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Safeguarding, its Genealogy and Governance:
Two Essays on UNESCO's Convention for the Safeguarding of Intangible Cultural Heritage

Technique, power, transformation

Anthropology in times of intolerance:
challenges facing neoconservatism

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Changing to continue

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From the current issue, number 16, *Vibrant* is adopting the continuous publication system, released in a single annual issue, following the instruments and guidelines presented by SciELO, in response to our growing operational difficulties and the equally rising demands of the latter bibliographic database, as well as those of other databases. Thus, the articles making up the sections of the volume will begin – and continue – to be posted online over the course of the year as they become finalised, with their respective digital object identifier (DOI) codes and their authors identified by their ORCID identity numbers. However, our intention is to continue to publish the entire volume in a single PDF document at the end of each year.

The present issue of *Vibrant* includes the journal's various regular sections: *In memoriam* records the sad loss of Sergio Figueredo Ferretti (1937-2018) and commemorates his life and work; the *Articles* section contains individual texts submitted to the journal, where we highlight the fact that two of them (those by Laura Graziela Ramos and Jair de Souza Ramos) were presented at the same event and dialogue with the same empirical setting. In the next section, the article by Edgard Teodoro da Cunha and Sylvia Cayubi Novaes focuses on how visual images can perform multiple roles, whether by revealing the intentions of their authors, or by activating memories and playing other roles in contemporary life, with the discussion referencing the first recorded images of the Bororo, an indigenous people living in Central Brazil.

The issue also includes three dossiers. The first is a 'mini dossier' composed of two important articles written by Antonio Augusto Arantes Neto, analysing the 'safeguarding mechanism' and its forms of management as proposed by the UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage. The heritage theme also reappears in the *Déjà Lu* section in the text "Heritage citizenship" by Manuel Ferreira Lima Filho.

The dossier *Technique, power, transformation*, edited by Fabio Mura and Carlos Emanuel Sautchuk, presents us with the classic discussion on technique – found in anthropology, archaeology and other sciences – as seen through the contemporary proposal of an *anthropology of technique*, approaching different theoretical proposals, methodological frameworks and empirical universes, in the process highlighting the reinvigoration of a rich universe within our disciplinary field.

Last but not least, we begin the publication of the dossier *Anthropology in times of intolerance: challenges facing neoconservatism*, coordinated by Lia Zanotta Machado and Antonio Motta, respectively president and vice-president of the Brazilian Anthropology Association in the two-year period 2017-2018, during which they were confronted with the 'conservative turn' that has assailed Brazilian public life across its multiple levels and dimensions. The dossier will continue in issue 17 of *Vibrant* and contains important reflections on the contemporary moment through which we are passing.

We wish everyone enjoyable reading and a good holiday season.

Antonio Carlos de Souza Lima and Andréa de Souza Lobo

Editors



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Sergio Figueiredo Ferretti

in memoriam (08/11/1937 - 23/05/2018)

Maristela de Paula Andrade¹

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On May 23rd, 2018, the anthropologist Sergio Figueiredo Ferretti died of heart failure at the age of 80, in São Luís, in Maranhão state, Brazil. Ferretti, as he was known, graduated in History (UB/UFRJ 1962) and Museology (MHN/UniRio 1962), with specialization in the Sociology of Development (UCL Belgium 1964/66), a master's degree in Social Sciences - Anthropology (UFRN 1983) and a doctorate in Social Anthropology (USP 1991). Spanning 50 years, his career was dedicated to the study of religions of African origin and manifestations of popular culture in Maranhão, training several generations of researchers in the study of religions. Ferretti participated in the foundation of undergraduate and postgraduate courses in Social Sciences at the Federal University of Maranhão, Brazil, and also had a strong presence and participation in official bodies related to culture in this state. He was known nationally and internationally for the studies produced with his wife, the anthropologist Mundicarmo da Rocha Ferretti. His main books – *Querebentã do Zomadônu. Etnografia da Casa das Minas do Maranhão* (1983) and *Repensando o Sincretismo: Estudo sobre a Casa das Minas* (1991), extend and advance beyond the works of Nunes Pereira, Roger Bastide and Pierre Verger on this Mina-Jeje house of worship in Maranhão.

On the occasion of his death, many fellow anthropologists and sociologists from various universities in Brazil wrote messages of condolences: Eliane O'Dwyer, Peter Fry, Miriam Grossi, Salette Barbosa, Antonio Mota, Antonio Carlos Souza Lima, Margarida Maria Moura, Mario Brasil, Maria José Aquino, Jane Beltrão, Emilia Pietrafesa de Godoy, José Ricardo Ramalho, Neide Esterci, Manuel Ferreira Filho and many others. The Brazilian Association of Anthropology (ABA) and the National Association of Graduate Studies in Social Sciences (ANPOCS) published eulogies on their websites and Facebook pages. Some colleagues, like Miriam Grossi, ABA's former president, stated in her message that Ferretti was one of the icons of Brazilian anthropology. Antonio Motta, ABA's current vice-president, mentioned the importance of the Afro-digital museum, founded by Ferretti, as well as the intelligent and generous intellectual dialogue he established with his peers.

Margarida Maria Moura, for her part, highlighted another of Ferretti's qualities: he had extreme respect for his peers, so much so that he once enrolled on a course about Franz Boas taught by Margarida at the Federal University of Maranhão. He sat down among the students as one of them, which moved her a lot. On that occasion, he took her to see the *terreiros*, which was how the Ferretti couple welcomed colleagues from various parts of Brazil and from other countries, always extremely generous and hospitable.

Among so many emotional messages, however, a phrase from Peter Fry struck me: he wrote that Ferretti was someone with his head and heart in the same place. His words expressed the integrity and wholeness of the trajectory of Ferretti who, indeed, loved what he did, completely devoted to his work, committed to his research and teaching and to UFMA as a knowledge-producing institution. At the university, where he was a professor for decades and subsequently emeritus professor, he never sought out administrative positions, preferring to dedicate himself to consolidating the institution's undergraduate and postgraduate courses in Social Sciences and Public Policies. Along with his wife Mundicarmo, he also maintained the Research Group on Religion and Popular Culture – GP Mina – one of the oldest anthropological research groups at UFMA.

Returning to the idea that Ferretti's head and heart were always in unison, I recall that from time to time when I taught an anthropology course, I would invited him to talk about the *Festa do Divino Espírito Santo*, preparing students for exercises outside the classroom. Once, I was late for five minutes, and when I arrived, he was already teaching! "You're late, I've already started," he told me, in his direct and rushed way. Ferretti had a sincerity that bordered on that of a child, and people nevertheless had no resentment, no matter how crude and even rude his observations or however nervous his manner.

On that day, in the classroom, someone asked what his religion was and he answered: "I reserve the right not to respond," but, immediately, he added: "If I were to choose a religion, I would choose mine." We return, then, to the aspect of Ferretti's trajectory so well highlighted by Peter Fry: integrity, unity of head and heart, communion, and affective identity with the religious groups and popular culture that he researched.

Ferretti chose to study discriminated minorities, collectivities subjected to religious intolerance, and groups often rendered invisible to the rest of society. Today it has become commonplace in Brazil to speak of the country's cultural and intangible heritage, and popular culture has become enjoyed and celebrated by other sections of the population. This was not always the case, though. Ferretti anticipated the whole movement, within anthropology, of studying manifestations nowadays treated as intangible heritage, including *bumba-meu-boi*, *tambor de crioula* and other manifestations of popular culture in Maranhão. He was ahead of the current concerns about recuperating African history, and his work precedes the discussions and policies surrounding affirmative actions implemented in Brazil such as quotas and social policies designed to address the social and economic inequalities faced by the country's African-Brazilian descendent populations. In the scope of the Federal University of Maranhão, Mundicarmo and Ferretti founded the Nucleus of Afro-Brazilian Studies back in the 1980s, Ferretti acting as its first coordinator, anticipating the movement of affirmation of the relations between Africa and Brazil.

Ferretti, however, did not limit himself to the study of African religions, but lived religious tolerance with his students, welcoming those who studied Catholic, Evangelical-Pentecostal and other religious manifestations, thus promoting true ecumenism in academic research practices.

Finally, I would also like to address this tribute to Mundicarmo da Rocha Ferretti. All of Ferretti's work was done with the support of his eternal companion in life and work. I vividly remember what was, I believe, one of the few occasions she was parted from him, when she attended a conference in another Brazilian state while Ferretti remained back in São Luís do Maranhão. She looked after him even from there, asking how he was driving in the traffic, while he expressed how much he was missing her. Mundicarmo was Ferretti's pillar, his staunch companion, and our tribute is also very much for her.

Maristela de Paula Andrade

São Luís, 05/23/2018

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Planes of forgetting: suicide among the Ticuna and the administration of narratives about suicide

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Abstract

This article examines suicide among the Ticuna based on the dimensions of experience that is little or not directly mentioned in the immediate narratives about the deaths. It thus focuses on how these suicides are lived in the daily practices instilled by state institutions, and on how certain discourses are incorporated in the undertaking of critical daily events. Based on readings, interpretations and local sensibilities, enhanced in dynamics about health, disease and cure, and on the parental demands and expectations related to educational trajectories, the article presents an analysis about the functioning and development of government discourses and programs in indigenous villages.

Keywords: Indigenous populations; suicide; public policies; state.

Os planos do esquecimento: o suicídio entre os ticunas e a gestão de suas narrativas

Resumo

Este artigo examina o suicídio entre os ticunas a partir das dimensões da experiência pouco e/ou não diretamente mencionadas nas narrativas imediatas sobre as mortes. Focaliza, nesse sentido, em como são vividas no cotidiano práticas oriundas de instituições estatais, como são incorporados certos discursos no desenrolar de eventos críticos cotidianos. Pretende-se, a partir das leituras, interpretações e sensibilidades locais, potencializadas em dinâmicas sobre saúde, doença e cura, bem como nas exigências e expectativas parentais relacionadas a trajetórias educacionais, expor uma análise sobre o funcionamento e desenvolvimento de discursos e programas governamentais em aldeias indígenas.

Palavras-chave: Populações indígenas; suicídio; políticas públicas; Estado.



Planes of forgetting: suicide among the Ticuna and the administration of narratives about suicide

Aline Moreira Magalhães

Introduction

In the Ticuna language *Tchau güü ta tcha rü ngüma* means “I forget myself”. Another phrase is used to say “I forget [a thing]”: *nü ya rü ngüma*. The expression “I forget myself” refers to the desire to “separate from this space”, to indicate that “I no longer want myself”, that “I will disappear”. It is a phrase commonly expressed by Ticunas who intend to kill themselves. It refers to a *forgetting* of oneself so that others also forget, to remove the body from oneself and others, to erase one’s body and its memory from a place which is thought to be refractory to one’s own existence. The relationship between forgetting and death relates to the urgent need to escape looks of reproof, disdain, judgement and or rivalry, to make them unnoticeable, thus becoming invisible. By obeying and or succumbing to orders of the spirits, which arise to say (or to confirm an impression) that one is dispensable, one forgets oneself to forget the forgetting of others.

The national Special Secretariat for Indigenous Health (Sesai) reported in 2014 a survey with detailed data about indigenous deaths registered in Brazil since 2007 in each one of the 34 Special Indigenous Sanitary Districts (DSEI), which encompass a population of nearly 900 thousand indigenous people. In those seven years, according to the survey, 2,365 indigenous people died from external causes (accidents or violence), of whom 833 were victims of homicide. Another 228 died of wounds, the motive for which was not determined. The survey does not include information about the authors of the crimes. Suicides, in turn, were the cause of 351 indigenous deaths from 2007 to 2014. The region of the Upper Solimões River, where the Ticunas are a considerable portion of the population, registered the most cases, 104, more than any other district. If it was a country, the Upper Solimões region would have the world’s second highest rate of suicides per inhabitant, 32.1 per 100 thousand inhabitants, behind only Greenland – where suicide among the Inuit is also high (Flora, 2009). The average rate among indigenous peoples in Brazil is 9 suicides per 100 thousand people, nearly twice the national average of 4.9.

These numbers, recognized to be under-reported, do not contemplate the magnitude of the problem. The continuity between external violence and violence committed against oneself is reflected in daily indigenous community life. One Ticuna once told me, while we spoke about some problems and generational differences concerning rules of community conviviality, that she thought that her community - where she and two generations before her had lived - as a “sad” place. I had still not consolidated any perception about this, so I could not offer it to my interlocutor, although I had been questioned as if to support her affirmation.

Sadness, shame (*ã´ne*) and anger (*nu´u*) are the expressions and states frequently used to speak about deaths by suicide. The forgetting of oneself, as I could interpret, became an escape from these emotions, and particularly from what motivates them. The escape specific to forgetting is not only elaborated by the Ticunas. It is also necessary to pay attention to the complicity that is built between an indigenous strategy of death as a political language of a frustrated struggle – therefore struggle and frustration, concomitantly – and of the more ambiguous mechanisms of the colonial relation, which blur the frontier of ethnic strengthening, of tutelage and governability, by producing other forgettings.

This article will defend the following points: 1) suicide among indigenous people is self-aggression, therefore violence; 2) the main issue related to self-aggression is not to determine the existence, inexistence or the level of “agency” contained in it, but to examine the political content that it emphasizes and gives potential to related to an ethnic struggle for survival; 3) I do not believe it is possible to see suicide as a form of lack of submission and liberation, or as a mimetic counter violence aimed at undoing subordination as proposed by Fanon (1979) and Hasenbalg (1979), concerning suicides among colonized and or enslaved peoples. It may also be this, although in conjunction with the opposite of this. Therefore, I propose that suicide should be interpreted as such (self-aggression), but I will do so by focusing on the paths by which the external violence is inverted once again against the self, and not against others, based on ethnographic data referring to the time that I lived among some Ticunas in a specific community, one of the 183 existing at the time on the Brazilian side of the triple national border that divided and insulated their territory. Thus, this article seeks to examine and operate in two registers that are apparently dislocated from each other: death by suicide in its concrete form, as well as the daily discourses and materialities involved in this problem, and the discursive developments around this, which not only dilute the problem, but re-elaborate it based on arbitrary framings.

I present here a specific discussion of an ethnography, which focuses on deaths by suicide by addressing them considering the social fabric, the dramas and the important daily affairs of Manayunk, a Ticuna community (Magalhães, 2014). My objective is to use this perspective to demonstrate the not at all trivial character of the existence and operability of activities related to *health and education* within the indigenous communities, which are two categories and activities that carry a morality and materiality established from above, but that are also interpreted and partially appropriated according to the indigenous realities and symbolisms. Thus, I intend to focus on two dimensions that have been little explored in the literature about indigenous suicides, which is incongruent given their influence on the dynamics and in the multiplication of dissonance and disparities among relatives.

The dilemma of “agency”

The adoption of the word *suicide* to refer to self-aggressions among indigenous peoples has been constantly and warily problematized and or theorized by the literature dedicated to the issue. There is no doubt that suicide involves delicate dimensions that are difficult to approximate without risking a narrative domestication, in the counterproductive sense of the expression. The analyses are frequently concerned with 1) giving a distinctive character to the theme, in collective terms, considering the urgent need to demystify a diffuse discourse permeating various spaces and channels, which argues that suicide is a sign of indigenous social disintegration and disorganization; 2) qualify the character attributed to the self-aggressions, in terms of the *agency* implied by the act, considering that it frequently occurs under the effects of a spell, from the orders of spirits.

Analyses produced in the 1990s – some from the field of psychology – approximate these deaths to the Durkheimian concept of anomie, suggesting the occurrence of a social and cultural destructuring through which the indigenous populations are supposedly undergoing in which the self-aggressions that lead to death were high, such as the Guarani-Kaiowá, a collectivity about whom most of the first studies focused. Although with the intent to denounce the violent territorial expropriations that led to the “disorganization” mentioned, these analyses once again wound up delegitimizing and attributing a negative character to the indigenous collectivities with a high rate of suicide, by identifying a supposed intrinsic fragility among them. At the limit, the argument of this interpretation affirmed that in addition to provoking their own death, indigenous culture was disintegrating; thus attributing mutual causes and effects. More than this, the explanation of “disorganization” does not correspond to a more detailed ethnographic examination of these deaths, as I will develop.

In an effort to weaken this argument, some positions counter to the interpretation of “anomie” at times fall on an opposite extreme, by attributing this type of death to cultural aspects based on descriptions of indigenous cosmologies and categories, recognizing little influence from social, economic and territorial conditions on the indigenous populations. They thus do not give the proper attention to the territorialization processes (Oliveira, 1988; 2000; 2016) the indigenous have undergone and are undergoing.

The centrality given to the “agency” of the act is generally used as an analytical strategy to confront the idea of the “epidemic wave” inscribed in the notion of “anomie”, which would be like an earthquake that smashes the “cultural” vase according to the anthropological argument. Any death, disease or misfortune is due to spells, according to countless ethnographies among indigenous peoples. Therefore, the explicit or implicit argument follows that indigenous suicide should be understood and explained based on internal cultural elements.

Nevertheless, it is necessary to consider that, according to these analyses, based on ethnographic study dedicated to the theme, the indigenous explicitly differentiate death by suicide (usually by hanging or poisoning) from other types of death by shamanism, which are caused by the aggravation of their symptoms. At times indigenous people designate a specific word to suicide, as do the Ticuna (*ma´a*). In addition, it is necessary to consider, above all, the countless indications of alarm, raised by the indigenous themselves and not only by healthcare agencies, about the increase in this type of death, and the beginning of the recent occurrence of suicides in indigenous collectives in which there had been no news of self-aggression until that time, as indicated by various recently published articles (Araúz and Aparício, 2017).

Using a distinct perspective and foci that I will attempt to explain based on a specific case, I, like other authors seek to reinforce the argument that the suicides are due, not to a weakening but to the strength of the native cultural experiences, which are tenacious and unreconcilable with the expectations and possibilities created by advances in market relations, which strengthen the contradictions between economic activities and dissonant moralities.¹

Indigenous suicide has become an issue that few want to debate, despite the statistical evidence and the fact that the problem is raised by the indigenous themselves, who question the intrinsic impossibility of discussing it by means of strictly “interactionist” or “structuralist” theoretical framings and frameworks. Under the tacit pretext of being a politically delicate theme, silence has become dominant. This contrasts with the frequency with which the theme arose in conversations between the indigenous and those who go to “study-them”. But the deaths, and this specific type of death, are increasingly imposed on the ethnographic data, despite avoidance of the issue, textually declared or not. The silence about the theme says more about the construction of theoretical disciplinary jails, than about the importance of this problem for the indigenous peoples. The fields of psychology and anthropology treat the emotional aspects of the issue quite differently. Psychology treats suicide as something real but does little more than fit a theory into realities that do not operate according to the presumptions of the respective framings adopted. Anthropology, meanwhile, treats the suffering on a discursive plane so it does not have to confront the difficult task of analyzing the types of conflicts that it involves in the case of autochthone populations. We thus have the paradoxical situation of anthropologists who leave home and write about suicides among indigenous peoples based on all the possible and imaginable dimensions about this problem, but not as an expression of a specific *real* suffering. Meanwhile, upon returning to their daily urban life, they seek therapies for dealing with their own difficulties with relationships due to correlated processes of violence. Avoiding explanations based on psychological motivations - a common recommendation in the social sciences - should not imply sublimating or euphemizing a quotidian social *problem*, or a failure to make a theoretical investment in it and produce data about it.

¹ For a perspective similar to that adopted here see Mura (2006 and 2007) who writes about the Guarani-Kaiowá and Yagarí (2012) about the Embera.

I did not analytically divide suicides among indigenous and nonindigenous into two radically different types of phenomenon. The increased reporting of suicides among non-indigenous peoples globally accompanies economic crises, and suicides in both groups therefore present an evident connection with the advance of exploitation typical of domestic and foreign colonialism, daily violences and terror by the state, and its reverberations for face to face interactions.² In this sense, the convergent mode by which Fanon (1979) and Freud (2010a; 2010b) formulate the question still echoes in the reflections about suicide. This includes the parallel that Freud establishes between a loss (of bonds), transitoriness and destruction and Fanon's understanding of the centrality of daily violence as destruction accompanied by the construction of an aura of loss in those who were colonized. Both these analyses focus on how violences and destructions establish a grammar of losses, and in contrast, on how the multiple types of losses are lived as destructions, which points to various routes for interpreting how these limit experiences of loss challenge the integrities of people.

By "losses" it is necessary to emphasize that Freud and Fanon do not appear to refer to "cultural disintegrations", a reading that possibly constitutes one of the reasons for which they are so little appropriated in contemporary analyses about indigenous suicides, which are based on shielding a specific notion of culture. To the contrary, the concern is for examining how the destructions in the surroundings – which are shaped as destructions of possibilities of a life socially valued in its idiosyncrasy – are experienced as destructions of a "self". A "self" that is evidently referenced in specific socio-cultural attributes and orientations and immersed in constant contradictions with the world around it. In this sense, if the ways that Freud and Fanon raise the problem are far from trivial or outdated, the ulterior reflection must necessarily be qualified to break with the pretentiously universal notions of person (in which the universal emanates from Europe) and that support the development of the argument, particularly the Freudian proposal, based on the importances, obligations and expectations valued in each socio-cultural context (Keesing, 1970).

Therefore, the analysis about suicide undertaken here begins with the understanding that the phenomenon must be addressed from three dimensions. First, by recognizing the concrete and violent character of the death, based on reflections on the continuity between territorial destructions and self-destruction in the materialist register raised by Freud and Fanon, or that is, self-aggression as a materialization of a specific suffering. Second, through the categories, importances and normativities of a sociocultural context that engenders the conformation of the hierarchically required obligations and expectations that are the object of constant negotiation among relatives, because they are in a permanent tension and creation of adaptive strategies to the social and economic conditions in which the Ticuna are inserted. Finally, through the narratives constructed about the deaths, both by the indigenous themselves and by healthcare institutions. In sum, suicide is seen as a face of colonial violence, as real suffering – even if it is not for us to narratively domesticate it – and as ideology.

It thus does not appear to be helpful to reinforce the dilemma around "agency" in relation to suicide (Broz and Münster, 2015). To the contrary, if the types of changes underway also present dramatic problems – the only consensus found in the texts about indigenous suicides – it is essential to examine why and how the revenge against the disturbances caused by the conditions and relations lived as refractory, fall mainly on the self. What is being destroyed or transformed in an act of self-destruction (Black, 1985:283)? What is the political content of the suicides and what do they say about the necropolitics of global capitalism (Broz and Münster, 2015)?

² According to a report produced by the World Health Organization (WHO), more than 800 thousand suicides occur annually in the world, a rate classified as an "epidemic of global proportions". Along with this unprecedented survey in the history of the institution, issued in 2014, WHO launched prevention programs and recommended the realization of detailed diagnoses, given that it involves an under-reported or not reported type of death in many countries. The document also informed that more than 75% of suicides take place in low- and middle-income countries. Sources: www.who.int/news-room/fact-sheets/detail/suicide; *Preventing suicide: a global imperative*. World Health Organization, 2014.

The flow of daily life and the temporality of the immediate

It is not possible to speak of paradigmatic and atemporal circumstances in which suicides occur among the Ticuna. Hangings and ingesting of timbó take place according to findings and impressions about the demonstrations of disdain and distancing, which lead, as I previously indicated, to fears about the issuing of spells. The reasons for the disdain and the subjacent conflicts between people change as the sources of the problems change over history.

At the time in which I conducted ethnography about the theme (2011 and 2012) two issues predominated in the narratives about the disturbances that engendered suicides. One of them concerned men “betrayed” by the women with whom they cohabited. The gravity of the act and of the comments about it nearly exclusively reside on the male inability to satisfy the woman, which I sought to argue in another text (Magalhães, 2015). The “betrayal” also carried a message that the women had spells cast on them and no longer wanted the men to be close. Men at times came to see spirits and when they did not hang themselves, obeying the orders of the spirits, became sick until they died, generating speculations about the possibility of poisoning. The second situation related to the suicides reflected a period of transition of children to former children, particularly the expectations of parents in relation to this transition. Thus, to marry properly (Rosa, 2015), with respect for clannic exogamy, the network of affinities, and the preference for someone who had command of an activity that provided some form of sustenance - related to agriculture, schooling, or some other form of wage-earning - was a step that was highly regulated and accompanied by parents and other close relatives.

The casting of a spell by female “betrayal”, apparently limited to the dimension of simple extra-conjugal sexual desire and of an absence of conjugal desire, reflected misunderstandings generated by a division of domestic activities, at times leaving the wives unsatisfied in relation to the attitude of the men with whom they cohabit. This means that looking for other men was also a way of demonstrating dissatisfaction in relation to male performance of the daily and essential activities, showing him that there were more competent men, who were therefore more attractive.

Both situations of conflict that guided the stories about suicide - the generational and the conjugal - were therefore related to possibilities, impossibilities and difficulties associated to activities of sustenance at a time of rising conflicts among relatives concerning neighboring farming plots, complaints about invasions and burnings at borders of the marked territories, and of the gradual decrease in fish, due to predatory exploitation by companies on the Solimões River. Moreover, at the same time that schooling became a possible alternative and was stimulated by mothers and fathers in relation to their children, this trajectory presented many difficulties and obstacles, as highlighted by Paladino (2006).

To offer more density to this argument, while I attempt to avoid dramatizing the theme, I will present the history of a person with whom I became close, and who accompanied me during the entire time of my work in the Upper Solimões. Fortunately, there was no death in this case, but her declarations about the events in her life, which I accompanied at the time they unfurled, express in what way the contradictions, obligations and forms of management and violence that were imposed on that context trigger the sensations and complaints about feeling forgotten and confabulate the forgetting of the self, the forgetting of a memory linked to a body. They also reveal a sensation that I had regularly, which was that the embodiment of the space of death (Taussig, 1992; 1993) was far being something that afflicted the “ill” and “vulnerable”, it was a state given potential by the local atmosphere, whether as a response, extension, resistance or duplication of the multiple planes of violence encountered in the daily experience affected by the market economy to which the Ticuna communities found themselves entangled.

We´ena and I met at a time that coincided with the beginning of her flirtations with Ipacaraí, whom she came to marry months later. Until accepting to leave the house of her parents to live with her new husband, she underwent a long path involving resistance, differences with Ipacaraí, antagonisms with other women

who also wanted him as a husband and pressure from her parents for her to fulfill the tasks corresponding to adult life, beginning with marriage. This transition to adult life would considerably change her routine and the way that she would be treated since then.

Of six children, she was the youngest woman and the only one still living with her parents. In Manayunk, the first marriage usually takes place between sixteen and twenty years of age. The youngest brother, who was younger than We'ena, would marry at fifteen, while she still avoided marrying (cohabitating) with Ipacarái. For the standards of Manayunk, We'ena, 25 at the time, had passed the age to stay home with her parents, and still depended on them for nearly everything and, even the age for having children. Thus, she would gain the nickname *no'e* (avó), as people who passed the age to marry or have children were called. For a long time she referred to her relationship with Ipacarái, who passed the week with her in the same house, as a "modern relationship". If she would marry, she explained to me, she would be required to offer inconvenient explanations: about where she was, where she would go, when she would come back. She was still not used to the idea of so much control over her movements and the activities with which she liked to be involved: "I am now no longer participating in meetings because he keeps calling me all the time, wanting to know where I am", she complained after one disagreement with Ipacarái.

The "meetings" referred to her involvement with indigenous organizations, particularly those recently formed by indigenous women, among other discussions that took place in municipalities close to Manayunk. We'ena lived at a time in which many indigenous women of her age took technical and college level courses at university campuses available in the municipalities of the Upper Solimões. She sought to insert herself in spaces of formulation of public policies aimed at various indigenous populations who lived there. While her father paid for her computing course with his pension as an army corporal, her mother tried to convince her to be a nurse or nurse technician, occupations with high prestige due to the salary and frequent hirings by the Special Indigenous Health Secretariat (SESAI). In her movements through organizations, meetings and university debates about the indigenous issue, We'ena met many Brazilian and Colombian researchers. We met because of her interest in these activities and we began to become closer. It was also this universe - her daily life as a student, her travel to take courses or at meetings of the indigenous movement - that she did not want to leave, and thus avoided marriage. Between her irritations and giving up fulfilling her parents' desire for her to marry (by cohabiting with Ipacarái in another house and, preferably having children with him), she got used to saying that she did not want to marry, she "did not want to stop being her parents baby".

Some meanings of this statement should be highlighted. "Baby" has a definition similar to "child" for the Ticuna in Manayunk. Children who are still dependent on their parents in terms of food and housing were perceived to be dependent on them. Therefore, the diffuse category "youth" or "adolescent" has no correspondence in the relations between adults and children in that context, because puberty does not represent, strictly speaking, a period of transition. After puberty, children came to be seen as "adults" while they performed tasks and roles in keeping with this condition. "No longer being her parents' baby" referred to the movement of having to care for another house and of other babies. We'ena, like other people her age who were still single, understood the accumulation of activities involved in married life, also considering the conditions of support that were available and possible in that situation.

The efforts required by the idea of getting married go beyond leaving the house and curtailing parental dependency, involving other types of disturbances, such as disputes with other women who declared themselves to be her rivals. Two of them threatened to issue spells, personally or in written messages. The first was Ipacarái's former wife (the mother of his son), from whom he separated, according to We'ena, after "finding out" that she "cheated". This woman encountered We'ena on a very busy street, introduced herself as "your boyfriend's wife", "cursing" [in the sense of using offensive language] We'ena for being "very young", "just a girl", that is, too inexperienced to provide a satisfactory conjugal life for Ipacarái. The use of the verb "cursing" [in the sense

of using offensive language] and We´ena’s considerably upset expression soon after this unhappy encounter, indicate the dimension of the grave offense contained in those words. Later, this woman went to We´ena’s house a few times to threaten to have a curse put on her if she did not separate from Ipacarái.

The dispute involved other family members, including We´ena’s aunt and cousin who lived next door. Her “own” aunt (“own” was repeatedly used before a term of kinship in her narrative about conflicts, emphasizing the proximity of the threat or the offense), also threatened We´ena through her mother, who passed on the message: “My mother came home crying, she is very worried about this”. A few days later We´ena’s oldest brother “nearly died”, but was immediately helped by a shaman, who was called by her mother. We´ena also felt affected by these symptoms, as the face to face encounters between her and these other women took place. She began to feel pains, first in her back, accompanied by a “sensation that a little bug was crawling under her skin” – translated by other people as “formigamento”³ – then, she felt “piercings” in her backbone, knee, that spread throughout her body.

We´ena defended herself by affirming that “she was not the one provoking this, but that he did not let her” participate in activities important to her. When the marriage was finally arranged between Ipacarái and the father-in-law [We´ena’s father], she still defended herself: “They want to put a curse on me, they can curse me”, she said, “they can kill me if they want. I don’t care. I already asked Ipacarái why he likes me...he was the one who insisted on being together”.

Even demonstrating a certain confidence about Ipacarái’s decision to “stay” [with her, in her house], some of her comments raised doubts about this relation, after some people told her that they had seen him some place “with another woman”. This information reinforced that there could be some correspondence between the threats of her rivals and Ipacarái’s behavior and doubts about having decided to marry We´ena. As long as there was no conversation between her father and Ipacarái, after which she could say she was “married”, there was the possibility of not going through with it.

We´ena delayed getting married as much as possible, which would concomitantly mean giving up daily parental support. At times she thought of plausible reasons to convince her parents that it might not be the most suitable person and time. “I liked him at first, until I realized” that this tie would bring many restrictions, like the impossibility of participating in “meetings”, because involvement with “organizations” and with other activities related to the “indigenous movement” appeared to be increasingly incompatible with her coming conjugal and domestic responsibilities, beginning with contributing to her support. The threats from other women, as she said, were not enough to definitively break up with him. She even invited me to be an accomplice in her new strategy; “perhaps (...) if I catch him with someone, I can break up with him without being guilty for this”. Amid the threats from rivals, fights and doubts, the break-ups and reconciliations repeated a few times during the time that We´ena had me participate in her preconjugal dilemma.

Before suggesting the possibility of marriage, her parents facilitated her life in every way they could. For example, if she broke or lost objects, her parents promised they would be replaced; if she did not meet deadlines or missed the classes paid for by her father, the tone of the reprimand was usually “mild”. We´ena usually said that she was treated as a child. After the conversation in which the marriage was agreed to between the father-in-law and the son-in-law, as well as joint collaboration to build another house, her parents came to be stricter in their demands. This would mean that she would have to take on the role and functions of wife, and they delegated to her more tasks beyond those that she fulfilled, so that “she would no longer be a little girl” – as she referred to the core issue of the difference between herself and her parents. But We´ena did not hide how reticent she was about this option.

³ “Formigamento” is the word commonly used in Portuguese to refer to an itching, burning or tingling sensation in the skin and is also used to say a limb “fell asleep”. Its root is in the word *formiga* that means ant.

Upon one of the many times that she complained about Ipacará's behavior and of the multiple disturbances that this union would bring her, her parents decided to terminate the issue and prohibit the continuity of the relationship. They ordered her to spend some time at the "farm house" far from the busy and main streets of Manayunk. Her father stopped giving her money – from his army pension – and limited her movements to school obligations, preferentially accompanied by a brother. Her parents thus drastically changed how they treated their daughter. What had been a patient wait by both mother and father for her to "stop being a little girl", turned to unexpected antagonism from them. She spoke of "guilt: for knowing that her acts and failures were directly related to her parents' deep frustration.

She said that she had never been treated so strictly by them. Of the sixteen months that I was close to her, it was during this period that I perceived that she was uniquely sad and did not know how to overcome the intense bad feeling between daughter, mother and father during the time that she remained distant from Ipacará. "I don't know how this happened, how my parents changed so much with me, I never imagined that it would be like this", she said crying. A few weeks later she continued to be in crisis: "It's all terrible. My parents haven't forgiven me. As I said, Ipacará ruined my life". The pressure, changes and conflict increased during this period. When she was already cohabiting with Ipacará and communication with her parents had been re-established, she told me at that time that she doubted she would be able to get past these changes and conflicts, and "began to think" that perhaps it would be better to no longer be seen by anyone.

Beyond the case of We'ena, transitions between the daily life of a child and an adult created constant episodes of crisis in that context. Crises are understood here as moments of contradictions between projections and expectations and the conditions raised by the reality to realize them. The idea of crisis, however, should not indicate a temporal sequence that oscillates between disruptions and a return to an ordinary life, to the previous normality. Crisis generate changes, whether in terms of strategies, relational configurations, shifts in projects or resignifications about the possibilities for the trajectories raised. The routes that were determined to be socially important - at a moment of transition that became a crisis - were being resignified over time and were attributed to other dimensions: the university, the school trajectory, participation in indigenous organizations, activities at her parents' farm plot, in the domestic chores and the care for the child.

Her parent's rejections, or impatience towards We'ena's indecision and timing, and the threats from other women, contextualized at a time of transition to a domestic autonomy and to conjugality, created a period of a delicate transition for her as it did for many others in her situation. She had commented on some symptoms; "little creatures" running through her body, as the first indications that she was cursed, and was soon supported and helped by her mother and sisters. The little creatures were caused by curses, shamans who cast spells on her, any person or people with whom We'ena had some hostile contact or disagreement, and for this reason she came to feel them physically.

It is thus not helpful to attempt to point to a single reason for suicide, or to opt for a casual vector, whether the colonial dimension or cosmological inscriptions. To the contrary, it is crucial to point to the inextricable articulation of the elements of a complex reality. More specifically, it is necessary to indicate the need for an analysis of the dimensions of the ethnic reality related to the possibilities for being in the world of these populations, to their possible territorialities and specific practices.

Many conflicts that precede and engender suicides and attempted suicides were contextualized in the demands that are contemporarily placed upon the Ticunas. These are demands and requirements from the social universe in which they are inserted, and that are valued and required at the micro level through generational hierarchical relations. The command over social codes in distinct universes is highly valued in that context, but so is fluency in the native tongue. The codes of the "whites" also dominate in terms of language (the ability to speak Portuguese or Spanish) and in the ways of moving through the urban universe, to allow the possibility of having a paying job. As the most populous indigenous group in Brazil and the Upper Solimões, the Ticunas

are politically hegemonic in various state institutions found there, like the National Indian Foundation (Funai) Sesai, and educational institutions. They participate in, administrate, compose and preside in these entities' boards of directors (such as in Condisi/Sesai).

In We'ena's case and of those of others about whom I have had information, the contexts in which the conflicts intensify are marked by the difficulty of conciliating school and work that contributes to reproducing the respective domestic units; and or involves changing to a new phase of life, thus renewing the airs of the houses, streets and other spaces, with the generation of children – whose existences and movements are uniquely valued – through conjugal cohabitation.

We'ena, like many of her cousins, relatives and acquaintances, absorbed the social pressure that establishes the need to confront and conciliate, in the most confident form possible, the life opportunities placed by that universe. To have a *big spirit* (ta'ötchi'i) – as long as it is not so exacerbated that one is seen to be proud and cause envy – implied a number of factors: having command of Portuguese without needing to abandon learning the native tongue; finding paid work that could contribute to domestic expenses (which they sought to guarantee by schooling); or learning abilities related to activities in the field and fishing.

The social and economic hierarchies forged and that were gradually advancing - whether through state institutions, public policies or market relations - come to be elaborated by relations between relatives, clans, houses and families. It is important to recognize that the family name, as well as that of the clan, also defines a mode of being in the Ticuna community where I conducted my study – while Ticuna cultural norms, reject the possibility for the existence of these hierarchies, which are prescribed by shamanism (yu'u), which is the predominant mode of regulation of conflicts among the Ticuna. Therefore, the opportunities for sustenance raised - mainly by valuing schooling - directly influence the construction of values incorporated to people, and establish differences between houses (brick versus wood, for example) among other types of differentiations in the living conditions between families and homes.

The value placed on schooling, whether exclusively embedded in principles of social mobility, referred to the scope of opportunities for being in the upcoming world that are negotiated between generations for the transition of children to adults. This mobility may be linked to access to rights – as in the case of We'ena, her schooling and engagement in indigenous mobilization. Yet it also tends to insulate the buildings that are already residences of the indigenous communities within more individual than collective projects, given that much of the effort at schooling is accompanied by suspicions and accusations related to arbitrary benefits and privileges gained from kinship networks. In this way, this mobility winds up leading more to economic inequality between those with salaries – like We'ena's father who had an army pension - and those without, and between different types of paid work, in the communities, than to advances in discussions about problems that affect daily community life and strategies to confront them.

The discussion in specific forums about curricular projects in the Brazilian educational institutions in the region, although they include indigenous representatives who have the right to speak at meetings and vote, is not accompanied by a deep discussion about the character of education, which could come to be emancipating and contribute to the construction of collective autonomy. The proposals frequently at the base of some programs, projects and even regular school and university courses, usually consist in the integration of the indigenous to the urban labor market. Therefore, the emphasis falls on social mobility, a problem that can compound the disparities and conflicts scattered through the community. As Luciano argues (2006:181), schools are “to a large degree installed by pressure from the Indians, without any reflection on their social role in the current and future life of the communities (...) in most cases they strictly follow the urban model of high school - disciplinary, vocational for the white world and focused exclusively on the knowledge of the whites”. In this way, Luciano continues, the educational process winds up representing to indigenous youth “a passage of life from the village (traditional indigenous) to non-indigenous life (city, job, money etc.)”

(Idem) - without a political reflection about the purposes of intercultural education. This process gives greater value to individual trajectories in the educational field – which also constitutes a possibility to guarantee self-reproduction in the realm of the nuclear family – than to advancing collective processes.

Disease, deaths and discourses

Meanwhile, the incidence and cure of diseases - inevitably generated by the attack of spirits sent by curses - are articulated in daily community life to the medical practices of the government healthcare service installed in the indigenous communities, the clinics that are the base of the Indigenous Secretariat of Indigenous Health (SESAI). Despite the asymmetries and hierarchies constructed from above in daily community relations, there is not exactly an irreconcilable antagonism between a *medical* perspective and the healers and shamans. In terms of social practices, there is a conviviality between the healthcare system implemented at the clinics and various modalities of traditional cures.⁴ When people get sick, especially in serious cases, they seek the health clinic, and there they determine what disease they have, although the origin of the diseases, or of what left them susceptible to illness, was inevitably seen to be curses issued by rivals. (The closer the emotional, consanguine and residential ties between the parties, the stronger the spells). The healers were allowed to attend in the health clinics, and there were dialogs and exchanges between teams of nurses and doctors and the local healers about a patient's state of health. Of course, the density and content of the exchanges between methods of distinct cure vary according to the staffs working in the communities. Thus, the speculation about and diagnosis of the symptoms and diseases emphasized not only the physical debilities of the people, but also debilities in current relations between people. At the healthcare clinic, while waiting to be attended, they spoke about *who and what caused the disease*, as well as *what disease it is*. In a certain sense, therefore, the medical discourse and treatment provided at the health clinic do not deny shamanism, but endorse it, while the shamanism complements the medical discourse. Patients under spells follow both the prescriptions of the doctors and nurses and of the healers and or shamans.

In terms of suicide – the Special Indigenous Healthcare Secretariat (Sesai) created a specific public policy that involved conducting a survey of the causes by having indigenous healthcare agents complete an “investigative form about a suicide/attempted suicide”, on which there is a place to specify if it involves one or the other. The questionnaire includes identification data about the person who attempted or committed suicide and questions followed by two blank lines: 1) Where was the body found and in under what circumstances?; 2) What was used to commit suicide?; 3) Did the individual use any type of drink or drug? What? The header on the forms suggests joint authorship between the federal Sesai and the local DSEI.

Even if they are not assiduously completed and used, the purpose of the form is to produce an epidemiological diagnosis, to be incorporated to an expanded database, with information about one of the highest causes of death among the Ticuna - even considering that suicides are underreported. The form also reflects the premises and gaps that guide the perceptions of public policies about the problem. According to the questions presented, suicide can be grasped as a death frozen in a single *act*, by surveying the descriptions of the situations or by the short temporal sequence of acts that precede the death. This narrative reduction, added to the exaltation of the suffering closed within itself (Das, 1995), tends to once again entangle those involved in *establishing responsibility* for the tragedy, at the same time that it projects an ideology about the institutional effectiveness and good will in the construction of strategies aimed at reducing suicide. There was an isolated attempt to use this data to deepen understanding about the issue, by expanding the discussion locally with professionals from Sesai,

⁴ Langdon and Diehl (2007) formulate a similar proposal about the operation of the DSEI's in southern Brazil.

an effort coordinated by the local psychologist, in which I participated. In general, however, the form collaborated to creating the impression that *the problem was being confronted* and limited the indigenous suffering to dramas that in hypothesis were internally created and fed.

The mental health meetings, another modality of intervention in relation to suicide, were guided by similar concerns. They were convoked and led by nurses who were accompanied by healthcare agents (the only position in the healthcare field then occupied by indigenous people). It was a program formulated by Sesai in Brasília and coordinated by the psychologist from DSEI mentioned above. At the meeting at which I was present, the nurse, after discussing sexually transmitted diseases, sought to encourage a conversation about the deeper concerns of those present, who mentioned the vulnerability of the *youth* (a category used by the Ticuna when they intend to be understood by *whites*) to alcohol and drugs. Those present, mostly women, complained about the growing influence of the points of sale of drugs in the region and had an expectation that their interlocutor could have some influence on this problem. She then reflected on the strategies for mitigating two forms of self-destruction, the excessive consumption of drugs, in particular drinks with high alcoholic content, and suicides, interlinked with recommendations about what close relatives could do to treat or avoid them.

The causal association between suicides and exacerbated consumption of alcohol (more than any other drug) is not random or unreasonable. A superficial listening to the native narratives of suicides would take from the initial responses formulated to account for these deaths. If, on one hand, the purpose and effect of this more immediate association is to make exogenous a cause outside the body as person and as broader collectivity, the contrary would inevitably make the same body vulnerable to destructive addiction, and therefore equally diseased. Even if at times it is an expedient used to quickly respond to inconvenient questions, drunkenness - in addition to not corresponding to the state of all the people who hang themselves or take *timbó* - also does not hold up to comparisons of cause and effect among suicides and alcoholism, nor does it reflect the complexity of the cases as reported from a long term listening, as I sought to conduct through the experience of *We'ena*.

Both strategies for what is called “suicide treatment”, the examination form of a suicide and the “mental health” meetings, focus on individual trajectories, on the dramas and dilemmas confronted, and on sharing as cure - which Foucault (2009) denominated as confessional practices of intimate life. It involves individuals expurgating and making intelligible their disturbances through dialog, to help avoid that they arise in domestic situations. The term “mental health” reveals the concepts subjacent to these programs: the self-provoked deaths could be resolved based on an individual logic of treatment of people who relate to each other as “individuals”. By calling on families to discuss the cases, the objective is to help them manage, and to teach their family members to deal with the social dilemmas and incapacities.

The theories of shamanism and allopathic medicine are divergent about this issue. While the latter gives priority to symptoms and curing the individual, the first is concerned with defending the effects of envy, jealousy and the *bad words* that constitute the curses that cause the diseases and the visions of the spirits, some of which are those that order the “forgetting of the self”. But only this. The complementary action of these two systems makes secondary and residual the dimensions of territoriality, or the conditions that are established for the social reproduction of the Ticuna and their development in time. This occurs less by poor decisions and scarcity of expanded spaces for discussion of community problems than by social absorption in the daily reverberations of a specific territorialization, in the ordinary struggles of life.

Final considerations

Even if we begin with the understanding that indigenous suicide stems from the precarities of a vulnerable life created and imposed by market relations and the multiple forms of racism engendered by state expansionism - and consider suicide to be a form of genocide, an effect of the totalitarian practices and of the terror perpetrated against the indigenous - the question remains of why the revenge against the multiple injustices and expropriations falls on the self and not on the direct or hidden agents of the state and parastate capitalist tempest - like the armed groups that protect and propagate illegal commercial activities that are quite common around indigenous territories. This does not involve merely a heuristic intention of “sociological explanation”, as affirmed by contemporary lines of thinking about the theme that seek to overcome the Durkheimian anomie by sublimating his still central and pertinent questions. What is at stake is that the violence suffered is effectively inverted *once again against the self* - and, I repeat, not against others - by means of suicide.

What makes the phantasmagoria of *sadness* - or anger - remain in the first plane, not only as if it had sprouted without having been planted, as if it was the root and the leafy branches of indigenous suffering, clouding the context of socio-economic exclusion in which these collectives are inserted? Sadness comes to be shaped as an ideology and daily sentiment and experience, or as an ideology that goes beyond its own limits in affective languages. What are the mechanisms that collaborate or support this? I understand that the case-by-case debates and indications around these questions are essential if we want not only to understand why suffering as an internalization of the violence is one *among other possible* effects, but above all how the response to this suffering could be expelled to outside the domesticating borders of indigenous villages - territories that are more susceptible to colonial violence - or from other locations. In other words, it involves an analysis about the affects that engender it, precisely by constituting political languages that are irreducible, in this case, to the polarity between protest and resistance *versus* self-annihilation. Because, in this case, they are both, and the result is too unequivocal for us to continue the debate in terms of the “agency” of the act, or to treat it as an epiphenomenon of ethnic extermination. To seriously consider the statistical data - suicides in Brazil more frequently strike indigenous peoples - is to understand what these acts communicate and which other acts are forgotten. This can reveal the mechanisms by means of which colonial violence is duplicated and inverted, through the internalization and collective sharing of intense mutual responsabilization and shame.

I focused my argument on two spheres which are raised for the anthropological discussion - in both the academy and in non-governmental organizations - about indigenous suicide, generally through the perspective that something is “lacking”. *More* education and *more* healthcare can mitigate the problems (which are known to be structural). This discussion has frequently been guided by the argument that stronger and more present services of *healthcare and education* are necessary conditions primordial to assisting and decreasing the indigenous people’s difficulties and suffering. The issue goes beyond the problem of land that immediately and directly relates to decreasing possibilities for support - demarcation is far from being a final solution for the autochthone populations. I suggest that, depending on how the educational and healthcare systems interact with the indigenous reality, and how much their structures, guidelines and practices are dedicated to consistent action to benefit - instead of “providing assistance” to the indigenous populations - as well as the latter being willing to appropriate these services to support construction of a collective autonomy - the consequences of the action of these institutions for the local dynamic tend to produce more tutelage than autonomy, more inequality than just distribution, more ill will among relatives than collective political strength.

These effects, it is known, are not exclusive to the indigenous reality, given the orientations and limits of state institutions, however, they are more explicit in the face to face interactions specific to micro-sociabilities, and therefore are noticeably more harmful. This is even more so if the contradictions that these institutions introduce or directly or indirectly heighten, contrast with some indigenous cultural premises – such as the incessant search for equanimous conditions for reproduction among peoples, lineages, clans and homes.

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Remaking everything: the clash between Bigfoot, the termites and other strange miasmatic emanations in an old industrial design school

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Abstract

This essay in speculative fabulation deals with the “ESDI Aberta” movement (2016-2017), in which students, alumni, professors and employees of the Superior School of Industrial Design, State University of Rio de Janeiro (ESDI/UERJ), have invested in alternative ways to live in difference, in response to the administrative and financial crisis that affects not only ESDI and UERJ, but all institutions of public education in the country. Accompanying the Esdian experiments with Donna Haraway and Tim Ingold, this essay suggests that the crisis affecting universities can be re-envisioned as an opportunity for resurgence and the collective production of spaces for living together in difference. Mobilizing notions such as correspondence and interstitial differentiation (Ingold), response-ability and sympoiesis (Haraway), it evokes the termites that occupied the campus of the school, the ex-Governor Luiz Fernando de Souza (Pezão), and other strange miasmatic emanations that have become unfastened from the buried Lagoa do Boqueirão da Ajuda.

Keywords: correspondence; speculative fabulation; State University of Rio de Janeiro; Superior School of Industrial Design; sympoiesis.

Refazendo tudo: o encontro entre Pezão, os cupins e outras estranhas emanações miasmáticas em uma velha escola de desenho industrial

Resumo

Este ensaio de fabulação especulativa aborda o movimento “ESDI Aberta” (2016-2017), no qual alunos, ex-alunos, professores e funcionários da Escola Superior de Desenho Industrial da Universidade Estadual do Rio de Janeiro (ESDI/UERJ), investiram em formas alternativas de viver em diferença, em resposta à crise administrativa e financeira que afeta não só a ESDI e a UERJ, mas todas as instituições de ensino público do país. Acompanhando os experimentos esdianos com Donna Haraway e Tim Ingold, este ensaio sugere que a crise que vem afetando as universidades pode ser percebida como oportunidade para a ressurgência e a produção coletiva de espaços para o convívio em diferença. Mobilizando noções como correspondência e diferenciação intersticial (Ingold), habilidade de resposta e simpoiesis (Haraway), evoca os cupins que ocupavam o campus da escola, o ex-governador Luiz Fernando de Souza (Pezão), e outras estranhas emanações miasmáticas que se desprendem da soterrada Lagoa do Boqueirão da Ajuda.

Palavras-chave: correspondência; fabulação especulativa; Universidade do Estado do Rio de Janeiro; Escola Superior de Desenho Industrial; simpoiesis.

Remaking everything: the clash between Bigfoot, the termites and other strange miasmatic emanations in an old industrial design school

Zoy Anastassakis

Avocado tree we will accept your act / we are also from the bush like the duck and the lion.
Gilberto Gil, 1975

Distracted we will win.
Paulo Leminski, 1983

Introduction

This essay in speculative fabulation (Haraway 2016) deals with the “ESDI Aberta” movement (2016-2017), in which students, alumni, professors, and employees of Escola Superior de Desenho Industrial, Universidade do Estado do Rio de Janeiro [Superior School of Industrial Design, State University of Rio de Janeiro] (ESDI/UERJ) experimented with alternative modes of living in difference in the oldest industrial design school in Brazil. In response to the profound political and financial crisis that drastically affects not just ESDI and UERJ, but all institutions of public education and, more generally, life in the country, ESDI’s community rehearsed forms of resilience and openness that came along with the cultivation of caring and community among those who inhabit that scholarly environment.

Following these Esdian experiments in the company of Donna Haraway and Tim Ingold, this essay seeks to contribute to the debate on the crisis affecting universities, suggesting that it can be reformulated as an opportunity for resurgence and the collective production of environments in which to cohabit in difference. Walking through the school, we will thus come into contact with the collaborative creative practices that have emerged in response to the precariousness of the UERJ stemming from its neglect by the government of the State of Rio de Janeiro. We will mobilize notions of correspondence and interstitial differentiation (Ingold), response-ability and sympoiesis (Haraway), through them evoking the termites that seized ESDI’s campus, the State Governor, Luiz Fernando de Souza, known as Pezão (‘Bigfoot’), and other strange miasmatic emanations that are detached from the buried Lagoa do Boqueirão da Ajuda.

Let me take you by the hand. Hey, honey, take a walk on the wild side!

Plunging into the text ‘On human correspondence’, I hear Tim Ingold’s call: ‘Let me take you by the hand. [...] Hand and mind, after all, are inseparable, so, when I join my hand with yours, our minds also meet’ (Ingold 2016: 09). I accept. Here we go. Hand in hand - he continues - our lives become linked, drawing together a zone of interpenetration, just like, as Marcel Mauss suggests, the one that involves beings in the midst of the deep-sea currents. And he proposes: ‘What if we were to join with Mauss and take the octopus and the anemone as exemplars for thinking about the dynamics of social life?’ (Ingold 2016: 10).

With this unusual invitation, which evokes the Maussian chorus of the ‘Essay on the Gift’, Ingold takes my hand and leads me to observe social phenomena *à la Mauss*: come, let us see human beings and groups in movement. Inhabiting a fluid medium, they behave in the same way as the tentacular beings from the deep sea. ‘Thus hanging on to one another, beings strive to resist the current that would otherwise sweep them asunder, but in the midst of which they are nevertheless endlessly generated. That’s what happens when I take you by the hand’ (Ingold 2016: 09).

Lulled by this ocean wave blown by Ingold and Mauss, I allow myself to be taken on an underwater tour where I end up finding strange critters that, just like the octopuses and the anemones invoked by my travelling companions, get mixed up with one another in the sandy bottom of the sea. Joining them, I suddenly come face to face with the astonishing fluidity of social life. After all, we are warned by Mauss, revisited by Ingold (recalling Mauss), that if we set out to see things as they “really” are, what we see, then, are beings intertwined with one another in movement, as octopuses and anemones in the sea. Getting closer and intermingling their tentacles, these critters bind into a meshwork that becomes able to respond to the challenges of the ocean depths, the earth, and the sky.

Taking me by the hand, Ingold invites me to join Mauss, the anemones and the octopuses in the sea. Ingold invites me to think with lines:

To describe the meshwork is to start from the premise that every living being is a line or, better, a bundle of lines. How, then, should we describe the interpenetration of lifelines in the mesh of social life? One possible way would be to think in terms of knots (Ingold 2015: 13-16). A knot is formed when a strand such as of string or yarn is interlaced with itself or another strand and tightened. I suggest that in a world where things are continually coming into being through processes of growth and movement – that is, in a world of life – knotting is the fundamental principle of coherence. It is the way in which contrary forces of tension and friction, as in pulling tight, are generative of forms (Ingold 2016: 10).

In reply to this invitation, I propose a voyage to the city where I live, in the Southeast region of Brazil. Thus, we leave the Northern Sea towards the lower half of the Equator. However, due to a stronger current that insists on leading us astray, instead of taking the shortest route, southbound across the Atlantic, we are mysteriously taken up.

Crossing the Bering Strait, we are lured to the coast of California, where our tentacles mesh with those of Donna Haraway. Creating an unexpected meshwork, we descend the Pacific Ocean, circumventing the American continent, until we return to the Atlantic again, this time in the Southern Hemisphere. Finally, after a lengthy circumnavigation of the American continent, we reach the Brazilian coast, and dock in Rio de Janeiro. Upon entering the Guanabara Bay, we see the Museum of Modern Art, where, in the 1950s, artists, intellectuals, and politicians dreamed of building a school of industrial design. Exhausted after such a long journey, we decline to visit the museum, but advance a little further, to the marshy waters of the buried Lagoa do Boqueirão da Ajuda, where, in 1779, after an outbreak of influenza and fever that affected a large part of the population, the Viceroy of the State of Brazil, D. Luís de Vasconcelos, ordered a French-style public garden to be built.

As the first urbanized area of Rio de Janeiro, a manifesto for the Enlightenment’s concept of public health, the Passeio Público (‘Public Promenade’) was intended to found a new relationship between man and nature in the city. Its creators dreamed that the wild nature that had reigned over these lands, once a source of fear, would thenceforth be reinvested as a product of knowledge and planning. After all, even before the development of the microbial theory of disease in the second half of the XIX century, European medicine associated epidemics to the impurity of the air, the miasmas, originated by people and the exhalations of sick animals, of the swamp’s emanations and of decaying substances (Martins, Martins 2006). According to this theory, once the miasmas were detected by their bad odour, their propagation could be interrupted, and it would then be possible to avoid and prevent epidemics.

In its original Greek sense, the term *miasma* is related to impurity, stain. Corrupted, spoiled air. Or, as described by the physician Giovanni Maria Lancisi (1654-1720), the *miasma* was composed of certain harmful influences emanating from the swamps (*apud* Martins, Martins 2006). In the turn of the nineteenth century, in the midst of the crusade against the *miasmas* and for the purification of the environments, a strong concern for water quality arises. Boiling, use of chlorinated compounds, acidification and carbonization, and, at the limit, on an urban scale, landfills: these are some of the resources exploited for environmental sanitary control.

However, the waters of Lagoa do Boqueirão, which had once flowed into the sea, persist. With the summer rains, the Parque and Rua do Passeio which it opens on to, are still flooded by the muddy waters of the lagoon, which stubbornly insist on returning to their place. As they do so, they advance through the entrance of the campus where, in 1962, the Escola Superior de Desenho Industrial was installed, and where the story I will now tell you begins.

But the one who tells this story is not the same as she who took a dive into the Northern Sea. Upon returning to my city, emerging from the water in the centre of the muddy Boqueirão, I find myself metamorphosed into a strange and miasmatic creature, perhaps resembling a spider, an octopus, or a coral. My sticky tentacles do not cease to multiply and, in this movement, I tie myself not only to Donna Haraway, Tim Ingold, and Marcel Mauss. Alongside them, I wrap myself around other critters such as Jeanne Favret-Saada, Starhawk, Isabelle Stengers, Bruce Albert, Davi Kopenawa, Ailton Krenak, Ibã Huni Kuin, Stuart McLean and Carlos Castañeda. Confabulating with them, I revisit the school with its echoes of the thousand and one stories that, at one point or another, took place there. As a tentacular critter, I sense the presence of some of the chthonic beings that inhabit it. They emanate the *miasma* that reaches me, whispering stories of experimental futures. I dwell on them, to listen and to tell.

Seeking a little sun, I gather strength to rid myself of the muddy waters of the Boqueirão, and finally rest, before beginning our story. But, dazed in the midst of the confusion of tentacular thinking (Haraway 2016) that flows through me, I neglect that old preoccupation of trying to control mistakes (Viveiros de Castro 2004), and settle comfortably into the space of equivocation where I dwell lazily. This is certainly not the story of the history of a Brazilian industrial design school. Nor is it an account of how, in this strange place, urbanization, modernity, and industrialization became allies of the white men who settled there, creating colonies of exploitation. This is just an attempt to communicate, by difference, one version among innumerable versions that emanate abundantly from this place. It is another story, one which deals with *miasmas*, chthonic critters, tentacular thinking, metamorphoses, correspondences, entanglements, interstices, rehabilitations, resurgences, restarts, reinventions.

Walking hand in hand with Donna Haraway and Tim Ingold through an old industrial design school, we visit the termites that inhabit it

Back to the beginning, in the early 1960s, I invoke a young German who had just graduated with a degree in design, crossed the Atlantic and, like my companions and I, ended up in the same design school at Rua do Passeio, number 80. Fifty-seven years later, in a speech held in his honour during a ceremony at ESDI on July 2017, designer Karl Heinz Bergmiller commented: 'At ESDI, the trees tell the history. I went to plant them. I identify with them'. With this statement, the former student of the Hochschule für Gestaltung from Ulm mentions a dozen rubber trees (*Ficus elastica*) and tropical-almond trees (*Terminalia catappa*) found on the campus of the first higher-level school for industrial design in the country, ESDI, created by the government of the State of Rio de Janeiro (Guanabara State, at the time) in 1962.

Provisionally installed in an old complex of small military buildings located in the historical centre of the city, the school continues to operate in the same facilities to this day. When the area was being renovated so that the new school could be established, the trees had not yet been planted. Some alumni recalled that planting had taken place between the end of the 1960s and the beginning of the following decade, at the initiative of the then director, the engineer, urbanist, and feminist Carmen Portinho (1903-2001).

Today, the tops of these trees reach great heights, and spread out producing shade over much of the campus. Their aerial roots rediscover the soil, forming auxiliary trunks. Underneath the earth, they create a meshwork that unfolds throughout the subsoil, pushing against the houses and their walls. One of these roots even climbed the roof of a neighbouring building, invading its water reservoir. In treading this path, it caused cracks to appear in the floor of the auditorium where the tribute to Professor Bergmiller was held, as were many other classes and conferences by people like Vilém Flusser and Umberto Eco.

It is known that the pollination of the *Ficus* depends on a specific wasp that has developed in a long process of exchange with this plant. More than simple interactions among distinct living beings, exchanges such as these tell us of what Donna Haraway calls symbiogenesis, or sympoiesis – ‘making-with’ (Haraway 2016: 5). Through these terms, she discusses processes that unfold through long periods of intimacy among strangers, ‘practices of critter becoming-with each other at every node of intra-action in earth history’ (Haraway, 2016: 60). Thus, according to her, these symbiotic agencings are more like entanglements than entities. Considering this interpretation of the exchange processes between beings of distinct species, symbiosis is not a mere synonym for mutually beneficial relationships, since the partners do not predate the entanglements. They are beings-in-meeting and, therefore, are consequences of these entanglements.

Recalling Bronislaw Malinowski, who, like Haraway, described social life as a long conversation, Ingold argues that ‘there is no reason for such conversations to be limited to humans, or even to living things. Nor need humans to be at the center of it’ (Ingold 2017: 32). Taking into account their arguments, one must then consider that ‘the collaborations among differently situated people - and peoples - are as crucial as, and enabled by those between the human and animals’ (Ingold 2017: 16).

But how does one learn to listen to the wisdom of these other inhabitants of the world? Thinking about this, Ingold relates the notions of correspondence and sustainability.

The problem in our relations with the natural world, then, is that we have forgotten how to correspond with the beings and things of which it is comprised. We have been so concerned with the interaction between ourselves and others that we have failed to notice how both we and they go along together in the current of time. This, surely, is what sustainability means: not the perpetuation of a completed form or stable state but the capacity of keep going, to carry on, to endure. If interaction is about othering, then correspondence is about togetherness. It is about the ways along which lives, in their perpetual unfolding and becoming, answer to one another. This shift from interaction to correspondence entails a fundamental reorientation, from the between-ness of beings and things to their in-between-ness (Ingold 2017: 41).

Taking seriously Karl Heinz Bergmiller’s speech and his statement of sympathy (Ingold 2016: 13) toward the trees planted by him and Carmen Portinho at ESDI, I thus propose to move closer to this old school of industrial design through the account of these and some other strange sympoietic relations that I was able to perceive between 2016 and 2017. At the time, the school and the university to which it belongs were seriously threatened as a result of a political, financial and institutional crisis which had been affecting not only the State of Rio de Janeiro, but Brazil as a whole.

Interweaving the arguments of Ingold and Haraway, I then embark on a narrative essay that intends to be speculative and imaginative while still documentative and realistic. In Haraway’s terms (2016), I compose a speculative fabulation, which emerges as I try to follow the tracks of a series of multi-species encounters

taking place at ESDI. This narrative experiment is organized around some of the knots formed by these strange encounters. Observing them, following the lines that conform them, is, then, my aspiration.

In framing the notion of correspondence, it is Tim Ingold, once again, who invites us to think in terms of knots:

A knot is formed when a strand such as of string or yarn is interlaced with itself or another strand and tightened. I suggest that in a world where things are continually coming into being through processes of growth and movement - that is, in a world of life - knotting is a fundamental principle of coherence. It is the way in which contrary forces of tension and friction, as in pulling tight, are generative of forms (Ingold 2016: 10).

To activate such a state of attention, one must be present. Watch and listen. In Ingold's terms, this means to care. To care for others. According to him, this attentionality is what allows us to perceive the textures shaped by the entanglement processes between alteration and conjunction. With Haraway once more, we cannot fail to consider the dangers involved in this kind of listening: "The risk of listening to a story is that it can obligate us in ramifying webs that cannot be known in advance of venturing among their myriad threads" (Haraway 2016: 132).

According to this author, escaping this trap requires paying attention to the situational and contingent aspects of each of these stories. In order to do so, however, it is not enough to be attentive and to listen. By listening and paying attention we are also invited to tell stories. Situated stories that speak of risky cooperation (Haraway 2016: 14), but that are also speculative fabulations like those sympoietic processes in which multispecies companions engaged in combining their lives give birth to unexpected collaborations and combinations (Haraway, 2016: 04). Comprised of many versions, "These are stories in which multispecies players, who are enmeshed in partial and flawed translations across difference, redo ways of living and dying attuned to still possible finite flourishing, still possible recuperation" (Haraway 2016: 10).

Playing thus with textures, meshworks, knots and lines, science fictions, speculative fabulations and string figures, Haraway and Ingold invite us to tell stories that simultaneously involve processes of remembering and imagination (Ingold 2016: 21). In Haraway's terms, stories that speak of making strange kinship (Haraway 2016: 02), meaning 'something different/more than entities linked by ancestry or genealogy' (Haraway 2016: 03). Ingold, in his terms, challenges us to 'find a different way of writing, (...) to experiment: try things and see what happens' (Ingold 2017: 81). Thinking with them, a question arises: how to tell stories such as these, full of in-between-ness (Ingold 2015: 147)? Let's see.

At ESDI, the *Ficus* do not only establish symbiotic relationships with pollinating wasps, but also, and quite intensely, with the termites that have taken over the campus through the years. Over the walls, made of brick and concrete - materials that they attack without necessarily ingesting - these chewing social insects have built channels and roads, weaving a complex meshwork that takes them to their true food: cellulose.

Living with microorganisms capable of digesting cellulose and other organic compounds, termites can literally live inside the food: be it in the subsoil, in the trees, windows, doors, or on the worktops where the students develop their exercises. This companionship between termites, bacteria, and protozoans, along with their great abundance in ecosystems, enable these insects to act as super-decomposers (Wikitermes 2017). At the same time as they speed up the decomposition of organic materials, they help to aerate the soil.

After the termite occupation of the school, when doors, windows and table tops that at first glance appeared intact were touched and analysed more closely, they turned out to have been remade from the inside. Instead of wood, there was a new material produced through trophallaxis, a procedure to recover those microorganisms with which termites develop companionships that sustain their way of life.

Trophallaxis is understood as the feeding process whereby one individual makes available to another what is inside its own digestive tract, either orally or anally. Feeding on material regurgitated or excreted by other members of the colony, termites nourish themselves by recovering the bacteria and protozoa that are able to digest the cellulosic materials. For termites, participation in this collective feeding system is fundamental, since during the exchange of the exoskeleton (*ecside*) – the membrane in which the symbiotic microorganisms are housed – is lost, which causes the reduction of these multispecies exchanges, a condition for the feeding diversity resulting from this intricate symbiotic relationship.

However, more than mere nutritional exchange, trophallaxis must also be considered a form of communication, which results from the transmission of chemical messages, drop by drop. When the mandibles of two termites come into contact, a small drop is released from the mouth of one of them toward the other. ‘A fraction of a second and the message has already been given’ (Tinoco 2016). In addition to trophallaxis, there is another typical communicative behaviour among the termites, grooming, in which individuals lick each other. This is also a mechanism for eliminating microorganisms and foreign particles that can cause illness among members of the colony.

But the specificity of the termite’s lifestyle does not end there. These critters are not just vegetarians, they are also cannibals (Fontes 2014). After all, they consume the tegumentary remains of their *ecside*s, and may also cannibalize individuals that are traumatized, weakened, or those who deviate from the population standard. Such voracity for animal matter also results in the consumption of small invaders, who enter the nest and end up being killed.

Their nests, constructed with a mixture of soil, faeces, saliva, and wood particles (Castro Júnior 2002), may contain hundreds to thousands of individuals. In them, many other animals can also be found, including different kinds of termites, the *inquilines*. There are *termitophiles*, animals living with termites inside the galleries, and *termitarophiles*, which only use termites’ nests without associating with their inhabitants, including beetles, spiders, lizards, rats, birds etc.

Among all these companion species, it is worth highlighting the protozoans that live inside the termite’s intestine, which form very close symbiotic relationships with different types of bacteria. They don’t just help termites digest cellulose. Without them, the termites could not survive, since their lives are mutually constituted through these meetings and entanglements that shapes them to be dynamic multi-partnered entities (Haraway 2016: 64) ‘that hold together, develop, communicate, and form layered tissues like animals do’ (Haraway 2016: 65).

Following Lynn Margulis, Haraway proposes that we follow the symbiogenetic models shaped by these knots or symbiotic groups, the *holobionts* (Haraway 2016: 62). In her view, we can formulate models that allow us to follow what really matters, namely the relationalities that abound in the midst of the movements of formation of complex ecosystems, the *holobiomes*.

What makes this proposal so fruitful for reading the situation in ESDI is that by emphasizing the relational aspects of social life, Haraway and Ingold invite us to observe not only what we believe we know – things as we understand them to be – but also the intervals wherein the unsuspected sympoietic practices respond skilfully to the challenges presented to them for living in a damaged planet (Haraway 2016: 67). Entangled, we become able to stay with the trouble, committed not to great ends and new beginnings, but to ‘partial healing, modest rehabilitation, and still-possible resurgence in hard times’ (Haraway 2016: 71).

With Ingold and Haraway, we can speculate on the partial connections (Strathern 1991) that abound in the continual encounters of all these companion species. With that, we can consider the issues that matter, which are not limited to the way animals stay together, but rather deal with how they craft architectures and spaces that stimulate the astonishing processes of morphogenesis (Haraway 2016: 66).

Beyond a mere interest in the social life of trees, termites and their companions, with this story I propose to think what they effectively do while living with us, humans, in ESDI. And, moreover, what they propose to us with their presence, and in return, how we – professors, students and employees – correspond (Ingold 2015, 2016, 2017) to them and to the architectural symbioses they devise, as we continue living our school life.

This raises the following questions: what does our awareness of their presence, and subsequent efforts to prevent them from continuing to devour the school, tell us about who we are and what we may become, as well as about the ways in which we rehearse responding to the crisis that has been affecting us in ESDI, UERJ and, in broader terms, public universities in Brazil? What does this awareness lead us to perceive about this old industrial design school and the ways in which it has been responding to the time and care given to it by those who have been and have passed through there over the past 55 years? In what way do these responsibilities (Haraway 2016; Ingold 2016, 2018) rehearsed in ESDI suggest new ways of being and making a school?

These issues matter because a university is not only made up of schools, colleges, institutes, and departments, where students, professors, and employees live together, but also of cement, wood, metals, doors, windows, roofs, tables, chairs, computers, wires, tubes, water, electricity, earth, trees, grass, and – in the case of ESDI – mites, wasps, mosquitoes, spiders, centipedes, dogs, cats, termites and all the microorganisms that share life with them.

So, with Ingold and Haraway, it is possible to think of the school as a holobiome, composed of a series of knottings and joinings that form a meshwork, whose constituent lines are drawn by dynamic multi-partnered entities (Haraway 2016: 64). In this sense, the school is a place that is in the world at the same time that it makes worlds, and it is therefore never finished, defined, closed. On the contrary, it is an environment in continuous growth that is perpetually transformed amidst the movements of its inhabitants, living together in difference and in co-living.

Thinking about the presence of termites and trees beyond the troubles they pose in terms of maintaining the buildings that make up the campus of this old school is not the aim of this essay. To my understanding, it is possible to speculate, along with the trees, termites and their companions, on other relationships that demanded a capacity for sudden response in ESDI. For example, another knot was created by the entanglement of the political and financial crisis in the State of Rio de Janeiro and the maintenance of academic activities in UERJ and also there, in ESDI.

Following a clue from Marilyn Strathern, taken up by Haraway, that points to anthropology as the knowledge practice that studies relations with relations, putting other relations at risk (Strathern 1991 *apud* Haraway 2016: 11), I now propose a rapprochement with some other rolls, knottings and joinings, formed in the midst of the responses of professors, employees, and students of ESDI to political-administrative disturbances between 2016 and 2017.

Crouching down to follow Big Foot's tracks, we meet some other chthonic critters that live in this place

In March 2016, I became the director of ESDI alongside Professor Marcos Martins. In UERJ, deans and school and institute directors are elected directly in a process that involves students, professors and staff. During ESDI's electoral period at the end of 2015, no tickets announced their candidacy to dispute the direction of the school. In response to this silence, the then-director wrote a letter to the professors summoning them to a meeting, urging them to consider the possibility of forming a ticket.

A few years earlier, the director had set up a task force to revise the curriculum of the undergraduate course in industrial design. This group was composed of the new teachers who arrived at ESDI through public tender to occupy the vacancies created by the retirement of some older teachers of the school. In 2011,

after defending my doctoral thesis in anthropology (Anastassakis 2011, 2014), I applied for one of these vacancies and was approved as an assistant professor in the field of design, society and history. As soon as I started to teach, I was invited, along with some of the other new teachers, to participate in the group that would be responsible for the elaboration of the new curriculum.

Concerned with the completion of this process, Professor Marcos Martins, who had also recently been hired, and I finally decided to run on a ticket for the direction of the school. However, this decision was only taken after a proposal I presented at that meeting: I called on the teachers to donate hours of work for school administration, in addition to regular teaching and research hours, with no extra gratification. At that moment, it seemed to me that no one intended to run the school because that task sounded extremely heavy and lonely. I imagined, then, that if there was a distribution of work and responsibility, there might be some proposal for an application. I appealed to the fellow teachers present at the meeting. However, no one applied. At the end of the meeting, it seemed to Marcos and I that if we did not submit our own application, all our ongoing effort toward the elaboration and implementation of a new curriculum would be threatened. We decided to apply.

Once elected, we began a series of attempts to decentralize the administration. We delegated to a third professor the management of funds that the university passes on to the school for small quotidian costs. We redistributed the tasks among the office staff and requested from the central administration an employee to oversee campus administration. We invited a professor to oversee the facilities and to monitor the infrastructure that aids academic activities. Finally, we set up ESDI Lab, a students' cabinet that began to collaborate with the directors, dealing with issues on two fronts: redesigning of the school's communication: visual ID, institutional letterhead, wayfinding and website; 2) occupying spaces: mapping resources and activities specific to each part of the school, proposing and carrying out changes to this organization.

Initially composed of eight undergraduate students, this laboratory contributed in a vital way to the installation of a new environment within the school, since its members began to speak and act with and for the directors, amplifying, horizontalizing, and decentralizing relations with regular administration, but also, and above all, gathering proposals, rehearsing and putting into practice new and old ideas and projects. We realized that, if multiplied, this wave of care could create a kind of force-field (Ingold 2011) capable of reactivating the sense of community in the school in other, unsuspected ways. This became even more important in the face of the enormous political, financial, and institutional crisis that already affected us.

One of the first activities after we assumed our posts was an inspection of ESDI's campus, which I had not visited attentively since my student days in the 1990s. I was very impressed with the deterioration of the facilities, which appeared to be overwhelmed by the action of time, plants, and termites that had spread everywhere. Apart from my astonishment, we understood on that visit that it would first be necessary to invest in pruning the trees and containing the termites. We looked for the municipal body responsible for the parks and gardens, requesting a technical report on the condition of the trees on the ESDI campus. Some professors argued for the total elimination of the trees situated next to the houses that hold the school's main facilities. But my view was that we should prune only what was necessary, paying particular attention to the risks of falling branches on roofs and trees that were already devoured by termites. Fortunately, the report recommended minimum pruning, condemning only two avocado trees that were hollow, devoured by termites. One of them threatened to fall on a wall that separated ESDI from the music school of another university next to us.

Regarding termites, we contacted a specialist in isopterology, a retired professor at a public university, who provided fumigation services. During campus visits, we were introduced to the silent and invisible work performed by these creatures, which had transformed the interior of doors and windows into other unsuspected things. The termites seemed to be careful not to gnaw outer surfaces, devouring interiors while adding a new

material composed of saliva and excrement. Thus it was still possible to find doors, windows, and table tops in the classrooms. However, inside, they were no longer made of wood. In its place, this strange material was produced by the collaborative effort of termites and their intestinal companions.

So, what still seemed to be a school was already the same and something else. Another school, seemingly hollow, but remade by a new materiality, had been slowly built by the invisible and silent work of our termite companions. If, as administrators, we had to counteract the action of these critters and invest in ways of restoring what they had damaged, our contact with this other architecture, produced by them and their companions, would also launch us into a series of questions related to the novelty that presented itself by that (dis)architecture. What other new stories did this symbiotic architecture invite us to build now?

If, as Bergmiller reminds us, in ESDI the trees tell the history, then we must consider what stories we are willing to hear from them. Moreover, what stories do we decide to honour: the one with which this founder-professor, to whom we paid homages twice in 2017, identifies? Or would it be Director Carmen Portinho, the engineer, urban planner and feminist activist, who planted the trees with students in the 1960s? Would it be the one told by the tentacular roots of the trees that venture through the city in search of water, or the termites' story of living with bacteria and protozoa that develop imbricated ways of life and remake materialities with them? Or the ones experienced by more than a thousand designers trained at ESDI? Would it be the story of 45% of students who entered the university through a state policy that reserves vacancies for students from public schools, blacks, people with disabilities, and members of ethnic minorities, as well as the children of civilian police, military, military firefighters, and of security inspectors and penitentiary administration, dead or disabled in service – a policy of which the UERJ is a pioneer in the country? Or, perhaps, the story forged by Governor Luiz Fernando de Souza, better known as Bigfoot, head of the administration of the State of Rio de Janeiro from 2014 to 2018?

After a moment of euphoria following the announcement of the discovery of oil reserves in the pre-salt layer of the ocean floor in the Rio de Janeiro region, the state plunged into a deep financial-administrative crisis. UERJ, a public university linked to the state administration, of which ESDI is part, was affected in an intense and unprecedented way. The state government, which is responsible for the transfer of funds for maintenance and academic activities in UERJ, defaulted on salary and scholarship payments, as well as on funding for infrastructure maintenance and regular teaching and research activities. From early 2016, delays and suspensions of payments became recurrent and cumulative. But even in 2015, the government had neglected to uphold contracts with companies that provide outsourced services in security, food, cleaning, maintenance, and garbage collection.

This resulted in a series of strikes by teachers, students, and staff, as well as the temporary suspension of activities after decisions by the university's central administration, due to lack of water, power, maintenance, and services. In the midst of this situation, cases of illness, stress, depression, and other physical-emotional complications multiplied. The scale of debt, firings and requests for the retirement of teachers and employees, grew. The number of applications for student transfers to other universities increased and the search for undergraduate and graduate courses declined.

In ESDI, the crisis immediately caused a reaction in students, alumni, teachers, and volunteers who mobilized to defend its survival. In 2017, this movement was named “ESDI Aberta”, an expression that was launched in an event that marked the inauguration of new means of access and communication for the school. Professor Luiz Pereira de Souza, alumni and former director of ESDI, comments: ‘we had a big meeting to defend the school in which all generations that had/have been there were present. It became clear that even though conservative and backwards thinking insists on demonizing public, secular, and free education, we will prevail over it. They will pass and our ideas will remain’ (statement for the author).

Resisting institutional and financial precariousness, keeping the school open became a continual exercise in shared management between professors, students, and staff, in which we rehearsed survival during the crisis. In addition to efforts towards decentralization, distribution, and horizontalization in the leadership and administration of the school, several experiments emerged as alternative ways of opening up and maintaining activities. One group of students opened a plot of land for a community vegetable garden where, along with their horticultural activities, they started to develop products and research with organic materials. Another group occupied the graphics lab that had been deactivated due to the absence of technicians, creating “Colaboratório”, an experiment involving artisanal printing, shared management, machine hacking, book-making, and other graphic arts. Professors, students and alumni came together to offer courses, reserving 50% of the vacancies for Esdi students and whole days of classes and workshops open to the general public with theme defined with the students. Yet another group of students came together to enable the payment of the monthly salaries of the groundskeeper, Mr. Carlinhos, who was fired from one of the companies that terminated their contract with the university. These are some examples of actions taken in the effort to survive and open the school up at that time.

Along with these initiatives, organized in ESDI, the university also created means for community management during the crisis. With increasing delays in wage payments, scholarships, and funding, the central administration mobilized the unit directors’ forum, which met weekly. This was not so much for routine discussions of how the university could respond to the government, but above all so that everyone could keep abreast of the situation in each of the academic units and the various campuses where they are installed.

In these long and repetitive meetings, each director brought news of the operating conditions in his/her unit. The rector asked us to present reports about the conditions for teaching, research and administration activities, but also to report on community assessments which resulted from periodic meetings between teachers, students and staff in each academic unit, so that the whole university could be aware not only of the working conditions, but, above all, of the “pulse” of the community. The intense toing and froing of these countless meetings, where most of the time there was nothing to be deliberated, was causing anguish in many of us. However, the effort to maintain communication amid an increasingly complicated crisis was fundamental to the activation of a strong sense of community in UERJ and also in ESDI.

This tense process intensified in the first days of 2017, when the central administration declared that it was impossible to resume classes due to a lack of resources and basic services. This decision gave rise to a wide-ranging debate across academic departments on possible alternatives, in the hope of avoiding a complete shutdown of activities at the university.

As we debated what to do at one of these meetings at ESDI, an office clerk asked to speak and argued that we should lock the school and wait for it to fall apart. In his view, this was the only way to make ‘public opinion’ aware of the crisis that was affecting us. To this a computer technician pondered: ‘If we close the school and let it fall, it will be left to us, and only us, to remove the debris and clear the ground to resume activities, even more precariously’.

At that moment, it seemed as if no one cared about the university. We struggled to get attention. Many argued that the best way to deal with the crisis was to galvanize ‘civil society’, seeking support from ‘public opinion’. We pondered the gains and losses involved in closing or opening the university. The debate was constant. Despite the great tension that surrounded it, the environment was open to discussion. Most of the time no decision-making or voting was involved, which ended up establishing an atmosphere of motivation and engagement among those who, like the computer technician, were willing to keep the school and the university open and operating, even in an improvised and partial way.

In the midst of these meetings, we decided, at ESDI, that it would be important to mobilize not only the current community, but also the alumni, reactivating the association of friends of the school. We sought to extend the care, make the crisis visible, and to celebrate, with a big party, the opening of the new access gate to the campus and a website, both carried out through partnerships established in 2016. The event, called 'ESDI Alberta #UERJ resiste' was scheduled for February 12, 2017.

The movement quickly expanded when former student, composer and writer Nelson Motta, a columnist for a major newspaper, published an article denouncing the threat of closure. A meeting was then organized with the presence of many alumni, who gathered in a task force to raise donations to fund urgent infrastructure costs – and to organize the party. Thus, a new group became responsible for gathering donations and organizing the event. We then had periodic meetings not only to deal with the crisis, but also to prepare for the celebration.

But why celebrate? We talked a lot about this, and we ultimately understood that, faced with instability, in which any kind of articulation to escape the precariousness of the university seemed impossible, the best we could do would be to affirm our presence in that place, to remind ourselves and others that ESDI existed and would continue to exist. To celebrate, and not only to remember, what shapes us as a community, but also to entice and prolong into the present what would vanish without the active reciprocity of partners (Haraway 2016: 25).

Two concrete reasons animated the party: opening a new gateway to the campus and launching a new website, both projects made possible through partnerships with students, alumni, and public and private institutions. The event entailed art and design workshops, collective planting, graffiti, a charity bazaar, food and drinks fair, 'dis-conferences', an homage to Prof. Bergmiller, a lecture by Prof. Pedro Luiz Pereira de Souza, the inauguration of the new entrance, website and visual identity, in addition to a concert bringing together various artists, and, to finish off, a Carnival parade. Over 1,500 people passed through ESDI that day, and there was significant repercussion in local media and social networks. Different generations of alumni reunited and the wave of community care spread beyond the party. In the weeks that followed, many former students returned to school, proposed partnerships, and engaged in various activities. Several proposals to ensure the school would stay open were thus rehearsed, and many were tested throughout 2017.

We were aware that none of this would 'solve' our main problem, nor would it guarantee that the school would stay open. Nor were we expecting that ESDI could become anything other than a school. We did not seek to be something else, but rather for ESDI to remain an industrial design school of its time. If it was a time of ruins, how do we proceed? How would we correspond to a time of precariousness, in resurgence?

On March 14th, a group of about forty students decided to occupy the school and to live in its quarters. This occupation, which they called "OcUPA ESDI", also involved students from the group that had been working with the directors. In the middle of the afternoon, they entered the director's office, where some professors were gathered, and informed them of the beginning of the occupation. Later on, that evening, in a declaration published on social media and affixed in the classrooms, they stated what motivated them:

We, a group of ESDI students, decided to start an occupation movement today, 03/14/2017. Due to the systematic delays and non-payment of employees, scholarships and maintenance funds for UERJ's infrastructure, we agree with the position of the board of directors, which has declared that it is impossible to return to the regular functioning of the university. At the same time, emptying of the university puts at risk the very existence of these spaces. With the community fragmenting, seeking individual solutions, the sense of the collective good is lost. Given this scenario, we understand that an occupation is an alternative that can foster activities of creation and transmission of knowledge applied to this reality. This being the essence of the university, it is our true tool to reintegrate the community in defence of public and popular education (OcUPA ESDI 14/03/2017).

They began to spend the nights in one of the classrooms, and demanded a space to cook. We asked the university to authorize the installation of a stove in our facilities, and we communicated to the central administration the profound confidence that the directors had in the group. However, with this occupation, there was a significant change in the relationship between the directors and the group of students who, until then, had been collaborating with them. Without abandoning their posts, these students began to organize their own agenda and priorities with the other occupants, no longer as a group that only supported the directors. While they declared support for the positions of the directors of ESDI and the board of directors of UERJ, they also asserted their autonomy in the face of the established structure of the school administration. By creating a new instance of action and housing it in that place, they contributed immensely to the consolidation of another sense of community in the school, which was autonomously guided by the students.

Throughout the month of the occupation, they dedicated part of their time to the organization of routine, but also to mapping and cleaning spaces, as well as organizing classes, workshops and debates on design and the crisis. They also engaged collectively in design projects that generated income for the expenses of the occupation, such as food and cleaning. However, starting April 17th, when classes resumed, the occupation was demobilized. Nonetheless, the feeling that it sparked brought forward another important layer of life in the school. After all, with the occupation the students claimed the legitimacy of their sense of belonging to that place. Moreover, their right to live at the school on their own terms.

Some of the spaces activated or energized during the occupation continued to operate through collaborative management, even after it had ended. Two projects stand out, the 'Green Spaces' and 'Colaboratório', which were already organized according to principles of shared management of spaces and activities before the occupation, and which continued to exist, in the same terms; and the collaborative kitchen, assembled by the occupants, in which students, professors and staff began to cook and eat together, often in collective efforts. In these spaces, the occupation is ongoing.

According to Eduardo Viveiros de Castro, in a text entitled 'Os involuntários da pátria' ('the un-volunteers of the country'), 'belonging to the land, instead of being the owner of it, is what defines the indigenous. And, in this sense, many peoples and communities in Brazil, besides the Indigenous people, can say, because they feel this, that they are indigenous people much more than they are citizens' (Viveiros de Castro 2017: 05). According to this statement, indigenous people would include all those who are part of a community connected to a specific place, and who, with this, recognize themselves as belonging to the land, claiming their right to live in it.

Obviously, the students who occupied ESDI did not claim recognition as Indigenous people. However, they proclaimed the same double affirmation: belonging to the school and the right to remain there, above and beyond what is imposed on them by those who think that they have the right to regulate what can happen there. Like many Indigenous groups who claim the right to remember their belonging to a particular land, which, consequently, implies a claim to the right to live in it, the students who occupied ESDI allowed themselves to remember and thus to remind others that they were also part of that place.

Like the chthonic ones imagined by Haraway (2016: 2, 71), the students who occupied the school were reclaiming their belonging to the place. In doing so, they did not point to future possibilities of overcoming the crisis, or to some kind of restoration of a previous ideal, but, staying with the trouble, they simply affirmed their commitment 'to the more modest possibilities of partial recuperation and getting on together' (Haraway 2016: 10). After all, nothing would be solved or guaranteed with their occupation. Betting on risky co-makings (Haraway 2016: 14), they only hinted that in the midst of precariousness and uncertainty, it was possible to revolutionize, responding creatively to contingencies, in resurgence.

With this sympoietic attitude, which reconfigured the distribution of information and control over the school, they ended up demonstrating the sheer impossibility of delimiting power in the management of that institution and the situation it was in at that moment. After all, if nobody told us to close the university, there was also no one who could guarantee its operation. Everything was happening as if there was not even the possibility of deliberating on what to do. Moreover, if alternative means of securing that the school remain open could not be envisaged, much less could one plan for the future.

With this, the students' occupation at ESDI seemed to mean that we would only be fit to face what threatened us if we also became able to transform ourselves by means of strange and risky co-makings that could build effective new collectives. If we were to relearn how to conjugate worlds with partial connections, we could become capable of inventing pedagogical and technological ways of rendering each other capable of responding to problems novel to all of us (Haraway 2016: 18). The task was then of the same sort as that commented on by Haraway: 'learning to live and die well with each other in a thick present' (Haraway 2016: 1). Cultivating these 'arts for living on a damaged planet that demand sympoietic thinking and action' (Haraway 2016: 67), we can learn how to live in ruins and to build unexpected sympoietic architectures and places for living together with difference.

But these differences involved not only the chthonic critters I have evoked so far. We only bumped into them because we crouched down into the muddy waters of Boqueirão, examining some of Big Foot's tracks (Ginzburg 1983: 95). Making visible the passage of this strange and gigantic creature that has passed by, these muddy footprints led the way so that we could feel the miasmatic emanations of the lagoon once again, which never ceased to circle by, but to which we, little by little, have become insensible. Inebriated by the miasma that is always being expelled, we finally found these other worlds, where it is no longer possible to distinguish between critters, water, sky, and earth, or between past, present, and future. But this is only the beginning.

Staying with the trouble, we remake community and care. But this is just the beginning...

Settled on the soil that buried the Lagoa do Boqueirão, this small and old industrial design school was able to take the movement of openness and care to a threshold where activating the sense of community went hand in hand with revising the forms of organization and administration, as well as revising ways of teaching design. And, as if that wasn't enough, of revising what many believe lies at the 'core' of the practice of design, namely the notion of prediction.

These experiments, along with the sense of community that inspired them, may seem no more than mere improvisatory and inconsequential acts that serve only to circumstantially mitigate the effects of the crisis. However, just like the doors and windows remade by another materiality, they multiply, thereby creating, in fact, a new and other school. It is not new because it rejects or refuses the past, nor because it wishes to promote a remodelled futuristic self-image as part of a novel project, but rather the same new/other school that corresponds with what is happening here and now.

Thus, in ESDI, the ways in which we reacted to the crisis point not only to ways of reinventing the school; they also broaden the debate about the notion of the future, traditionally understood as a fundamental characteristic of design practice. After all, in the industrial rhetoric that informs this professional practice, things should first be idealized, then modelled, tested, fabricated, marketed, and ultimately consumed. According to this version, the industrial designers are to be those who devote themselves to the development of things as products for the industry. Planning today what would only come into circulation a little later, in a more or less near future. Designing would then have to do with ideas of prediction, prescription, foresight (Ingold, Gatt 2013).

As the crisis surprises us daily with new and unsuspected challenges, even more so after the Brazilian presidential election of 2018, the prediction supposedly intrinsic to the activity of design seems incompatible with the urgencies of these challenges and the scarcity of the resources available to meet them. Thus, the responses we rehearsed through continual experimentation seemed to indicate fundamental transformations in the temporal emphases that guide the practice of design, since, more than planning artefacts and means of communication envisioning an implementation in the future, it is necessary to take action and to respond in the present.

It seems, then, that industrial logic no longer serves us. If it was one of the last areas of knowledge to emerge from modern Western thought, believing, then, in great separations, this and that - creation, production, consumption, us and them - designers, consumers and users, maybe it's time to realize that this same modern project, to which many of us designers devote our faith, no longer fits us. Or is it that we no longer fit in? Have we ever fit in?

Speaking to designers, Bruno Latour (2008) invites us to abandon the dogmas of Promethean modernism, to consider rethinking the design profession in a post-Promethean era. Can we imagine Prometheus seizing fire in a cautious, prudent, careful manner? This other Prometheus, would he be a designer designing with caution? Drawing things together? Latour thus raises the question: "How can we draw together matters of concern, so as to offer to political dispute an overview, or at least a view, of the difficulties in which we are going to be entangled every time we are going to have to modify the practical details of our material existence?" (Latour 2008: 11).

Back to ESDI. In Haraway's terms, we could speak of a chthonic design, or the design of chthonic ones, which is no longer concerned with designing, but with the ability to respond, thus developing their own responsibilities in precarious times. A design that 'through this ongoing quest for displacement and change, strives to continually maintain experimentation' (Lenskjold, Olander, Halse 2015: 67), like what the researchers of the CoDesign Research Center (Code/KADK) propose with their notion of 'minor design activism' (2015: idem). By rehearsing other conversational dispositifs (Anastassakis, Szaniecki 2016), through open-ended experiments, this kind of design seeks to challenge prescriptive agendas and, above all, to reconfigure collective relations.

In assuming that we can only build because we dwell (Hallam, Ingold 2014: 04), this sympoietic way of thinking and designing does not solve any crisis, nor does it even propose alternative solutions. Reclaiming, it starts to recover the ability to live and die well with difference, and thus to correspond, honouring every experience 'we care for, as "not ours" but rather as "animating" us, making us witness to what is not us' (Stengers 2012). By reclaiming such a process of correspondence of agencing (Ingold 2017, 2018) it creates other presences, other modes of response, in resurgence.

Invoking these processes of 'becoming-with' (Haraway 2016: 25), understanding interpenetration as condition (Ingold 2016: 12), and retrieving the ways in which companion species (Haraway 2016: 29) get along together (Haraway 2016: 25-9), we find the clues that allow us to escape from a simplistic reading of the commoning process. After all, one must consider, as Ingold suggests, following the philosopher John Dewey's propositions, the practices involved in these processes. Thus, there can be no commoning without variation, nor variation without commoning. According to this perspective, commoning and variation are codependent.

This notion of 'variation-in-commoning', Ingold argues, 'anticipates the idea of interstitial differentiation' (Ingold 2016: 15). Paying attention to this interstitial arena of experience of the interval - midstream - where there are no subjects before actions, is what he proposes through the notion of 'correspondence of agencing' (Ingold 2016: 17). Following these correspondences (Ingold 2015, 2016, 2017), established through improbable collaborations (Haraway 2016: 136), and paying attention to both the knots and the intervals forged in them, Ingold and Haraway whisper in our ears stories told in otherwise muted registers, stories that require reading with all of our senses.

Among the curious outcomes of this process was the research carried out by Master's Degree student Pedro Themoteo and PhD students Diego Costa, Pedro Biz and Pedro Costa. Through their involvement with the school's garden, they began to manufacture artefacts along with the trees (Themoteo, Biz, Costa 2017) and to cultivate colonies of bacteria (*kombucha*) with which to develop materials and products, such as a wallet made from bacterial cellulose (Costa, Biz 2017). If, in ESDI, we design even with the trees and the bacteria, we should ask ourselves, more broadly, what can designing be in times of turbulence. With our tentacles gathered in an unusual meshwork, we reach the bottom of the Lagoa do Boqueirão and the water reservoir atop a building. Like trees, bacteria, protozoa, and termites, we create paths. New beginnings. A fresh start. Intermediations. Metamorphoses.

But for now, hand in hand with Bergmiller, Haraway, and Ingold, I set this story aside and settle idly under the shade of a tree by the muddy waters of the Boqueirão. It is now one of the avocado trees that we had to prune drastically because it had become hollow, devoured by our companions, the termites. Curiously, soon after the pruning, both trees began to bud with strength and vigour.

As I lie down against the tree, inebriated by the miasmatic emanations the lagoon insists on releasing, I end up falling asleep to the sound of the voice of one of my traveling companions, murmuring affectionately in my ears: 'How should we define it? What is tree and what is not-tree? Where does the tree end and the rest of the world begin? (...) Every tree is a knot, and the characteristic feature of all knots is that their constitutive threads are joined not end to end but in the middle, with trailing ends that go in search of other threads to bind with. Life is a meshwork' (Ingold 2017: 34-35). So, my dear avocado tree, let's take a walk on the wild side.

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Landscapes of memory: the first visual images of the Bororo of Central Brazil¹

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Abstract

The opportunity of exhibiting in a Bororo village in Central Brazil the film *Matto Grosso, the Great Brazilian Wilderness* (1931), and translating into Portuguese this typical travelogue and widely considered to be the first documentary with synchronized sound, led the authors to analyze visual images on the Bororo society made in the first decades of the XX century. The article focuses on how visual images – films and photographs – frequently show the intentions of the author and on the other hand may enhance memories and create a particular relationship with the past and history of a people.

Keywords: visual anthropology; Bororo Indians; Brazil; documentaries and travelogues; photographs; Penn Museum archive.

Paisagens da memória: as primeiras imagens visuais dos Bororo do Brasil Central

Resumo

A oportunidade de exibir o filme *Matto Grosso, the Great Brazilian Wilderness* (1931) numa aldeia Bororo no Brasil Central e traduzir para o português esse *travelogue*, considerado o primeiro documentário com som sincronizado, levou os autores a analisar imagens visuais da sociedade Bororo realizadas nas primeiras décadas do século XX. O foco do artigo é entender como as imagens visuais - filmes e fotografias - frequentemente mostram as intenções de seus autores e, por outro lado, podem ativar a memória e criar uma relação particular com o passado e a história de um povo.

Palavras-chave: antropologia visual; índios Bororo; Brasil; documentários e travelogues; fotografias; Acervo do Penn Museum

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Introduction

Cabinets of curiosity or “wonder rooms” (*wunderkammer*) emerged in the sixteenth century and included in their collections a great variety of artwork, artifacts and different kinds of objects from exotic people, shells, rock samples, botanical specimens, zoological species. It seems that we Westerners have always had a passion for collections even before museums became part of the landscape of big cities in Europe, around the seventeenth century, as public cultural institutions. “Wonder” is a continuing part of the museum experience; nowadays, “Museums as media produce more than coherent messages; they sometimes create magical, excessive effects” (Henning 2006 in Bouquet 2012:4). This is the case with the film *Matto Grosso, the Great Brazilian Wilderness*, a pioneering film project sponsored by the University of Pennsylvania Museum of Archaeology and Anthropology.

In 1931, in the midst of the Great Depression, E. R. Fenimore Johnson, son of the President of Victor Talking Machine - the great phonograph company and largest manufacturer of Victrolas in the United States, which was sold to RCA in 1929 - was persuaded to finance a zoological and ethnological expedition to Mato Grosso. This expedition was among the largest ever sent out from the US and employed at various times as many as thirty employees, equipped with the most modern appliances (an airplane, automobile, radio, etc.). This four-month expedition included an ethnographer, Vincenzo Petruccio and a film crew, whose work produced the film *Matto Grosso, the Great Brazilian Wilderness*. Its three directors Floyd Crosby (who had worked with Murnau and Flaherty on the 1931 film, *Tabu*), Clarke, and Newell created a 50-minute film that was a combination of science and adventure. It was also a pioneer in the use of synchronized sound in a documentary.² It has recently been restored by the University of Pennsylvania’s Penn Museum in the United States. A narration of the lengthy expedition, the film reaches its height with the arrival of the North Americans at a Bororo village where the natives welcome them with a hunt for the jaguar, which has enormous importance in Bororo funerary rituals. Additional footage was later edited to produce another 9-minute film entitled *The Hoax*.

The two films, *Matto Grosso, the Great Brazilian Wilderness* and *The Hoax*, are the property of the University of Pennsylvania’s Penn Museum (Pourshariati 2013) and were sent to the authors by Kate R. Pourshariati for translation of the parts spoken in Bororo. She also forwarded the yet unpublished article “The beginnings of sound in documentary film: *Matto Grosso* (1931)” in which she analyses the importance of this film, considered to be the first documentary with synchronized sound.³

2 Regarding sound, see, from an article titled *Talkie cameras taken*; “For the first time, according to Mr. Johnson, talking motion picture apparatus is being taken in to the field to record the voices of people and animals in their native locale. The expedition expects to bring back a permanent record for future use of ethnologists and naturalists”. See also: “Explorer shows sound film of primitive Brazil tribe” *Washington Post*, 1/31/33 p.7 “Presenting the first sound moving pictures ever taken of primitive people, Vincenzo Petruccio of the University Museum of Philadelphia last night took members of the Archaeological Society of Washington on a two hour trip into a lost world of Brazilian wilderness...Dances and other amusements of the primitive people were revealed, and one heard their language recorded on the sound film”. All these notes can be found in Pourshariati <https://www.penn.museum/sites/mattogrosso/>

3 The full article is found at www.penn.museum/sites/mattogrosso.

In July 2011, Edgar Teodoro da Cunha and Sylvia Caiuby Novaes took these films to Mato Grosso where they were shown to the Bororo in the village of Tadarimana, located in the São Lourenço River basin in an area delimited by the Vermelho River. It is the same region where the original films were shot. The two anthropologists were able to observe the natives' reactions first-hand, and at the behest of the Museum, the parts of the film spoken in Bororo were translated and subtitled in the field. It is to the memory of Beatriz Kiga, the translator of the film, that the authors dedicate this article.

Figure 01: Beatriz Kiga translates the film and Edgar Teodoro da Cunha subtitles it in the village of Tadarimana.



Photo Sylvia Caiuby Novaes.

According to the IBGE census (2010) the Bororo are 2.348 people and they currently reside in six indigenous lands demarcated in the state of Mato Grosso, in the central region of Brazil. Films about the Bororo had been made prior to the arrival of the above-mentioned North-American expedition at the beginning of the 1930s, and it is worth taking a look at these and other images from that period, as there are interesting resonances between them and the 1931 film. Most of these films present the same characteristics Henley pointed out when analyzing Haddon's and Spencer's films made toward the end of the nineteenth century: they were made with the sense "to preserve as many typical physical manifestations as possible of a soon-to-disappear 'primitive' stage in the evolution of human society" (Henley 2013:386). The same was the purpose of those people who decided to fund the expedition to Brazil: Horace Jayne, director of the Museum and Fenimore Johnson, the son of Victor Talking Machine Co. founder, E. R. Johnson. Besides being a way "to expand the Museum's holdings primarily by sponsoring expeditions, rather than purchasing objects from third-party vendors" (Attridge 2017:16), "the expedition should serve the purpose of documenting what he [Johnson] perceived to be the last vestiges of the primitive world. He saw the film as an opportunity to record a dying breed of indigeneity before it vanished forever, either through cultural assimilation or complete annihilation". (Idem:17). In a sense, these films and the museums behind them were quite similar to the cabinets of curiosity: they "engaged in aggressive collections practices in order to stockpile indigenous material culture before indigenous cultures, and with them the market for their artifacts - disappeared" (Attridge 2017:18).

Films and photographs, although produced at the same time, frequently show the intentions of the author and may present totally different realities. The purpose of this article is to analyze these first visual images of the Bororo of Central Brazil. Our goal is an analysis of how films may be understood considering the cinematic era in which they were shot, their relation to each other in the period and the different purposes for its production. On the other hand, films may enhance memories and create a particular relationship with the past and history of a people. An analysis of the film's narrative structure and development may throw light on why these images captivate viewers when exhibited by the time the film was produced and today, for the descendants of the people originally filmed.

Films as part of the State strategy to raise funds

The first of these was the 1917 film *Rituais e Festas Bororo* (Bororo Rituals and Feasts), by Luiz Thomaz Reis, a major in the army and cinematographer who was responsible for the Cinematography and Photography Section created by Cândido Mariano Rondon⁴ in 1912 as part of the Commission for Strategic Telegraph Lines that explored territory from Mato Grosso to the Amazon. Rondon was fully aware of the power of images, just as the Russian statesmen of his era were, and this and other films by Reis were shown in large urban areas in order to raise funds for the Rondon Commission's activities, which included gathering geological, botanical, zoological and ethnical data. The exhibition of these films was also seen as a way to validate the Commission's work for the Brazilian State in the interior of the country, principally in Mato Grosso (Tacca 2005). Moreover, the film was part of Rondon's strategy to demonstrate the importance of occupying the borderlands of Brazilian territory.

Theodore Roosevelt, former President of the United States, went on an expedition accompanied by Reis and Rondon between December 1913 and May 1914. Reis was also the director of the film *Expedição Roosevelt a Mato Grosso* (The Roosevelt Expedition to Mato Grosso), which according to Tacca (2001), appears to anticipate the 1931 film in that it also pairs the search for the exotic with an interest in the scientific, thus the images of the taxidermists who came along on the expedition to treat the specimens being collected for the American Museum of Natural History in New York.

Figure 2 e 3: Shots from the film “Bororo Rituals and Feasts”, by Luiz Thomaz Reis.



⁴ *Rituais e Festas Bororo* is available online at <https://www.youtube.com/watch?v=Ein6EKqMBtE&t=309s> For more on the film *Bororo Rituals and Feasts* as well as the work of Major Reis and the Rondon Commission, see Tacca 2002 and Caiuby Novaes, Cunha and Henley, 2017.

In 1918, immediately following the release of Reis's film on the Bororo, the National Geographic Society sponsored his trip to the United States where *Bororo Rituals and Feasts* was shown as part of their "Wilderness" program at Carnegie Hall in New York. It is important to point out that this film was unrealistic in its depiction of the types of contact with the outside world that the Bororo had had at that time. It would not have been a great strategy to show the Bororo wearing clothes or working in the fields if the main goal of the films was to raise funds for the Rondon Commission's activities. Therefore, Reis never mentioned the Salesian missionaries who had been working among the Bororo since the beginning of the 20th century in areas further to the north of Mato Grosso. In the film's version of Bororo rituals, the natives are portrayed as primitive savages with no apparent sign of contact with non-Indians, which does not correspond to historical reality. The term noble savages immediately come to mind. Reis's camera views the Bororo from bottom to top, from an epic perspective; the film depicts them as Indians living in isolation, when in fact their first contacts with European outsiders date back to the beginning of the 18th century. Reis's photography, however, reinforces the idea that the Bororo have not yet been made commonplace by the process of civilization.

Photographs as part of the missionaries' strategy to raise funds

While researching the Salesian archives in São Paulo, Sylvia Caiuby Novaes discovered a series of photographs of the Bororo which were taken by Catholic missionaries during the same time period when Reis's film was being shot. These photos, which acted as a calling card in their fund-raising efforts to demonstrate the benefits missionary work could bring to the Indians, show the Bororo taking part in a variety of activities: planting crops, working in the sawmills built by the missionaries, women (all wearing the same type of clothing) weaving on big looms under the supervision of a nun, couples engaged to be married receiving trousseaus from the mission, and a football team with the Brazilian flag in the background.

Figures 4, 5, 6, 7, 8: Arquivo Salesiano







Contrary to Reis's film, there are no primitives or savages in these pictures, whose aim is to portray the principal values that the Salesians tried to instill in the Bororo: work as a virtue, the importance of the nuclear family, the basis of Christian morality, and citizenship (Caiuby Novaes, 2006). As we said at the start, images, far more than texts, reveal the author and his intent.

Major Reis's film is consistent with the philosophy of the Rondon Commission, a project inspired by the doctrine of Positivism and initiated in Brazil shortly after the new Republic was established in 1889. It is important to have in mind that Rondon himself was of indigenous descent: his mother was of mixed Bororo and Terena descent and his father had Guaná ancestry. The institutional character of the group of films and photos produced by the Commission is irrefutable and is a reflection of how the latter's actions aimed to promote the taming of the interior of the country and its then little-known borders. Contrary to the Salesians, Rondon thought that "the process of incorporation of the indigenous people into the national society should take place without the need for them to pass through the process of being 'catechized' by missionaries" (Caiuby Novaes, Cunha and Henley, 2017:118).

However, the film *Bororo Rituals and Feasts* is in direct contrast to the treatment given to other indigenous groups who came into contact with the Commission, which always put forward ideas of assimilation and professed the desire to incorporate the Indian into civilization while going through the process of expanding Brazil's borders and occupying its territory. In this film, which represents Bororo society as being untouched and "savage", the objective is to relegate their existence to the past all the way back to the "origin of nationality," a typical feature of the Indian tradition found in Brazilian romantic literature.

As mentioned before, the Commission for Telegraph Lines produced visual material with the objective of documenting and divulging its activities, but it also aimed to procure alternative sources of funding for the latter through the circulation of films and photographs. One aspect of Reis's work that has received little attention is the initiatives he undertook to exhibit and circulate his films. Reis presented a report to the central office of the Commission in 1918, in which he listed the receipts from the exhibition of Commission films in several cities in Mato Grosso such as, Campo Grande, Aquidauana, Cuiabá, Cáceres and Corumbá, demonstrating that the amount nearly covered the costs of three of the expeditions already undertaken, including the expedition to the São Lourenço River, which resulted in the film on a Bororo funeral. Another interesting aspect of the Reis report is the contrast between what he says about his plans in relation to the production of *Bororo Rituals and Feasts* and the actual film that was made. In some ways his intentions anticipated what would only fully be realized in 1953 with Heinz Foerthman's film on the Bororo funeral in which he managed to bring together all of the images that Reis described so well in his report (Lasmar 2002; 2008). Even more important is the way Foerthman's film managed to approximate the tone and drama of Reis's original description of the ritual cycle (Cunha 2005).

Although the film is based on external shots and there is a preference for focusing on the ritual activity taking place in the village courtyard, Reis always has a camera nearby and when his heavy equipment and tripod permit, he uses long, generous takes as he visually closes in on various aspects of Bororo life.

The film sequences are captioned with title cards in a "picturesque" way, which is in contrast to the more sober, descriptive tone used in the report. The film does not follow the actual sequence of the funeral activities, but rather strives to engage viewers through the economy of its narrative and editing, which synthesizes actions and feelings. For example, at the end of the narrative there is a primary burial filmed as a culmination of the ritual sequence; it has been edited to look like the end of the funeral in an inversion which probably serves as a simplification of the theme of the film, as the very significant final title card suggests: "We had the sensation that we were back in the remote Age of Discovery."

In this film the image of the Bororo is one of the untouched savage, who comprises the roots of nationality. However, the concept of the Bororo as contributors to the origin of a collective identity is made possible only by removing them to a distant past, a time immemorial as is the case with all origin myth. The Indians, as they actually were, had been incorporated into “civilized” society and no longer fit the bill.⁵

For this reason, the Indians in *Bororo Rituals and Feasts* are portrayed as “savage”⁶ and “untouched,” maintaining the perception that they have had little contact with the outside world. We cannot discern any diacritical sign of change in the film: only a few of the Bororo are clothed, and the inclusion of any of the elements pertaining to the white man’s world is kept to a minimum.

For anyone who is aware of the history of contact with the Bororo people, it is easy to see the degree to which the above mentioned image has been fabricated. We need go no further than the comments made by Karl Von den Steinen at the end of the 19th century in his appraisal of the situation of the Bororo in the Military Colonies. The former were submitted to a complex system of tutelage and worse, were kept under control by the extensive use of alcohol. The photographic evidence produced by the Salesians during their evangelistic, civilizing missions with the Bororo, who lived in the region under the former’s influence, also speaks for itself.

Films as part of the exotic adventure

Another film, *Last of the Bororos*, by Aloha Baker (1931)⁷, an American adventuress, records an expedition to a Bororo village, most probably Pobore, which is located on the margins of the Vermelho River in the same region where Reis’s films were shot. The film documents several aspects of Bororo daily life and ritual. It was filmed during an extensive hunt for the British explorer, Colonel Fawcett, and his son, who had disappeared during an expedition in the area of the Xingu River tributaries in 1925. We first see Baker meeting Rondon in Rio de Janeiro; this is followed by her train journey from São Paulo to Corumbá and ends with her first contact with the Bororo in Pobore, where she is welcomed by a group of Bororo men in front of the *baimanagejeu*, or men’s house.

Figure 9 e 10: Shots from the film “Last of the Bororos”, by Aloha Baker.



⁵ This line of thought is developed in Cunha (2005).

⁶ A fine analysis of this film is in Tacca (2002).

⁷ More references to Baker’s film can be found in Cunha (2005, p.53 and 2016, p. 247). The director is also known as Aloha Wanderwell Baker; the film can be found with its original title modified to “The River of Death” and can be viewed online at the link <https://www.youtube.com/watch?v=EuV7Z17NPtM>

Baker, a filmmaker who made several adventure films, appears in many scenes interacting with Bororo, as, for example, when she dances in the courtyard with the men and women or when she appears alongside a child who is dancing in the yard or next to a couple inside a Bororo house. Her narration watching the music and dancers is “*I could hardly believe that the music scene before me could be part of this world.*” The film transmits an aura of enchantment with an exotic place, a remote place full of piranhas, capybaras, and the most diverse birds, such as macaws, parrots, as well as anteaters, deer, pumas and monkeys. Baker communicates with the Bororo only through sign language, but even so she manages to have a man light the fire by rubbing two pieces of wood together. Baker leaves the Bororo village saying “*We left this land of mystery, of beauty and of danger, untouched by civilization.*” The white woman seems truly attached to the Bororo she meets and she is portrayed as an intrepid explorer of new worlds using her hydroplane as means and method.

The early history of Bororo films shows that women were filming a lot, and in quite different ways, as we will see next.

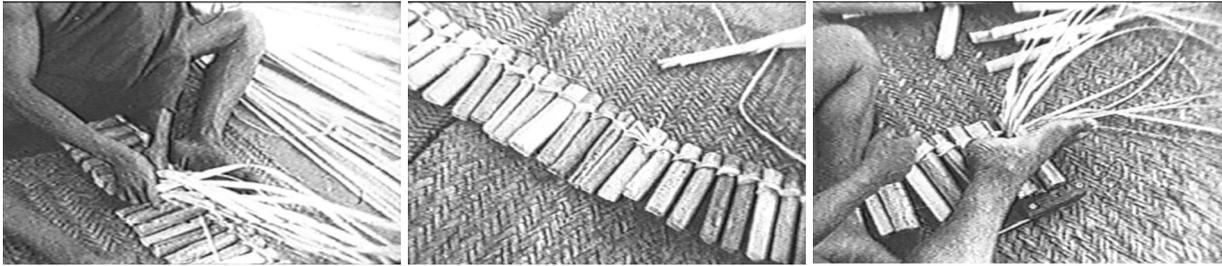
Film as part of ethnography

Dina and Claude Lévi-Strauss arrived in São Paulo, Brazil in the beginning of 1935, as members of the French Mission in the recently founded Faculdade de Filosofia, Ciências e Letras, at the University of São Paulo. Between November 1935 and March 1936, Dina Dreyfus Lévi-Strauss accompanied her husband on an expedition to contact the Kaduveo and the Bororo, both indigenous societies located in Mato Grosso, Central Brazil. The photographs and ethnographic films she made clearly highlight the scientific objectives of the expedition: *Aldeia de Nalike (Nalike Village I and II, shot among the Kaduveo)*; *Cerimônias Fúnebres entre os Índios Bororo (Funeral Ceremonies among the Bororo I and II)*; *A vida em uma aldeia Bororo (Life in a Bororo village)* and *Os trabalhos do gado no curral de uma fazenda no sul de Mato Grosso (Cattle work in a farm in southern Mato Grosso)*. Each film runs 8 minutes and they were all shot in 16mm.

This expedition was partly funded by the Departamento de Cultura da Cidade de São Paulo, which had a remarkable partnership with Anthropology (Peixoto 1998:94). More than anybody else, it was Mario de Andrade, director of this Department, who defined cultural policies for Brazil in a time the country was undergoing huge transformations. (Amoroso 2004:65). Soon after this first expedition of the Lévi-Strauss couple to the Kaduveo and Bororo, in April 1936, Mario de Andrade decided to honor Dina with the foundation of Sociedade de Etnografia e Folclore (Society for Ethnography and Folklore). The films that resulted from this expedition should be understood in the context of the Course on Ethnography that Dina offered to members of the Society for Ethnography and Folklore. Her course is an answer to the complaints of Mario de Andrade, about the absence of scientific approach in the collection of data in ethnographic studies. Their goal was to ground anthropology in the systematic and comprehensive collection of field data and at the same time to create an archive of the diversity of Brazilian culture as desired by Mario de Andrade.

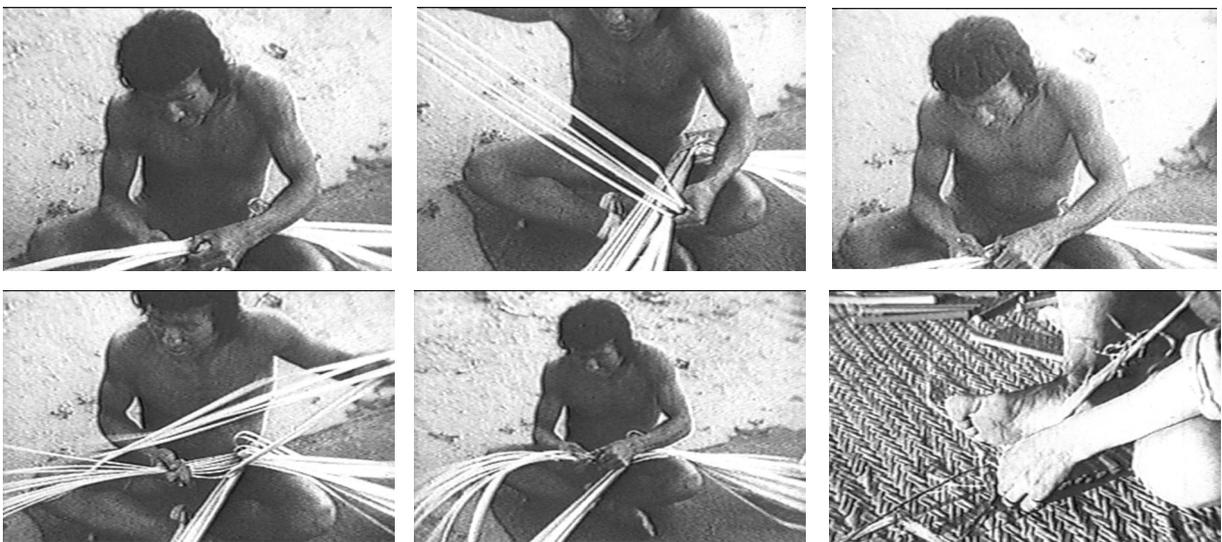
The 1935 film *Cerimônias Fúnebres entre os Índios Bororo (Funeral Ceremonies among the Bororo)*, presents yet another view of the Bororo’s world. Here there is no need to engage the reader as the Reis film does. The film’s shots are hesitant, as if its author is using the viewfinder to search for the right elements to film in such a visually complex world. The camera is hand-held and when a zoom lens is used, the resulting images are quite shaky. Nevertheless, compared to Reis’s work, it is camerawork that is concerned with “description” and detail.

Figures 11, 12, 13: Shots from the film “Funeral Ceremonies among the Bororo”,
by Dina and Claude Lévi-Strauss.



Dina's films about the Bororo were often shot without a tripod and always at eye level, as if to show the objectivity of its author. Unlike Baker's film, Dina or Claude never appear in the scenes. Part of the film focuses on the ceremony of the *Marido*, ceremonial wheels made from the stalks and leaves of the buriti palm, and the ritual dance, *Bakororo*. The film captures aspects of material culture and the construction of the ceremonial wheels. There are no close-ups and no sense of intimacy with the people being filmed. Title cards explain the ongoing action. This is descriptive filmmaking containing long wide-angle shots in which several men who are meeting in the central plaza can also be seen. Dina Lévi-Strauss's film is a good example of the type of ethnography being practiced in the 1930s: objective gathering of data without the interference of subjective information, while maintaining distance between the subject and the observer.

Figure 14, 15, 16, 17, 18, 19: Shots from the film “Funeral Ceremonies among the Bororo”,
by Dina and Claude Lévi-Strauss.



In her course Dina stressed the need to be precise and to record details in the gathering of field data. She valued the use of audiovisual equipment as the only possible way to register gestures, attitudes, techniques, patterns of movement and the like (Valentini 2010). For Dina it was a priority to look at details, as in a face, or the pattern of movements, as shown in these shots of the films presented here. There are sequences that slowly get closer to the technique: from a general view which shows the position of the person approaching the job, moving through a mid-plane, which still includes the head of the practitioner, ending with a close up on the hand, the instrument and the work in progress.

The ethnographic research expeditions led by Claude and Dina Lévi-Strauss were guided by the scientific criteria of their time. Besides the films and ethnographic data they produced, they also assembled a large ethnographic collection of material culture that was sent to Musée de l'Homme in Paris and at the Museum of Archeology and Ethnology at the Universidade de São Paulo. For Dina, material culture provides a unique access to the expression of human cultures: men leave their traits in the things they do and it is possible to translate the facts of life through material objects, Dina used to say in her lectures. For her, the material object has its own life. To understand it, it is important to describe all the phases of its fabrication, to know the raw material in it, the techniques to do it, its decoration, how it is used and why it is destroyed. Then it is possible to classify it. The same object may be classified in many different ways, and it is important to gather all the information related to the object. For the object to keep its life it is necessary that it be accompanied by all the beliefs that surround it, by everything that is related to it in its original context (Amoroso 2004:68-69).

Dina Dreyfus certainly had an impact on the work of her husband. She followed Frazer and Boas in emphasizing that the knowledge produced by ethnology is essentially general and theoretical, but it is supported by the ethnographic description that encompasses, in a systematic and comprehensive way, the whole group. According to Amoroso (2004), Marcel Mauss was a major reference in all her classes.

Recurring themes in the first visual images of the Bororo

It is interesting to note that many films about Arctic Inuit and Alaskan Eskimo were made before Nanook. "In almost all these films, the narrative centers on a whaling expedition or an arctic exploration. Footage of Inuit and Alaskan Eskimo polar bears and paddling in kayaks were 'picturesque' details which, as in other films of the period, lent an air of authenticity to the representation" (Tobing Rony 1996:108). In the same way, several themes recur in early documentaries on the Bororo, whether these are the central or secondary focus of the films. Up until the 1940s, the hunt for the jaguar is present in every film. The difficulty in such an undertaking, however, often meant that no successful kill was filmed, which the Thomaz Reis report as analyzed by Tacca (2007) demonstrates.

The Bororo are superb hunters and place great value on hunting this feline, which also plays a central role in several of their myths. When we showed the film *Matto Grosso* to the Bororo in Tadarimana, the audience responded to the scenes of the jaguar hunt with great enthusiasm.

Another recurring theme related to the hunt is the funeral itself, which is the principal rite of passage in this society. Following someone's burial, the killing of a large cat such as a jaguar, catamount, or ocelot is the main responsibility of the person who represents the departed, and the period of mourning comes to an end upon presentation of the animal's hide to the deceased's family. The Bororo funeral impresses all non-Indians as a most eloquent expression of otherness. The funeral rites may last up to 2 months, from the death of an individual to the final dressing of the bones, which are carried to a river bay in a large basket. The final three

days are the most intense and dramatic as the bones are taken from a provisional grave in the center of the village, washed, and finally, adorned. These activities occur in the midst of many high-pitched lamentations from the grieving relatives, who score their bodies letting their blood drip over the bones.⁸

Reis made reference to his frustration in attempting to film this phase of the funeral, which is almost impossible not only because of the tension of the moment, but also due to the fact that the bones are washed secretly at dawn; in addition, the adornment of the bones would have to be filmed from the interior of the men's house where the lack of light, insufficient space for heavy camera equipment and the slow speed of the film would make it difficult to obtain good shots. Heinz Foerthman who travelled to the Bororo with Darcy Ribeiro is one of the few cinematographers who managed to clearly capture this phase of the funeral, but not until 1953, while filming the funeral of Cadete, a great Bororo chief.

A third recurring element in these images of the Bororo is the absence of contact with non-Indians, with the exception of the photographs produced by the Salesians. Bororo society has been the focus of anthropological literature at least since the work of Karl Von den Steinen (1894) at the end of the 19th century⁹. In addition to the large bibliography produced by the Salesians, anthropological literature has continually analyzed the complex social organization of this dual society and its cosmology (Lévi-Strauss 1936; Viertler 1976; Crocker 1985), its intricate cultural material (Dorta 1981), funeral rites and their effect on social life (Viertler 1991; Caiuby Novaes 2006), as well as the impact of outside contact and the way the Bororo have interacted with society on a national level since the 18th century (Viertler 1990; Cunha 2005).

Yet from the first films of Thomaz Reis onward, the impression given has been that the Bororo had practically no contact with society on a national level: only a few Indians appear to be clothed, work tools are not shown, and in the 1931 film, when daily life in the village is depicted, the Bororo house is substituted by an image of an enormous house from the Xingu, an entirely different cultural region in Central Brazil. The non-Bororo house may have been inserted because it represents a more powerful ethnic ideal in the minds of western audiences than the less appealing houses the Bororo built.

Figure 20: Xingu Indian house in the “Bororo village”. Shot from the film “Matto Grosso”.



8 See Caiuby Novaes (2006) for more on this phase of the funeral.

9 For a critical examination of the bibliography on the Bororo until the 1970s, see Viertler, 1976.

Film as travelogue - Some aspects of the structure of the narrative of *Matto Grosso* film

The film *Matto Grosso, the Great Brazilian Wilderness* is a typical travelogue, in the sense that it documents a journey exploring distant, exotic places, guided by a main character who establishes the narrative focus of the film. In this case it is a travelogue with the distinction of having been partly financed by the University of Pennsylvania's Museum, which contributed to the project's positioning as both science and adventure. Oddly the Museum appears nowhere in the credits.

The travelogue is generally defined as a film genre (Benelli 2002; Ruoff 2006) that precedes so-called documentary filmmaking, whose first example is attributed to Robert Flaherty's famous 1922 film *Nanook of the North*, and whose development was consolidated in the 1930s with the advent of the Grierson method of filmmaking. An outstanding feature of travel films is the recurrent ingredient of landscapes and exotic panoramas, which are traversed by a character /traveler / narrator who describes his impressions and experiences. They are narratives in which the "picturesque" is frequently the guiding element, influencing narrative choices as well as the components selected to construct the film.

Figure 21: Floyd Crosby and the experimental Mitchell camera.



Figure 22: Ainslee Davis in foreground with sound mixer, Floyd Crosby in rear while filming the staged tent scene.



In Brazil in the 1920s films of this genre were called *natural films* or “*digs*”, evoking the active role that filmmakers played in the search for possible clients who were needed in order to get their films made. This practice resulted in recurring themes, such as scenes linked to local politics, commercial establishments and coffee plantations, burgeoning industrialization, or the world of machines as opposed to fields and life in the country, and included documenting various aspects of social life associated with these areas. Nevertheless, the guiding element of the takes and the choice of objects and situations that were filmed continued to be the “picturesque.”

The term “picturesque” is associated with other narrative forms that preceded the travelogue film, but which were equally linked to travel stories. Travelers from the 19th century, and of course, even much further back, produced innumerable texts that narrated expeditions, journeys and quests to experience different physical and cultural spaces. These narratives relay new images of distant, unknown lands, where the natural landscape gains form and is linked to a human landscape. This association with landscape has its roots in the term “picturesque,” which originated in the field of fine arts, particularly painting, and refers to that which is considered “worthy of being painted,” an allusion to landscapes and scenes that were particularly expressive, fascinating and original from a pictorial point of view. The eye of the traveler searching for the picturesque is a way of constructing the narrative and focuses the attention on the natural and human elements in the world, which can be translated as the search for the exotic. In this search the natural landscape is superimposed upon the human landscape and distant cultures are viewed as much closer to nature than those who are observing them.

The travelogue, therefore, is a genre that presents the journey as an undertaking which involves risk and emotion, the unexpected and the surprising; it frequently resorts to grandiloquent language, which stresses the picturesque, as seen in Baker’s film. This comes through even in silent films like the documentary about the Bororo directed by Major Reis; despite the lack of sound, title cards comment on the images and constitute one of the key elements that articulate the narrative of the film. The commentary, while external to the context presented on film, helps to build the spirit of adventure, creating the sensation of taming the unknown, facing challenges, and overcoming obstacles in the same vein as the travel narratives of the 19th century.

The narrative point of view in *Matto Grosso* is defined by a unique individual: Uncle George Rawls, the real name of a character who plays himself in the film as a guide who leads the expedition and who is always in the front lines regarding the relationships that are formed along the way, particularly with the Bororo. He is no “ordinary white man,” but rather someone who comes from a singularly North-American context: the “Florida Cracker,” a descendant of the first settlers who arrived in Florida in the 18th century. A rustic character, he is also good-natured and fun-loving.

According to Attridge (2017:11-12), although claiming to blend science and action, “ethnographic adventure films, also sometimes referred to as expedition films, served as a form of touristic cinema, located somewhere between anthropological inquiry and popular culture”. Shot in the state of Mato Grosso (which was spelled with a double “t” in the thirties) in central Brazil, a place represented as totally unexplored, the last refuge of primitive tribes, *Matto Grosso* is a documentary-style travel film. It focuses attention on the landscape, the animals, and the people met along the way – the Indians, all characteristic of the exotic, tropical scenario that the film strives to depict.

The presence of Uncle George Rawls is elemental to this travel film’s narrative: in scene upon scene he instigates and guides the action, establishing a narrative focus, a point of view. He functions as a mediator with the public, providing them with the chance to immerse themselves in and engage with the film, to project themselves into the action. What is unique in this case is the fact that the narrative focus that drives the film is based on a rustic character who is not contaminated by progress and urban life in an era that was marked by the Great Depression.

Figure 23: The tent scene with George Rawls and Tari.



Another important aspect in the construction of the film's narrative is the editing process, which shines light on some of the project's key elements. The directors were banking on a final cut, which would have a specific narrative, implying editing choices that lean towards naturalistic language and that result in imperceptible cuts that can be summarized as follows:

- The actor who plays Uncle Rawls guides the narrative and is the link that allows for continuity between different situations, contexts and events, thereby focusing attention on the story being told rather than on the techniques and methods of editing being used.

- An example of the use of the narrative to cover up cuts in editing is the river scene in which a large fish is being caught with a bow and arrow. The fish is struck and thrown into the boat; however, there is a cut between these two actions which have been edited to seem as if the shot is continuous. Here the narrative serves to mask the discontinuity, a technique that is typical of naturalist narrative forms which strive to convey an authentic, un-contrived feel to a take and which is also used for the benefit of dramatization, which could be adversely affected by any hint of discontinuity. Flaherty used a similar technique in *Nanook* during the episode of the seal hunt; this allowed him to dramatize the scene, which would not have been possible had he used the images as they actually occurred during filming.

Figure 24: Staged scene of boat arrival, George Rawls greets shaking the chief's hand.



Figure 25: George Rawls in a staged scene, trading American goods for Bororo goods.



One last point that bears mentioning about the film in question is the fact that the same footage was edited and used to produce three distinct versions. Whereas *Matto Grosso the Great Brazilian Wilderness* is without a doubt an adventure film whose narrative elements add emphasis to this idea, the other two films¹⁰ *Primitive Peoples of Mato Grosso: The Bororo* and *Primitive Peoples of Mato Grosso: The Xingu*, both edited in 1941, including new images and changes in the soundtrack, substitute the original audio with a revised narrative in voice-over narration done by Lowell Thomas, a famous radio announcer. The explanatory narration gives the material a different connotation: whereas the first film is a typical adventure with an epic tone to its narrative, the other two films take on the form of a scientific endeavor; what changes is the tone of the narrative, which is epic in the case of the travel film and more objective in the case of the scientific film.

All three films convey an experience of modern cabinets of curiosity. The Mato Grosso expedition returned “with thousands of feet of film and a number of zoological specimens, including five snarling jaguars, a half tamed puma, two ocelots, two anteaters, two porcupines, a cuati, a 70 pound turtle, and a stork, known as the tu-u-u-” (Attridge 2017:33). If those wonder rooms of the sixteenth century could display collections of artifacts from exotic people, samples of fauna and flora of their habitats, these films add technology to the cabinets and show moving images and sounds of the same items: artifacts, exotic people, fauna and flora. Our passion for collections seems to be endless.

Some present-day reactions

Although it is not the main goal of this article, it is interesting to point out some present day reactions to the exhibition of *Matto Grosso to the Bororo*. In June 2011 we took these and other films to the Bororo village of Tadarimana. The exhibition of the film was announced over a loudspeaker in the village by one of its leaders. We set up a “screen” made from white sack cloths that were stretched and hung on the beam of a large palisade with the use of some twine. The Bororo arrived with their stools, chairs, and strollers as well as towels and blankets to ward off the chill air of the Mato Grosso nights at this time of year. Men, women and children made up the audience on the three evenings we exhibited these films using the data show projector we had brought with us from São Paulo. All paid great attention and it did not appear that the audience minded the film being narrated in English. A lot of exclaiming could be heard whenever an animal appeared on screen, and there were many in the film: jabiru storks, tapirs, capybaras, monkeys, otters, anteaters, armadillos, a jaguar and a puma. The hunt for the jaguar, as we mentioned before, was the cause of much emotion among the audience.

It bothered us to be showing scenes which supposedly depicted the daily life of a Bororo village, but which contained images that had been inserted from a Xingu village with the Xingu Indians and their enormous oblong houses; it seemed to us that we were duping audiences who had no knowledge of Bororo life. The Bororo, however, were fascinated by these scenes and were frustrated that the film did not show other facets of Xingu life.

¹⁰ These two films are available online. *Primitive Peoples of Mato Grosso: The Bororo* is available at https://archive.org/details/upenn-f16-4012_1941_Primitive_Peoples_of_Matto_Grosso.

Figure 26: Scenes from the exhibition of the film *Matto Grosso* in the village of Tadarimana, in Mato Grosso.



Photo Sylvania Caiuby Novaes.

Exhibiting these films for the Bororo made us realize that there are many ways to look at a film and that we certainly had not viewed it in the same way as the Bororo had. They saw the film as a series of small, self-contained scenes, which did not necessarily form a continuous narrative. In this sense, it may be correct to associate the Bororo's reaction to the film to the way in which they structure their mythical narratives, which are also composed of small, self-contained scenarios.

Figure 27: Scenes from the exhibition of the film *The Hoax* in Tadarimana village, Mato Grosso.



Photo Sylvania Caiuby Novaes.

The film *The Hoax* made by the director of *Matto Grosso* is only 9 minutes long and especially charmed the children, although it also got some good laughs from the adults. The main character is a boy of about six who is introduced by the narrator as a “great hunter.” In the first scene he comes out of a large basket and sits on the lap of a man who is making him an arrow. The boy leaves to go fishing but catches nothing; he feeds two otters and returns to fetch the two arrows, which are now ready for him. He “rides” on a tapir, encounters an anteater and a possum, and going into the bush, practices with his bow and arrow, all the while being closely observed by a monkey who appears to be laughing at his troubles. Next, he has the idea to use one of his arrows to hook a dead lizard that he finds on the path. He takes the lizard back to show the men, proud of his deed and demonstrating with his bow and arrow how he had hunted it down. But while holding the animal up for them to see, the boy is undone by the smell of rotting flesh, which causes the men to wrinkle their noses. In the final scene the monkey laughs.

Figure 28: Scenes from the exhibition of the films in Tadarimana village, Mato Grosso.



Photo Sylvia Caiuby Novaes.

It is easy to see why this film, which was obviously made according to a concept that had been developed with the help of the local Indians, is so pleasing to the children, who can identify with the main character. The editing process allowed the author to insert scenes featuring numerous animals that, in fact, appear as if the boy has encountered them on his way through the bush. The Bororo have a keen interest in the animal world, and the images depicting them were always greeted with enthusiasm.

The monkey’s supporting role is reminiscent of the characters in Aesop’s fables; on the other hand, it could also very well be a character from one of the Bororo’s own tales. In the myths collected by Albisetti and Venturelli (1969) there are two in which the main character is *juko*, the monkey. In the first of these myths, *juko*, tired of living alone, begins beating the ground with his magic wand, giving birth to the civilized beings that become his subjects. There were so many of them that they had no place to live; in order to solve this problem, *juko* uses his wand to bring forth wooden sticks from the peppertree which the civilized beings used to construct their houses. They then decide to steal the monkey’s magic wand, which is subsequently

recovered by the parrot, *reko*, who is *juko*'s great friend. In the second myth the Salesians collected about the monkey, *juko* is an astute swindler, who deceives everyone, including the great jaguars, and he cleverly manages to escape from all of the traps that are set for him. In the North American film, the situation is reversed: the monkey does not deceive anyone; he laughs at the boy's troubles and at the deception that he tries to pull on the men who made his arrows.

Figure 29: A young Bororo sets the TV for another exhibition at Tadarimana village.



Photo Sylvia Caiuby Novaes.

Raimundo Itogoga, a great Bororo leader from the village of Tadarimana, lived at a distance from the group of houses that formed the circular village and he asked us to show the film in his house, which we did. A large group of people got together in an open area of his home and we showed the films there on a large television screen.

The films brought back memories and there is a true fascination with images from the past. Raimundo actually recognized one of the people in the *Matto Grosso* film: the Bororo man with the painted face who he identified as the *bari* (shaman) called *Tiriacu Arequiri Ópogoda*, a *bari aroe toarari* (shaman of the souls), known for his bravery and for killing both men and jaguars.

According to Raimundo, the film takes place in an ancient village called *Pogubu Çoreu*, which is located about 10 or 15 kilometers from the city of Fátima. During the first half of the 20th century a missionary took the Bororo from this village to the Teresa Cristina Colony where sugar cane processing had been established. Raimundo believes that the products appearing in the film distributed by the North Americans among the Bororo were a stratagem for ensuring a friendly welcome rather than being met with the hostility for which these Indians were known. This idea is in contrast to the situation put forward by Marshal Rondon and the missionaries, all of whom insisted that pacification and cessation of hostile behavior towards non-Indians were the norm.

In 1931, *Matto Grosso, the Great Brazilian Wilderness*, succeeded in bringing North Americans closer to people from distant, exotic lands and the film's soundtrack made explicit how it was possible for the Penn Museum expedition to arrive at these places and document the diversity of fauna and exuberant vegetation to be found

in Mato Grosso, with its great rivers and exotic people. The expedition returned to the Museum with the images it filmed as well as with indigenous artefacts and innumerable fauna samples that went to the Academy of Natural Sciences of Philadelphia and the live animals that went to the Philadelphia Zoo.

The exhibition of this film in the present day permits the Bororo to take a look at their past, their memories and their customs. For us these films can be seen as landscapes of memory; they are documents that also speak to and about us, whether it be about the foreign as an object of desire and danger, about our interest in the exotic – and what this notion of exotic consists of – or about how our institutions make use of collections (images, artifacts, samples of flora and fauna) to create history. “Museums select what they choose to collect, preserve and display. [...] They simultaneously remove us from and then reconnect us with the outside world” (Bouquet 2012:4-5). In a sense these films do the same, presenting us a remote world with their exotic people, fauna, and flora.

Figure 30 e 31: Photo Sylvia Caiuby Novaes.



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Indigenous health in Brazil: Reflections on forms of violence

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Abstract

This article concerns public health policies for the Indigenous peoples of Brazil, focusing on relations of violence observed by the authors during their research. We draw attention to different types of violence through an analysis that articulates fieldwork on primary health care in Indigenous Areas with observations of political negotiations concerning health issues involving Indigenous leaders and government workers. There is, on the one hand, the habitual symbolic violence that can be observed in daily interactions between health workers and Indigenous patients, and, on the other, the contradictions of an official political rhetoric that assents to Indigenous authority and then systematically dismisses it when decisions that involve public health are put into practice. The research combines different methodological strategies (intensive fieldwork, research on public policy documents, participant observation of political meetings, interview with indigenes and managers, etc.) to establish correlations between interpersonal violence and structural violence along democratic processes of public policies building in Indigenous health. From this perspective, the paper addresses the violence in health sector beyond the individuals and their intentions; it proposes that violence in health must be interpreted against the backdrop of a broader discussion on the construction of Indigenous citizenship that articulates tutelage and political participation in the politics of health practices in Brazil.

Key words: indigenous health; tutelage; citizenship; violence; participation.

Saúde indígena no Brasil: Reflexões sobre formas de violência

Resumo

Este artigo trata das políticas de saúde pública para os povos indígenas do Brasil, enfocando as relações de violência observadas pelos autores durante sua pesquisa. Chamamos a atenção para os diferentes tipos de violência através de uma análise que articula o trabalho de campo sobre atenção primária à saúde em áreas indígenas com observações de negociações políticas sobre questões de saúde envolvendo líderes indígenas e funcionários públicos. Há, por um lado, a violência simbólica que pode ser observada nas interações cotidianas entre as/os trabalhadoras/es da saúde e as/os pacientes indígenas e, por outro, as contradições de uma retórica política oficial que afirma a autoridade indígena e, em seguida, a descarta sistematicamente quando as decisões que envolvem saúde pública são colocadas em prática. A pesquisa combina diferentes estratégias metodológicas (trabalho intensivo de campo, pesquisa sobre documentos de políticas públicas, observação participante de encontros políticos, entrevista com indígenas e gestores etc.) para estabelecer correlações entre violência interpessoal e violência estrutural ao longo dos processos democráticos de construção de políticas públicas na saúde indígena. Nessa perspectiva, o artigo aborda a violência no setor saúde além dos indivíduos e suas intenções; propõe que a violência em saúde seja interpretada no contexto de uma discussão mais ampla sobre a construção da cidadania indígena que articula a tutela e a participação política nas políticas de saúde no Brasil

Palavras-chave: saúde indígena, tutela, cidadania, violência, participação.

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This article concerns public health policies for the Indigenous peoples of Brazil, focusing on relations of violence observed by the authors during their research. We draw attention to different types of violence through an analysis that articulates fieldwork on primary health care in Indigenous Areas with observations of political negotiations concerning health issues involving Indigenous leaders and government workers. There is, on the one hand, the habitual symbolic violence that can be observed in daily interactions between health workers and Indigenous patients, and, on the other, the contradictions of an official political rhetoric that assents to Indigenous authority and then systematically dismisses it when decisions that involve public health are put into practice.

We begin by explaining our approach to violence, charting the central historical contradictions of the public policies for Indigenous health in Brazil. A number of ethnographic situations then convey different types of violence, weaving connections between the two configurations and the forms of violence they engender. This is finally interpreted against the backdrop of a broader discussion on the construction of Indigenous citizenship in the politics of health practices in Brazil.

Violence as a quality of interactions and as a structural condition

One of the greatest challenges to employing the category of “violence” is breaking free of the dichotomy that defines it exclusively through either its representations by the subjects being researched, or its reduction to objective and universal aspects applicable to all sociocultural forms regardless of the meanings attributed by those affected in any given context. While the radical relativism of the former alternative stifles the comparative approach that is so central to anthropological understanding (and to the scientific endeavour), the diversity of configurations that may be presumed violent according to the latter alternative obliges the researcher to choose which local aspects are part of a repertoire that is common to humanity as a whole – a decision that demands an analytically unprofitable exercise in authority.

To free ourselves of the binary dilemma of having to choose between an imposition of the senses that renders the translation between worlds impossible, and the ethnocentric comprehensiveness of empirical universals, we need to take a different tack to “violent phenomena”. We can no longer ask what is the content of violence, but rather what characteristics single out a *form of interaction* as “violent”. Violence hence ceases to be a substantive reality to become a quality of social interactions whereby meaning and strategy are anticipated, manipulated and disputed. From this point of view, violence is a *resource for the construction of legitimacy* for those participating in a specific situation that defies the physical-moral integrity of others (Riches 1986; Krohn-Hansen 1994, Dias da Silva 2017a). If moral violence does not always involve force or physical pain, all physical violence is also moral violence, for it violates the identity of those who suffer the aggression – that is, his or her representation of their condition and place in the world. It does not matter if an episode of physical aggression is preceded by moral violence; all that matters is that the category of ‘violence’ enables us to understand and account for connections within the physical-moral universe that we are describing.

Taken as a conflict of legitimacies, violence emerges in a discursive landscape in which the (political, moral, emotional, etc.) value of actions is in question. It develops within fluxes and temporalities in which opposing subjects seek to favourably position themselves by constructing and construing the validity of their acts. Subjects thus struggle for a redefinition of shared meaning (even when meaning is differentially distributed) that can sustain and ensure a coveted legitimacy; or, in other words, a shared meaning that constitutes the symbolic terrain wherein certain words and values will be adequately managed from the vantage point of each of the terms directly (considered as aggressor and victim) or indirectly (mediating subjects and meanings) involved in the dispute.

Riches' work on violence as a quality of interactions, published in *The Anthropology of Violence* (1986), along with its posterior developments (Krohn-Hansen 1994; Stewart and Strathern 2002), highlights its structural and invisible dimensions. It aims to articulate the interactional approach with the social and political constraints within which concrete interactions take place by emphasising that violence must be understood through certain formal characteristics. Violence is here a material and symbolic instrument of specific relations of power, where the tacit recognition (the legitimacy) of the world is in question and in which interactional configurations always involve mediations and mediators. We follow this approach not because we are after some sort of conceptual synthesis, but because of the exigencies of the ethnographic experiences that inform this study – to wit, the political relations that permeate recent issues concerning Indigenous health in Brazil – which cannot be exhausted by what Farmer (2004: 305) has called the *ethnographically visible*. In a Weberian key, our approach involves a heuristic choice that seeks, on the one hand, to pinpoint the relevance of considering violence as meaningful action, structure and history, and, on the other, to express an affinity with a certain contextual and localized view of the available theoretical options in the social sciences.

In the opening pages of his masterful article 'An anthropology of structural violence', Farmer (2004) stresses the need to articulate the interpretative project of modern anthropology with the historical understanding of the wider social and economic structures in which suffering is located – in his case, suffering emerging from the AIDS epidemic in Haiti. Instead of demanding that ethnographies incorporate historical contexts or surveys, Farmer addresses the challenge of building connections between temporalities and spatialities that are experienced as being disjunctive. He thereby mutually references the meanings attributed to experience and to the materiality of social life. The author aligns stories of the suffering of Haitian patients seeking treatment for tuberculosis, AIDS or cancer, which were "ethnographically visible" to him, with the way of life of the French bourgeoisie in the 19th century, querying its characteristic material conditions of affluence and excess. The critical position he adopts foregrounds the lucrative slave-holding colony of São Domingos, which has today become poverty-stricken Haiti. By triangulating eras and spaces, Farmer renders explicit the deep structure and institutional nature of the violence lived by Haitians in their contemporary quest for therapy. What is more, he shows that this structural violence is perceived as a subjectless and blameless systematic violence which transcends those immediately involved in relations of care (health professionals and patients), thus placing constraints on the possibility of action. This way of perceiving violence is made possible by various forms of de-socializing experiences and worlds, or of erasing historical memory, which the anthropologist must restore lest she understand only the residual meanings of the experiences under study.

If, in Farmer's (2004: 309) terms, material imbalances of power cannot be effaced without distorting meaning (which establishes their relevance to anthropology's interpretative project), in Bourdieu's work we find a near-perfect inversion of this relation. For the latter, the transfiguration of the material relations of power is the hallmark of a specific type of power: symbolic power. Symbolic violence is hence the gentle and invisible form of power, one that becomes more intense whenever direct physical or economic violence is negatively sanctioned by the group (Bourdieu 2002). Through a sort of social alchemy, symbolic violence generates legitimate authority via personal relations in which work, time, attention, care, inclusion,

political participation, or indeed any other attitudes that are morally attuned to the environment or group, seek to generate a value that is seen to be irreducible to the materiality of the world. Such practices can thereby be seen to be generous, disinterested, and, above all, committed to transcendental ideals (saving lives, strengthening democracy, etc.).

For Bourdieu, the concept of the *habitus* binds structures and practices through the agency of subjects. While subjects incorporate conduct, they create and recreate modes of acting based on a principle of perceiving ulterior experiences as “a system acquired from generative schemes” (Bourdieu 2009: 91). The *habitus* seeks to overcome the dichotomies of subject and action, individual and society, structure and practice. It is reminiscent of Schutz’s definition of anticipation and typification as actions in the lifeworld: anticipation based on preceding experience (structured structure for Bourdieu) and typification based on classifications or modes of perceiving future experience (structuring structures). According to Schutz (1979: 136), anticipating and typifying are equated in the mediation of past and future experience, which occurs through a subject who acts according to a relevance system created by and through him or her. The acting subject is the link, he or she maintains the unity of the oppositions. If we return to the symbolic violence (understood as a quality of interaction) of the *habitus*, we can reflect on violence as its own universe of mediation between action and structure; or even as a third possibility, a kind of social grammar that furnishes specific rules to a game in which the struggle for legitimacy itself legitimizes the dispute over meaning. Violence is hence made legitimate as a part of interactions. However, such a grammar is constituted through a historical process in which material imbalances of power have combined forms of physical and symbolic violence in different ways.

Policies for Indigenous health in Brazil: between abnegation and degradation

Studies of the history of health policies for Indigenous peoples in Brazil reveal an apparent contradiction, which probably dates from the very first acts of government intervention, between the “abnegating motivation” of the health workers and the “structural dynamics” of a contact that leads to the physical degradation of the Indigenous populations (Costa 1987). Government involvement in Indigenous health only developed into formal assistance in 1956, almost 50 years after the creation of the Indigenous Protection and National Worker Placement Services (Serviço de Proteção aos Índios e Localização dos Trabalhadores Nacionais, SPILTN) in 1910. In 1918, the SPILTN was remanaged as the Indigenous Protection Service (Serviço de Proteção aos Índios, SPI). The sanitarian Noel Nutels was fundamental in the planning and execution of what was termed the Aerial Sanitary Units Service (Serviço de Unidades Sanitárias Aéreas, SUSA). This was one of the first of successive efforts, taking place throughout the 20th century, to intensify sporadic treatment and to improve our knowledge of the health conditions of Indigenous populations. Previously, information on Indigenous health was only occasionally transmitted through the reports of missionaries and doctors who took part in expeditions into the Brazilian interior (Costa 1987: 391).

Having taken part in the Roncador-Xingu Expedition, Nutels also believed that it was necessary to safeguard means for ensuring the survival of groups. An equally important task was to mediate recent contact with other groups, so as to prevent deaths from endemic and fatal cases of tuberculosis, malaria, the flu, and other diseases¹. After the expedition, Nutels strove to set up a system of continuous care, undertaking a specialization course in tuberculosis in order to establish permanent control over the disease. Treatment of this disease in particular, following the sanitary procedure of isolating areas where the disease has spread, would continue to be a part of the strategy of the health services even after the dissolution of the SUSA in 1968. In the words of Nutels (in Costa 1987: 392):

¹ See Cunha’s (2002) interesting study of the “spirit of sanitary policies” based on reports by health professionals published in the 1930s in Brazil.

“This way we will establish a veritable sanitary curtain around the affected area. No one will be able to enter with prior control”.

We can conjecture that attempts to prevent the spread of disease, with their focus on isolation and territorial control (inspired by the philosophy of Rondon), was forged in the heroic aura attributed to the health teams that assisted Indigenous peoples in the most remote places. In a recent study of the sociological history of public health in Brazil, Arouca and Lima (2014) have highlighted further contradictions through an analysis of the 1947 medical plans for Indigenous peoples. The author of the document, Dr. Herbert Serpa, already identified a clash of conceptions: “the profound differences and divergences that exist between Indigenous medicine and that of civilized men is undeniable...” (Arouca and Lima 2014: 70).

Comparing conceptions of indigenist policy seems to us to be a pertinent aspect of the analysis of these early state-sponsored instances of healthcare for Indigenous peoples. Indeed, these first instances of medical aid may be considered the first manifestation of tutelary powers in what pertains to the field of health in Brazil. From the outset, the authoritarian heroism of the health professionals – and of the indigenists in general – and the drama of the expansion of Brazil’s internal frontier (Velho 2009a, 2009b) were two aspects of the same process.

With the creation of the National Indian Foundation (Fundação Nacional do Índio, Funai) in 1967, and the subsequent establishment of its health division, the healthcare of Indigenous peoples was dismembered and dispersed throughout the national territory. It was no longer a Service (SUSA), but a working group. Through the resources of Funai, an Itinerant Healthcare Working Group (Equipe Volante de Saúde, EVS) was created, made up of a doctor, a nurse, a biochemist and a dentist, all of whom resided in the main regional capitals and occasionally visited Indigenous villages. The earlier model championed by Nutels continued to exist, though Funai put it through an institutional transition by first implementing a rotating system of nursing assistants in the villages, then proposing targeted emergency action and prolonged treatment (Verani 1999: 3), and finally arriving at the present organization. Healthcare thus always focused on basic care and on the removal of critical cases to nearby hospitals. However, it was only after these transformations that the roles of “assistant”, nursing technicians and various health adjuncts would be expanded. A structure for providing care was thereby formed. It would outlast the numerous institutional upheavals and crises of legitimacy which affected the politics of Indigenous healthcare during the subsequent decades. The culmination of this fraught process is the model of the Sanitary Districts², premised on social control.

When Nutels coordinated health campaigns, the dominant view of Indigenous health was that it was intimately linked to the evils of contact, spurring the protectionist reaction to safeguard the physical existence of Indigenous peoples through direct intervention. Yet the image of a “sick Brazil” (Lima e Hochman 2000), with its forsaken interior and hinterlands, deviated in the heart of the sanitarian movement of the early 20th century, did not take Indigenous peoples into account. The reports and studies of that time projected an image of a country “with an unknown, backward, ill, unproductive and abandoned population, lacking any identification with the country” (Lima & Hochman 2000). During the 1940s, this scientific movement established the political and administrative bases for the development of national services aimed at combating endemic diseases that were seen as obstacles for national development. Despite a lack of concern with ethnic differences, the same period also witnessed the emergence of an explicit alignment between the “expansion of public power, development, institutionalized public healthcare, and Indigenous populations” (Hochman e Silva 2014). The focus on disease that characterized the health campaigns was based on this model of government intervention, inspired by conceptions of national and economic development typical of the 1950s and 1960s.

The heroic narrative pursued by a few, sporadic but persistent health professionals thus enhanced the idea of care (assistance) as protection and tutelage of those who were relatively vulnerable and defenceless.

² See Athias & Machado (2001), Magalhães (2001), Marques (2003) Buchillet (2004), Rocha (2007).

The zeal to control exogenous diseases such as tuberculosis characterised a practice of control that focused on “diseases of contact”. The growth of the pharmaceutical industry after World War II, with the expansion of antimalarial and antibiotic medication (Hochman e Silva 2014), strengthened the ties between health and development. Although a distinction between combating disease and providing healthcare was maintained, it is evident that disease control through the creation of healthcare working groups targeting Indigenous peoples gradually fed into a logic of practice in which control of people’s behaviour, via (epidemiological) campaigns and measures promoting hygiene, resulting in a relation of mutual determination between indigenism and sanitary policies. This is the case whether we are dealing with the Aerial Sanitary Units Service or the Itinerant Healthcare Working Groups. As Arouca and Lima (2014: 76) note, “the 1940s and 1950s represent an important chapter in the history of the Indigenous question in Brazil; a meeting point between medical conceptions and anthropological perspectives”. It is precisely by means of the articulated management of territory, health policies and education that cultural differences were invented as an obstacle to measures of prevention and assistance, giving rise to practices of symbolic violence which deauthorized the other – in other words, to the exercise of a specific tutelary power (Souza Lima 1987). The deauthorization of the other took on a distinct shape after the democratic process which began in the late 1980s, as will be seen below.

Certain facets of the history of indigenist policies in the 20th century thus invite us to reflect on the connections between the ideas of protection and tutelage which regulate the relations between State and Indigenous peoples, and the expansion of biomedical power in Brazil following the sanitarian movement. The successive restructurations of Indigenous (and, indeed, national) healthcare services, which intensified in the 1950s and 1960s, as well as in the 1980s and 1990s, in conjunction with internal colonization drives that were typical of the “march to the West” (1950s) and the development projects of the military government (1970s) and subsequent democratic governments (1990s)³. We can discern historical continuities between state services’ logic of saving lives and the physical violence of land disputes and conflicts. According to Souza Lima (1987), the words and deeds of the indigenist project augmented political struggle through the entailment of an emergency – no less than the very physical survival of the Indigenous peoples of Brazil – which determined the type of social relation that was to be established. This way of relating time (emergency) and political action (physical survival) was to have a profound impact on Darcy Ribeiro’s argument for a government policy that would lie at the interface of protection and tutelage. At the time, both were apprehended as, simultaneously, an urgent drive to save lives and as a form of relation. Darcy Ribeiro thus argued for “the importance of practice, of direct coexistence, of the denial of a scientific posture, of the prophetic vocation for formulating an indigenist project and a project for the nation” (ibid. 1987: 157). This view could easily be generalized for most Brazilian intellectuals. Analysing the work of Darcy Ribeiro, we can discern the constitution of an indigenist project similar to that of Rondon, articulated with an authoritarian view of the construction of nationality. In any case, what fell to the Indigenist Agency, whether the SPI or, later, Funai, was the matter of how to construct this nationality by ensuring the physical preservation of Indigenous peoples, in the hope that this would drag along with it a “desirable cultural survival”. Indigenous peoples had nothing to add to the nation other than their own physical existence:

this historically constructed representation is induced by the very structure of this field of struggles that was established at the start of the century by the Brazilian state, resulting in the creation of the SPILTN as an agency. At its core lies the search for a consensus from which, once a position is reached that dodges the censorship that characterizes the field, there will emerge the dimension in which the deeper regions of consensus can be achieved (Souza Lima 1987:163).

³ The logic of development is updated in the 2000s, with the rise of large-scale projects linked mostly to hydroelectric power and mining. However, this surge has its paradoxical side, since it is concurrent with the increase in Indigenous participation in the political spheres. We will return to this paradox shortly.

If we are to bring this matter up to date, the question that needs to be addressed concerns, precisely, the new terms in which, to borrow the words of Souza Lima concerning the SPILT and the myth of Rondon, we can give continuity to “the search for a consensus from which, once a position is reached that dodges the censorship that characterizes the field, [so that] there will emerge the dimension in which the deeper regions of consensus can be achieved”. What are the forms of censorship that constrain engagements between indigenism and sanitary policies in these democratic times?

Settings and Violence

To answer these questions, we will now turn to ethnographic reports pertaining to the two contexts that we have been focusing on: Indigenous political activity at the federal level and health care in Indigenous villages. Our aim is to trace connections between the two. These connections have been rendered invisible, but they seem to us to be crucial channels for comprehending the violence and the power configurations that are characteristic of the public space of Indigenous health.

Negotiations and political setting:

Institutions reply: [...] we're here to show you discourse is within the established order of things, that we've waited a long time for its arrival, that a place has been set aside for it - a place which both honours and disarms it; and if it should happen to have a certain power, then it is we, and we alone, who give it that.

Foucault, *Orders of Discourse*, 1971: 8.

Foucault's imaginary dialogue in his reflections on discourse as a dispositif of power guides our understanding of the ethnographic situations that follow. We can convey to the reader our uneasiness at what was said, what remained implied between the lines, what was emphasised, and what led us on the interpretative path that determined how we present the following case studies⁴. Taken as a set, these ethnographic vignettes provide the framework for a more detailed analysis, which will be developed shortly. We hope that this approach allows the reader to grasp what enticed us to write this article, based on research carried out over ten years ago.

Situation 1

In interviews to Ferreira⁵ carried out in Brasília, two presidents of the District Council for Indigenous Health (Conselho Distrital de Saúde Indígena, CONDISI) explained why their decisions failed to be implemented by administrators:

“[...] the CONDISI has to be called when it's time to make decisions. Now it's only called by the administrator when problems need to be solved with the Indigenous population” (Ferreira 2012:105)

4 Except for “situation 1”, all of the ethnographic situations presented in this section derive from direct observation and interviews carried out by Teixeira and her team during the 5th National Conference of Indigenous Health. They are available in the ethnographic film “Estive em Brasília, lembrei de você” (“I was in Brasília and thought of you”) [<https://vimeo.com/126372482>].

5 Ferreira interviewed 32 presidents of the District Council for Indigenous Health during 2011 and 2012. “The presidents that were interviewed answered the following questions: How was the District Council for Indigenous Health created in your district? What are the main difficulties and significant headways related to social control?” (Ferreira 2012: 12). Interviews were held during the following events: Meeting on Social Control/Mato Grosso do Sul (Reunião do Controle Social/MS), March 2011; Indigenous Health April (Abril Saúde Indígena), April 2011; Free Land Camp (Acampamento Terra Livre), May 2011; Strategic Planning Workshop (Oficina de Planejamento Estratégico), February 2012; Forum Reunion (Reunião do Fórum), March 2012 (ibid: 73).

“[...] because today the administrator doesn't respect the deliberations of the council, he pretends that he doesn't know, [...] puts it off, you know? So, like, it's not going to get better, the council can be able, the council can be functioning, but if the administrator doesn't respect it then there's no way things can get better” (Ferreira 2012:85)

Situation 2

The scene is the opening of the 5th National Conference of Indigenous Health (Conferência Nacional de Saúde Indígena), at a convention centre in Brasília. The session was composed of government authorities and indigenous leaders, and the audience was made up of over one thousand Indigenous delegates from the whole country. Presentations and tributes were underway when the delegation from the state of Mato Grosso do Sul quietly made its way into the hall, carrying banners with slogans such as: “Indigenous health in Mato Grosso do Sul needs help”, “Land is health: urgent demarcation of Indigenous Lands”, “Special Indigenous Sanitary District/MS of 75 thousand Indians demands respect: down with the dictatorship in Indigenous health”. Some Indians applauded, but the opening ceremony remained indifferent to the manifestation. Sônia Guajajara, coordinator of the Articulation of Indigenous Peoples of Brazil, the first Indigenous leader to speak at the session, drew attention to the message of the Mato Grosso do Sul delegation. To much applause, she condemned the confrontations between Indians defending their lands and the Agribusiness farmers (*ruralistas*), calling on the Minister of Health, who was present, to “take our call for land to President Dilma”. (Field notes, 5th CNSI, 2-6/12/2013, Brasília).

Situation 3

“Maybe one of the biggest gains, among the many gains we had with the Subsystem [of Attention to Indigenous Health], was, without a doubt, the creation of social control in Indigenous health, which for us has been like a school for many of our Indigenous leaders, with a more concise education in relation to legislation” (Interview with Uwira Xakriabá, president of the District Council of Indigenous Health of Altamira/PA, 5th CNSI, 2-6/12/2013, Brasília).

Situation 4

“What is the role of a conference? As the name says, the conference confirms⁶. [...] It evaluates standing policies, detects what is right among them, sees which proposals don't apply and need to be reformulated and approves directives for a new policy or the revision of a standing policy. [...] [Indigenous people] are very well prepared to demand their rights. This is what social control is: participation, respect for others, knowing how to listen, talking less and listening more, seeing out commitments, making deals, negotiating, dialoguing”. (interview with Antonio Alves, Special Secretary of Indigenous Health, Ministry of Health, 5th CNSI, 2-6/12/2013, Brasília)

These situations and interviews took place in formal meetings on the role of so-called “social control” in Indigenous health. More specifically, they took place in the Forum of Presidents of the District Councils for Indigenous Health (CONDISI), which takes place regularly in Brasília; and the 5th National Conference on Indigenous Health (CNSI), which took place in 2013. These events were chosen because they are legally

⁶ Translator's note: in Portuguese, *A conferência confere*, a play on the double meaning of the portuguese verb *conferir* which means both 'to confer' and 'to confirm'.

sanctioned meetings of Indigenous leaders, and because of their remarkable capilarity. There are 34 District Councils throughout the national territory, including local councils for villages, a council for each district, and the forum for their presidents, which meets four times every year. Conferences are more irregular, but they gather an increasing number of “delegates” and members of Indigenous organizations from every part of the country. In the last conference, in 2013, more than one thousand Indigenous delegates were present. But the determining factor was that social control, of which these organizational levels are a part, was the primary focus of the permanent political activity of participating Indigenous peoples in what concerns health policies. This emphasis was sustained throughout the 2000s, at least until President Temer came to power in 2016. In the situations presented in this article, Uwira Xakriabá explicitly said that social control was a “school” and one of the greatest gains in the field of Indigenous health policies (Situation 3) – which ratifies what we heard between 2006 and 2014 in the regular meetings of the Intersectional Committee for Indigenous Health. Understanding this policy not only stresses its importance for Indigenous peoples, but also places it in the sphere of academic debates on social participation as a form of government. By focusing on it, we seek to reveal the symbolic violence that this process of democratic expansion appears to actualize.

The situations presented above reveal a complex and singular political game, in which the participation of Indigenous representatives or leaders, even when this participation is critical of the proceedings, is recognized and often praised. Their voices are integrated with those of government authorities in conferences and in the local administration of the 34 special districts for Indigenous health – whether as participants in the district councils, as indigenous advisors for administrators or as health agents. Trimesterly meetings are held with all of the presidents of the district councils for Indigenous Health in the Ministry of Health in Brasília, and Indigenous representatives have a seat in the National Health Council, which is the central agency for participative deliberation in health policies. They coordinate and compose the majority of the inter-sectorial commission on Indigenous health (a commission that assists the national council in matters pertaining to Indigenous health), and participate in other commissions that provide assistance to the national council. This inclusion is attested in the four situations, but it coexists with a feeling of powerlessness⁷. But powerlessness does not deauthorize the democratic rhetoric of participation as a form of government – which was a hallmark of the governments of President Lula and President Dilma Rousseff. However, it euphemizes the degrading living conditions and growing physical violence in Indigenous territories (we will return to this shortly).

In the interactions presented above, we can glimpse the production of symbolic violence in tangential complaints and accusations, along tortuous paths. In these paths, the legitimate authority formally conferred on Indigenous leaders and representatives by means of the policy of social participation is reduced to contexts such as the health conferences and national and district councils, where principles and injunctions for national and Indigenous health policies are discussed and deliberated and where they are tracked across different levels. From this point of view, participatory politics, as it is structured: (1) institutionally excludes from Indigenous authorities the exercise of local and national health policies and, at the same time, (2) keeps their voices close to the administration as consultants and advisors (for example, in relation to the special secretary of Indigenous health in the Ministry of Health, and to the directors of the Special Indigenous Sanitary Districts throughout the country). In this configuration, Indigenous presence is *de jure* instituted, but *de facto* deauthorized. However, Indigenous peoples tend to place blame on the individuals with whom they interact in administration: it is these men and women who neglect their opinions. The alchemy that makes violence invisible within this configuration is conjured through the transformation of the rules of the political game into a matter of personal character: local administrators do not respect the deliberations of the councils, as voiced by the presidents of the CONDISI in Situation 1. National administrators meanwhile listen to the positions and recommendations of the

7 Data gathered by Ferreira (2012: 85) confirms this hypothesis: “In the questionnaire, when replying to whether the demands of the Indigenous peoples were met in 2009, half of the 34 Condisis provided a negative answer, 8 provided a positive answer, 8 claimed that they were partly met, and one did not reply”.

advisors in the national conferences, but their opinions on health and land are not taken into consideration, if they make their way to the presidency at all. As of to confirm this posture of listening without attributing authority to what is said and done, we have the incident narrated in Situation 2, when government authorities in the opening solemnities of the 5th CNSI ignored the protests of the delegation of the state of Mato Grosso do Sul. And, again, the Special Secretary for Indigenous Health confirmed his office's vocation for the pacification of conflicts during conferences, which, in his words, involve "knowing how to listen, talking less and listening more, seeing out commitments, making deals, negotiating, dialoguing" (Situation 4).

We can thus observe that, by being glossed as "democratic administration", the exercise of daily domination, which is proper to bureaucracy (Weber 1999), comes to be attributed the moral qualities or political and material interests of administrators. Administrators are therefore accountable for not putting into practice the guiding principles agreed in common for Indigenous health policies. We do not intend to imply that individuals do not matter in the exercise of functions, whether bureaucratic or political. What we wish to stress is that the emphasis placed on this dimension inhibits us from seeing that it is the very model of political participation and its institutional conditions that make it legitimate for Indigenous peoples – who are already excluded from formal legislative instances and from top-level decisions on the distribution of resources, as well as from the equally important networks of personal relations that influence those in power – to also become excluded from the daily administration that reproduces, accommodates and readapts the dominant material and political relations of power.

This exclusion is tacit in the game of participative inclusion. It is expressed as 'disrespect' that is anticipated and typified in interpersonal dynamics through a moral vocabulary of negotiation, compromise and dialogue (Situation 4), the ultimate effect of which is to deauthorize the conflicts of legitimacy that qualify accusations of violence. In this way, the central dispute, which involves the external conditions that limit participation as a political strategy, is relegated to a secondary concern. In other words, any reflection on the terms whereby the rules of the game are defined, which establish what can be said when, by whom, and in which political-institutional contexts; as well as on the place of the game of 'participation' in the hierarchy of the political-institutional contexts and the effects that are produced by inhabiting this place, is banished by the cardinal value attributed to the mechanism of participation itself (by both Indigenous peoples and authority figures, Situations 3 and 4). It is also banished by the privilege given to internal relations of power between the subjects that make up the participative arenas: the accusations against administrators by the presidents of the CONDISI, and the repercussions of the lack of consequences stemming from the protest in the opening session of the 5th CNSI (Situations 1 and 2 respectively).

It is clear to Indigenous representatives and leaders that safeguarding Indigenous territories is paramount for improving the health of Indigenous peoples⁸ (as, indeed, the delegation from Mato Grosso do Sul ritually enacted at the 5th CNSI, Situation 2). It is equally clear that other forms of political action matter, ones which eschew the entrapment of the "discourse of administration", and which build on autonomous political strategies, such as the Free Land Camp (Acampamento Terra Livre), which has taken place in Brasília every April since 2003 (Souza Lima 2015; Silva 2017). What is less clear (and this is not specific to the Indigenous movement, nor to Brazil; see Bronz 2016; Cruikshank 1999), is that the game of participation contributes to the political resignification of the direct violence experienced locally, and, above all, to the existing estrangement of the political and economic dimensions. It is as if the attacks on Indigenous territories by large landowners – represented in Congress by the "Parliamentary Group for Agribusiness" – occurred *in spite of* the Indigenous presence in national politics and the democratic project that is expressed by this presence. They thus appear to be isolated and exceptional episodes, which should be investigated and settled as if they were *criminal cases*.

8 For those who want to read further, see the reports of the National Conferences for Indigenous Health (<http://conselho.saude.gov.br/biblioteca/relatorios.htm>). Viewed on 20/01/2018.

Negotiations and scenes of healthcare in the villages⁹

Before turning to the second set of ethnographic situations, it is important to explain that the health posts situated in Indigenous villages are one of the so called “limits” of the subsystem of Indigenous health. Following the logic of decentralization implemented through the 34 sanitary districts, the health post is imagined as the starting point – that is, where patients begin their journey along trajectories of healthcare through institutional health policies. Rather than setting up a comparison of objectives and results, we propose to focus on the routes available for those who seek consultations, medication and guidance for various ills, such as diarrhoea, headaches, stomach aches, fevers, malaria, flu, pneumonia, and so on. The medical interventions that can be carried out in these posts do not go beyond the administration of medications, consultations or, at best, small sutures. The posts, although viewed as appealing “ports of entry” into the system, are often spaces where intense crises involving varied subjects takes place. Death by negligence or lack of basic conditions for providing treatment can occasionally, and circumstantially, be experienced as individual errors. It is this type of power that we want to investigate here.

The following situations describe multiple levels of symbolic violence (which is said, heard, witnessed, felt). Due to the fleetingness of their frameworks, these levels of violence can best be apprehended through concrete situations. Thus, the mundane act of applying an injection (Situation 5) can unfold into an unrelenting cascade of neglect – engendering, in one fell swoop, the lack of material structure and the interactional configuration that takes place in health posts in Indigenous villages. Even when there are explicit critiques of the visible poverty of villages, material lack is conveyed as an equally moral facet of repulsion toward the values and practices associated with the Indians, although not only with them. Certain episodes originating in an ethnography of the DSEI Rio Tapajós, carried out in 2008-2009, exhibits this dynamic.

Situation 5

“This afternoon I went with nurse Malu to another visit/consultation at Mrs. Kabá’s house. She was strewn across her hammock with a stomach ache. Nurse Malu immediately asked if she wanted to travel downriver, to town, but Mrs. Kabá simply said she didn’t. The nurse then stressed that Mrs Kabá was responsible for her own decision to stay in the village, and that she [nurse Malu] would be travelling to town the following day. If something were to happen to her, “if you, God forbid, were to die, you wouldn’t have anyone to attend to you”. Mrs Kabá ignored her advice. We all shifted to a part of the house that had better light, to give the patient an injection. Malu asked if she’d eaten, but she hadn’t. It was already 2:30PM. Malu decided: “So it’s wind in your belly. That hurts. You have to eat”. She started to look at the children around her and pointed to one of the boys, who had a bone deformation in his ankle, and asked if they had applied for his retirement. She also observed that when he had arrived from Jacareacanga the boy had been fat and that he’d lost a lot of weight in the village. When we left, she quipped that there were too many children in that house and that Mrs. Kabá’s sons did nothing. To prove her point she referred to one of them, who had been resting when we arrived at the house”.

What stands out from this vignette is that the nurse, who is well-known locally, and who was somewhat respected by the Munduruku because of the time she had spent working with Indigenous health, nonetheless failed to put together a credible dialogue. Malu could not possibly have believed her own words when she said that the injection would have helped to cure “wind in the belly”; at the very least her training as nurse would immediately preclude that possibility. What we claim here is that her words were a rhetorical choice

⁹ Situations 5, 6, 7 and 8 were experienced by the anthropologist Cristina Dias da Silva during her doctoral research, between 2006 and 2010. The thesis which resulted from it is included in the bibliography. The first person singular here refers to this fieldwork in particular.

in relation to her Munduruku interlocutors. Metaphors such as “wind in the belly” are a typical means of discrediting the other, as attested in a number of anthropological studies of tutelary power and its many facets, such as, for example, studies in the medical anthropology of the power relations that permeate instances in which doctors/health professionals and patients talk past each other when they come from different cultures (Garnelo 2003 e 2004, Langdon 2004, Cardoso 2004, Smiljanic 2008, Novo 2010, Teixeira 2012, Ferreira 2013), or from distinct social groups (Boltanski, 1979, Loyola 1984, Dias Duarte 1986). What is in dispute, it seems, is not an opposition between biomedical and traditional knowledge. What is in dispute in these interactions is not epistemic reason, but rather a capacity to navigate “difficult” situations, or, as nursing assistants often say, of “giving it your best shot”.

Situation 6

“An explicit and common means of avoiding conflict in day-to-day interactions involved administering vitamins. Of the many medications kept in the post, it was poly-vitamins, B vitamins and vitamin C that were usually administered to pregnant women, malaria patients in recovery, and also – surprisingly – “to avoid conflicts”. Practically, this meant patients without any symptoms, who were only after attention, could eventually be prescribed vitamins, in an act of basic reciprocity. The fact that the register in itself is a mere informality reveals a stable pattern of conduct and interactions. Typically, more experienced professionals had recourse to this method, which was considered mostly harmless. Associating vitamins with various strategies for avoiding conflict stems from an analysis of the specific contexts that one experiences and lives in the field alongside health professionals and the Munduruku. For the former, the improvised aspects of health care were not evidence of a “lack”, but a total way of acting, a way of being within the subsystem of Indigenous health. Hence the importance of approaching improvisation as a native category, as discussed elsewhere” (Dias da Silva, 2014).

Situation 7

During an interview at the local headquarters of DSEI Rio Tapajós in Itaituba (Pará State), Mr. Lino, who was responsible for sanitation work in the District, and a long-time employee of the agency, explained to me that sanitation development was going ahead. Their priority that year was to finish projects that had been abandoned along the way, such as the piping for the village where I was residing, which had faucets, bathrooms and kitchens, but no water. This situation persisted for over ten years. He hoped to travel to the village before the year was over.

When I returned to the field in the second half of 2009, piped water had finally been established in the village: “The establishment of piped water in the village, after so many years, made access to water much easier, but people nonetheless continued to walk down to the river every day to bathe, wash clothes, was dishes. The village bathrooms (which also had faucets and two showers) were not used regularly. In the afternoon, many children took baths in these “sanitary improvements” and a pet tapir, which belonged to an old woman who lived next to the post, would often occupy the space in the mornings, enjoying the humidity of the tiles, much to the amusement of the children. The faucets in each house were built into a basin, but these had incomplete piping. The water would fall directly to the earth, in the exterior of the house. Bathrooms had cesspits. Piped water had no effect on the times when people would gather on the river banks. Families would gather to go to the river.”

In a “lifeworld”, to use Schutz’s general expression for describing the flux of events, where we find the cohabitation of sanitary installations, tapirs, health professionals, medications, the river, and so many others, material diversity is as epistemic as any other articulatory concept. Conceiving of this scene as a ‘situation’ requires a conceptual game between structures, as described previously when we discussed symbolic violence as a form of interaction.

Situation 8

“In the very first week [of fieldwork], a nurse held a lecture for mothers on “Sexually Transmitted Disease, Cervical Cancer Prevention and Hygiene”. Although she invited an Indigenous health agent to translate the lecture, she began before he arrived, despite the fact that most of the Munduruku women do not understand Portuguese. When the interpreter finally arrived, he always translated long stretches of speech, accompanied by images displayed to the audience, without being afforded a suitable amount of time for translation”.

In the economy of values that makes up the institutional engineering of Indigenous healthcare in Brazil, the Indigenous health and sanitation agents, along with nurses and nursing technicians, occupy a privileged place. They provide the link between the Indigenous community and the health professionals, particularly in what pertains to facilitating articulations between traditional indigenous practices and biomedicine. This mediation should ensure the recognition of ethnic and cultural specificities during health care, what is known in Brazil as “differential care”, thus enabling the subsystem of Indigenous health to promote and recover the health of Indigenous peoples, advancing the exercise of full citizenship. Theirs is an institutional function, which, from the start, comprehends a technical and political orientation. However, attention to the daily practice of care in Indigenous areas (situations 7 and 8) reveals the distance between the “language of imagination” characteristic of normative documents and the “language of decision” that these types of texts look to enable (Geertz 1985). This distance, as the situations above express, is constituted in the myriad relations of neglect toward patients and Indigenous agents, observed in the day-to-day of the village (Dias da Silva 2010; Situations 5 and 6), in what concerns culturally differentiated care, the demands of patients, and the mediating role of Indigenous health agents.

The metaphor of “wind in the belly” (Situation 5) can be described as a redundant situation. Pretty much every day had its “wind in the belly” moment, or one of “vitamins to avoid conflicts” (Situation 6). Even though the nurses and health technicians are the professionals of the subsystem of Indigenous health who are closest to the experiences of pain and suffering of the Munduruku people, they are also generally capable of perpetrating a type of deauthorization which is difficult to understand, for it does not emerge as a form of coercion, nor was it driven by evil intentions – quite the contrary. It is a form of violence which authorizes and deauthorizes in equal proportion: it blames the Indigenous patient (and her family) for their condition, holds her accountable for the consequences of her decision to stay in the village, and, at the same time, ignores the political dimension of (for example) the precarious material conditions of healthcare available in the subsystem. It thus reveals tutelary power in its brutal form, rather than in the benevolent form that we usually observe. The manner in which people (as “patients and their families”) were treated recalls mechanisms of deauthorization as a type of interaction that avoids conflicts, but which has a potential for conflict that inhabits this very avoidance. This process evokes Herzfeld’s (2008) approximation of the concept of violence to the notion of cultural intimacy, which he provisionally defines as a sort of disseminated essentialism expressed in practical constraints in social life: “cultural intimacy is, above all, *familiarity with known social imperfections*, which provide culturally convincing explanations for apparent deviations from public interest” (Herzfeld, 2008:24-5, our emphasis)

These mechanisms of deauthorization are also visible in the prescription of medication (Situation 6), where the potential for conflict that might emerge from a visit to the post that does not result in the dispensation of medication was countered via the oral administration of vitamins. This is one of many possible situations: it is exemplary, but not absolute. “Complaints” deemed to be exaggerated, but which could not be ignored, were managed, relatively successfully, through this use of vitamins as a substance/object that hovers over a certain perception of cultural distance (“they do not understand” or “do not know”, evaluations typical of tutelary power). To claim that vitamins occupy a privileged place in the daily regulation of conflicts, being interpreted through native categories of improvisation, does not lay blame on individuals for the actions associated with them. Our aim is, rather, to understand these specific acts as part of a wider set of attitudes and tactics, as suggested by the notions of tutelary power and inequality (Souza Lima, 1995; 2002a, 2002b, 2002c).

This singularity of vitamins, which made them stand out among the range of available medication, makes explicit the persuasive potential of acts of “administering medication”, which is even more interesting for being a performative act, a ritual of daily interaction. The political/ritual dimension of this relation also emerges in the case of water supply and sewage in the village (Situation 7). The faucets had been a part of people’s homes for many years. On the one hand, this reveals the precarity of services rendered. The scene was, at best, strange: faucets with no purpose, piping that was defective before being used. On the other hand, when the sanitation work was complete, Munduruku use of the faucets “fell short of expectations”, a type of explanation which points to meanings other than material precarity. In this case, we draw attention to the fact that, from the perspective of structural precarity, precarity itself is transformed into relations of tutelage – that is, into efforts to control the behaviour of another who is considered relatively incapable. This situation contains a form of interaction that we have sought to underscore: the material conditions acquire a double meaning, they perpetuate and represent. They afford continuity to flagrant problems, while also coming to represent the other through an inversion between living conditions and ways of living (Dias da Silva 2010).¹⁰

In Situation 8 the nurse focused on the expressive force of her lecture through a logic that neglected the actions of the Indigenous agent. The notion of risk and danger that she transmitted through the pictures of disease were considered fundamental means of connecting with the audience, part of a purportedly universal discursive strategy. She then shifted from warnings to “risk management” by drawing attention to actions that modified self-care for the sake of disease prevention. In what concerns hygiene, the link between warning and behavioural prescription was evoked by reference to the Amazonian winter, which was just starting at the time, and the diseases linked to river water that proliferate during this season (mostly diarrhoea and worms). She stressed that it would be wise to “bathe every day, in the morning, afternoon and at night, to clean the house, sweep it, gather trash at the allotted place”. The nurses’ recommendations included very general and sociologically empty commentary, which made little sense to Munduruku everyday life. Indeed, bathing three times a day and sweeping their homes were common practice. The idea that they defecated on the river banks had no connection to village life, but was rather part of the health education of riverine communities in general.

This vignette is furthermore exemplary for describing an event in health education that did without the Indigenous agent. The nurse lectured in Portuguese to women who were monolingual in Munduruku, without the required translation, using a *universalist* biomedical language of disease riddled with *particular* anticipations. Biomedicine is, after all, a cultural idiosyncrasy like any other, whence the emergence of the notion of ‘interculturality’ as a resource for enabling dialogue between medical knowledges. However, the Munduruku way of life is deauthorized in this process: the health policies affirmed in the Constitution of 1988,

¹⁰ The concept of ‘culture’, taken as an obstacle, brings us to a well-known field of tensions between anthropologists carrying out fieldwork and health professionals in sanitary districts. See also Smiljanic (2008).

and reaffirmed in the meetings between Indigenous leaders and government administrators (Teixeira 2010), is interpreted as ‘interculturality’, when, in fact, it reproduces the same type of asymmetry and tension which it seeks to undo.

We would like to stress that we do not intend to use the ethnographic evidence narrated in these different situations to blame individuals. This is not what our set of ethnographic data reveals. Instead, we propose to carefully consider these situations by focusing on the overlapping ties between people and institutions and their power effects. In this sense, the lecturer disregarded the Munduruku not because she was a bad public servant or a bad health professional, but because she could do so in a structural sense. It allowed her to more quickly observe boring protocol which she may not have wanted to carry out herself, as evidenced by her impatience during the event. At any rate, we are not in the realm of intentionalities, but of a politics of relations that bears a historical depth that affects everyone.

It seems clear to us, at this juncture, that an act of care is an act of power, and relations of care are no less political, nor do they convey an aura that transcends daily conflicts. Care is therefore an act of managing space, time and the lives of others. We are not here proposing a naturalized view of care, as if the political dimension contaminated relations of care. Instead, we see the political dimension as an ineluctable aspect of care, one which reveals forms of association that demand our investigation. This theoretical stance allows us to better comprehend this specific relation of power – a development that we will explore in the conclusion.

Concluding remarks: new configurations of power and violence, new citizenships

There are numerous studies of health care in the special Indigenous sanitary districts. They adopt different approaches and investigate different themes: traditional medicine, Indigenous health and sanitation agents, differential care, etc. (Buchillet 1991, 1995, 2004, Garnelo 2003, Erthal 2003, Langdon & Garnelo 2004, Dias-Scopel 2005, Novo 2010, Dias da Silva 2014 e 2017b). There are likewise numerous studies of Indigenous participation in public policies: its dilemmas and challenges (Cruz 2011; Ribeiro de Almeida 2010; Teixeira et al. 2013; Pallheta 2015), the conferences (Garnelo 2002; Teixeira 2010); the councils and councillors (Langdon & Garnelo 2004; Garnelo & Sampaio 2005; Ferreira 2012). Acknowledging the excellence of these studies, we have sought to articulate these two themes so as to reveal new meanings. Our research has thus addressed the violence characteristic of these two sets of situations, and their possible connections and political developments.

To conclude, we align our analysis with a delicate reflection, which we hope is not misconstrued by the reader. We do not intend to deauthorize policies of social participation, and we share their democratic aims¹¹. Our aim in this article is to contribute to an understanding of the limits and possibilities of this new configuration of power, which seeks to produce citizens capable of acting in their own benefit by participating and collaborating with government policies. This is a sort of civic version of the Christian teaching that “you should not give fish to a man, but teach a man to fish”. From this angle, the citizen must be a new subject of power (the participatory citizen), and he or she must be produced as such: “taught”, “capacitated”, and so many other terms that smooth over the subjection and moulding that is required for this process to be successful. Thus, the dichotomy between the subject and object of power loses meaning, since the production of the former depends on the constitution of the latter: the subject who participates (subject of power) must learn to be a citizen (object of power) who negotiates, converses, and agrees, rather than one who fights and confronts. In 1910, when the SPI was created, the Minister for Agriculture, Industry and Commerce said that the agency would “constitute catechism in new terms, conferring on it a Republican face” (in Souza Lima 1987: 26). Today, it is not just a matter of replacing the word ‘catechism’ with ‘protection’. Today, the magic of

¹¹ While we were preparing this article for publication, the very structure of social participation and of Indigenous healthcare in Brazil became threatened with extinction by the government of president Jair Bolsonaro.

transforming direct violence into symbolic violence is no longer based on fraternal protection. It has acquired a new dynamic: that of the utopia of the distribution of power and differential rights. Furthermore, the dispute over legitimacy is made more complex by the multiplication of mediators (Indigenous and non-Indigenous specialists, Indigenous leaders and their allies, various bureaucrats, professional and occasional politicians) who are frequently trapped in a grammar of accusations which, in the case of healthcare, is rarely made explicit in accusations of violence, as we have been arguing throughout this article.

If Indigenous participation expanded networks and channels of articulation, taught them new political strategies, familiarized them with discourse registers that effect Indigenous healthcare, what we have been arguing in this article is that these effects are contained by the formal rules of “social control” which do not grant the power of decision (or veto) to Indigenous peoples, and which appear to weaken political confrontation by the predominant moral tune of “conciliation”. The presence of Indigenous candidates in the 2018 elections, including the election of the first Indigenous congresswoman in the history of Brazil¹², suggests an understanding that the challenge at hand involves deepening the conditions for political participation. This creates tensions in institutionalized spaces of social participation, seeing as the incentive to participate in government policies and in the management of Indigenous healthcare do not result in an improvement in the living conditions of these citizens – now transformed into ‘populations’, with their indicators and statistics – but, rather, generate and multiply the very act of participating. This process, in turn, construes as a “paradox” or a “police affair” the direct violence that bears the indisputable stamp of national development, where state agents act directly and through omission, which is exercised and combined with participatory power. Structural violence is here processed not only by the effacement of the historical connections with tutelary domination, but mainly by the transformation of these connections into “contradictions” of the democratic process – contradictions which must be corrected (at least until recently) by the creation of further spaces for participatory democracy, spaces which abide by the self-same rules.

At the same time the relation between professional neglect and the precarity of the living conditions of Indigenous peoples in healthcare practices, which has marked indigenism in Brazil since the SPI, are perpetuated under the veil of practices of improvisation (Dias da Silva 2010). Such practices characterize the work of health professionals in Indigenous lands, whether as a way of coping with material precarity or in the interactional dynamics that make explicit the deauthorization of the other. The universe of benevolence that is inscribed in the rhetoric of daily care, and which is the idiom *par excellence* of the health post, traverses the rhetoric of social participation and is maintained as a form of violent interaction that disregards and distorts the demands of the other in the management of this care. Taking violence in Indigenous healthcare as simultaneously significant action, structure (of power and of the material conditions of existence) and history has enabled us to map continuities between distinct temporalities and specialities. In the temporal axis, we can apprehend the relation between the turn of the 20th century and the recent period of (1) participatory democracy and (2) universal and differential rights to healthcare. We have thus sought to articulate yesteryear’s legally incapable Indian to the contemporary subject (who is subject to) participation. But we have likewise sought to connect the past Indian targeted by selfless acts of healthcare (and by successive sanitary campaigns), object of the destructive effects of contact, with the contemporary Indian who bears a differential right to healthcare, object of the effects of the precarity of the structure of healthcare in villages and of the strategies of neglect and the avoidance of conflict (through the manipulation of authority and biomedical procedure). In the spatial axis, we have identified (but not investigated) the links between the politics of Indigenous inclusive participation

¹² Joênia Wapichana became a congresswoman for the state of Roraima. Her term began in 2019.

and the model of economic development that excludes them¹³; as well as between this politics (and its power vacuum) and the relations of power between healthcare professionals and Indigenous patients.

Returning to the question of censorship, our hypothesis is that, in the recent arena of democratic politics in Brazil, the effect of censorship is expressed in an inability to concede that participation, in the form of dialogue and co-responsibility, is not a sharing of power, but an instrument of domination; it is a type of structural and symbolic violence in which conflict and the dispute over legitimacy cannot be made explicit, because of the over-arching consensus around the value of participation and social control in the field of Indigenous health. And this is a field in which indigenism meets sanitary policies, tutelary powers meet biomedical power in democratic contemporaneity. These are the elements that guide the permanent production of new Indigenous citizenship since the mid-1980s: a participative citizen, with differential rights. It is with these citizens that, in an apparent paradox, the government, through financial resources and training programmes, seeks to share the exercise of power through varied forms of collaboration. In this way, new configurations of power are constituted in which, in Cruikshank's Foucauldian reading, "The citizen is an effect and an instrument of political power rather than a participant in politics" (1999:5).

Yet it is not only participative citizenship that cannot be made explicit as a singular process for producing subjects and subjection; neither can care be unveiled as a process for producing quotidian violence. In the local activities of healthcare, our second area of focus, disjunction (which itself conceals structural violence) takes place in the daily management of inattention to healthcare in the villages. This negligence in turn engenders suffering and routine deaths through an unspectacular process of exclusion, of transforming inadmissible physical violence (deaths and malnutrition, waterborne diseases, parasitosis) into habits of a politics of healthcare which, nonetheless, is deemed more or less successful in "cultural", "logistical" or "legal" terms. In this way, it is difficult to situate those who are responsible for violence in healthcare.

All of this is unsaid during normal times, but in moments of crisis and distrust they seep through the censorship of the political game of Indigenous healthcare. It is only by carefully examining the interactions experienced in the two contexts articulated here (political negotiations in social control and healthcare in the villages), situating them in the long-term historical processes that constitute them (indigenism and sanitary policies), and referring them to the exacerbation of physical violence in the last ten years¹⁴, that we can comprehend the complaints, the conflicts (experienced in discourse, in the management of medication, in performic protests, etc.) and the negotiations in Indigenous healthcare as expressions and weapons of a struggle for power and domination that is metamorphosed as collaboration, participation, attention, care.

Through the different situations we have investigated, we have thus sought to apprehend structural violence and its symbolic expression in their systematic nature in the everyday relations of healthcare and in the political negotiations of Indigenous health policies, both in the material asymmetries of power and in the distortions of meaning. They constitute a double transfiguration in which: conflicts are avoided, contained and hidden by various procedures institutionally activated by health professionals situated in the villages; and the fragility of "social control" is attributed mainly to the personal characteristics of legitimate authority figures (coordinators of the DISEI, Minister of Health, President of the Republic, etc.) who do not respect decisions reached through dialogue. These understandings erase the mediating violence, which, like a grammar, is incorporated to the conditions of the possibility of the interventions that are questioned and debated in Indigenous healthcare. Reflecting on some of the rules and tendencies that emerge as dominant, but which remain implicit, is a way of making them known. We thereby convey the interrogation of tacit conditions, of presuppositions

¹³ There are a number of anthropologists who have explored the double origin of social participation: how the World Bank had intervened in the last decades and the demands of social movements. For the Brazilian case, see Salviani (2010), Bronz (2016), Teixeira (2017), among others.

¹⁴ See report produced by the Indigenous Missionary Council (CIMI): <https://www.cimi.org.br/observatorio-da-violencia/relatorio-2016/>. Viewed on the 08/02/2018

(Bourdieu 2003: 50) in Indigenous healthcare. As the anthropologist and Indigenous leader Gersem Luciano¹⁵ observed, the time is ripe, after the difficulties which gather in the horizon after the 2018 elections, to articulate an ethno-political project that situates Indigenous peoples in the ideas and projections of Brazil being discussed. This project would emerge from the prospects of political and economic risks for and by Indigenous peoples and their capacity to plan for the future through the lens of Indigenous cosmologies.

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Devenir sujet : les expériences des jeunes sous Contrat jeune majeur en France

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Résumé

Il s'agit des résultats d'une recherche ethnographique menée entre 2015 et 2017 à propos des modes par lesquels les « jeunes majeurs » d'une association éducative parisienne se construisent en tant que sujets. Dans un contexte de contractualisation des politiques de protection françaises, je me suis intéressée aux expériences des jeunes de cette association vis-à-vis du Contrat jeune majeur (CJM), qui est une technologie de gouvernement pour faire face aux effets de la réduction de la majorité depuis 1974, ainsi qu'aux lacunes qu'elle a créées en matière de protection et d'assistance aux jeunes entre 18 et 21 ans qui sont en difficultés d'intégration sociale. L'article fait état d'un chevauchement des questions économiques sur celles d'ordre éducatif de telle sorte que les jeunes qui ont ce contrat ne sont pas ceux qui se trouvent en difficultés d'intégration, mais ceux qui ont un « projet de vie consistant ».

Mots clés: Technologie de gouvernement; Contrat jeune majeur; Jeunes; Sujet.

Sujeitos em devir: as experiências de jovens em situação de “Contrat jeune majeur” na França

Resumo

Trata-se de resultados de uma pesquisa etnográfica empreendida entre 2015 e 2017 sobre os modos pelos quais os “jeunes majeurs” (jovens de 18 a 21 anos) de uma associação educativa parisiense se constroem enquanto sujeitos. Em um contexto de contratualização das políticas de proteção francesas, eu me concentrei nas experiências dos jovens dessa associação em relação ao Contrat jeune majeur (contrato jovem adulto), que é uma tecnologia de governo implementada para enfrentar os efeitos da redução da maioria implementada desde 1974, como também as lacunas que essa criou em termos da proteção e da assistência aos jovens entre 18 e 21 anos que enfrentam dificuldades de integração social. O artigo problematiza a sobreposição das questões econômicas sobre aquelas de ordem educativas, de tal modo que os jovens que têm a oportunidade de assinar o contrato não são exatamente aqueles que encontram dificuldades de integração, mas sim aqueles que possuem um “projeto de vida consistente”.

Palavras-chave: Tecnologias de governo; Contrato; Jovens; Sujeito.

Devenir sujet : les expériences des jeunes sous Contrat jeune majeur en France

Fernanda Cruz Rifiotis

Introduction

Dans cet article, j'analyse les façons par lesquelles les jeunes majeurs peuvent se construire en tant que sujets (les modes de subjectivation), compte tenu des logiques de contractualisation qui ont marqué les politiques de protection françaises. Par conséquent, je prends comme objet central de ces politiques le Contrat jeune majeur (CJM), qui sera problématisé comme une technologie de gouvernement. La réflexion est basée sur l'ethnographie que j'ai développée entre 2015 et 2017, dans le cadre de mon postdoctorat en Anthropologie sociale à l'EHESS de Paris. La recherche a comme outil privilégié l'écoute des récits des expériences des jeunes majeurs (à partir d'entretiens et de conversations informelles) et l'observation de leur vie quotidienne au sein de la Suite éducative¹ d'une association parisienne.

Dans le cas des jeunes « sortant du dispositif de protection de l'enfance »², la question de leur « devenir » est centrale pour les politiques publiques et pour les études scientifiques. « Qui sont ces jeunes ? », « Que font-ils ? », « Qu'est-ce qui leur est arrivé après leur départ ? », ces questions sont souvent soulevées par les professionnels qui travaillent dans le dispositif de protection de l'enfance, ainsi que par des chercheurs de différents domaines (Sociologie, Démographie, Psychologie, Droit, etc.). L'avenir de ces jeunes semble éveiller l'attention de tous les intervenants sociaux, en particulier ceux qui participent à la création et à la mise en œuvre des politiques de protection. Dans la perspective plus traditionnelle, il y aurait l'idée d'un investissement pour ces jeunes, qui devrait être rétribué selon ce que sera leur avenir : l'insertion professionnelle, l'achèvement des études, la conquête de l'autonomie, etc. Et quand ces jeunes ne correspondent pas à cet idéal des politiques publiques, ils sont considérés comme ceux qui n'ont pas atteint un « bon projet de vie ».

La recherche que je mène depuis 2010 (Cruz, 2014) est basée sur une espèce d'inversion temporelle dans l'ordre de ces questions, afin de considérer non pas ce que ces jeunes sont devenus (en tant que produit des politiques de protection et de l'institutionnalisation), mais ce qu'ils peuvent devenir en tant que sujet. Dans mon approche analytique, le mot « devenir » a une portée philosophique, une catégorie analytique et, au-delà du sens de changement comme processus d'arrivée à un point, comme identité figée, il prend en considération la construction permanente sans un aboutissement et sans une direction univoque. Cette perspective permet de réfléchir sur les manières dont les jeunes en situation de contrat se mobilisent pour résister et s'adapter à ce qui leur est demandé.

¹ La Suite éducative est située dans le 20^e arrondissement, le deuxième plus peuplé de Paris. Le quartier est connu pour accueillir les populations des migrants et les principales communautés présentes proviennent du Maghreb et de l'Asie (principalement de Chine). La réalité du quartier est comme celle de la Suite. Le service accueille, en moyenne, 40 jeunes âgés de 18 à 21 ans, de différentes provenances géographiques, mais principalement de pays africains comme la Guinée, le Congo et la Côte-d'Ivoire. La Suite éducative est l'endroit où est fait le travail du suivi éducatif des jeunes. C'est dans la Suite que les jeunes sont suivis par une équipe de quatre éducateurs, une chef de service et un psychologue. Chaque jeune a un « éducateur de référence » qui est chargé de son orientation pour qu'il puisse accomplir le projet établi dans le Contrat jeune majeur.

² Selon la revue de littérature publiée par l'Observatoire de l'enfance en danger (ONPE), en octobre 2014, l'expression « jeunes sortant du dispositif », qui a pour équivalent l'expression anglaise « care-leavers », « permet de ne pas fixer un seuil d'âge, mais de s'intéresser plus généralement à la période qui suit le départ du jeune de la dernière structure au sein de laquelle il a été accueilli au titre de la protection de l'enfance ». ONPE (Observatoire national de la protection de l'enfance). *Revue de Littérature : L'accompagnement vers l'autonomie des jeunes sortant du dispositif de protection de l'enfance*, 2014. Disponible sur Internet : <http://www.laurent-mucchielli.org/>

Ma proposition est de mettre en avant-plan de mon analyse le sujet d'une façon que « nous ne sommes pas habitués à voir », c'est-à-dire celui qui s'est construit de façon contingente à partir de ses multiples expériences (Strathern, 2006). Pour une telle entreprise, il est essentiel d'observer les expériences des jeunes majeurs afin de comprendre les modes de subjectivation qui sont révélés par une « attitude générale » (leurs manières d'être dans le monde, d'agir, d'être en relation avec l'autre, d'une certaine manière de faire face aux choses) des jeunes par rapport à eux-mêmes, aux autres et au monde (Foucault, 2010, p.11) (c'est moi qui traduit). Sans perdre de vue que chacun, « avec son nom, son individualité désigne une multiplicité » (Deleuze, Guattari, 1997, p.36) (c'est moi qui traduit). Contrairement à ce que l'on pourrait vouloir, il ne s'agit pas de dire qui sont ces jeunes (et leur devenir) et de les définir à partir de leurs expériences. Ils sont en devenir (dans le sens philosophique), et donc ils échappent à toute prétention de les encapsuler en catégories, en particulier celles qui portent le supposé poids ou les effets de l'institutionnalisation. Ce que je veux présenter est peut-être une partie du « devenir », une partie de ce qu'ils peuvent en tant que sujets et non de ce qu'ils sont : dans ce sens, il n'y a pas de place pour la substance. Dire ce qu'ils peuvent révèle la dimension de puissance contenue dans chacun de ces jeunes, une multitude de croisements de différentes forces et intensités qui ne convergent pas à une forme finie.

1. Le Contrat Jeune Majeur en tant que technologie de gouvernement

Prendre les technologies de gouvernement comme objet d'analyse, cela signifie, d'abord, comprendre que celles-ci sont intégrées dans un problème plus vaste nommé par Foucault (2008) « gouvernementalité ». Le concept qui émerge d'une manière localisée, se référant au système de pouvoir mis en place au XVIII^e siècle (comportant comme principale cible – la population –, comme principal moyen de savoir – l'économie politique – et comme instruments techniques – les dispositifs de sécurité), prend peu à peu un sens plus général et abstrait. En ces termes, il ne définit pas seulement une relation de pouvoir, mais un domaine spécifique lié aux techniques de gouvernement « sous-jacent à la formation de l'État moderne ». Le concept permet de problématiser une sorte de « surévaluation du problème de l'État » ou « le monstre froid face aux individus », ou encore sous sa forme réduite à un certain nombre de fonctions présentes dans le cours de l'Histoire. Vu que l'État n'a pas « cette unité, cette individualité, cette fonctionnalité rigoureuse », il faut capturer son mode de gouvernement à partir d'un ensemble de techniques et de pratiques hétérogènes (Foucault 2008).

Considérant que l'État est une « réalité composite », qui sera composée d'une série de fragments de pratiques et de connaissances qui, lorsqu'ils sont assemblés, ne constituent pas une nouvelle forme, car toujours inachevée, les technologies de gouvernement sont devenues « question politique fondamentale et l'espace réel de la lutte politique » (Foucault 1979). Conformément à ce point de vue, les technologies de gouvernement peuvent être considérées comme l'ensemble multiple de stratégies et de tactiques, de connaissances, de dispositifs, de procédures et de réflexions qui permettent de gouverner et objectiver les sujets, les pratiques sociales et les moralités.

Les technologies de gouvernement ne sont pas des « outils neutres », elles sont ainsi inextricablement liées non seulement aux « formes de résistance » et aux « contre-conduites », dans les termes de Foucault³, mais aussi à la création des conditions pour l'émergence des formes de se construire en tant que sujet, celles-ci n'étant pas des formes finies, mais toujours en train de se faire et dans une relation expérimentale avec elles-mêmes (Schuch, Ribeiro, Fonseca, 2013). Les technologies de gouvernement, dans cette perspective, sont indissociables

3 En suivant cette perspective, il me semble que le dialogue avec Foucault est productif, en particulier en ce qui concerne la notion de modes de subjectivation. Les modes de subjectivation ont peu à voir avec le sujet ou le retour à celui-ci : ils ne correspondent pas à une substance. « (Le sujet) C'est une forme, et cette forme n'est pas surtout ni toujours identique à elle-même. Il y a sans doute des rapports et des interférences entre ces différentes formes du sujet, mais on n'est pas en présence du même type de sujet » (Foucault, 2012, p.269). Les modes de subjectivation peuvent être pris comme forme, parce qu'ils sont variables, selon le temps et les conditions de leur émergence, ils peuvent à tout moment être défaits et refaits.

des modes de subjectivation. C'est-à-dire qu'il ne s'agit pas d'une simple approche par les sujets ni de leur autonomie et ses marges de manœuvre face aux technologies de gouvernement. Elles révèlent l'émergence des sujets selon leurs façons d'évaluer les codes et les institutions, et ainsi de créer des modes d'existence.

Les technologies de gouvernement sont des éléments actifs dans la construction de nouveaux contextes politiques et elles sont toujours remodelées et actualisées (Schuch, Ribeiro, Fonseca 2013). Loin d'un fonctionnement selon des modalités univoques et à partir de mécanismes verticaux, elles procèdent à partir de logiques multiples et de manière diffuse (Fassin, Memmi, 2004). Dans le cas des technologies de gouvernement envers les jeunes majeurs, celles-ci ont été de plus en plus marquées par la contractualisation. Il est important de rappeler que la contractualisation est un processus complexe (ce qui implique une certaine conception de l'État et aussi du social) qui passe à travers l'objet du contrat, mais ne se limite pas à celui-ci. La contractualisation mélange un ensemble de dispositifs dont la vocation est l'insertion et, donc, elle est la partie visible de l'arrivée de nouvelles politiques sociales fondées notamment sur des récits individuels, sur la relation individuelle et sur la mise en perspective par le projet (Guimard, Petit-Gats, 2010).

En ce qui concerne le CJM, pour comprendre les modes de fonctionnement de cette technologie de gouvernement, il faut reprendre certains aspects du Contrat jeune majeur. Il sera important de comprendre le contexte dans lequel le contrat émerge, les changements dans les politiques publiques de protection qui ont bouleversé ses objectifs initiaux et aussi ses dynamiques et logiques actuelles. Le Contrat jeune majeur émerge en France, dans un contexte marqué par une série de transformations (d'ordre législatif principalement) dans les politiques de protection de l'enfance. La première, en raison de la loi n 74-631 du 5 juillet 1974, se réfère à l'abaissement de l'âge de la majorité civile⁴ (de 21 à 18 ans), qui a produit un revirement sur les façons de prendre en charge les enfants protégés par le dispositif de protection à l'enfance. À cause de l'abaissement de l'âge et, par conséquent, du « vide juridique » créé par cela, il semble important que le gouvernement atténue les effets indésirables de cette loi (Capelier, 2015).

Ainsi, en suivant cette perspective de l'atténuation des effets du rabaissement d'âge, deux décrets sont créés, en 1975, pour instituer une protection administrative et une autre judiciaire s'adressant aux jeunes âgés de 18 à 21 ans. La promulgation de ces deux décrets conduit à la création d'une nouvelle catégorie juridique : le jeune majeur⁵. Les jeunes majeurs sont des jeunes âgés entre 18 et 21 ans qui ont des difficultés d'intégration sociale par manque de ressources ou de soutien familial adéquat. Pour faire face aux effets de la réduction de l'âge de la majorité et aux lacunes qu'elle a laissées en ce qui concerne la protection et l'assistance aux jeunes de plus de 18 ans, les sujets eux-mêmes ont alors la possibilité de demander la poursuite d'une mesure pour les protéger après la majorité.

Afin de comprendre ce contexte, il est important d'expliquer brièvement le fonctionnement du dispositif français de protection, dont la particularité est précisément le fait qu'il repose sur une dualité, qui a été accentuée en 1983 à cause des lois de décentralisation. Autrement dit, le dispositif est formé par deux versants : l'un administratif relevant du Département (Aide sociale à l'enfance - ASE), et l'autre judiciaire au sein de l'État (Protection judiciaire de la jeunesse - PJJ). Les deux, jusqu'en 2007, étaient chargés de fournir un soutien matériel, éducatif et psychologique aux enfants et à leurs familles lorsqu'ils sont confrontés à des difficultés qui mettent en danger leur santé, la sécurité, l'éducation. Cela signifie que les jeunes de 18 à 21 ans pouvaient bénéficier, jusqu'à ce moment-là, d'une protection de ces deux institutions, en obtenant un statut administratif ou juridique de jeune majeur. Sur le plan judiciaire, ces sujets pouvaient demander une Action de protection des jeunes majeurs (APJM) et, dans l'administratif, il y avait la possibilité du Contrat jeune majeur (Jung, 2010).

4 Depuis 1792, la majorité en France était fixée à 21 ans.

5 Il est important de souligner que cette catégorie ne comprend pas seulement les jeunes qui, pendant l'enfance et l'adolescence, ont été placés, mais tous les jeunes qui se trouvent en situation de difficultés d'insertion.

Cependant, en raison de nombreux changements dans le système de protection français, notamment en raison de la Réforme de la protection de l'enfance en 2007, on assiste à un désengagement de l'État par rapport aux procédures civiles et au soutien éducatif offert jusqu'à ce jour aux jeunes majeurs par PJJ, qui est devenu responsable seulement pour l'action pénale. Face à un tel scénario, les départements sont confrontés à une demande accrue de protection aux jeunes majeurs, puisque la demande de protection judiciaire devient subsidiaire et justifiée, seulement en cas d'échec de la mesure administrative (Jung, 2010).

La durée du contrat peut varier d'un mois à un an et il peut être renouvelé jusqu'à 21 ans. Pour la signature du contrat, il est nécessaire que les jeunes répondent à une série de « rites administratifs ». Le premier consiste à l'acheminement de la demande au Secteur éducatif auprès des jeunes majeurs (SEJM). Dès la réception de la demande, un entretien est immédiatement fixé. Même avant l'entretien, il est préférable que le jeune, avec l'aide de son éducateur, envoie au SEJM un dossier dont le principal document est le formulaire de demande d'Accueil provisoire jeune majeur (APJM). Parmi les documents justificatifs du formulaire il y a la lettre adressée à l'inspecteur de l'ASE, où le jeune doit justifier sa demande et présenter son projet éducatif et professionnel.

Le deuxième rite comprend « l'entretien dans le SEJM » au cours duquel on attend la participation active des jeunes ; cela signifie produire un récit de tout leur parcours dans le cadre de la protection sociale française. À partir de ce moment, le dossier est transmis par la Commission SEJM à la Commission jeune majeur, qui émettra un avis définitif sur l'acceptation de la demande et la durée du Contrat jeune majeur.

Le troisième rite se réfère à la « signature du contrat », quand aura lieu le dernier entretien avec le jeune et, par conséquent, l'évaluation finale par l'inspecteur de l'ASE. La signature du contrat marque formellement l'accès des jeunes à un autre statut – jeune majeur – qui vient avec l'annonce de la fin de certains privilèges de la minorité, en particulier la fin de l'obligation d'assistance. En raison de la création de la catégorie jeune majeur, apparaît en France un nouveau « marché de services » spécialisés, comme la Suite éducative, avec les modes de fonctionnement spécifiques tant éducatif que matériel (Guimard, Petit-Gats, 2011).

Ainsi, cette proposition soulève aussi le défi de réfléchir sur les limites des politiques de protection, en particulier sur la possibilité de reconnaissance de ce que peut le sujet, à savoir, sa puissance de mettre en place de nouveaux modes d'existence. Et sur ce point-là, je partage l'intérêt de Schuch (2013) sur les surprises que nous réservent les sujets sur le plan de leurs complexités, et comment ils peuvent apporter de nouvelles complexités au scénario des politiques de protection, en particulier celles liées aux jeunes majeurs. Compte tenu de la proposition de penser les sujets en matière de leurs complexités, je présente, ci-dessous, des extraits ethnographiques des expériences de cinq jeunes de la Suite éducative (Auguste, Albert, Sophie, Alice et Victor)⁶.

2. Auguste : des excuses sur un morceau de papier

Auguste est guinéen et quand j'ai fait sa connaissance, son Contrat jeune majeur était presque terminé. Ce fut un moment très délicat pour le jeune parce qu'il avait manqué la date limite de demande de renouvellement du CJM et il avait besoin le plus vite possible de remplir le formulaire de demande du CJM et de rédiger sa lettre de motivation. En outre, la situation de ses papiers restait irrégulière. Lors d'un rendez-vous avec sa référente, il était avec sa petite amie. Les deux semblaient avoir une relation marquée par la complicité, elle soutenait le développement de son projet. Tandis qu'ils parlaient, la jeune fille tenait tout le temps la main du jeune. Et, parfois, il penchait sa tête vers ses genoux, montrant sans honte sa faiblesse à ce moment-là. Il a très mal réussi à l'école, l'année a été perdue pour lui. Ce qui était une préoccupation majeure en ce qui concerne

⁶ Pour une question d'éthique, les prénoms des jeunes ont été changés.

la demande de renouvellement du CJM. Mais, il a dit que son stage allait très bien et qu'il s'était appliqué, parce qu'il aimait beaucoup le travail. La référente a souligné que ce point était à remarquer dans sa demande, à savoir : même s'il avait des problèmes à l'école, le stage se passait très bien.

Tout au long de la conversation, nous avons parlé du CJM et de sa logique de fonctionnement, en particulier, des exigences imposées aux jeunes. J'ai demandé à la référente si le contrat imposait des contraintes aux jeunes. Elle a dit que ce n'était pas seulement cela. Par exemple, a-t-elle dit, je suis dans ma maison, avec ma famille, et je dois tout laisser pour travailler. Ceci est une contrainte. « Maintenant, pour ces jeunes, en particulier ceux qui ne sont pas français, le contrat est leur vie même, c'est bien plus qu'une contrainte. Parce que tu sais que si tu n'as pas de papiers, si tu n'as pas un contrat, tu ne peux pas rester en France. » Pendant qu'elle parlait, je regardais le jeune, qui restait la tête basse, visiblement angoissé par rapport à sa situation qui était exactement celle énoncée par la référente.

Quelques jours après ce rendez-vous, j'ai eu une conversation avec la référente sur Auguste. Elle était très inquiète de la situation et, surtout, elle se faisait du souci pour lui par rapport à l'évaluation du jeune par l'ASE. Elle était préoccupée parce que le renouvellement du contrat du jeune était en jeu. Il fallait être très prudent sur la manière d'écrire (quoi écrire et avec quels mots). Elle m'a dit qu'elle n'a eu aucun contact avec lui pendant plusieurs jours et qu'il n'a pas donné de retour sur le formulaire et la lettre de motivation. Il avait manqué la date limite. Elle m'a montré l'ébauche de la lettre qu'il avait écrite. En fait, c'était un morceau d'une feuille de cahier, écrit des deux côtés. D'un côté, avec l'écriture de sa petite amie, les points qu'il devait développer (son projet pour ses prochains mois) ; de l'autre, il y avait le récit du jeune sur sa situation. Dans la lettre, le jeune parlait de ses échecs, de son impuissance face au projet qu'il avait promis à ses parents et aussi à l'ASE. Il a commencé en disant que, au début, il pensait qu'il serait en mesure de gérer son autonomie, de vivre seul et de conduire son projet. Mais il s'était trompé, il n'était pas capable de faire les choses tout seul. Il ne pourrait pas tenir la promesse qu'il avait faite à ses parents : avoir une formation, un emploi et la citoyenneté française. Il ne pourrait pas rentrer à la maison et dire à ses parents qu'il avait réussi. Ce projet serait accompli par son frère cadet qui est venu avec lui en France. Ce morceau de papier contenait également des excuses.

3. Albert : « Je suis un artiste en herbe »

Le jeune, dont les parents sont marocains, est né en France. Il avait 14 ans quand il est arrivé à la Suite et son parcours à l'ASE est long et a commencé depuis l'enfance, quand il avait 7 ans. Il est passé par différents foyers et familles d'accueil. Les derniers mois ont été particulièrement difficiles pour lui. Le départ de la Suite est proche et le jeune n'a pas obtenu son baccalauréat (bac) à la fin de l'année dernière. En général, quand un jeune n'a pas eu le bac, il peut le repasser l'année suivante, s'il a obtenu la moyenne pour cela. Mais cette situation n'est pas la réalité de la plupart des jeunes en situation de Contrat jeune majeur. Si le jeune a déjà 20 ans ou qu'il a presque cet âge, il n'aura pas la chance de repasser le bac. Il est prêt à quitter la Suite éducative, il a besoin de quelque chose qui lui permette une insertion plus immédiate et un logement. La réalité des jeunes en situation de Contrat jeune majeur est soumise à la contrainte du peu de temps pour l'insertion et pour faire une formation. Le contrat est une des raisons pour lesquelles la plupart des jeunes choisissent une formation plus courte et plus technique. En matière d'insertion, un baccalauréat professionnel (bac pro) ou baccalauréat technologique (bac techno) est plus facile et produit des résultats plus immédiats qu'un baccalauréat général. Les études longues ne sont pas encouragées, parce que le temps passe très vite et, dans la meilleure des hypothèses, ces jeunes ont trois ans pour s'insérer.

Donc, sans la possibilité de repasser le bac, Albert veut tenter le Bafa⁷. Lors d'une de nos conversations, il avait l'air à la fois motivé et triste. Motivé pour toutes ces possibilités qui semblaient s'ouvrir devant ses yeux (à cause de son départ), et triste parce qu'il fallait quitter la Suite. « C'est bizarre, partir de la Suite après si longtemps ». C'est bizarre, étrange et triste, parce que c'est une partie de lui et aussi de son histoire qui restent là. Il ne semblait pas préparé, il semblait même en détresse face à l'effort pour faire croire que tout allait s'arranger en quelque sorte. À sa faveur, il avait la citoyenneté française. Parmi ses désirs, celui d'être un artiste : faire du théâtre, jouer de la guitare, réciter de la poésie. Mais pourquoi n'avait-il pas fait ce choix avant ? Curieusement, le bac choisi n'avait rien d'artistique, ce n'était pas un bac en sciences humaines, mais en sciences exactes. Il avait choisi un bac dans le domaine des machines industrielles. Le choix du jeune a été motivé par le conseil de son père. « C'est mon père qui m'a dit qu'il y avait beaucoup de boulot dans ce domaine ». Ce serait un projet de ton père ? Ai-je demandé au jeune pour comprendre pourquoi il n'avait pas fait la formation dans le théâtre. « Ce que j'ai fait là... les trois ans, j'ai fait n'importe quoi, j'aurais dû pas prendre la formation que j'ai fait. Parce que là j'ai perdu trois ans. J'ai raté mon bac et là j'ai arrêté trois mois, quoi. Mais en même temps j'ai un diplôme, j'ai un BEP. Mais après, de toute façon je reprendrai mes études. Là je suis jeune, j'ai quel âge ? J'ai 20 ans ». Mais au-delà du conseil de son père, le jeune a dit qu'il ne connaissait pas avant sa « capacité pour le théâtre ». « Et là tout le monde dit que je joue bien, que j'ai un potentiel. Que je crois en moi, quoi ! J'ai un potentiel. Même un des éducateurs m'a dit que je suis un artiste en herbe. C'est un artiste qui va devenir un grand artiste plus tard. Là, je suis là. Un artiste au niveau est là. Il faut que je monte les échelons. C'est comme un peu un ascenseur, il monte les échelons ! Il monte les étages ! Mais moi, il faut que je monte tous les échelons ! »

Il y aurait parmi ces décisions, ou plutôt ces choix, le poids de ce qui est espéré par l'ASE, par les politiques de protection françaises ? À ce moment-là, il était difficile de différencier ce qui était le désir de ce qui était le projet, ce qu'il pourrait être (sur le plan de ses volontés et de ses compétences) ou ce qu'il devrait être (dans la logique d'une insertion et de l'autonomie). Parallèlement au Bafa, Albert a également pour but d'obtenir la Garantie jeunes⁸, mais cela ne sera possible qu'à partir du moment où il devra quitter la Suite. Mais tous ces projets feraient l'objet d'une réunion avec toute l'équipe des éducateurs de la Suite, le mardi, jour des réunions de synthèse. Ce jour-là, la fin de la réunion serait consacrée à la préparation du départ du jeune. Cette rencontre a également pu compter sur la participation de la représentante du Théâtre du Fil, où le jeune veut faire son stage du Bafa.

Préparer la sortie des jeunes, qu'est-ce que cela signifiait pour Albert ? Qu'est-ce que cela signifiait pour les éducateurs ? Comment prépare-t-on ce moment ? La chef de service a pris la parole en premier. Elle a dit qu'Albert avait beaucoup de projets, mais qu'ils dépendaient de ceci ou de cela. Autrement dit, il y avait beaucoup d'idées, mais concrètement elle voulait savoir comment ces idées fonctionnent et si elles seront possibles. Le jeune avait trois idées en tête : faire le Bafa, être hébergé au Théâtre du Fil et demander la Garantie jeunes.

L'impression que j'ai eue est que tous avaient de grandes attentes (ou même des certitudes) sur les bonnes nouvelles qu'ils imaginaient que la représentante du Théâtre du Fil leur apporterait et que le devenir du jeune serait assuré à partir de cette conversation. Cependant, quand elle a pris la parole, les expressions, de tous ceux qui ont écouté attentivement, ont commencé à changer. Le théâtre traversait des problèmes structurels et ne pouvait pas héberger Albert en ce moment. Ce qui était certain c'est que le jeune ferait son stage d'animateur au théâtre. Mais il n'aurait pas un endroit où vivre à partir de janvier 2017. Ceci, si le CJM était renouvelé le 30 septembre 2016. Cependant, le jeune semblait sûr que le contrat serait renouvelé jusqu'à janvier. Un des éducateurs lui a demandé ce qu'il aurait l'intention de faire si le renouvellement du contrat était rejeté.

⁷ Brevet d'aptitude aux fonctions d'animateur.

⁸ La Garantie jeune est un dispositif créé par le gouvernement pour donner aux jeunes (de 16 à 25 ans) « la chance d'une intégration sociale et professionnelle grâce à un parcours intensif de formation et d'accès à l'emploi ». Disponible sur Internet : <http://www.gouvernement.fr/action/la-garantie-jeunes>.

Albert semblait être très confiant. En fait, dans son discours, cette possibilité semblait impensable, car il avait tout expliqué, il a écrit toute sa vie dans la lettre de motivation. L'éducateur a insisté sur le fait que la question ne devait pas le troubler, mais il fallait se prévenir : « Ils peuvent te demander pourquoi tu vas demander de l'aide pour faire un Bafa, s'ils t'avaient déjà financé auparavant. Tu dois avoir un plan B » (les éducateurs parlent beaucoup du plan B à la Suite).

Dans la salle, le climat est devenu progressivement plus « lourd », tous semblaient partager la difficulté que ce moment leur imposait : ils avaient besoin de trouver une sortie. En même temps, c'est comme si tous aussi attendaient quelque chose d'Albert, ce qu'il aurait à dire pendant le temps qu'il lui restait avant son départ. Dans ce climat, les questions ont donné lieu à un grand silence, tout le monde regardait le jeune, en attendant un mot, une réaction. Il n'avait rien à dire, mais il a su « casser » cette atmosphère lourde : « Pourquoi tout le monde me regarde ? » Dit-il en souriant. « Plus précisément, qu'est-ce qui se passera ? », demande le stagiaire. Ce fut certainement la question que tout le monde se posait à ce moment-là, mais ils ont préféré la contourner, parce qu'il n'y avait pas de réponse. Il n'y avait rien de concret. En l'absence de réponses, la chef de service a demandé au jeune s'il avait des doutes ou s'il voulait dire ou demander quelque chose. Quelque chose qu'ils pouvaient encore faire pour lui, sauf décider où il habiterait après son départ de la Suite. Le jeune a dit non : « aucun doute et aucune demande à faire » (ou plutôt, c'était déjà fait). Puis, la chef de service a demandé : « tu peux expliquer à tout le monde le projet que tu présenteras à l'ASE ? ». Albert ne voyait aucune nécessité de faire ce que proposait la chef de service. Mais elle a insisté sur le fait qu'il était important que tout le monde connaisse le projet qu'il allait proposer.

Visiblement contrarié, le jeune a expliqué que son projet se composait de trois points principaux : obtenir le Bafa, faire le stage au Théâtre du Fil et demander la Garantie jeunes quand il sortirait de la Suite. Dans l'impossibilité d'être logé par le Théâtre, Albert a dit qu'en fin de compte, il allait vivre pendant un certain temps avec sa mère, qui vit seule. Mais, en même temps qu'il voyait la possibilité de vivre avec sa mère, il savait que cela ne serait pas facile. Sa mère le dérange beaucoup ; pour que l'on se fasse une idée, il a expliqué, « elle pense que je suis dans une famille d'accueil. Si elle sait que je suis ici, elle va m'embêter ! ». « Tu veux qu'elle ne sache rien de ta vie, mais tu veux vivre avec elle ? ! », a demandé le stagiaire en souriant. Si c'était vraiment possible de vivre avec sa mère, je me demande pourquoi il aurait fait un si long parcours à la Protection de l'Enfance. La chef de service a rappelé que si le jeune avait l'intention de vivre avec sa mère, elle devrait le savoir avant. Il devait savoir si cela était effectivement une possibilité. « Tu as besoin d'anticiper les choses ! », a soutenu la chef de service.

Après cette réunion, j'ai rencontré Albert d'autres fois, l'une d'elles a été dans son studio. Ce jour-là, je lui ai posé des questions sur ses sentiments vis-à-vis de son départ de la Suite éducative. « Je vis au jour d'aujourd'hui, pas l'avenir », a déclaré le jeune.

4. Sophie : « toujours dire la vérité » n'est pas une bonne stratégie

Sophie est de la Guinée Conakry et est arrivée en France quand elle avait 12 ans. Son départ, m'a-t-elle expliqué, a été motivé par des problèmes de santé et par la possibilité d'avoir la formation tant désirée dans le domaine du Droit. Quand elle était petite, elle a découvert qu'elle avait du diabète, à un niveau très grave. Aujourd'hui encore, elle est suivie médicalement et elle suit un traitement avec de l'insuline injectable. À Conakry, elle vivait avec sa mère et son grand-père. Ses parents se sont séparés, sa mère est guinéenne et son père sénégalais. Elle n'a pas vu son père depuis l'enfance, mais garde avec affection sa photo dans son portable. Elle aspire à le rencontrer à nouveau et à vivre au Sénégal quand elle aura terminé sa formation.

Elle fait un DUT⁹ en Droit à Paris 13. Elle avait commencé une licence, mais elle n'a pas pu continuer, c'était très difficile pour elle. Elle est travailleuse et bien dévouée aux études. Elle dit qu'elle ne veut pas du tout travailler comme avocate, ce qui l'intéresse c'est la carrière diplomatique, donc après le cours elle veut suivre une spécialisation en Relations internationales. Le désir de suivre une telle carrière l'accompagne depuis longtemps et elle a persisté, malgré les discours décourageants de l'éducatrice du foyer où elle a été placée avant d'aller à la Suite. L'éducatrice a mis en doute le potentiel de la jeune et a insisté sur le fait que le CJM vise aux formations de courte durée et qu'il n'est pas pour les études supérieures. Aujourd'hui, Sophie est parmi les quelques jeunes de la Suite éducative qui font des études supérieures.

Comme pour les autres jeunes de la Suite, la demande de renouvellement de son titre de séjour (Vie privée et familiale) a été refusée ; j'ai appris cette nouvelle lors d'un rendez-vous de la jeune avec sa référente. Ce jour-là, quand la jeune est entrée dans la salle, je pouvais voir que quelque chose lui était arrivée. Elle ne semblait pas contente et conviviale comme d'habitude. Elle était très inquiète et triste. La préfecture de police avait rejeté sa demande de renouvellement du titre de séjour, affirmant que la jeune femme était toujours en contact avec sa famille et qu'elle n'avait pas de liens durables sur le sol français (elle n'était pas mariée à un français et elle n'avait pas d'enfants, donc, elle n'avait pas de famille ici). Ce n'était pas une bonne stratégie « toujours dire la vérité », expliquait la jeune. La référente se sentait très coupable de ce qui était arrivé, « je ne suis pas juriste, cela n'est pas mon métier. Je me sens coupable de l'avoir guidée à écrire ce qu'elle ne devait pas écrire. C'est Sophie qui va souffrir les conséquences », se lamentait-elle.

Dans sa demande, la jeune n'aurait pas dû mentionner qu'elle avait des contacts avec sa mère et son grand-père maternel, étant donné que l'une des conditions pour ce genre de titre est justement de ne pas avoir de contact avec la famille. À partir de la date de réception de la lettre de la préfecture de police, la jeune avait deux mois pour faire un recours. La référente commence à recueillir la documentation (les bulletins de l'école, diplôme d'obtention du bac général, passeport, acte de naissance, certificat médical, etc.). Autrement dit, il y a tout un processus de préparation d'un ensemble cohérent de documents qui sont en conformité avec le dispositif juridique. La référente pense que la question du diabète peut être un bon argument, mais peut-être qu'il ne suffira pas. Elle demande à Sophie de prendre contact avec son médecin afin qu'il puisse certifier de son problème de santé et qu'il parle de l'importance de suivre son traitement en France. L'éducatrice a également suggéré à Sophie que son petit ami, qui a la nationalité française et qui travaille dans l'armée, fasse une lettre en disant qu'ils sont ensemble en France. La jeune était très bouleversée et angoissée par les nouvelles. Elle avait peur de devoir retourner dans son pays, sans pouvoir poursuivre ses études et sans commencer la carrière souhaitée. Elle a beaucoup pleuré. En plus de la préoccupation avec le titre de séjour il y en avait une autre : l'attente de renouvellement du Contrat jeune majeur. Le renouvellement du CJM a également été un élément pour composer le dossier de demande de recours auprès de la préfecture de police.

Lorsque le jour du rendez-vous à l'ASE est arrivé, afin de renouveler son contrat, Sophie avait déjà déposé auprès de la préfecture de police une demande de titre de séjour étudiant. Même si ce titre est plus précaire, en ce qui concerne la possibilité de travail, il permet à la jeune de régulariser sa situation en France. Dans l'une des salles du nouveau Service jeune majeur, le renouvellement du CJM de la jeune serait décidé. Le coordinateur du service a commencé son discours en reprenant les points du projet de la jeune, lesquels justifieraient la demande. Ensuite, il a commencé à poser une série de questions qui sont suivies par des orientations qui pourraient aider à la jeune, à la fin du contrat. Il a rappelé que le contrat ne couvre pas toute la période de la licence et il lui a demandé si elle avait envisagé un logement, des bourses, etc. La jeune, qui était toujours très éloquente, a pris à ce moment un ton de voix plus bas et a semblé mesurer chaque mot de son discours. La tête baissée, elle dit qu'elle avait pensé demander une bourse d'études et aussi une place dans la maison

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universitaire. Il a insisté sur le fait que ce n'étaient que des hypothèses, mais que c'était important d'envisager des alternatives au cas où les choses ne se passent pas bien. Il a demandé si la jeune avait un logement ou quelqu'un sur qui elle pouvait compter en France. Elle a dit qu'elle pouvait vivre avec la famille de son petit ami. Le coordinateur a souligné qu'il était important, si cela arrivait, qu'elle puisse maintenir le rapport avec l'aide sociale. En cela, le coordinateur lui a expliqué que l'ASE a des services qui peuvent l'aider par rapport à la demande de bourse (pour des périodes plus longues).

Pendant l'entretien, le chef de service a demandé l'autorisation d'intervenir et de dire que la situation administrative de la jeune l'empêchait de suivre le projet proposé au CJM. Elle a expliqué que le titre de séjour VPF de la jeune avait été refusé et que cela l'empêchait de travailler. Le coordinateur a demandé si Sophie avait déjà un avocat pour la guider. Elle a dit qu'elle avait déjà demandé un titre de séjour étudiant. Il a demandé si elle savait que c'est un titre plus précaire que le VPF et qu'elle ne pourrait pas travailler normalement. Elle dit qu'elle le savait et qu'elle avait pensé faire de l'alternance (travail/étude) au cours de la deuxième année du DUT. Après avoir expliqué et posé des questions à la jeune, le coordinateur a dit que le contrat serait renouvelé jusqu'à février 2018. Cela signifiait qu'elle pouvait finir le DUT et même commencer la licence. Les renouvellements de plus d'un an sont également des exceptions.

Quand nous nous sommes retrouvées seules, j'ai demandé à Sophie si elle avait peur que le contrat ne puisse être renouvelé. Elle a dit qu'elle ne le craignait pas, parce que comme elle avait accompli tout ce qui était inclus dans son projet, il n'y avait pas de raisons pour le non-renouvellement. Sa préoccupation était plutôt la durée qu'ils pouvaient lui accorder.

5. Alice : « Je ne peux pas faire la volonté de l'État »

Alice est une jeune congolaise qui a quitté son pays en raison de la guerre civile. Elle a 18 ans et deux filles : l'une a six ans et vit au Congo avec la grand-mère d'Alice, l'autre, de cinq ans, vit avec la mère d'Alice en dehors de Paris. Selon sa référente, la mère de la jeune est en France en situation d'asile. Dans un premier moment, la mère d'Alice a laissé tous ses enfants au Congo. Après, avec le temps, elle a amené les enfants pour vivre avec elle. Alice a eu sa première fille quand elle avait 11 ans. Les deux filles sont le résultat de viols vécus par la jeune dans son pays (il est important de rappeler qu'au Congo le viol est devenu une arme de guerre). Elle est restée très peu de temps à l'école, elle a dit que son pays est très pauvre et que pour avoir accès à quelque chose (y compris la possibilité d'étudier) les personnes doivent appartenir au groupe politique qui gouverne le pays.

Selon les récits de sa référente, la jeune vient à la Suite régulièrement pour les rendez-vous hebdomadaires et elle entretient une bonne relation avec tout le monde. Le problème, c'est que la jeune n'habite pas dans sa chambre. Face à cette impasse, son éducatrice a marqué un rendez-vous avec la chef de service et la jeune pour essayer de comprendre ce qui se passait et aussi chercher des moyens pour résoudre cette situation. Elle ne dort jamais dans sa chambre, qu'elle trouve très petite et pas propre, en particulier les toilettes et la douche qui sont collectifs. L'éducatrice et la chef de service essaient de trouver une solution au problème, car étant en situation de CJM, Alice ne pourrait pas rester dans la maison familiale ou dans l'appartement de son ami, où elle a passé ses nuits. « Où veux-tu rester ? », lui demande la chef de service. Elle répond, la tête baissée et la voix très timide, qu'elle sait que l'appartement de son ami n'est pas sa place et en même temps, elle sait qu'elle ne peut pas rester dans la maison de sa mère.

La chef de service fait référence à la possibilité qu'à la jeune de pouvoir rester dans un Foyer jeune travailleur (FJT), comme le foyer où habite son amie. La référente lui rappelle que le problème de rester dans un FJT est que la jeune n'aura pas le soutien éducatif, ce qui est très important pour elle maintenant, surtout compte tenu de tout le travail que la référente et son éducatrice à l'ASE font pour qu'elle puisse rester progressivement avec sa fille. La chef de service s'impatiente et argumente : « Elle a signé un contrat pour être ici ».

À cela, la jeune répond, la tête toujours baissée et avec la voix timide : « Je ne peux pas faire la volonté de l'État ». La référente rappelle également qu'en FJT elle ne pourra pas recevoir sa fille. « Je veux aller dans un foyer normal », dit la jeune en essayant de trouver un moyen de sortir de l'impasse. L'éducatrice lui explique qu'à son âge, il n'y a pas de foyer normal. « Maintenant, c'est terminé, il n'y a que des endroits comme la Suite ou le FJT ». Après, l'éducatrice rappelle que la jeune termine sa formation en juin et que son projet inclut sa fille. Mais il n'y a pas d'argument qui puisse convaincre la jeune, elle reste irréductible. Ce n'est pas un problème de vivre seule, le problème est que la jeune ne veut pas du tout vivre dans l'appartement qu'elle considère comme sale. La référente dit : « Tu ne peux pas rester dans cette situation ». « C'est dommage de laisser la Suite juste pour une chambre », ajoute la chef de service ne voyant pas d'alternative à cette impasse imposée par la jeune. La professionnelle quitte la salle sans trouver de solution. Elle dit simplement à la jeune : tu dois réfléchir à ce que tu veux vraiment ». Lorsque la chef de service quitte la salle, nous trois (Alice, l'éducatrice et moi) essayons de trouver une alternative. La référente semble se motiver un peu avec les possibilités, mais pas la jeune. Je lui demande si le problème serait de rester loin de sa fille. Alice dit non, que sa fille était très bien avec sa grand-mère et que c'était mieux pour elle comme ça. Et elle insiste, encore, sur le manque d'hygiène des toilettes. Elle raconte qu'elle a une énorme cicatrice de la césarienne de sa fille et qu'elle a peur d'être infectée. « Je commence à me gratter chaque fois que j'utilise les toilettes ». Elle me raconte la situation difficile qui est arrivée lors de la naissance de son premier enfant, expliquant le problème de la cicatrice. Elle a beaucoup souffert parce que sa fille pesait 4 kg à la naissance. Elle dit que les césariennes sont terribles au Congo sans péridurale, avec seulement une simple anesthésie. Elle pensait qu'elle allait mourir, qu'elle ne saurait pas supporter tout cela.

Dans la période de vacances d'été, Alice est partie de la Suite éducative. Elle a été transférée dans un autre service jeune majeur en dehors de Paris, « juste à cause d'une chambre ». Elle avait fait un choix. Le problème de la chambre, en particulier l'hygiène, n'a pas été inclus dans les négociations. C'était comme si à chaque fois qu'elle utilisait les toilettes, elle devait faire face aux situations de violence qu'elle avait vécues dans son pays.

6. Victor : « Je suis venu pour le bien de quelqu'un »

Victor est de la Côte d'Ivoire. Le jeune vient d'une famille pauvre, sa mère a connu beaucoup de difficultés pour élever ses trois enfants (Victor et ses deux sœurs cadettes). En Côte d'Ivoire, on lui a promis une vie meilleure en France, avec la possibilité de trouver un emploi :

Ce n'est pas moi qui ai pris la décision. Je suis venu pour le bien de quelqu'un. Il m'a fait de fausses promesses. Tu vois ? Tu viens en France, là-bas c'est bien, une belle ville. Tu vas aider ta mère au bled, parce que je sais que là-bas est chaud. [...] Ma mère a cotisé, elle a réuni une somme pour mon départ. [...] C'est cher, 1.100 euros comme ça, je pense. [...] deux semaines après mon arrivée, il a dit au revoir !

Victor est arrivé en France avec le passeport d'une autre personne, avec l'aide d'un « passeur ». Il a vécu quatre mois de peur, dans un pays inconnu, même s'il parle la même langue. « Je galérais au début ». Le jeune n'a eu aucun contact avec sa mère pendant quatre semaines. Enfin il a parlé avec sa mère et il a pu lui expliquer un peu tout ce qui se passait ; elle a beaucoup pleuré. Mais il lui a dit qu'il resterait pour voir ce qui allait se passer. Être courageux à cette période-là ce n'était pas une question de choix, c'était une obligation.

Comme Sophie, Victor a également fait face à des problèmes pour obtenir le titre de séjour (VPF). Sa dernière demande a été refusée et la raison était la performance du jeune homme à l'école avant de se rendre à la Suite éducative et aussi le fait qu'il a eu des contacts avec sa famille. Mais contrairement à Sophie, Victor est assez pragmatique sur la possibilité de retourner dans son pays, s'il n'obtient pas ses papiers :

Si jamais la Préfecture refuse de me donner le titre, je reste ici pour quoi ? C'est comme si tout ce que je faisais était vraiment un gros n'importe quoi. Je vais rester là pourquoi ? Je vais attendre que la meuf va me donner mes papiers ? Qui va me donner mes papiers ? Personne. Je ne peux rien faire. Je ne peux pas travailler, je ne peux rien faire. Je ne sais pas. Je reste chez moi, c'est mieux. Et puis, rester ici ? Attends, c'est vrai ! Pourquoi tu restes là, tu cherches quoi ? Tu n'arrives pas, tu ne peux pas travailler. Tu vas voler ? Tu vas faire quoi ? Tu fais quoi ? Rien. C'est mort ! Rentre chez toi.

En ce moment, le jeune fait un bac Électrique et prévoit de commencer en 2017 un BTS. En 2018, son contrat se termine. Cependant, ce n'est pas exactement cette formation qu'il voulait faire en premier. Son projet était de faire mécanique ferroviaire. C'est à partir des conseils de son professeur, à l'époque, que le jeune a fini par changer de choix :

Parce que quand je suis passé au test, et ma professeuse qui allait me guider dans ma vie m'a dit : 'Je peux te trouver ce que tu veux, mais je préfère que tu partes pour l'électricité, parce qu'à l'électricité, tu peux travailler dans divers domaines.

Toutefois, s'il obtient ses documents, le jeune n'a pas l'intention de retourner dans son pays. Dans ses récits, on peut voir comment il se sent reconnaissant pour tout ce que la France a fait pour lui jusqu'à présent. Il reconnaît que les premiers mois ont été très difficiles et pleins d'incertitudes, mais il a été accueilli et a eu l'occasion de commencer sa formation. Victor est déjà depuis trois ans en France ; même s'il a galéré au début, il n'a pas renoncé. Il avait une mission et il a trouvé un soutien pour l'accomplir. « Je suis resté et ils se sont vraiment occupés de moi ». S'il part, son sentiment sera d'avoir pu accomplir beaucoup de choses. Mais s'il reste en France, il a l'intention de se dédier encore plus, étant donné que tout a un temps et qu'il faut vivre des expériences. « Je reste, je travaille. Et puis on verra. Je suis là, je pense ici ».

Par rapport à son pays, sa famille est la chose qui lui manque le plus. La possibilité d'aider sa mère fait qu'il reste en France. Il envoie, chaque mois, une partie de son argent en Côte d'Ivoire, pour aider sa mère et ses sœurs. « Chaque fin de mois, je tente d'envoyer quelque chose à elle pour se défendre. C'est ma mère ! Grâce à elle que je suis ici ». Il dit qu'il ne pense pas vraiment au moment de son départ de la Suite, parce qu'il préfère s'occuper du moment présent et de toutes les possibilités que cela offre. « Ce n'est pas vraiment le départ. Moi, je pense d'abord au présent. Je ne peux pas faire cela. Étape par étape. On va doucement. Pour l'instant, je suis à la Suite. Et je suis là pour quelque chose ».

7. Modes de se construire comme sujet : migration, désir et temporalités

À partir des cinq expériences rapportées, je voudrais maintenant soulever quelques questions. La première, qui me semble essentielle pour comprendre la façon dont les jeunes peuvent se construire en tant que sujet dans cette technologie de gouvernement fait référence à la migration. Parmi ces cinq jeunes, quatre ont quitté leur pays, encore mineurs, à la recherche de meilleures conditions de vie en France. Ces jeunes, quand ils arrivent en France, dans de nombreux cas, ils n'ont même pas de passeport et migrent avec l'aide d'un « passeur », comme ce fut le cas de Victor. Il n'est pas rare que les familles réunissent des économies pour payer une personne qui leur promet non seulement l'entrée en France, mais, surtout, une vie meilleure. L'arrivée dans le pays de destination est accompagnée par l'entrée de ces mineurs dans le Dispositif de protection à l'enfance français. Alors, quand ils sont mineurs, la question des papiers (ou plus précisément leur absence) ne pose pas de problème. Mais la situation change complètement lors de l'arrivée à la majorité. À partir de ce moment, les démarches pour obtenir les papiers ont tendance à se complexifier et à imposer des limites à ce que ces jeunes voulaient être. L'obtention d'un emploi est soumise à la régularisation de leur situation sur le

sol français. Comme cela apparaît dans les récits de Victor, l'impossibilité d'obtenir le titre de séjour, en fin de compte, invalide tous les efforts faits pour avoir une formation et un travail. « C'est comme si tout ce que je fais était vraiment un gros n'importe quoi ».

Selon le récit de l'une des éducatrices de la Suite, la situation des jeunes sans-papiers s'aggrave de plus en plus. À la Suite éducative, ces derniers temps, ils ont eu 19 cas de jeunes sans-papiers. Cette constatation appuie la demande des éducateurs afin que l'Association puisse avoir un avocat pour les aider dans les procédures qui ne sont pas de la responsabilité du travail éducatif. Et contrairement à ce que l'on pourrait imaginer, le départ du pays de provenance est un mouvement difficile pour beaucoup de jeunes. Comme l'a soutenu une autre éducatrice, la plupart quittent la maison des parents, quand ils sont encore mineurs, sans savoir où ils vont. Les jeunes voyagent vers d'autres pays où ils ne connaissent personne et parfois ils ne parlent même pas la langue locale. Et le point le plus intéressant de la réflexion qu'a fait l'éducatrice est la question du choix. Qui a choisi ou qui a voulu partir ? Et pourquoi voulaient-ils partir ? La plupart ne veulent pas partir, ce qui apparaît très clairement dans le récit de Victor. « Ce ne fut pas moi qui ai pris la décision. Je suis venu pour le bien de quelqu'un. On m'a fait de fausses promesses ». Parfois, ce sont les parents qui prennent la décision de faire partir les enfants : « Les parents ont fait ce choix pour sauver les enfants ». Et les raisons qui les font partir sont nombreuses : la situation de guerre, la précarité, une vie meilleure et la possibilité d'aider la famille, les conflits familiaux, etc.

Il y a des jeunes qui partent en raison d'une « mission » donnée par les parents et/ou par la famille ou d'une mission qu'ils se donnent à eux-mêmes (Etiemble, 2008). Cette idée de la mission apparaît dans le cas de Victor qui a quitté la Côte d'Ivoire pour faire une formation et pour travailler, mais surtout, pour aider sa famille, de sorte que chaque mois il se soucie d'envoyer quelque chose pour aider sa mère et ses deux sœurs. On peut aussi l'observer dans l'expérience d'Auguste quand il raconte son impuissance par rapport au projet qu'il avait assumé vis-à-vis de ses parents. Il ne pouvait pas revenir en arrière et dire à ses parents qu'il avait échoué. Maintenant, ce projet serait réalisé par son frère.

Les mineurs mandatés ont pour mission (ou se donnent pour mission, 's'auto-mandatent') de se rendre en Europe pour travailler et faire vivre la famille restée au pays. Cette mission est parfois associée à un projet d'études et d'acquisition d'un métier socialement valorisé [...]. Eux sont davantage inscrits dans une logique d'ascension sociale (Etiemble, 2008, p.180).

La réflexion que je fais, en ce moment, c'est qu'il ne s'agit pas seulement d'un projet individuel, comme prévu par les modes de fonctionnement du CJM. Il est souvent un projet familial. La migration « mobilise toute la famille, qui est stratégiquement organisée pour envoyer certains membres et garder les autres à la maison » (Lobo, 2006, p.113) (c'est moi qui traduit). Il est important de noter que la notion de famille est utilisée dans son sens le plus large. Décider lequel des enfants va émigrer n'est pas un choix aléatoire. Une telle décision « doit être en conformité avec les intérêts et les besoins du groupe familiale » (Lobo, 2006, p.113) (c'est moi qui traduit). À la limite, on peut dire qu'un autre contrat a été préalablement établi avec la famille. Il y a aussi une dette assumée avec la famille.

Il faut souligner que le projet d'immigration n'est jamais exclusivement individuel, en fait, il est le résultat d'une « connexion du sujet avec la société d'origine » (Jardim, 2015, p.66) (c'est moi qui traduit). C'est ainsi que le « projet migratoire » ne prend forme qu'à partir d'une série de décisions qui sont traversées par des projets nationaux, par des connexions historiques (coloniales) entre les lieux d'origine et de destination, ainsi que par des médiations étatiques qui interviennent dans les calculs individuels et collectifs. C'est par un complexe tissage avec tous ces éléments que la définition du comment et du pourquoi de l'immigration devient une option possible pour les sujets (Jardim, 2015, pp.66-67) (c'est moi qui traduit). C'est dans ce sens que le projet individuel

accordé dans le CJM peut être mieux compris. De telle sorte que les perspectives de succès ou d'insuccès d'un tel projet participent au tissage du projet migratoire et sont soumises à l'exercice de la réflexivité des sujets (Sayad, 1998 ; Jardim, 2015).

Et ce projet ne coïncide pas nécessairement avec l'idée d'étudier et d'obtenir une formation, comme dans le cas de Sophie. À la base de ce projet, le but peut être simplement d'obtenir les papiers pour travailler. Il implique d'avoir une vie meilleure en France, mais aussi de fournir les conditions pour la survie de la famille, de ceux qui sont restés. Ainsi, le projet, que l'on veut individuel, mais qui parfois est familial, est non seulement une obligation pour certains jeunes, mais aussi la vie en soi. Donc, on pourrait penser que l'une des façons de se construire comme sujet est liée à cette « circulation » non seulement entre les pays, mais entre les différentes cultures, et aux limites imposées à la vie quotidienne de ces jeunes à cause d'une négociation entre un projet individuel (à remplir pour correspondre à ce qui est exigé par les logiques de contractualisation), et un projet qui est familial.

Il est important de prendre en considération que ce processus permet de se détacher des signatures identitaires et même de les dépasser. Sophie, qui a des origines¹⁰ guinéennes et sénégalaises, a appris à sélectionner dans quelles circonstances, et toujours ainsi de façon contingente, chacune de ses origines lui permet une meilleure performance. Donc, quand elle pense à faire une carrière diplomatique, c'est plus productif de se construire en tant que Sénégalaise, mais quand il s'agit de parler de l'éducation qu'elle a reçue, elle parle en tant que Guinéenne. Mais elle laisse en deuxième plan ces deux origines, quand elle dit qu'elle est totalement adaptée à la vie parisienne. Il y a également une négociation qui est faite en termes de relations de parenté établies entre ces jeunes. Et ils apprennent ça, à partir des démarches de demande de titre de séjour. Ce n'est pas une bonne stratégie de « toujours dire la vérité », a appris Sophie. Qu'est-ce que cela signifie ? Cela veut dire qu'il faut réinventer les relations de parenté, les liens qu'ils établissent, la force de ces derniers et la possibilité de les refuser si nécessaire. Ce sujet qui se construit à partir de nombreuses relations parentales, devient un sujet qui peut être « isolé » en territoire étranger, ou qui n'a personne sur qui compter dans les moments difficiles : il est complètement seul, il n'a même pas des nouvelles de sa famille. Donc, ce sont des façons de se construire comme sujet qui ne sont pas stables et n'acquièrent aucune forme définie. Elles sont temporaires et sont tout le temps en cours de renégociation. « Ce sont des mouvements d'émancipation dont le sens politique s'élabore contre et/ou à l'écart de l'ordre qui institue leur identité » (Agier, 2013).

Il est important d'observer la manière dont ces jeunes font et vivent leur vie, malgré et par rapport aux limites qui sont imposées dans leur vie quotidienne et comment ils trouvent des sorties et des lignes de fuite. « Comment ils font face à ces forces dans leurs projets de vie et découvrent les potentiels pour le changement, même s'ils sont petits » (Biehl, 2016, p.418) (c'est moi qui traduit). La proposition est de se déplacer par rapport à une conception réductrice de l'expérience de ces jeunes qui est liée à ce qui est attendu en matière de performance par les politiques publiques de protection. Et l'un des chemins se trouve dans la façon de décrire la capacité créatrice des sujets, leur potentiel d'agence. Rappelons que « l'agence », ici, est pris non seulement « comme résistance » ou « résultat » d'un processus qui, dans le cas de ces jeunes, serait le développement de leur projet individuel (devenir autonome), ou même la réalisation d'une action. « [...] Il est nécessaire de regarder les capacités d'agence des personnes, comment les personnes se mobilisent, pourquoi et comment elles imaginent et souhaitent » (Biehl, 2016, p.419) (c'est moi qui traduit). Et pour cela, il faut faire attention à la fois aux négociations avec les réalités et les limites posées par celles-ci, ainsi que les refus de s'engager avec elles.

¹⁰ Il faut souligner les différentes variables qui permettent de définir les « origines » de ces jeunes. Au-delà des documents (comme le passeport, la carte d'identité ou l'acte de naissance) qui attestent officiellement une origine géographique, un âge, etc., les jeunes définissent leurs origines à partir d'éléments très éloignés des considérations administratives. « Ils décrivent ainsi les contours d'un territoire à taille plus humaine. Chacun est, de par ses expériences de vie – et non de par son extranéité –, porteur d'une origine hybride articulée autour de plusieurs lieux ». (Przybyl, 2016)

À partir des expériences des jeunes, on peut trouver des pistes sur les manières dont chacun négocie avec des réalités posées par cette technologie de gouvernement. « Parfois il faut savoir comment jouer le jeu du contrat », explique une des éducatrices. Sophie négocie comme quelqu'un qui fait des études supérieures, elle est une bonne élève, dévouée, et rêve de faire une carrière diplomatique. On peut observer à partir de sa performance lors du rendez-vous pour le renouvellement du contrat : voix plus basse, gestes plus contrôlés. Elle a répondu à toutes les questions qui lui ont été posées. Elle était déjà informée de ses possibilités. Elle a appris à s'appropriier la technologie de gouvernement. Elle a bien appris à jouer « le jeu du contrat ». À la limite, elle a constaté aussi que « toujours dire la vérité » n'est pas une bonne stratégie. Et le coordinateur a réalisé qu'il valait la peine d'investir dans la jeune et il lui a expliqué toutes les autres possibilités d'aide que l'ASE pourrait offrir. Auguste négocie aussi, mais à partir d'une autre place qui n'est pas celle d'une personne qui a réussi à l'école ou au travail. Comme il n'a pas de points forts à souligner, comme l'a fait Marie Hélène qui négocie à partir de son potentiel, il a recours à la description des difficultés qu'il a vécues, sa souffrance et l'apparente incapacité de réaction. C'est sa petite amie qui écrit les points qu'il doit développer dans la lettre. Il se construit comme « victime » et transfère à son frère cadet la tâche de réaliser le projet familial. Il faut observer cet autre lieu à partir d'où le jeune négocie, car il souligne également un moyen de tester les limites de cette technologie de gouvernement. Et cette façon de se construire comme un sujet peut également être observée dans le cas d'Albert qui, compte tenu de l'impossibilité d'être hébergé par le Théâtre du Fil, lance au groupe d'éducateurs la possibilité de vivre avec sa mère, ce qui n'a jamais été viable tout au long de son parcours de placement. Une autre place possible est celle qui refuse l'engagement avec ces réalités. Tel est le cas d'Alice qui préfère quitter la Suite éducative et surtout le suivi éducatif qui a été fait pour qu'elle puisse vivre avec sa fille. Elle se construit comme sujet, soit quand elle nie l'accueil à la Suite éducative, soit quand elle rompt avec la violence qu'elle a vécue dans son pays. Elle « ne pouvait pas faire le désir de l'État », même si elle a signé un contrat et une dette, comme le lui rappelle la chef de service.

Le Contrat jeune majeur pourrait donc être pensé comme une technologie de gouvernement qui est formée par deux types de segmentarité. Une « segmentarité molaire », qui est l'ordre des règles, des bureaucraties et des connaissances établies, très évidentes dans la conception du projet et des rites administratifs pour la signature du contrat. Et une « segmentarité moléculaire » qui correspond à une série de pratiques qui fonctionnent d'une autre manière, à partir de différents agencements, tels que les appropriations que les jeunes font des discours des politiques et des éducateurs et aussi comme bifurquant du projet formalisé dans la lettre afin de le concilier avec ce qu'ils veulent faire. De telles pratiques sont de l'ordre du désir (Deleuze, Guattari, 1996).

En observant les expériences des jeunes, on peut remarquer la présence d'une dialectique permanente (et sans synthèse) entre le projet (sur le plan de ce qui est attendu pour obtenir un CJM) et le désir, ce qui échappe aux engrenages mêmes de la technologie du gouvernement. Parfois, le projet et le désir coïncident, comme dans le cas de Sophie, elle a proposé un projet qu'elle a toujours désiré : avoir une formation dans le Droit et faire une carrière diplomatique. La possibilité de retourner dans son pays à cause de problèmes avec les papiers constitue une menace à son projet, mais surtout à tout ce qu'elle a imaginé et souhaité pour sa vie. Parfois, le projet bifurque (comme une manière de négocier avec la réalité et ses limites). Dans un premier moment, il arrête de correspondre à ce qui était de l'ordre du désir. Mais à la fin, il trouve la motivation pour réconcilier le projet et le désir. Et c'est peut-être même, à ce moment-là, l'occasion de découvrir ce que les jeunes savent et ce qu'ils aiment faire, comme ce fut le cas de Victor. Et il avait d'ailleurs un potentiel reconnu par les éducateurs à l'école, qui lui ont recommandé le bac et non pas un CAP.

Une troisième possibilité peut être observée dans l'expérience d'Albert. Dans son cas, le projet et le désir ne sont pas en accord dès le début. Il ne fait pas ce qu'il désirait faire, mais ce qui pourrait correspondre à ce que l'on attend en matière de politiques de protection et aussi en termes familiaux. Une façon de s'adapter à ce qui lui est demandé et, donc, aux modes de fonctionnement de cette technologie de gouvernement. « Le cours

de théâtre n'est pas considéré favorablement par l'ASE. Ce genre de chose est difficile de passer à l'ASE », se souvient la référente du jeune. Ainsi, c'est seulement à la fin de son CJM qu'Albert décide de reprendre ce qui relevait de l'ordre du désir. Et à ce moment-là, il est de nouveau capturé par la segmentarité molaire. Le théâtre ne pouvait pas le recevoir, il devait trouver un emploi pour être en mesure de se maintenir et de trouver un logement. Rappelant également que ce que chaque jeune désire et/ou imagine pour sa vie est parfois traversé par les désirs des autres. Ces désirs se confondent. Albert a fait du désir de son père son désir.

Il est important de remarquer que cette relation entre le projet et le désir, ou entre « segmentarité molaire » et « segmentarité moléculaire » n'est pas stable non plus. Au contraire, l'incitation entre les deux est permanente. Donc, contrairement à ce qu'on pourrait penser, la « segmentarité molaire » n'empêche pas l'émergence des pratiques moléculaires, au contraire, elle les encourage. Ainsi, comme la segmentarité molaire stimule l'émergence de la segmentarité moléculaire, l'inverse est également possible, à tel point que, en fait, l'une ne peut exister sans l'autre. Plus l'organisation molaire est forte, plus elle finit par susciter une molécularisation de ses éléments. Cela signifie qu'il n'est pas suffisant de définir la bureaucratie tout simplement à partir d'une « segmentarité dure », car il y a, en même temps, un ensemble de « perversion bureaucratique » et une « inventivité ou créativité permanente qui s'exerce contre les règlements créatifs » (Deleuze, Guattari, 1996). À la suite de cette perspective, on peut dire que le Contrat jeune majeur cherche à la fois à produire des cadres, établissant des règles, des moralités, les savoirs et les pratiques bureaucratiques, et, en parallèle, il attise un ensemble de pratiques créatives des sujets (les jeunes et aussi les professionnels qui les accompagnent) qui sont de véritables « lignes de fuite ».

La question de la temporalité est un autre point à souligner par rapport aux modes par lesquels les jeunes se constituent en tant que sujets. Beaucoup a été dit sur la durée du CJM, en particulier, parce qu'elle impose un temps très court pour que les jeunes deviennent autonomes et ainsi qu'ils conquièrent leur insertion sociale. Cependant, ce que j'ai pu observer, à partir des expériences des jeunes de la Suite éducative, c'est qu'il ne s'agit pas d'une préoccupation pour la durée du contrat, mais pour une question beaucoup plus complexe qui est liée à la façon même dont les jeunes conçoivent le temps. Ils ont une autre façon de comprendre et de vivre le temps qui se concentre sur le présent (les événements) et ils n'ont pas l'ambition de contrôler leur devenir (ce qui est l'objectif principal de CJM). Nous sommes confrontés à d'autres temporalités qui se situent au-delà de l'idée courante que les jeunes vivent le moment présent et qu'ils ne se préoccupent pas de leur avenir. Il ne s'agit pas d'un simple « présentisme », mais d'une conception du temps qui considère que chaque événement peut transformer complètement leurs expériences. On peut observer qu'il n'y a pas une préoccupation à contrôler le temps (ce qui serait une préoccupation centrale de la technologie de gouvernement). Car c'est précisément là, dans cette ouverture à des temporalités différentes qui se croisent, que se trouvent la créativité, la puissance et le désir. Alors, quand Albert dit : « Je vis au jour d'aujourd'hui, pas l'avenir », ou lorsque Victor explique : « Moi, je pense d'abord au présent. [...] On va doucement », on peut penser que les jeunes signalent cette ouverture à « l'inattendu » et donc au « devenir », dans le sens philosophique. Il s'agit d'accepter les changements et de ne pas essayer de les contrôler. Vivre chaque événement en reconnaissant le potentiel de transformation qu'il porte. Comme l'a dit un des jeunes de la Suite : « Je ne m'inquiète pas pour le moment du départ de la Suite. Il n'y a pas comment savoir ce qui vient après, tout peut changer. Je ne sais pas ce qui m'attend ». Le devenir « [...] contient donc en germe tout ce qui n'existe pas encore, tout ce qui est proprement impensable et impossible » (Mozère, 2005).

En ce sens, il est intéressant de penser que même quand il y a un manque de mouvement et apparemment pas de sorties, on peut penser au devenir (Biehl, 2016, p.418) (c'est moi qui traduit). La réunion, dans laquelle l'équipe d'éducateurs prépare le départ d'Albert de la Suite, ou le rendez-vous d'Auguste avec sa référente, ou encore le rendez-vous d'Alice avec sa référente et la chef de service, les trois situations montrent ce manque de réaction aux événements de la part des jeunes et des éducateurs. Cependant, l'ouverture au devenir permet

d'entrevoir comment les choses seraient autrement. Il ne faut pas penser à ce que ces jeunes vont devenir en raison des échecs sur le plan d'un parcours destiné à être envisagé par le CJM. Quand la professeure a dit à Sophie que les études supérieures ne sont pas pour elle, et qu'elle devait comprendre que dans le cadre du CJM, les jeunes font des études de courte durée, elle délimitait, à priori, ce que la jeune pourrait devenir. La professeure entrevoyait la fin du parcours, le produit de ce que la contractualisation devrait produire. Et, ce faisant, elle a fini par ignorer tout le mouvement à entreprendre par la jeune (avec toutes ses déviations et imprévisibilités) pour poursuivre d'autres possibilités. Et aujourd'hui, la jeune fait des études supérieures pour suivre une carrière diplomatique. Bien sûr, la perspective du devenir est évidemment tensionnée par la dimension pragmatique des logiques du contrat : trouver un emploi, avoir un logement, obtenir une formation, etc. Et le contrat impose aux jeunes le poids des attentes qui ont été déposées sur eux, tel que cela apparaît dans la réflexion que fait la chef de service face à l'indécision d'Alice « Mais tu as signé un contrat pour être ici ». Après un investissement fait en termes éducatifs et financiers (il y a une dette). Donc, devenir un acteur de théâtre, par exemple, ne constitue pas un « bon » projet : c'est instable et ne permet pas la maîtrise du devenir. Cependant, le devenir permet de penser comment les choses pourraient se passer différemment, il considère ce qui est de l'ordre du désir. Le devenir permet de réfléchir sur ce que ces jeunes peuvent en tant que sujet : Un devenir artiste, par exemple, un « artiste en herbe ».

Le devenir est ouvert à l'inattendu et au changement. Même quand il y a un manque de mouvement, lorsque les circonstances sont intraitables, le devenir répond à la manière dont les choses pourraient être autrement. Il y a aussi une autre temporalité présente là et, qui sait, le devenir la contemple. Alors, un potentiel reste ouvert à de nouveaux points de départ, de nouveaux types d'imagination, de nouveaux désirs et de nouvelles négociations (Biehl, 2016, p.418) (c'est moi qui traduit).

Ainsi, considérer cette manière dont les jeunes vivent le temps permet une ouverture aux nouveaux points de départ et aux négociations avec les limites imposées par les réalités. Et cela passe par une remise en cause des questions que le CJM impose à ces jeunes, en particulier, celles qui sont liées au devenir (Où vont-ils arriver ? Qu'est-ce qu'ils deviendront ?). La proposition est de déplacer ces questions, de façon à ne pas concentrer les efforts sur les issues de ces vies, mais sur ce qui se passe dans le « milieu » où l'on « atteint la plus grande vitesse. Ce milieu est précisément là où les temps les plus différents se communiquent et se croisent dans un tourbillon » (Pelbart, 2010). C'est précisément dans le milieu que se trouve le devenir, la puissance : ce que peut un sujet.

Ainsi, tout au long de l'article, je cherche à souligner l'importance de la proposition d'une Anthropologie du Sujet (qui prendra en compte le devenir) pour réfléchir sur les expériences des jeunes par rapport au Contrat jeune majeur, en tant que technologie de gouvernement. Lorsque l'on considère les modes par lesquels les jeunes peuvent se constituer comme sujet et les devenirs qui sont impliqués dans ce processus, je ne prétends pas que les politiques de protection puissent répondre aux spécificités et aux demandes de chaque sujet. En effet, toute politique, précisément à cause de son caractère public, suit certaines catégories d'homogénéisation (tels que la vulnérabilité, la situation de violation des droits, etc.). Mais en même temps, cette proposition permet de mettre en perspective cette conception d'un « universel » qui peut recouvrir une totalité sur le plan de sa diversité. Le défi est donc l'exercice d'identifier et de réfléchir sur les limites des politiques, notamment en ce qui concerne la reconnaissance d'agence des sujets. Ceci est un exercice permanent de réflexivité sur les possibilités de concevoir et de mettre en œuvre des politiques de protection plus plurielles, qui ne possèdent initialement aucun problème.

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Historias detrás de objetos: organizadores y vendedores en un circuito de eventos

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Resumen

Este artículo sigue una línea de estudios según la cual la creación de mundos sociales es constitutiva de los modos de consumo desarrollados por las comunidades de *fans*. Aquí se describe un circuito de eventos que reunía a *fans* de la cultura pop japonesa entre los años 2009 y 2013 en la ciudad de Córdoba, Argentina, y se propone un desplazamiento hacia el estudio de procesos de construcción de sí de quienes se desempeñaban como vendedores y organizadores en tales instancias de encuentro. El enfoque presentado considera como fundamentales las reflexiones que los interlocutores de la pesquisa realizaban acerca del pasaje entre *hobby* y trabajo implicado en la profesionalización de sus prácticas. En este sentido, el análisis de las narrativas muestra que la profesionalización constituye un proceso continuo en el cual ciertas actividades consideradas de ocio o de tiempo libre se tornan proyectos laborales, a partir de la transformación de los vínculos de atracción y apego que unen a los *fans* con los objetos que producen y comercializan.

Palabras clave: *fans*, animé, *hobby*, trabajo.

Histórias por trás de objetos: vendedores e organizadores em um circuito de eventos

Resumo

Este artigo continua uma linha de estudos que afirma que a criação de mundos sociais é constitutiva dos modos de consumo desenvolvidos pelas comunidades de fãs. Aqui se descreve um circuito de eventos que reunia fãs da cultura pop japonesa entre os anos 2009 e 2013 em Córdoba, Argentina, e se propõe um deslocamento para o estudo dos processos de construção de si das pessoas que desempenhavam atividades de vendedores e organizadores nessas instâncias de encontro. O foco apresentado considera fundamentais as reflexões que os interlocutores da pesquisa faziam acerca da passagem de um *hobby* para um trabalho envolvida na profissionalização das suas práticas. Nesse sentido, a análise das narrativas revela que a profissionalização constitui um processo contínuo no qual certas atividades consideradas de lazer ou de tempo livre se tornam projetos laborais a partir da transformação dos vínculos de atração e apego que unem os fãs com os objetos produzidos e vendidos por eles.

Palavras-chave: fãs, animê, *hobby*, trabalho.

Historias detrás de objetos: organizadores y vendedores en un circuito de eventos

María Cecilia Díaz

“... the lines between creators and consumers have been very permeable, and today’s fanboy reader may be tomorrow’s writer, artist, editor or publisher”

Bukatman, Scott (1992)

Introducción¹

Durante mi trabajo de campo para una pesquisa desarrollada entre 2009 y 2013, participé de numerosos eventos de animé² en la ciudad de Córdoba, Argentina, en los que se celebraba el gusto compartido por la “cultura pop japonesa” (Luyten, 2006). Éstos se realizaban los fines de semana, por lo general en locales bailables o asociaciones de socorros mutuos, y duraban todo el día. El programa incluía concursos de dibujo de estilo manga (historietas japonesas), exhibiciones de artes marciales y de coreografías grupales, torneos de juegos y, finalmente, el concurso de *cosplay*,³ esto es, un desfile en el que participaban los asistentes que habían acudido caracterizados como personajes de animé (animación japonesa). Además de estas actividades, había numerosos puestos de venta de mercancías de diversa índole: remeras estampadas con imágenes de personajes, tazas, *pins* (prendedores), figuras coleccionables, accesorios, llaveros, pelucas, lapiceras, cuadernos, muñecos de peluche, DVD de series y películas, revistas, juegos de mesa y cartas, *comida asiática*, etc.

En una ciudad que se caracteriza por su intensa vida universitaria, los eventos reunían en promedio a quinientos niños y jóvenes que acudían solos, con sus padres y/o con amigos, para pasar el día y encontrarse, motivados por un conjunto de productos culturales que los fascinaban. Una de las impresiones más duraderas que me dejó la experiencia de recorrer los salones alquilados para tales ocasiones fue que se trataba de ámbitos en los cuales muchas de las interacciones estaban guiadas por la comercialización de los productos previamente descritos. En efecto, la organización del espacio en cada evento imponía ciertos modos de estar, a través de la presencia de *stands* (puestos de venta), que consistían en mesas dispuestas a lo largo de las paredes de los salones –o boliches, es decir, locales bailables– alquilados para esas ocasiones. De esta manera, se proponía a los asistentes un recorrido específico, un camino a seguir en la búsqueda de algo deseado desde hacía mucho

¹ Una primera versión de este artículo fue presentada en la *X Reunión de Antropología del Mercosur* (X RAM, 2013) y luego formó parte de mi disertación de maestría, defendida en el Programa de Pós-Graduação em Antropologia Social, Museu Nacional, Universidade Federal do Rio de Janeiro (PPGAS-MN/UFRJ), bajo la orientación del Dr. Luiz Fernando Dias Duarte (2014). Esta pesquisa se vio beneficiada por las discusiones en el marco del Programa “Subjetividades y Sujeciones Contemporáneas” (Centro de Investigaciones de la Facultad de Filosofía y Humanidades – CIFYH), dirigido por el Dr. Gustavo Blázquez –quien orientó mi trabajo final de grado– y codirigido por la Dra. María Gabriela Lugones, a quien agradezco por la lectura del presente texto y las sugerencias recibidas. La Dra. Laura Belén Navallo Coimbra también realizó observaciones y comentarios que permitieron reforzar los argumentos que se articulan aquí. Los errores y omisiones, desde ya, son exclusiva responsabilidad de quien escribe.

² A lo largo del texto opté por emplear *itálica* para los términos escuchados durante mi trabajo de campo –algunos de los cuales provienen del inglés o japonés– y *comillas* para los conceptos de la bibliografía consultada. En el caso de las expresiones breves de mis interlocutores, se combinarán ambos estilos. En las citas de fragmentos más extensos de entrevistas, el destacado es mío.

³ *Cosplay*, término que resulta de la unión de “*costume*” y “*play*”; es una práctica que consiste en encarnar a personajes de series y películas de animación japonesa, manga o cómics, por medio de trajes y maquillajes. También puede incluir la realización de *performances* en concursos, es decir, pequeñas secuencias de acción en las que se recrean momentos de los personajes en la ficción.

tiempo, o que “*llamara su atención*” en ese momento en particular, como me fue dicho en numerosas entrevistas. Parte de las actividades que realizaban los asistentes giraba en torno a comprar productos y hablar entre sí sobre esas compras, mostrando a otros lo adquirido para luego recibir devoluciones y comentarios al respecto.

El crecimiento de un conjunto de circuitos que, siguiendo a Becker (2008) llamé “mundos del animé” en Córdoba, se dio en torno a la emergencia de esos emprendimientos comerciales. En *stands* en los eventos, los pequeños productores vendían aquello que conseguían importar, o que fabricaban, a compradores ávidos de conseguir esas mercancías. Los propios eventos formaban parte de estos emprendimientos y eran organizados por *fans* locales, que se nucleaban en un *staff* (equipo) destinado a posibilitar la emergencia y el desarrollo de esos momentos de reunión. En esta primera aproximación hacia los eventos locales y sus dinámicas, podemos percibir diferencias con respecto a las primeras convenciones organizadas a mediados de los 1970s por los *fans* del manga y el animé en Japón que, de acuerdo con Schodt (1983), Papalini (2006) y Tamagawa (2012), tenían como objetivo principal la divulgación de historietas producidas por aficionados (*dojinshi*):

[Se trata de un] acontecimiento que se inició en diciembre de 1975, organizado por aficionados para aficionados, sin fines comerciales, llamado “Komiketto” (abreviación de “Comic Market”) que se repetía dos veces al año, en Tokio. (...) En Komiketto no se permite la participación de compañías editoriales ni de *sponsors*, lo cual mantiene su orientación hacia los aficionados (Papalini, 2006:38).

El tipo de formación que hemos analizado se encuentra más cerca de aquella observada por Lourenço (2009), quien analiza los eventos realizados en Rio de Janeiro y São Paulo como “*loci de socialização e de familiarização com o mundo anime*” (2009:239) a través de la compra o intercambio de objetos y el encuentro entre aficionados.⁴ Lamerichs (2013), por su parte, distingue formatos semejantes en su estudio comparativo del *dojinshi* y el *cosplay* en convenciones de Holanda, Estados Unidos y Alemania, a las que caracteriza como “sitios ejemplares (...) para participar en la cultura inspirada por el flujo mediático japonés” (2013:157). De esto se desprende que las convenciones o *eventos de animé* constituyen instancias que se desarrollan con frecuencia desde la década de 1980 en distintas latitudes, lo que, ciertamente, ameritaría un estudio comparativo capaz de dar cuenta de sus singularidades y aspectos en común (Ito, 2012).

Un rasgo primordial de los eventos que abordo en este artículo es la combinación de la dimensión de compra y venta, y la presencia de espectáculos, tales como proyección de videos, concursos de *cosplay* y bandas que interpretaban los temas de apertura y final de las series de animé, conocidos como *openings* y *endings*. Uno de los integrantes del *staff* del evento Córdoba Animé Fest (CAF) se refería a esta figuración como la conjunción de dos etapas: “está la venta, donde todos pueden vender su *merchandising* y después lo que es la fiesta en sí, el *cosplay*, las bandas en vivo, las proyecciones.” Otra entrevistada describía esas dos etapas con los términos de *feria* para designar los intercambios comerciales, y de *entretenimiento* para hacer alusión a lo que ocurría sobre el escenario del salón. Corresponde remarcar que, si bien las actividades del tipo “feria” seguían los ritmos de los compradores, las acciones propias del entretenimiento o espectáculo se realizaban según un cronograma fijado de antemano por los organizadores.

El evento constituía una mercancía cultural que posibilitaba la interconexión continua de las acciones y experiencias de sus participantes, de manera similar a lo que ocurría con los bailes de cuarteto estudiados por Blázquez (2009). Desde el año 2005 los eventos eran organizados por *fans* para *fans*, y unos años después apareció la figura del *inversor*, que se ocupaba de contratar a miembros del *staff* de otros eventos o a personas con una cierta experiencia en el *ambiente* para que se desempeñaran como organizadores, a cambio de una remuneración. Tal es el caso del evento Animé Shock, realizado por primera vez en abril de 2013, cuya producción corría por cuenta de un boliche céntrico y su organización se encontraba a cargo de quienes integraban el *staff* de un

⁴ A diferencia de los mundos que se describen aquí, los lugares elegidos por los organizadores en los casos analizados por Lourenço (2009) eran clubes y escuelas.

evento anterior. Daniela,⁵ contratada bajo esta nueva modalidad, contaba cómo se produjo la transición que habilitó la vinculación de una empresa y la separación de las tareas de inversión y organización, antes reunidas en la figura del organizador:

... por lo general los que organizan son los que ponen el dinero. En este caso no, estamos separados en dos: está la gente que pone el dinero, que no tiene nada que ver con el palo [el ambiente], sino que invierte, y estamos nosotros que somos los organizadores del evento, por decirlo de alguna forma, los administradores, los que decimos “esto vale tanto” y ellos ponen la plata. Como ellos ponen la plata obviamente se quedan con el porcentaje total de las entradas y lo que ganan en la cocina. Y ellos a nosotros nos pagan un sueldo (Entrevista a Daniela, 11.04.13).⁶

Como podemos observar, inversores, organizadores, *staff* y vendedores se ocupaban de montar la escena de las convenciones locales, en la que coexistían distintos relatos acerca de sus motivaciones y aficiones. Aquí sigo el tipo de abordaje que propone Becker (2008:27), cuando sostiene que “al analizar un mundo de arte buscamos sus tipos característicos de trabajadores y el conjunto de tareas que cada uno de ellos realiza”. En esta oportunidad, me interesa enfocar las prácticas de organización y venta de productos, que tornaban a los eventos en mercados donde los objetos que circulaban y la atracción que generaban hacían oscilar los valores de uso y de cambio de que estaban investidos (Hills, 2002). A la vez, las pasiones por esas mercancías impactaban en las historias particulares, y en los motivos para generar circuitos comerciales, y participar de los mismos. En este sentido, examinaré un repertorio de experiencias que comprende desde la organización y venta concebidas como *hobbies*, hasta los procesos de profesionalización que implicaban vender lo producido para “vivir de eso”.

Con estos objetivos en mente, tomo como punto de partida el planteo de Turner (1977) acerca de la distinción entre trabajo [*work*] y ocio [*leisure*] en las sociedades industrializadas, que abriría espacio para los fenómenos liminoides de carácter fragmentario, plural y experimental, situados entre las ocupaciones y las actividades cívicas y familiares (1977:43). Curiosamente, la palabra *leisure* no solo deriva del latín “licere” - “permitir”-, sino también del indoeuropeo “leik” - “para ofrecer a la venta”- que alude, de acuerdo con Turner, al ámbito liminal del mercado “con sus implicaciones de elección, variación y contrato” (1977:43). Esa observación funcionará como guía para considerar las tensiones que se ponen en juego entre esas esferas de actividad, como así también para analizar las narrativas a la luz del continuum entre trabajo y *hobby*,⁷ amor y dinero, que se pone de manifiesto en los eventos y en las concepciones de los que participan en ellos. Así, teniendo en cuenta el trazado etimológico que Turner realiza de la palabra *leisure*, propongo matizar las diferencias entre ocio y trabajo -o más específicamente, entre “actividades de tiempo libre” y “trabajo ocupacional”, de acuerdo a Elias & Dunning (1992:88)- y hacer hincapié en las continuidades mediante la metáfora del pasaje, del *entre* [*betwixt and between*] que impregna las experiencias de los *fans* una vez que éstos se abocan a la producción y venta de las mercancías culturales que aman.

5 En este trabajo opté por emplear seudónimos para referirme a algunas trayectorias puntuales.

6 Al momento de la entrevista, Daniela tenía 22 años y estudiaba Diseño de Modas en una universidad privada. Como en otros casos, la conocí en un evento de animé y allí determinamos los detalles para una posterior entrevista.

7 Según el diccionario de la Real Academia Española, “Hobby” es una “actividad que, como afición o pasatiempo favorito, se practica habitualmente en los ratos de ocio”. Disponible en: <<http://dle.rae.es/?id=KXu47LP>>. Acceso en: 20/08/2013.

Consumir y producir: (re)situando las artes de hacer

Antes de tratar sobre esos procesos, conviene hacer una breve digresión sobre trabajos que han explorado prácticas como las que se abordan aquí, dado que brindan herramientas analíticas útiles para pensar las experiencias de los *fans* en la conjunción entre consumo y producción. Me hago eco del abordaje de Hennion (2007), quien enfatiza la intensidad de las emociones que las personas sienten hacia los objetos que constituyen su pasión. Se vale para ello del término “amateur”, que indica un compromiso sostenido en la realización de actividades sistemáticas que permiten desenvolver progresivamente un conjunto dado de sensibilidades y habilidades en las personas que las llevan a cabo. A propósito de los aficionados a la ópera, Benzecry (2012:34) considera al amor como un modo de construcción de sí que se produce en narrativas en las que la historia personal se encuentra atravesada por la relación con los objetos amados, permitiendo trazar el desarrollo individual de las pasiones y su proyección a futuro.

Al emplear el término “fan”, recojo las observaciones de Jenkins (2010) acerca de la pertinencia del uso de “fan” en lugar de “fanatic”, que incluye un componente de obsesión o de desmesura y que, en todo caso, habilita ciertas lecturas académicas centradas en reconocer la irracionalidad de los comportamientos de los sujetos en lugar de intentar estudiarlos en su complejidad. Si bien en las entrevistas aparecen estos instantes cuando los aficionados recuerdan períodos “de mayor fanatismo” o épocas en las que se empezaron a *fanatizar*, se trata precisamente de la construcción biográfica de momentos en los que la intensidad sentida hacia los diversos objetos se incrementó, y no de un estado emocional permanente. De la misma manera, hablar de “fan” o “fans” me permite abarcar, con una terminología cercana a *fandom* –término que apareció en el trabajo de campo y que significa “reino de fans”– un conjunto diverso de personas que se reunían en los eventos, y que compartían el gusto por el manga, el animé, los cómics, el rock y el pop japonés, las películas de superhéroes, los videojuegos y, también, los juegos de rol y cartas. Así, mis esfuerzos de pesquisa se centraron en el estudio de los eventos como situaciones en las que se realizaban, y visibilizaban, las redes de relaciones y las trayectorias apasionadas de los sujetos que participaban en ellas (Díaz, 2014).⁸ Las categorías identitarias empleadas para definir esas construcciones en ciertos momentos de la vida, tales como *otaku* y *friki*⁹, formaban parte de ese paisaje y se negociaban e intercambiaban también de manera situacional.

Valiéndose del modelo de lectura como cacería furtiva propuesto por De Certeau (2000 [1990]), Jenkins conceptualiza a los *fans* como piratas que “han desarrollado la piratería hasta convertirla en un arte” (2010:42), y añade: “La expresión “piratería” de De Certeau nos recuerda poderosamente los intereses potencialmente opuestos de los productores y consumidores, de los escritores y los lectores” (Jenkins, 2010:48). En su análisis, las prácticas enfocadas son la producción de literatura basada en los textos consumidos (*fan fiction*, *fanzines*), la creación de videoclips con imágenes de las series y música a elección (a la que denomina “videoarte”), y la composición musical que comenta textos preexistentes (*filking*). Estas producciones permiten explorar personajes o subtramas secundarias de las series, y circulan en una comunidad que se caracteriza por su gran dimensión participativa. De esta manera, para Jenkins los *fans* son *prosumidores* porque son a un tiempo consumidores y productores; y las dos dimensiones no pueden ser pensadas por separado. Las convenciones, en tanto espacio de circulación, también son concebidas en la línea que contrapone y une a profesionales y *fans*:

8 En mi disertación de maestría exploro la idea de “trayectorias apasionadas” a partir de un estudio exhaustivo del desarrollo de pasiones y apegos por parte de *fans* de la cultura pop japonesa (Díaz, 2014). Dada la extensión de este artículo, sería imposible describir las trayectorias con la profundidad que merecerían. Por ese motivo, aquí circunscribo el análisis a las narrativas que recuperan los procesos de construcción de sí de un conjunto de organizadores y vendedores que daban forma a los mundos del animé en Córdoba entre 2009 y 2013.

9 “*Otaku*” es un término japonés que alude a las personas obsesionadas con cualquier tipo de práctica, aunque en otros países fue aplicado de manera general para designar a los fanáticos de la cultura pop japonesa (Cfr. Kelly, 2004). “*Friki*” deriva del inglés “*freaky*” e incluye las siguientes acepciones de acuerdo con la Real Academia Española: “1. Extravagante, raro o excéntrico. 2. Persona pintoresca y extravagante. 3. Persona que practica desmesurada y obsesivamente una afición.” Disponible en: <<http://lema.rae.es/drae/?val=friki>>. Acceso en: 20/08/2013.

A pesar de que las convenciones de ciencia ficción constituyen un mercado para los productos comerciales relacionados con las historias basadas en los medios de comunicación, y son un escaparate para escritores, ilustradores y artistas profesionales, las convenciones también constituyen un mercado para las obras producidas por los fans y una vitrina para los artistas fans.” (Jenkins, 2010:65).

En la visión de Jenkins, los *fans* cuya labor se resalta son artistas del collage, piratas que ejercen su resistencia a través de asaltos sucesivos a los textos, y cuyos intereses se centran en la difusión de cintas de video y de sus propias obras, aun si no reciben compensaciones monetarias a cambio de ellas. Sin negar que esto sea así, Abercrombie y Longhurst reconocen que tales *fans* constituyen una muestra, en un espectro más amplio que incluiría desde una audiencia regular hasta pequeños productores (Gray, Sandvoss & Harrington, 2007:8).

Otro conjunto de estudios problematiza las dimensiones de consumo y producción en torno a ejes críticos como la relación local/global y la extensión del *fandom*, en tanto modo distintivo de aproximación hacia objetos y formas de interacción social, en el marco del capitalismo global. Entre tales esfuerzos se puede ubicar el trabajo de Hills (2002), quien coloca la subjetividad imaginada de los *fans* en un proceso de permanente elaboración de distinciones entre prácticas de consumo “buenas” y “malas”; es decir, entre modos de acercamiento a los objetos más o menos auténticos, en los que impactan incluso las concepciones elaboradas por las ciencias sociales. En palabras del autor,

On the one hand, we are presented with a view of fans as (specialist) consumers, whose fandom is expressed through keeping up with new releases of books, comics and videos. On the other hand, we are told that fans whose practices are ‘clearly linked with’ dominant capitalist society (eg. They may be trying to sell videos recorded off-air) are likely to be censured within the fan culture concerned. This is not simply a theoretical contradiction: it is an inescapable contradiction which fans live out (Hills, 2002:5).

Aquí interesa particularmente retomar la idea de “artes de hacer” de De Certeau (2000), que tiene la virtud de enfocar los modos de usar los productos que se desarrollan en la vida cotidiana. A ello añadimos las contradicciones observadas por Hills, en la medida en que la pasión por objetos es habilitada –y se encuentra atravesada– por procesos de mercantilización y de construcción de distinciones nosotros/ellos (2002:37). En el contexto etnográfico que acompañara en la ciudad de Córdoba, los relatos sobre prácticas de compra e intercambio de objetos vinculados a la cultura pop japonesa aparecían, en comentarios y entrevistas, directamente asociados al período de fines de 1990 y comienzos de 2000. En este sentido, se correspondían con las derivas que realizaban los *fans* en busca de series y mangas, por kioscos, “comiquerías” y librerías de saldos del centro de la ciudad.

A partir de 2005, los eventos condensaron un circuito material y moral, en el que se anudaron progresivamente los procesos de producción de significados y las trayectorias de los distintos participantes. Se convirtieron, además, en espacios de circulación de aquellos objetos que durante los primeros años de formación del *fandom* local solo se conseguían a través de derivas céntricas. De manera paralela a la emergencia de los eventos, numerosos integrantes de esos mundos se embarcaron en la fabricación o venta de objetos, para obtener un ingreso extra o construir un proyecto dentro del “campo de posibilidades” abierto por esos consumos (Velho, 1981). Así, las “operaciones de los usuarios” (De Certeau, 2000:XLII), que primero se centraban en la compra de mercancías, pasaron a incluir su confección y producción.

Fruto de la gestión de los propios *fans*, los eventos siguieron esta tendencia y empezaron a ser organizados por distintos grupos, con el auspicio de los negocios vigentes. Estas actividades creaban “escenas locales” (Bennett & Peterson, 2004) y ponían en juego prácticas de DIY (*do it yourself*) características tanto del bricolaje, como del punk y otros movimientos artísticos, que se valieron del collage como técnica para producir una cultura underground (Yúdice, 2007:27). Ese proceso se visualiza en la experiencia de Ana, una entrevistada que tenía 20 años cuando conversamos por primera vez y era estudiante universitaria.

Ella había iniciado su participación en el circuito de eventos en 2010, y seis meses después había comenzado a vender fotos y prendedores artesanales en el Paseo Sobremonte –plaza céntrica donde se hacían reuniones todos los sábados– y en las convenciones. Ya en 2013, ella integraba el *staff* del evento Córdoba Animé Fest. El relato de ese camino recorrido tiene la virtud de mostrar las prácticas DIY que atravesaban el intercambio, la adquisición y/o producción de objetos para consumo personal; como también de revelar la aparición de proyectos de venta que servían para generar ingresos que luego podían invertirse en otras actividades del *fandom*:

... ahora empecé con el tema de las fotos a vender, pero ya hay gente que antes hacía cosas, por ejemplo, que hacía llaveritos o vinchitas, pero no habían decidido ir y venderlas directamente. (...) Las empecé haciendo para mí y después dije: “está buena la idea”. Primero, porque está bueno venderlo y segundo, porque no hay, vos vas a las casas de animé o de cómic en el centro y te venden los muñecos, te venden los mangas, los libros, las revistas, lo que sea, pero no hay imágenes del animé. A raíz de lo que yo hice, otras personas dijeron “voy a empezar a traer tal cosa que yo hacía”. Con los chicos dijimos que está bueno porque hay algunos, por ejemplo, que están estudiando, son de la secundaria, y bueno, por ahí pueden hacer cositas y las venden, y les queda para ellos, digamos. Y aparte porque tratan siempre de buscar alguna fuente de dinero para invertirlo después en los cosplays o cosas así (Entrevista con Ana, 29.05.10).¹⁰

Testimonios como éste revelan un proceso de mercantilización que creaba, en un mismo movimiento, un mundo social y diferentes trayectorias de *fans*, entre ellas, la de los organizadores de eventos y los dueños de emprendimientos de venta de *merchandising*. En las siguientes secciones consideraré sus experiencias con relación a los objetos o servicios que producían y vendían.

Convertirse en organizador de eventos y en miembro de un *staff*

Mientras que Hills (2002) habla de una dialéctica permanente entre valor de uso y valor de cambio que se pone en juego en la relación de los fans con los objetos, para Appadurai (1991) las mercancías representarían un estado de las cosas del que éstas pueden entrar y salir en diferentes momentos de su existencia –lo que él denomina, siguiendo a Kopytoff, su “biografía cultural”–, a partir de su inclusión en sistemas de valores específicos: “Propongo que la situación mercantil en la vida social de cualquier “cosa” se defina como la situación en la cual su intercambiabilidad (pasada, presente o futura) por alguna otra cosa se convierta en su característica socialmente relevante” (Appadurai, 1991:29).

Los procesos de mercantilización y singularización, de entrada y salida de ese estado de mercancía, se vinculan, además, con distintas distribuciones de conocimiento que “puede ser de dos tipos: el conocimiento (técnico, social, estético y demás) que acompaña a la producción de la mercancía, y el conocimiento que acompaña al consumo apropiado de la mercancía” (Appadurai, 1991:60). Si consideramos a los eventos como mercancías culturales, podemos decir que los organizadores de eventos detentaban y producían esos conocimientos, ya que eran ellos quienes determinaban la fecha del evento, el lugar en el que se realizaría, el precio de las entradas, las actividades durante la jornada; y además, fijaban cronogramas y horarios, distribuían tareas y participaban de la creación de redes de relaciones, con organizadores locales y de otras provincias. En este contexto mercantil, pensando en términos de Appadurai (1991:31), dicho conocimiento era, a la vez, de la producción y del consumo, puesto que quienes se desempeñaban como organizadores habían desarrollado la inquietud por dedicarse a tal actividad a partir de asistir a otros eventos.

¹⁰ Luego del contacto inicial en un evento y de la realización de una entrevista en profundidad, el vínculo y la conversación con Ana se mantuvieron durante los siguientes cuatro años.

La propia participación en esas escenas creaba relaciones, habilidades y saberes necesarios para las tareas de organización, es decir, aprender las formas estandarizadas de hacer las cosas en esos mundos. Daniela, de quien hablé previamente, se convirtió en organizadora luego de haber ganado un concurso de *cosplay* y de desempeñarse como jurado en otros concursos. Ir a los eventos le sirvió para incorporar conocimientos relativos a su organización:

He ido a casi todos los eventos que se hicieron en Córdoba desde que empecé a ir, y *yendo a eventos aprendés muchísimo*. Es la primera vez que organizo y la verdad es que es muy fácil para mí, además porque hace rato que venía con ganas de organizar un evento, entonces *cuando iba a los eventos no solo disfrutaba, sino que observaba cómo se hacían las cosas, las fallas...* Entonces como que me llamaron en el momento justo, porque si me llamaban un año antes no sabía nada. Este último año que estuve yendo, fui a eso, a disfrutar y a ver cómo se hacen las cosas, ver cómo se organizan, de qué se trata cada concurso y demás (Entrevista a Daniela, 2013).

En el caso de otro evento llamado Concomics, sus organizadores viajaron desde México unos meses antes de la fecha de realización del evento para conocer la ciudad y evaluar si era rentable hacer esa inversión. La llegada de una convención internacional que se realizaba en otras ciudades de América Latina era percibida como un signo de progreso, en especial por aquellos que comenzaron a participar de estos circuitos en los años en que tal oferta aún no se había materializado. Como me decía uno de los integrantes del *staff*:

... ellos van a decidir seguir viniendo o no, en función de si la gente responde o no. *Yo a eso ya te lo digo como un poco de cada lado*. Me encantaría que la Concomics siga viniendo porque *yo como parte del staff quiero que vengan*, me hice muy amigo de la gente del *staff* y me gusta poder decir “soy parte del *staff* de Concomics”, no quiero que sea algo pasajero, quiero seguir siendo el que los represente acá. *Pero también soy un chico al que le gusta la onda y que me gustan los eventos* (Entrevista a Federico, 21.03.13).¹¹

De estos fragmentos de entrevistas podemos establecer que familiarizarse con el *ambiente* y la *onda* era una condición para la producción de los eventos, y por esa razón, como veremos luego, se volvía un marcador que distinguía a aquellos que pertenecían a estos mundos y que tenían una trayectoria reconocida en ellos, de los considerados advenedizos, que solo se interesaban en los eventos “*como un negocio*”. De esta manera, los mejor posicionados para crear este tipo de material eran los propios *fans*, ya que habían acumulado una experiencia que los volvía conocedores y les daba la sensibilidad para responder satisfactoriamente las demandas del público. En este sentido, es importante notar que los organizadores y los miembros del *staff* se ubicaban en una franja de entre 23 y 35 años, mientras que las edades de los asistentes reconocían un espectro más amplio, con gran cantidad de niños que concurrían acompañados de sus padres.

Tanto para los organizadores como para el *staff*, la pasión que sentían por la cultura pop japonesa creaba dificultades para dar lugar a procesos de profesionalización y los ubicaba en una situación contradictoria frente a otros *fans*. Así, si bien por sus conocimientos se encontraban habilitados para organizar, es decir, poner en movimiento los mundos del animé locales, también se volvían objeto de críticas en caso de que obtuvieran ganancias. Con frecuencia, esas tensiones internas eran resueltas a partir de la asunción de un rol intermedio, como lo expresaba uno de ellos cuando se reconocía como “*parte del staff*” y “*un chico al que le gustan los eventos*”. Ante mi repregunta, me explicaba qué quería decir con esa distinción:

-Lo decís porque sos aficionado y a la vez parte de una organización...

¹¹ Cuando conversamos, Federico tenía 23 años y estudiaba Licenciatura en Cine y Televisión en la Universidad Nacional de Córdoba.

–Es que es lo que soy, soy como un ayudante-alumno, ¿me entendés? Porque estoy con los profesores y bancándolos a ellos, pero yo estoy para ayudar a los chicos. En este caso, soy del staff, soy la cara de ellos acá, las consultas me las hacen a mí y yo las transmito allá. Los banco [a los organizadores], los ayudo, soy parte del staff, pero yo también fui un aficionado y también fui un alumno, ¿me entendés? Soy un ayudante-alumno, igual que ellos (Entrevista, 2013).

Tal vez eso aparezca de modo más claro en la trayectoria de uno de los organizadores del Córdoba Anime Fest, que vale la pena de ser descrita puntualmente para analizar los aspectos que mencioné acerca de la socialización en las convenciones vigentes, las edades de los organizadores y su posición de mayor jerarquía en el *fandom*. En 2010, cuando lo entrevisté por primera vez, tenía 23 años y cursaba estudios en Administración de Empresas en una universidad privada. Trabajaba, además, como empleado de correo y alternaba sus ocupaciones estrictamente laborales con la organización del evento. En ese entonces, me contaba que había creado un foro *online* y además había desarrollado gran variedad de proyectos, entre ellos, viajar por eventos del país para llevar novedades a Córdoba:

... no únicamente he hecho lo que es el foro –porque ahora está el foro nuevo, que es el Imperio Otaku–, sino que no me he quedado en eso, he hecho la radio, he hecho un evento, ahora estoy con proyectos de hacer una revista, después voy a alquilar un local comercial para que compartamos manga, que vengan después a jugar a *la Play* [Station]. O sea, *siempre estoy en movimiento. A mí me gusta ser una persona que le gusta dar todo, a los chicos darles con todos los gustos* (Entrevista, 03.09.10).¹²

Cuando comentaba acerca de sus comienzos en la tarea de organización se remontaba al período 2005-2006, en el que empezó a “conocer el movimiento”, es decir, a participar de las reuniones que los grupos de *fans* organizaban en una plaza del centro de la ciudad. En esos años y hasta el 2009, el único evento vigente era el Anime Bash, que se llevaba a cabo en boliches y que había surgido de las gestiones conjuntas de una comiquería y un grupo de *fans*. Cuando la fiesta pasó a ser organizada por un aficionado de corta edad que carecía de los conocimientos necesarios para ocuparse de esa tarea,¹³ él y otros miembros del grupo empezaron a pensar en la posibilidad de generar otro tipo de oferta para los aficionados al animé locales. Su relato acerca del primer evento muestra algunas prácticas vinculadas a las tareas de organización y, además, revela las tensiones entre organizar eventos “*por gusto*” y “*vivir de esto*” que los propios organizadores experimentaban como constitutivas a su rol en esos circuitos:

Me acuerdo de que la primera CAF fue: el sonido me lo prestaron unos amigos, [había un] único stand y era vender comida y bebida, y nada más. Y bueno, *la gente caía y les gustaba, les gustó y vieron que yo no tengo ningún local, nada... yo soy una persona muy normal, tengo un trabajo normal, trabajo, estudio, no tengo algo relacionado, que me genere dinero con el animé o un local*. No, soy una persona normal que hace eso. Y eso me ha gustado (Entrevista, 2010).

En otro momento de la entrevista definía esa tensión como una oposición entre el amor y el lucro, y establecía que realizaba un estudio de mercado a la hora de planificar cada evento:

... yo trato de darle a la gente lo que le gusta. Es como un estudio de mercado lo que hago a veces, digo yo como administrador de empresas, hago un estudio de mercado y veo lo que a la gente le gusta o lo que necesita y yo trato de dárselo. Es eso lo que hago yo. *Y en realidad lo hago sin ningún fin de lucro, yo lo hago por amor* porque me gusta organizar y me gusta el movimiento (Entrevista, 2010).

¹² La entrevista se realizó un año después de habernos conocido en un *evento de animé*.

¹³ En 2008, el local comercial que auspiciaba la fiesta fue vendido a uno de sus clientes habituales, quien se encargó de organizar los eventos durante ese año.

Al igual que los emprendimientos de esos mundos, él también empezó con fiestas en casas particulares y luego, progresivamente, decidió realizar un evento propiamente dicho en un salón, con entradas y un programa de actividades. En torno a ese proyecto se montó toda una red de cooperación que incluía a amigos y familiares: en cada edición de la CAF participaba un equipo o *staff* de amigos que ayudaban en la realización de las distintas actividades, mientras que los gastos corrían por cuenta de él, en tanto que inversor y organizador. Parte de los costos se cubrían con el aporte de los dueños de locales comerciales o pequeños productores, que pagaban un monto específico por el derecho a poner un *stand* de venta en el salón y/o aparecer en los panfletos publicitarios como auspiciantes. Ese dinero era empleado para pagar los gastos de alquiler del salón, de tal manera que los ingresos provenientes de las entradas se convirtieran en ganancias. Los eventos que se realizaron luego, aunque organizados por otros grupos, tendieron a seguir las convenciones establecidas por este tipo de cooperación mutua entre organizadores y vendedores.

Una trayectoria interesante para nuestro análisis es la del organizador del evento Shibuya, ya que reconocía la mediación del dinero como necesaria para lograr los objetivos propuestos. Al momento de la entrevista tenía 28 años y era dueño de un local comercial que vendía productos asociados con la cultura pop japonesa, donde también se hacían tatuajes. En su caso, estaba familiarizado con las actividades comerciales porque trabajaba en un bar y, además, provenía de una familia de comerciantes vinculados con la venta de indumentaria, discos, y accesorios de rock. El primer evento que organizó tuvo lugar en dicho bar, ubicado en la zona del “ex Abasto”¹⁴:

Yo ya tenía el Vampire Club, y en el 2009 hice el evento Anime Explosion. Fue el primero que hice, que lo hice con un amigo, le dije “bueno, nos juntemos, yo tengo un bar, nos juntemos a ver qué onda”. *Lo íbamos a hacer todo gratis porque la idea era juntarnos.* Pero justo se dio la posibilidad de que estaba esta banda, Tamagochi, en ese entonces, pero vivían en otra provincia y necesitábamos plata para [traerlos]. Entonces digo “bueno, cobremos la entrada y de ahí sacamos para Tamagochi y les pagamos”. *Si bien no iba a ser con un fin de lucro, son cosas que se te presentan (...)* Sí o sí tenés que cobrar la entrada para poder financiar eso (Entrevista, 20.02.13).¹⁵

Distinto de los anteriores, otro de los eventos vigentes por esos años se había realizado a partir de la separación de las tareas de inversión y organización. Esto abría la puerta para la intervención de actores ajenos a esos mundos y que carecían, por lo tanto, de los conocimientos considerados necesarios para la producción de eventos de ese tipo. En la opinión de los organizadores entrevistados, esa innovación constituía una amenaza, en la medida en que se corría el riesgo de transformar las fiestas “en un negocio” y, con el paso del tiempo, incluso los inversores podían llegar a prescindir de los saberes de los *fans*. Como me comentó uno de ellos:

... yo les dije varias veces a los chicos que una vez que ya sepan cómo se hace el evento, los van a echar. *Yo tengo miedo de que los echen.* A alguien van a tener, pero van a decir “ah, esto de organizar stands, lo llamo a fulanito que es mi primo y lo organiza”, *yo creo que lo ven así, como un negocio* (Entrevista, 03.07.13).

Aquí se presentan dinámicas de mercantilización y singularización distinguidas por Appadurai (1991), por medio de las cuales una cosa deviene mercancía en un momento dado y luego, insertada en regímenes de valor diferentes, se desmercantiliza. En su etnografía, Tsing (2015) considera ese punto al decir que no hay alienación en la relación entre los recolectores de hongos y sus “trofeos de caza”, ya que en un primer momento éstos se asocian a la libertad y al placer de la búsqueda y luego son convertidos en mercancías a través de operaciones

¹⁴ El “ex Abasto” es una zona relativamente cercana al centro de la ciudad, que comprende gran cantidad de locales bailables. Hasta fines de la década de 1980 fue sede del Mercado de Abasto, de ahí su nombre. Luego del traslado de dicho mercado, los galpones y construcciones remanentes fueron reconvertidos en *pubs*, bares y boliches.

¹⁵ Tamagochi Experiment era una banda de covers de *openings* y *endings* de las series de animé que surgió en el año 2005. Una crónica sobre ese evento se encuentra en una de las páginas de la banda: <http://tamagochiexperiment.blogspot.com.ar/2009/06/anime-explosion-cordoba-30509.html>. Acceso en: 10/11/2013.

de traducción realizadas por mediadores. Los compradores, a su vez, acceden a ellos teniendo en mente la construcción de relaciones (Tsing, 2015:121-125). Para los organizadores, si bien los eventos podían constituir mercancías, había una clara distinción entre saber de qué se trataban, conocer a las personas del circuito y ser *fan* del animé, y tener un interés solo como empresario. “Hacer por amor” y “hacer por dinero”, sin embargo, no eran procesos excluyentes, sino que se encontraban en contigüidad, y servían a la construcción de procesos clasificatorios en esos circuitos. Así, la segunda expresión podía ser empleada como categoría acusatoria dirigida a algunos organizadores, mientras que la primera podía ser reservada para explicar la relación propia con los mundos del animé.

Los *fans* reconocían que el ejercicio de las tareas de organización suponía abocarse a cuestiones que no pasaban por el disfrute, sino que adquirirían un matiz laboral. Por esta razón, vinculaban el mayor o menor éxito de los eventos a la edad de los sujetos. Ir como asistente e ir como organizador o miembro del *staff* imponía diferentes maneras de hacer uso del espacio, y habilitaba distintos tipos de experiencias. Así lo relataba un organizador:

Pasa que un chico de 18, 19 tiene ganas de hacer algo, pero no tiene idea cómo. Es lo que me pasa a mí. Mucha gente me dice “sí, te quiero ayudar”. Pero cuando llega el momento de ayudar, me dicen “*si querés te ayudo para armar, pero cuando es la fiesta no cuentas conmigo*” (...) los chicos más chicos no pueden organizar un evento porque inconscientemente se dan cuenta de que *o te atás al evento o te atás a ser público* (Entrevista, 2013).

En ese sentido, otro organizador me narraba que a veces era necesario contratar empleados ajenos a la *onda* para que se ocuparan de trabajar y no se distrajeran con el evento:

Vos no podés mandar a la gente cuando están de onda, cuando les pagás sí. Nosotros somos 22, son amigos. *Cinco o seis serán de la onda nomás, porque si tenés gente en el staff que es de la misma onda no te van a rendir lo que esperás que te rindan porque se van a poner a conversar, se van a distraer y después vas a tener medio mundo atrás putéandote porque no hay nadie ayudando en nada. Para un staff tenés que tener gente que no sea del rubro, siempre va a responder mejor porque esa persona va a ir a trabajar y a hacer lo que vos digas que haga* (Entrevista, 2013).

En los eventos de animé donde desarrollé mi trabajo de campo, los miembros del *staff* tenían un vestuario característico que los distinguía del público. Por lo general, consistía en una remera con el logo del evento y el nombre o *Nick-name* (apodo) de cada uno. Se encargaban de coordinar las actividades, desde la venta de comida hasta el desarrollo de los concursos de dibujo, videojuegos y *cosplay*, de modo que su ropa funcionaba como un índice de su pertenencia al equipo de organización. Además de ser concebido como una afición o *hobby* que demandaba esfuerzo y dedicación, para los jóvenes del ambiente pertenecer a un *staff* era signo de haber alcanzado un mejor posicionamiento a través de la construcción de una relación de confianza con los inversores/organizadores. La permanencia en uno de esos equipos se constituía en indicio del cambio de posición en el circuito de eventos, en dirección al ejercicio de labores de coordinación de actividades de divertimento que antes habían realizado como asistentes.

“Compra y venta friki”¹⁶

En su estudio sociológico sobre el trabajo artístico, Becker (2008) considera como una parte esencial la movilización de recursos, esto es, la producción de los recursos materiales y personales cuya presencia posibilita la creación de las obras consideradas artísticas. La emergencia de fabricantes y proveedores se vincula directamente con la presencia de una demanda determinada, en la medida en que “Si la economía permite y recompensa esa actividad, algunos empresarios considerarán que hasta vale la pena apuntar a un mercado pequeño y minoritario” (Becker, 2008:96). En mayor proporción que los organizadores –cuyo desempeño requería, como vimos, contar con dinero para costear la producción de un evento en caso de los inversores, y de ser *conocedor* y *trabajador* en caso de los miembros del *staff*–, varios de los jóvenes que conocí como asistentes se convirtieron en vendedores de distintos tipos de objetos. Así, comenzaron a participar en esos espacios festivos con su *stand* de venta, que consistía en una mesa o tablón cubierto de un mantel y poblado de objetos diversos, a menudo adornados por carteles que indicaban el nombre del emprendimiento y tarjetas pequeñas con la dirección y/o su página *web*, a disposición de compradores y curiosos.

Si entre los años 2009 y 2010 las convenciones contaban con un promedio de diez *stands*, en 2013 tenían casi cuarenta, lo cual ampliaba las oportunidades de hallar diversas versiones de un mismo objeto. Esto implicaba un marcado contraste con una época anterior en la que, según los entrevistados, era mucho más difícil conseguir cosas. Precisamente, las prácticas de DIY que atravesaban esos mundos tenían que ver, como en la organización de eventos, con el descubrimiento por parte de los sujetos de que podían hacer y construir –individual y colectivamente– aquello que no podían adquirir por internet o que no se encontraba a su disposición en los locales comerciales del centro de la ciudad.

Una motivación semejante a la descrita subyace a la creación de fanzines, AMV, *fan art* y *fan fiction* (Jenkins, 2009; 2010; Schott & Burn, 2007) y al intercambio de cintas grabadas con recitales inéditos, como aparece en la investigación de Cavicchi (1998:74). Esas obras pueden ser interpretadas, como “indicios materiales de la productividad de la cultura de los fans” (Jenkins, 2010:14); y entre ellas, cabe incluir los proyectos laborales que permitían el desarrollo de trayectorias a medio camino entre *hobby* y trabajo, muchas veces en vías de profesionalización. Con el objetivo de abordar esas trayectorias, la categoría de “pequeños productores” –desarrollada por Abercrombie y Longhurst (1998) y citada por Hills (2002) en sus consideraciones sobre la “dialéctica del valor”–, constituye una primera referencia analítica, en tanto describe las experiencias de quienes comienzan a producir aquello que consumen. Para ellos,

‘the previous enthusiasm becomes a full-time occupation’ (...), are involved in market-organised relations and are able to use their finely-honed skills to produce material professionally which then can be marketed back to their own fan culture (Abercrombie & Longhurst, 1998 apud Hills, 2002:5).

En los mundos analizados el panorama era más complejo, ya que la producción de objetos no suponía una posición recortada prolijamente del espectro de los consumidores. Esto ocurría porque muchos se pensaban en camino a la profesionalización, y por el momento concebían sus actividades de organización y venta como *hobbies* que mantenían junto a su trabajo *normal*. Además, siguiendo la apuesta de Turner (1977) de considerar el *entre*, propongo no pensar en una transición consumada desde el entusiasmo (inicial) hacia un oficio (final), o del apego hacia el desapego, sino de un proceso de construcción de sí en el que las pasiones que los sujetos sienten por las mercancías son permanentemente negociadas.

16 “Compra y venta friki” era el nombre de un grupo de Facebook que reunía a personas interesadas en “vender, comprar o intercambiar cosas (...) del ámbito cosplayer, frikie o gamer” La dirección de la página era <https://www.facebook.com/groups/200478743356650/> y contaba con 833 miembros. Acceso en: 08/10/2013.

Para acompañar las narrativas o procesos de tales fans, hecha la salvedad de que los casos no se ajustan completamente a la definición presentada anteriormente, me guiaré por los tipos de proyectos comerciales que reconocí durante mi participación en los circuitos articulados por las convenciones. Uno de ellos se llamaba “Friki Store”, y consistía en una tienda virtual de venta de artículos importados.¹⁷ Su dueño, a quien llamaremos Martín, tenía 28 años y se definía como coleccionista y *friki*. Participaba con su *stand* en los eventos y esta actividad era para él “un cable a tierra” y un *hobby*, en comparación con su trabajo de lunes a viernes en un organismo estatal. El desarrollo de su negocio se vinculaba directamente con su trayectoria como *fan* del animé desde la infancia, y con su creencia de que un *verdadero fan* debía tener cosas de las series, coleccionarlas, y volverlas parte de su hogar, como objetos decorativos. De hecho, las figuras que poseía eran para él “*pequeños trofeos de la vida*” que le servían para recordar escenas de las series y situaciones del pasado en compañía de esos personajes. Así como las series tenían el poder de “enganchar” a los sujetos, este poder también era atribuido a los objetos, que funcionaban como artefactos que posibilitaban la construcción de biografías y trayectorias.

Como sostiene Hennion (2007) a propósito de la acción de aprender a escalar, el gusto es una actividad que se produce en el contacto con los objetos, es decir, en “el momento del surgimiento incierto de una sensación” (2007:5) que involucra la reflexividad presente en una disposición posible de identificar. Las cosas, por su parte, se caracterizan por su capacidad de interrumpir, de imponer una presencia: “Los objetos no están allí, inertes y dispuestos a nuestro servicio. Ellos se entregan a sí mismos, se develan, se imponen sobre nosotros” (Hennion, 2007:10). Este poder de los objetos aparecía en el relato de Martín, cuando hablaba acerca de la relación entre sus series preferidas y la compra de figuras coleccionables, y concluía que eso se debía a que había “*una historia detrás de cada objeto para cada persona*”:

De [la serie] Lupin III tengo figuras porque cuando las veo me hacen acordar a partes y me siento solo, es más, me estoy tentando ahora de pensar en alguna de las escenas y cómo están hechos los personajes. Lo mismo con otras cosas, con otros juegos y cosas así, que tengo figuras y cosas, y me evoca eso. También por ese lado con lo que hablamos al principio que te decía del tema de las figuras y la gente que quiere tener algo de animé, lo que te acabo de decir recién, cuando ves la figura te evoca algo (...) La figura dentro de todo está viva desde el punto de vista de que vos la podés poner en una pose que te haga acordar a una escena de la serie o del juego, o lo que sea. Entonces cuando lo ves te imaginás, empezás a fantasear (Entrevista con Martín, 18.04.13).

El proyecto del *stand* emergió dentro de esas prácticas como coleccionista y se manifestó a partir de su propia participación en eventos de animé, realizados desde 2010 en adelante. Ante la presencia de *stands* y productos similares, como así también de los altos precios de algunos productos en particular, decidió comenzar su propio emprendimiento de venta de figuras y objetos que él mismo compraría. Aquí aparecen, una vez más, las prácticas DIY que tienen a los consumos personales como puntos de partida: “*con el tema del stand tuve un criterio muy simple: voy a comprar cosas que yo compraría, mejor dicho, voy a vender cosas que yo compraría. Incluso la mayoría de las cosas que yo vendo, casi siempre tengo una o dos para mí.*”

Como puede observarse, el desarrollo de un emprendimiento como éste comportaba una visión de lo que los propios fans desearían ver o tener, y se constituía sobre la base de las anticipaciones, propias de un conocedor de esos mundos. En el caso del dueño del emprendimiento que consideramos aquí, luego de tomar la decisión de iniciar un negocio, dicho proceso continuó con la venta de productos a sus amigos; y la opción, finalmente, por incursionar en la venta directa en un *stand*, a raíz de la invitación del organizador de un evento. En este sentido, el nombre elegido –Friki Store– tenía que ver al mismo tiempo con el tipo de objetos

¹⁷ La mayor parte de estos emprendimientos eran tiendas virtuales que permitían abaratar los costos que demandaba tener un local. Se trataba de una tendencia más generalizada, como puede verse en la siguiente nota periodística acerca del tema: González, Laura: “Emprendedores por medio de Facebook”, *La Voz del Interior*, 04/05/2013. <http://www.lavoz.com.ar/ciudadanos/emprendedoras-medio-facebook>. Acceso en: 09/10/2013.

que comercializaba y con las cosas que le gustaban. Tal como él lo decía en la entrevista, lo que lo atraía de los eventos era atender a los clientes y “contagiar el frikismo”, una emoción que era despertada por cosas que se compraban y vendían en esos ámbitos:

A mí me gusta más la idea de *contagiar un poco el frikismo* que la idea de venderlo. Obviamente es un negocio y lo vendo, pero independientemente de la venta me gusta más la reacción de la gente cuando ve algo de alguna serie que vieron y dijeron “¡ahhh!” o de ver algo así, único, raro y decir “me gustaría tener en casa esto o regalárselo a alguien”. Bueno, eso en sí. Como te digo, también *es parte de la esencia de ver que la gente reacciona ante las mismas cosas que a mí me gustan*. (Entrevista, 2013).

Otro tipo de emprendimiento era aquel que se dedicaba a la venta de productos fabricados artesanalmente por sus dueños (*fanmade*), quienes tenían sus propias páginas *web* y también participaban de los eventos con sus *stands*. Uno de ellos era “Escaramaquia Réplicas”, que se dedicaba a la venta de “réplicas, remeras y objetos para fans”, tal como decía en las tarjetas que sus dueños distribuían y en sus páginas de Facebook. Al momento de la entrevista, uno de ellos tenía 37 años y era diseñador industrial. Su interés por el animé se remontaba a su infancia y la producción de objetos también se había desarrollado en ese período, como una forma de tener aquello que no podía conseguir, o que se encontraba disponible, pero era demasiado caro:

Eso de las maquetas y las réplicas siempre ha sido una especie de ausencia de lo que no se podía comprar, de suplantar lo que no se podía comprar cuando éramos pibes. (...) no estaba la posibilidad, en los últimos 15 años se han podido comprar cosas, antes no. Yo me acuerdo muy claro de haber querido un Mazinger cuando era chico y era un sueldo de mi papá, un sueldo de empleado municipal. Era mucha plata y teníamos una familia grande (Entrevista, 06.05.13).

Decidió crear Escaramaquia luego de que lo despidieran de su trabajo anterior, de manera que, para él, lo que antes era una afición se transformó en un trabajo. A diferencia del caso anterior, aquí la venta de remeras estampadas y de réplicas constituía su única fuente de ingresos, y la participación en el circuito de eventos representaba una instancia casi obligada para tornar conocido su emprendimiento y expandir sus ventas. En el desarrollo de una carrera planteada como profesional, admitía que desprenderse de los objetos que confeccionaba le había llevado tiempo y esfuerzo, por lo que el pasaje del consumo al emprendimiento comercial estuvo atravesado por un aprendizaje sobre cómo relacionarse con lo producido para finalmente venderlo y dejarlo ir:

Ahora siempre digo “*me voy a volver a hacer cosas*” pero no he tenido tiempo. Tengo algunas, pero tarde o temprano se van. *Ya medio que me autoconvencí de que son productos, pero también son cosas que me gustan a mí*. No es lo mismo cuando me piden una espada o un arma de un animé que no conozco o no me gusta, sí, lo veo más como un producto y está bien, queda hermoso en un lugar, es atractivo, pero no me atrae. *Pero cuando me piden algo que me gusta a mí o es conocido... Inclusive en un tiempo empecé a hacer dos de cada cosa*. Pero no, tuve que dejar porque quedaba una terminada y otra a la mitad ocupando espacio, me terminaba olvidando de que estaba eso ahí guardado. (...) Pero me ha pasado con eso, con remeras me pasa todo el tiempo. Es peor aún porque en el ámbito que me muevo yo somos todos afines, hasta musicalmente. *Hago una remera y la quiero para mí, pasa que bueno, he aprendido a evitarlo porque si no tendría una cantidad enorme de remeras sin usar, y aparte es un gasto innecesario (...)* Y sí, *cuesta desprenderse de todo lo que a uno le gusta para que sea vendido* (Entrevista, 2013).

Aquí nos encontramos con el tema del afecto que estos objetos despiertan, que tiene que con la historia de los *fans*, las cualidades sensoriales y materiales de los objetos en sí (Hennion, 2007), y con el hecho de haber sido fabricados por ellos mismos, en un proceso afectivo en el que participan las emociones inspiradas por las películas, las series y los mangas.

Por último, atendiendo a la caracterización de tipos de emprendimientos propuesta con anterioridad, mencionamos los locales comerciales, ubicados principalmente en la zona céntrica de la ciudad, que se ocupaban de vender no solo artículos importados, sino también las cosas que llevaban los pequeños productores. En estos casos, se trataba ya de una opción por una actividad profesional, aunque a semejanza con las historias mencionadas, se enfatizaba que su creación se debía a la decisión de dedicarse a “*lo que realmente les gusta*”. Estos locales tenían sus páginas *web*, que servían principalmente para difusión, y sus dueños concurrían a los eventos con sus *stands*; funcionaban también como espacios donde los organizadores de eventos podían realizar fiestas y reuniones para un número reducido de participantes. Entre los ejemplos más significativos o reveladores de esa articulación, podemos citar el caso de dos jóvenes de 23 años que anteriormente frecuentaban los eventos de manera esporádica, porque no residían en la ciudad. Uno de ellos había vivido en una localidad cercana hasta los 18 años y allí formó parte de un grupo que se juntaba todos los viernes a jugar Magic,¹⁸ motivados por “*la buena onda y el amor al juego*”. Cuando se mudó a Córdoba capital trabajó en una concesionaria de autos y decidió renunciar a ese empleo para concentrar sus esfuerzos en el proyecto del local. Antes de ello, participó de los eventos con un *stand*, lo que sirvió a modo de preparación para la actividad comercial que quería desarrollar:

Un año antes de que estuviera el local empezamos a participar como *stand* de los eventos, con el tema de las cartas intercambiables, más que nada Magic, que fue algo que de muy chicos aprendimos a jugar, tenemos mucha experiencia incluso como jugadores relativamente profesionales. Entonces estamos muy metidos en el tema y dijimos “*vamos a empezar a sondear el ambiente, ver qué onda*”. En ese momento no teníamos la variedad de productos que tenemos ahora, era solamente como para ir haciendo una introducción, por así decirlo, y darle temperatura a lo que es el tema del Magic porque en Córdoba había mucha gente que en algún momento jugó, que le interesaba pero que no tenía dónde comprar ni dónde aprender, como que era algo que quedaba muy incómodo porque no hay un lugar que comercialice esto ni mucho menos que te enseñe a jugar. (Entrevista, 16.06.13).

De acuerdo con su relato, su *hobby* se había convertido en una profesión, aunque eso no impedía que encontrara momentos de ocio en el trabajo, ya que después de todo, siempre estaba entre amigos:

En mi caso sigue siendo mi hobby y mi trabajo, pero son dos momentos divididos porque no es lo mismo la parte de trabajo cuando estoy vendiendo Magic que la parte de hobby cuando estoy jugando Magic porque me gusta. Si bien se desarrollan adentro del local, son dos momentos diferentes donde no está [el] que está trabajando, sino que está el que la está pasando bien. Todas las personas que trabajan acá tienen por lo menos un hobby que se desarrolla acá adentro, porque tienen que tener la capacidad de poder enseñarles a los que quieren aprender (Entrevista, 2013).

En resumen, de las historias descritas realizamos una clasificación de proyectos en: locales comerciales –que cuentan con páginas *web*– y locales exclusivamente virtuales. Si consideramos el tipo de objetos que comercializan, pueden dividirse en: manufacturados (importados), artesanales o ambos. La articulación entre los diferentes emprendimientos y la escena de eventos daba lugar a una ecúmene mercantil (Appadurai, 1991), y también a procesos de reflexión por parte de los *fans* respecto a sus carreras, que oscilaban entre actividades de tiempo libre y actividades laborales. Incluso, como vimos, en los casos en que dichas tareas eran concebidas como parte de un quehacer profesional, la línea que separaba esos dos planos era porosa y había un permanente pasaje entre ambos. Esto se daba a partir de la distinción entre momentos durante la jornada de trabajo, o de la fabricación de copias de determinados productos que se destinaban para uso personal.

Las prácticas de compra y venta, propias del modo en que se tejían las redes en los mundos del animé acompañado, estaban atravesadas por los afectos que los objetos generaban, los recuerdos que éstos traían a la memoria y las relaciones de amistad que se formaban, de tal manera que la profesionalización requería una

¹⁸ *Magic: The Gathering* es un juego de cartas coleccionables creado en 1993, que reúne a una comunidad global de jugadores en torneos oficiales y en espacios de encuentro informales.

transformación del vínculo que cada uno tenía con dichos objetos para aprender a verlos como mercancías. Asimismo, este trabajo sobre sí también era un trabajo sobre la relación con los otros, quienes debían aprender a concebir la labor de estos pequeños productores en tanto ocupación laboral y no como *hobby*.

Hecho por fans, para fans

Vendedores y organizadores daban forma a un mundo, proveyendo recursos materiales y personales que se volvían parte del modo de hacer usual, esto es, de las convenciones vigentes. A lo largo de este artículo hemos visto cómo esas interacciones, generalmente comerciales, hacían lo que decían hacer –negocios, transacciones– pero también algo más: generaban relaciones y ponían en juego afectos, construían posiciones, carreras y redes. El análisis de las trayectorias de *fans* y de sus narrativas respecto al desarrollo de proyectos de organización y venta de productos muestra los procesos de construcción de sí que son realizados para, valga la redundancia, procurar construir, de manera paulatina, una posición como profesionales en esos mundos.

En su estudio sobre las carreras de músicos de baile, Becker (2009) sostiene que la definición del éxito profesional se vincula con las relaciones que éstos establecen al interior de su familia, con otros músicos y con agentes marginales, es decir, con empresarios que, a juicio de dichos músicos, tienen un interés exclusivamente comercial: “Es posible pensar una carrera exitosa como una serie de escalones (...) donde cada escalón es consecuencia del patrocinio, un desempeño exitoso y el establecimiento de relaciones provechosas” (2009:129). En los mundos del animé de Córdoba –y aparentemente esto es válido en varios casos, como pude observar a partir del diálogo con *fans* de otras provincias–, las carreras de emprendedores surgían principalmente de trayectorias previas como *fans*, de modo que las mercancías que producían y vendían se destinaban al mismo grupo del que ellos formaban parte. La única figura que podría ser asimilada a la del empresario de la música era la del inversor que, ajeno a estos códigos y “mapas de afecto” (Grossberg, 1992), veía la creciente convocatoria de los eventos solo desde el punto de vista de una inversión rentable.

Los organizadores y vendedores asumían una posición intermedia entre *hobby* y trabajo, en la cual las pasiones que sentían por los objetos que vendían o los servicios que prestaban debían ser continuamente negociadas. Así, volverse profesional requería aprender a concebir las propias prácticas como emprendimientos, y los objetos, producidos y vendidos, como mercancías. Para ser parte de una organización se debía aprender que, durante esas jornadas, los miembros del *staff* trabajaban y no podían disfrutar del evento permanentemente, como si fueran parte del público. Claro que a menudo se abría un espacio para que el disfrute asociado al *hobby* se manifestara, ya sea a través de hacer *cosplay*, de “contagiar el *frikismo*”, de jugar Magic o brindar talleres, que se volvían reuniones de amigos. De esta manera, las historias narradas nos muestran que los análisis relativos a la dialéctica del valor y a la profesionalización se vuelven comprensibles si se tienen en cuenta las experiencias de los *fans*, la creación de mundos sociales anclados localmente y las trayectorias apasionadas que ponen en juego distintos modos de relacionarse con las mercancías (Díaz, 2014).

García Canclini y Urteaga (2012:12) analizan la relación entre economía, desarrollo social e innovaciones culturales a partir del estudio de la emergencia de nuevos empleos, redes sociales y prácticas creativas por parte de jóvenes mexicanos. Los contextos que describen –gestados por artistas visuales, editores y músicos independientes– tienen en común la producción de “formas complementarias de aprendizaje vinculadas a la capacidad de asociación y trabajo colectivo” (2012:33-34), entre otros aspectos. Una literatura a la que tuve acceso más recientemente tematiza el fenómeno del emprendedorismo y lo coloca en la clave de procesos de autotransformación individual en los que intervienen motivaciones éticas y que conducen a la creación de un yo neoliberal (Fridman, 2019:20-21).

En los casos de fabricantes y vendedores de objetos, como también de los organizadores de eventos de animé, la percepción sobre lo que a ellos les gustaba consumir y experimentar como público; la formación recibida en espacios educativos formales, trabajos ocupacionales y en las propias convenciones; y las relaciones que eran capaces de movilizar, constituían una constelación de factores que creaban las condiciones para iniciar proyectos propios, que con el tiempo podían transformarse en empleos propiamente dichos. Al organizar y vender, los *fans* no solo se ponían en contacto entre sí, sino también con sus objetos queridos y con las historias detrás de los mismos, que incluían tanto las tramas narrativas de series e historietas, como los procesos personales de apego y desarrollo de afectos por un conjunto específico de mercancías. Eso, a su vez, reforzaba la opción por dar continuidad a sus proyectos laborales, que se fundamentaban así en el *gusto* y el *amor* por la cultura pop japonesa.

En este artículo hemos analizado historias de *fans* del manga y el animé que desarrollaron distintos proyectos: algunos eran pensados como actividades de tiempo libre que permitían obtener un pequeño ingreso, mientras que otros implicaban opciones profesionales en unos mundos que ellos ya conocían en tanto que consumidores, espectadores y asistentes. El análisis minucioso de los sentidos atribuidos a las prácticas de producción de objetos y eventos, como también a los procesos de profesionalización entre *fans* permite comprender más ampliamente el papel crucial desempeñado por afectos y pasiones en la conformación de subjetividades y sociabilidades juveniles. De la misma manera, abre el camino para una concepción de los eventos y convenciones de animé como sitios que habilitan –y en los que se realizan– procesos de construcción de sí de los *fans*, y no solo como instancias expresivas de unas identidades que supuestamente existirían de antemano. Esto pone de manifiesto el intenso trabajo reflexivo implicado en la reformulación de los vínculos con objetos amados y admirados, una vez que éstos pasan a estar cada vez más asociados a la esfera laboral.

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Political agency of indigenous peoples: the Guarani-Kaiowa's fight for survival and recognition

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Abstract

The article examines the survival strategies and political reactions of indigenous groups in areas of agricultural frontiers that are strongly influenced by cultural symbols, family bonds and land-based responses. It is discussed the unique socio-spatial trajectory of indigenous peoples and, in addition, a typology of the indigenous space is proposed. The analysis is focused on the emblematic example of how frontier making was experienced by the Guarani-Kaiowa of South America. The wisdom and resistance of Guarani-Kaiowa groups derive from the simultaneous ethnicisation of space and spatialisation of culture. They have shown latent geographical agency shaped by religious practices, strong family ties and the ability to internally negotiate the return to their original areas. There are many lessons to be learned, in particular the talent to absorb the increasing and dissimulated brutality of frontier making and, at the same time, voice their political demands, form solid strategic alliances and coordinate land-recovery initiatives.

Keywords: Guarani; Kaiowa; land grabbing; *retomada*; culture; religion.

Agência política dos povos indígenas: a luta dos Guarani-Kaiowá por sobrevivência e reconhecimento

Resumo

O artigo examina as estratégias de sobrevivência e reações políticas de grupos indígenas em áreas de fronteiras agrícolas, que são fortemente influenciadas por símbolos culturais, vínculos familiares e respostas vinculadas ao apego pela terra. Discute-se a especificidade da trajetória sócio-espacial dos povos indígenas e, além disso, propõe-se uma tipologia do espaço indígena. A análise é dedicada especialmente ao exemplo emblemático da fronteira vivida pelos Guarani-Kaiowá da América do Sul. A sabedoria e a resistência dos grupos Guarani-Kaiowá derivam da simultânea etnização do espaço e da espacialização da cultura. Essa experiência demonstra uma agência geográfica moldada por práticas religiosas, fortes laços familiares e a capacidade de negociar internamente o retorno às suas áreas originais (retomadas). Há muitas lições a serem aprendidas, em particular a capacidade de absorver a brutalidade crescente e dissimulada que caracteriza o avanço da fronteira e, ao mesmo tempo, de expressar demandas políticas, formar alianças estratégicas sólidas e coordenar iniciativas de recuperação das áreas perdidas para o desenvolvimento.

Palavras-chave: Guarani; Kaiowá; grilagem; retomada; cultura; religião.

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Spiralling paradoxes: the indigeneity of frontier making

Socio-spatial frontiers are not just remote areas where new socio-economic relations are imposed on top of previous conditions. The space of the frontier has a complex, multifaceted configuration in which both the hyper-new and what is considered obsolete coalesce. Following development and modernisation trends, frontier making brings the potentiality and, more importantly, the long-lasting problems of core spatial areas to the emerging frontier spaces (Ioris 2018a). Among the many peoples affected, indigenous groups – also described as natives, ancestral peoples, first nations, the Fourth World or aborigines – have vividly experienced the complex interplay of clashes, violence and resistance due to their brutal insertion in the process of frontier making. Discourses of sovereignty and legitimacy certainly underwrote “settler colonialism’s desire to uproot and destroy the place-based autonomies of Indigenous peoples in the relentless acquisition of ever more land and resources” (Larsen and Johnson 2017: 4). The colonial project was a coordinated attempt to affirm the power of the European nation states and create sources of wealth and economic rents out of the subjugation or displacement of indigenous peoples. Survivors were usually forced to seek refuge in remote areas, already occupied by other groups, and which would later be incorporated again as new frontiers. Particularly in Latin America, the tragic history of indigenous groups is well known, written under the auspices of colonisation and following the pattern of a racialised power exerted both by the European powers and by governments in Latin America after independence (Quijano 2008).

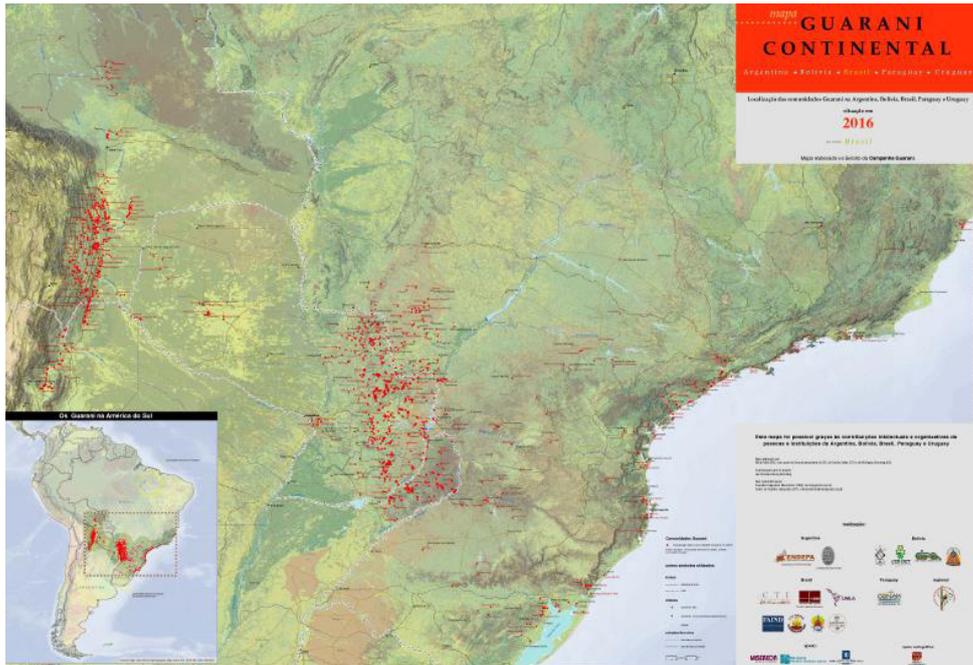
Mariátegui (2007), almost a century ago, rightly denounced the idea that the ‘Indian question’ in the region was primarily a problem of the land ownership regime. However, the process of frontier making was a devastating blow that went far beyond land or resource grabbing: it has been a true phenomenon of world-grabbing in the sense that it comprises an attempt to reduce lives and landscapes to the language of money and profit. Unlike migrant peasants, miners, construction workers or farmers, indigenous peoples had already been living in the areas converted into frontiers, which raises an important question regarding how they differ from other subaltern groups involved in frontier-making activity. Martins (1995) argues, based on studies in the Amazon, that the condition of squatters at the frontier results directly from the contradictions of capital, given that squatters must be removed from disputed areas for private property and wage labour to flourish. For that reason, the “squatter is product of the very logic of the expansion of capital; the Indian is not. The squatter can be reimbursed for his work, as a means to remove him from the land pursued by the farm or the company... The Indian cannot, in principle, be reimbursed to leave his land: this land is not just a thing, an object... it doesn’t have the attribute of thing and commodity. The land is sacred, it is the base of the tribal organisation” (p. 117). On the other hand, the political condition of indigenous peoples is not entirely different and, just like peasants, squatters and similarly marginalised people, their existence is intensely transformed by their immersion in frontier making (Ioris 2019). The dialectical result is that indigenous groups retain their cultural heritage and strict relations with the land, but at the same time they share important patterns of

mistreatment and marginalisation with other groups. As pointed out by Anthias (2017), indigenous territories are neither separate from, nor entirely subsumed by, capitalist development processes, but rather subject to multiple land values, ontologies and business investments.

Therefore, the participation of indigenous peoples in frontier making, although widely studied throughout the world, still demands further conceptual and empirical scrutiny. The focus of most texts is on the systematic imposition of a new socio-spatial order by the settler states on indigenous peoples, at the expense of pre-existing institutions such as common ownership of land, a self-sufficient economy, nomadic stateless life, and spiritual bonds to the land (Yiftachel and Fenster 1997). Authors discuss how the original inhabitants of the territory were obliged to retreat in the face of the advancing new frontier, forcing them into situations of acute exploitation, deprivation and overcrowding. However, this literature has frequently overlooked the perceptions, the inventiveness, the active reactions and the complex ontology of indigenous peoples. It is really only since the 1970s that indigenous voices and political subjectivity have started to attract better recognition. Indigenous groups are the quintessential targets of resource colonialism and the theft of land and resources (Parson and Ray 2018), but their history and agency did not end with the loss of their land and the decimation of members of their society. On the contrary, they continue to claim an indigenous identity in daily life activities and maintain attachments to places under difficult circumstances. Consequently, the indigeneity of frontier making requires post-colonial sensibilities and a recognition of the political significance of culture in space. Beyond essentialist and reductionist positions, there should be a concern for the politics of race, as well as questions of representation and the ideological construction of various racialised 'others,' in favour of conceptualisations that are time and place specific (Jackson and Penrose 1993).

Our goal is not to review the geography, culture and history of indigenous groups in any great detail, but to examine their survival strategies and insurgent geographies based on cultural symbols, family bonds and land-based responses to the excesses of frontier making. This is directly inspired by the 'cultural materialism' of Raymond Williams, which entails the mobilisation of culture against modern society with a creative reconciliation between multiple sensitivities and an anti-capitalist critique (Löwy and Sayre 2018). The main intention is to make use of the conceptualisation of frontier making to understand the socio-spatial trajectory and, in addition, propose a typology of indigenous spaces. This article aims to foster a dialogue between anthropologists and geographers through an examination of the emblematic example of how frontier making was experienced by the Kaiowa, one of the Guarani peoples of South America (for background information, refer among others to Brand 1997; Chamorro 1998; Clastres 1974; Melià 2004; Pereira 2016). The Guarani population is estimated to comprise around 280,000 individuals, 85,000 of whom live in Brazil, 80,000 in Bolivia, 61,000 in Paraguay and 54,000 in Argentina (EMGC 2016). They are normally described as belonging to four clusters: Kaiowa (the denomination used in Brazil, also known as Paĩ-Tavyterã in Paraguay), Nhandeva (also described as Ava-Guarani), Mbya (in the south of Brazil, Paraguay and Argentina) and Chiriguano (in the Andean foothills in Bolivia). The majority of the Kaiowa-Guarani, around 45,000 people, live in the Brazilian state of Mato Grosso do Sul, around and to the south of the city of Dourados, often sharing reserves and lands with other ethnic groups, such as the Nhandeva-Guarani and Terena. Figure 1 shows the population distribution of the Guarani peoples of South America.

Figure 1 – Present-day distribution of the Guarani population in South America



(source: EMGC 2016)

Disruption and aggression towards Kaiowa communities is a long-established phenomenon, originally related to the process of colonisation and aggravated during moments of territorial dispute, such as during the Paraguay War (1864-1870), the bloodiest conflict in the continent's history, which took place right in the middle of Guarani territories. From the end of the nineteenth century, after the war, explorers and companies were attracted to the region due to its abundant natural resources, good agricultural land and strategic location in terms of river navigation, relative proximity to the main economic centres, and the geopolitical need to occupy international border areas (Ioris 2012). Economic activity has intensified in recent decades due to the expansion of export-oriented agribusiness and increasing land speculation. One crucial driving-force behind the various periods of colonisation and economic production has been the distressing levels of violence against individuals and families, particularly in areas of acute agrarian conflict between farmers and indigenous collectives. Space-based violence is a major, ongoing reality, not a singular event that happened in the past – in other words, the oppression of indigeneity continues to pervade the geographical present (Radcliffe 2017). Indigenous groups are systematically harassed by the police and by private militias hired by landowners (known as *pistoleiros*, i.e. 'hired guns'). Professional militias are typically registered as private security firms, managed by former military police officers and tacitly accepted by a pliant judiciary. Even in the regularised indigenous reserves, the population feel discriminated against and marginalised by the rest of society, leading to growing frustration and social unrest. Kaiowa-Guarani communities have presented alarming rates of suicide (555 between 2001 and 2011, according CIMI) and premature deaths, including children hit by cars, are much higher among indigenous families than among the general population.

Out of the total number of 1,119 murders of indigenous individuals in Brazil between 2003 and 2017, 461 cases (41.19%) occurred in Mato Grosso do Sul (CIMI 2018a), particularly affecting the Kaiowa and involving atrocities that amount to genocide (Zelic 2018).¹ Such macabre statistics are related to overcrowded reserves, chronic malnutrition, usurpation of ancestral lands, and disregard or attacks from agribusiness farmers, mainstream politicians, authorities and the business community. During our research in Mato Grosso do Sul, discrimination against Kaiowa children and adults was disturbingly common in shops and streets, in addition to mistreatment by civil servants. Court cases often take decades to be decided, even when the rights of the indigenous groups are clearly defined and easy to ascertain. More than economic, political and environmental refugees, the Kaiowa are expatriates in their own territory, as they have been systematically marginalised from the benefits of development and forced to live in newly created, and constantly reinforced, socio-spatial edges. Despite using social media to promote their cause, the Kaiowa are much less visible, for example, than national and international NGOs because of internet algorithmic filtering, which deliberately excludes some types of political discourse, segregates social groups and suppresses divergent perspectives (Ochigame and Holston 2016). Racism is concrete, structural and widespread (despite being officially a serious crime under national legislation) and, in this regard, the Kaiowa-Guarani share many of the troubles affecting other indigenous populations, peasants and the urban poor throughout the country.

The shocking poverty and terrible suffering of the Kaiowa-Guarani represents the unpleasant side of the agribusiness-based regional economy and corrodes the supposed legitimacy of development and the existence of the democratic rule of law in the region. Agribusiness causes a range of problems for the world at large, but on the frontier it is even more belligerent and irrational, compensating for and filling lacunas in state and civil society with the rhetoric of ‘development’ when, in reality, the region has been launched into a state of low-intensity agrarian warfare between farmers and indigenous groups. Nonetheless, the spatial condition of the Kaiowa is a true riddle for regional economic planning: on the one hand, their land, resources and labour force are central to the very success of the frontier; on the other, the existence of indigenous groups means that the worst side of frontier making is still active and constantly reinforced by the unresolved incongruity between cultures and cosmologies. The result is that indigenous groups like the Kaiowa are the embodiment of the spatial frontier and also its most explicit subversion. The Kaiowa-Guarani articulate a resistance against political hegemony, an ability to operate in the interstices of the state apparatus, and a capacity to attract support from a heterogeneous array of organisations. This can be described as ‘latent geographical agency.’ Before examining the specific situation of the frontiers lived and transgressed by the Kaiowa, it is important to reflect upon the multifaceted condition of indigenous peoples and the related challenges involved in conducting research from a critical and ethical perspective.

Making sense of the indigeneity of frontier making

In this section we ponder how to properly consider the deeply politicised condition of indigenous groups at the frontiers of economic development. Our reflection is closely associated with the emerging “critical geographies of indigeneity” (Radcliffe 2017), meaning, in particular, an appreciation of landscape as a framework for addressing basic human rights – or, in other words, the role of a ‘right to the landscape’ in the movement towards justice, dignity and wellbeing, integrating the spiritual and cultural values of land and

¹ Today Brazil contains 305 indigenous peoples, speaking 274 different languages (there were an estimated 5,000 groups in 1500, the year of the Portuguese conquest), and occupy about 13% of the national territory (although 97% of this area is in the Amazon). Mato Grosso do Sul has the second largest indigenous population, but the worst allocation of land in the country: the population density is 10.18 inhabitants/km², which is 40% more dense than among the non-indigenous population. In the case of the Kaiowa, this reaches 34 inhabitants/km² according to data presented by Zelic (2018).

local communities (Egoz et al. 2011). The landscape becomes part of what people are through everyday life experiences, and indigenous people create meaningful relationships and connections with land as their main source of survival (Ingold 1993). To fully grasp this fact, it is necessary to acknowledge the long positivistic tradition and colonial foundations of Western knowledge, going back to the nineteenth century and even earlier, typically focused on areas of high biodiversity and abundant natural resources (MacDonald 2017). As pointed out by Coombes et al. (2014: 845), working with indigenous peoples has stretched “presumptions about appropriate modes of engagement and representation... that challenge reaches the heart of the enterprise to question the very purpose of research.” Among other methodological and epistemological consequences, this means conducting research with and for the benefit of indigenous communities, allowing the expression of their own voices and their involvement in the interpretation of findings, rather than the conventional research on these communities conducted for the benefit of non-indigenous scholars and government agencies. In addition, and similar to feminist, anti-racist and queer movements, indigenous geography opens up the prospect of decolonising and reimagining wider horizons and functions for/of geography (Panelli 2008). As MacDonald (2017) splendidly observes, the research process is even more important than the immediate outcomes.

Many social scientists have demonstrated a growing commitment to embrace reflexive methods and deal with the politics of representation and the relational basis of critical research (Smithers Graeme and Mandawe 2017). This represents a challenging but rewarding attempt to remove prejudices and learn together through, for instance, participatory research within fluid situations fraught with injustices and ongoing territorial disputes. Several key aspects deserve particular attention, starting with ethical questions. Despite the debate and the concerns about research ethics, there remain important barriers that continue to limit understanding of indigenous landscapes affected by the pressures of economic development. Among the thousands of Kaiowa in Mato Grosso do Sul, the majority live in the congested reserves and around a quarter live in urban areas or in encampments along the roads. Theirs is a very unsettled and painful situation that continues to evolve through survival strategies amid threats of assimilation, annexation and extinction. Socio-cultural information about the Kaiowa is, therefore, deeply contingent upon specific space making circumstances, exacerbated by recurrent conflicts, the need to maintain family networks and external alliances, and the challenge to make sense of – and survive – in-between-world situations. The Kaiowa-Guarani have skilfully mobilised their memories, imaginaries and cultural expressions towards acts of resistance and spatial practice, and their involvement in any research project is seen as part of the struggle and a search for allies. As a result, researchers find themselves ‘in between worlds’ and are irrevocably transformed by the experience (Larsen and Johnson 2012). Researchers deal with accumulated tensions and passionate discourses, which often bring them to the centre of the struggle. It is a movement away from representing the Other and towards collective problem-solving, activism and advocacy (Coombes et al. 2014). The researcher occupies a specific location within the broad socio-political context of their research and must responsibly handle how this positionality and associated privileges shape the construction of knowledge (Smithers Graeme and Mandawe 2017).

Ethical concerns must be sensitive and creatively engage with the past trajectory, the current political situation and the aspirations of societies amid land-based disputes with uncertain prospects. This is clearly important in terms of the confidentiality of social and personal information, and the constant risk of revealing details about leaders and their strategies, which could undermine action or influence public perception. It could likewise worsen internal divisions among indigenous families or groups, as well as between them and their traditional allies (churches, unions, NGOs, etc.). Riddell et al. (2017) list several crucial requirements for conducting ethical research, such as the informed and autonomous engagement of indigenous participants, recognising their ownership, control, assessment and possession of knowledge, respecting their intangible cultural property (i.e. language and traditions), reciprocity and inter-relational accountability. It means that the study of indigenous life cannot be contained within the narrow boundaries of non-indigenous

science and reasoning, while simultaneously the basic terminology (i.e. indigeneity, aboriginality, colonial dominance, etc.) is highly contested. In the case of the Kaiowa, it is also necessary to consider their acute political situation and how they mobilise culture and religion to recover lost landscapes. What is needed is more than the usual participatory action research, but rather an engaged research approach that recognises local systems of knowledge and practice as fully authoritative and the actors involved as sufficiently competent to design, conduct and evaluate the research in which they are involved. This eschews what is happening with supposedly inclusive techniques, such as participatory mapping, now being incorporated into policymaking by government agencies and multilateral organisations. The indigenous participants must be more than informants or collaborators: they should be treated as co-researchers, co-ethnologists, co-creators.

Researchers must establish trusted connections with real people, without romanticising events or political leaders – that is, avoid perpetrating the ‘hyperreal Indian’ projected by many NGOs, a fantasy that reinforces the simulacrum of indigenous people as supposedly pure, ecological, stoic, unadulterated (Ramos 1994). Anthropological research has specifically demonstrated that the notion of the Kaiowa person emerges from relations across wider categories of their society: it is an intense dialectic between the self and their collective condition (hence their discrimination against single adult males). Among other issues, it is problematic to think of clear epistemological distinctions between approaches loosely identified as ‘Western’ and ‘indigenous,’ since in actuality both are polyvalent and polyvocal realms of discourse, just as indigenous people live within the framework of Western cultures (Shaw et al. 2006). Indigenous cultures and identities are fluid, their narratives and engagement with place and space are mutable, not linear; all this invites and prompts experimentation, innovation, affection and partnerships (Coombes et al. 2011; Murton 2012; Ramos 2018). Related to this fact, the Kaiowa find it unacceptable for researchers not to provide clear feedback or some concrete benefit back to them in relation to their struggle for recognition, rights and land. As one interviewed anthropologist pointed out, the research effort needs to recognise that the political demands of indigenous peoples are complex, multiple and constantly changing because of emerging problems. The responsibility of the researcher is to conduct objective research, to the best of their capacity, while at the same time responding to the expectation of a supportive and worthwhile interaction. The geographical trajectory of the Kaiowa encapsulates disputes and reactions that are common to other indigenous groups and even peasant communities throughout South America, but they have also experienced unique challenges related to their location, specific geographical settings and particular involvement in the wider process of modernisation through regional development.

While they expect support from researchers, the Kaiowa are not desperately begging for help from non-indigenous actors. On the contrary, and in common with other contexts where extreme oppression has led to mobilisation, they have a lot to contribute in terms of resistance and the ability to react. Despite sustained violence over almost two centuries, with different stages of land-grabbing and cultural obliteration, the Kaiowa have resisted and their population is on the rise. They represent an uncomfortable presence in the process of regional development based on agribusiness intensification and dominated by large private properties. The fact that indigenous groups even exist in the region, against all the odds, suggests that the socio-cultural landscape of Mato Grosso do Sul is much more complex than normally considered in reductionist analyses that reduce interactions to forces for or against development. In fact, the survival of the Kaiowa (and the other first nation groups in South America) reveals their remarkable strength and the astute strategies they have adopted (obviously, in no way detracting from their pain or minimising the significance of the long list of assassinations and attacks against them). There are elements in their culture and value system that are not easy to capture and bring to the realm of academic assessment, but it is not too difficult to understand that their cosmovision, their religious beliefs and practices, and their linguistic and artistic skills come together to form a coherent wisdom. As argued by the late Kaiowa leader Ambrósio Vilharba, retaking land is not the end in itself, but it “will reinforce our way of being Kaiowa” (in Markus 2013: 9).

This sensitivity results from the accumulation of long-term collective engagement with the landscape, reaction or interaction with non-indigenous groups and the state, and the ability to incorporate and metabolise elements of the new world order. The tortuous, fragmented process of resistance and reaction is, essentially, a perennial attempt to project indigeneity into a space that is itself highly dynamic. The Kaiowa have had to struggle and wait, but – notwithstanding all the troubles and recurrent pain – they have kept alive the possibility (often translated into reality) of restoring spatial indigenisation. The irony is that this is ultimately an effort to re-indigenise a territory that used to be theirs.

A transformative indigenous research effort needs, therefore, to recognise the limitations of academic work (particularly in the present neoliberal context where universities are increasingly managed as businesses and academics are seen as money-making labourers) and dislocate the centre of knowledge production: knowledge is creatively produced on the ground, through an open, horizontal engagement between different voices in which the academic researcher is basically a facilitator, a translator of what has been jointly learned. Indigenous co-researchers should be able to have control over collecting information about themselves, to access and analyse information according to their own needs and goals, and to determine what should be communicated and how. At the same time, research practice must be planned to adequately comprehend, respond to and engage with social groups facing constant threats. Considering the context of violence and the willingness of the Kaiowa to pay a high human price in order to get their lands back, the research effort should be extremely careful to neither undermine ongoing mobilisations nor put people and leaders at risk (our visits to road encampments and *retomada* areas were certainly moments of high tension and apprehension for both the indigenous families and other research colleagues). This is not a trivial logistical question, given the recent history of the Kaiowa, marked by record numbers of murders and suicides. Likewise, there is a clear need to theorise the world from the perspective of the indigenous groups, rethinking universal concepts and searching for alternative socio-economic and political paths. Indigenous settings and cultures continue to require appropriate conceptual, methodological and interpretative approaches. Their contemporary condition is not only shaped by constant attacks and the pain of losing their land, but also by the resolve to resist and react, which will be analysed below.

A frontier-making avalanche...

Many readers are likely to have heard about the Guarani of South America in contexts including, for example, narratives about their striking architecture and a complex society managed by Jesuit priests located in the centre of the continent during the colonial period. Some may also be informed about the ongoing violence against the Kaiowa of the state of Mato Grosso do Sul (considered the Gaza Strip of Brazil). But few will be fully aware of the scale of land rights violations, systematic killing of adults and children, ferocious discrimination against people living in precarious roadside settlements or on the periphery of the cities, widespread suicides of young people and teenagers, and disturbing levels of insalubrity and food insecurity. The Kaiowa have been exposed to the worst side of frontier making, affected by land-grabbing, displaced from their ancestral lands and confined to minuscule reserves, and have experienced widespread socio-ecological exploitation (ranging from underpaid work to deforestation of their reserves for timber extraction). Kaiowa-Guarani life based on common land, managed by large families and regular movement around the region, has been (partly) substituted by the commodification of labour, land and nature, and, increasingly, by urbanisation, drug trafficking and cross-border contraband.

There is actually no other way to describe the situation of the Kaiowa under the advance of soybean and sugarcane production (among other crops) than genocide, following Short's (2016) definition, which includes cultural destruction, social death and ecological devastation as equally important genocidal practices.²

It is crucial to observe that the advance of the economic frontier over indigenous land in Brazil was not only violent and disruptive, but primarily illegal. First and foremost, the Kaiowa have been the lawful owners of their land since colonial times and in accordance with the rules imposed on them. In 1680, a Royal Decree issued by the King of Portugal instituted the *indigenato*, which guaranteed that the concession of land to private individuals should not interfere with the 'original rights' of the indigenous groups to their land, as well as exempting the latter from any duty or tribute. This old legal principle that emanated from Portugal was gradually incorporated into Brazilian legislation, although in practice it was very easy to bypass the law and obtain land from the state or by employing widespread fraud (Vietta 2013). The legal system clearly guaranteed the rights of indigenous peoples and the protection of their cultural and material needs. Yet, after 1880, that did not prevent the concession of millions of hectares of Kaiowa-Guarani land to the Matte Larangeira company, a corporation that profited from the native mate herb (*erva-mate*) through the exploitation and even the scandalous, but tolerated, enslavement of indigenous populations. A few decades later, in the context of the paternalistic ideals promoted by Marshal Rondon, eight reserves were created between 1915 and 1928 (initially with 3,600 hectares each, later reduced following land grabbing by the surrounding farmers) by the newly established, and highly inefficient and corrupt, Indian Protection Service (SPI). This was a process of tacit 'containment' in small reserves, where indigenous peoples would be expected to be assimilated into the rest of national society (Brand 1997), similar to the policies implemented in the United States at the end of the nineteenth century. Because of the limited space and the agglomeration of different groups and families in very small areas, the reserves have been hotspots for tensions and growing frustration (CIMI 2001). The concentration of people facilitated the utilisation of badly paid indigenous labour, which guaranteed the economic insertion of the Kaiowa in the economy of the frontier and to some extent preserved their (highly subordinate) participation in regional society.

After 1920, large farms began to be opened by migrants attracted to the region from the south of Brazil and incentivised by the national government. A sequence of policies and legislation promoted the privatisation of ecosystems, deforestation and monoculture-based agribusiness. The region where most Kaiowa live in Mato Grosso do Sul is famous for its excellent red soils – the Kaiowa-Guarani affirm that the soil is red because it contains their own blood (see Morais 2017) – which were appropriated by the new farmers. Several migratory waves of people from Rio Grande do Sul (known as *gaúchos*) moved to Mato Grosso in the first decades of the twentieth century and then again in the 1950s and 1960s, following the cancellation of the territorial concession granted to Matte Larangeira and increasing competition with *erva-mate* produced in Argentina (leading to the eventual closure of the Larangeira corporation). The Kaiowa were then coerced to leave their traditional lands and witnessed the destruction of the woodlands that give them their name ('people of the forest').³ New legislation was introduced by the Brazilian military dictatorship in 1973 – the Indian Statute – but this basically maintained the assimilationist approach and failed to resolve the growing gap between the reserves that actually existed and the many other sites claimed by the Kaiowa as their legitimate land. A more recent phase began in the 1990s with the intensification of an agribusiness-based economy and the exponential

2 Much of the debate on the impacts and legacies of frontiers revolved around whether or not many indigenous groups were subjected to genocide and genocidal practices (Rogers and Bain 2016). However, van Krieken (2004) insists that the source of destruction may lie less in an "unambiguous 'intent to destroy' a human group, than in the presumption that there was not much *to* destroy," which means that the colonial settler ethos, although it may not spell out a clear plan for destruction, certainly provides ideational sponsorship for genocidal actions (quoted in Woolford and Thomas 2017: 71). Rather than focusing on legalistic notions of 'intent' by settlers and governments, it is essential to acknowledge the destructive potential of the systematic practices of cultural devaluation and social marginalisation.

3 Forcing people off their own land is called *esparramo* or *debandada* in Portuguese and *sarambipa* in Guarani (Brand 1998).

growth of plantation farms. Local changes directly reflected national trends and the power of the agribusiness sector, which included a broad coalition between landowners, conservative politicians, banks, industry and transnational corporations (Ioris 2018b). Agribusiness has been naturalised as above party disputes, a sector that is supposedly intrinsically beneficial to the country, meaning that any obstacle, including the rights of indigenous groups, must be removed, whatever the cost. In this sense, it has largely hijacked the political debate and forced the approval of highly questionable policies and legislation, as in the case of the new forest code, changes in labour regulation and the attraction of international investment funds (Ioris 2017).⁴

Brazilian agribusiness in agricultural frontier areas like Mato Grosso do Sul has given rise to even higher levels of speculation, dispossession of common land and wide-ranging aggression against those with different interests (Figure 2). Frontier making creates favourable conditions for the arrival of unscrupulous individuals in search of rapid enrichment and for the collective acceptance of morally questionable economic and political practices. The recipe for serious socio-spatial conflicts is then complete: on one side, adventurers and speculators reinvented as ‘agri-food producers’ (the euphemism often used by agribusiness farmers to describe themselves) and, on the other, marginalised native peoples who have been living in the region for many generations in a context of contrasting relations with land and society. The failure to meet indigenous peoples’ legitimate demands and the invalidation of even their most basic human rights are clear signs of the institutional racism that pervades the Brazilian state and of how its ideology of modernisation has been constructed at the expense of, and against, subaltern sectors of society. Instead of legal rights over their land, the Kaiowa-Guarani have been offered only backdoor access to regional space, bearing in mind that since the early twentieth century farms have been opened in areas illegally expropriated by farmers and the government. The recurrent violence against the legitimate proprietors of the land – the indigenous groups – is in direct breach of the fundamental principles of the Brazilian constitution. However, enforcement of the legislation by local judges, civil servants and politicians typically rules in favour of the most powerful economic sectors. This corresponds to the wider problem of non-consensual expropriation of indigenous lands around the world (Doyle 2015).

Figure 2 – Agribusiness production in Mato Grosso do Sul in areas grabbed from the Kaiowa-Guarani



(all pictures by the author)

⁴ The ‘bonfire’ and destruction of the National Museum of Rio de Janeiro on 2 September 2018 offered a sinister metaphor for the low quality of Brazilian democracy and the neglect of public culture and social justice. Likewise, the pervasive violence against indigenous groups was graphically reproduced on 21 April 2000, on the very site where the Portuguese arrived in the country, during the commemoration of five centuries of Brazilian history.

The dominant ideology of a ‘timeless Indian’ (i.e. idealised, according to the colonial mindset criticised above, as a savage who, to be genuine, has to be confined to the past, a depiction permeating school textbooks and the public imaginary) gives support to the idea of an ‘spaceless Indian’ (no rights over land, no need for land, no space) because they have lost their right to land insofar as they are no longer seen as ‘real Indians.’ This is an example of the ‘tyranny of authenticity’ that threatens to exclude individuals and groups who do not fit the narrow criteria set for membership (Lennox and Short 2016). The Kaiowa have been subjected to a persistent, everyday experience of social, ecological, cultural and physical violence, and seeing their rights recognised has been a difficult struggle. During the first visit of Pope John Paul II to Brazil, the Guarani leader Marçal de Souza Tupã-Y denounced the long-standing practice of expropriating land and massacring indigenous peoples, demonstrated by Figure 3. After several unsuccessful attempts by farmers to bribe and quieten Marçal, he was murdered on 25 November 1983, three years after meeting the pope. As has so often been the case, nobody was held responsible or punished for Marçal’s murder. In fact, public agencies are often driven to provide some kind of response only after a large-scale tragedy is reported by the international media. The bad news has kept pouring in: “High murder rates blight Brazil’s indigenous communities” (BBC 28 February 2014); “Brazil indigenous leader’s killing raises tension” (BBC 3 September 2015); “Dispute turns deadly as indigenous Brazilians try to ‘retake’ ancestral land” (The Guardian 14 July 2016); “The Guarani Kaiowà people could soon be wiped out” (Lifegate 20 April 2017); “Au Brésil, une manifestation d’Indiens tourne à l’affrontement avec la police” (Le Monde 26 April 2017). The New York Times reported on 29 May 2017 that in “August 2015, some of the Guarani-Kaiowa decided to reoccupy part of their territory. They camped on land owned by ranchers. The landholders had other plans: according to reports, they hired armed militias to try to drive the tribe out. Semião Vilhalva, a tribal leader, was shot and killed. There were accounts of torture, rape and child abduction.”

Figure 3 – Graves of indigenous people killed by farmers in Caarapó



Another famous victim was Ambrósio Vilhalba, a leader of the Guyra Roka ('Place of the Bird') community, who had spent decades campaigning against the planting of sugar cane on his tribal lands. He became internationally famous after taking part, as the main character, in the award-winning film *Birdwatchers* (sadly and prophetically, the character was based on himself and, as in the movie, he also ended up being murdered). He travelled the world to speak about the Brazilian government's failure to protect native Guarani land. After months of death threats, in 2013 Ambrósio was found dead in his hut from multiple stab wounds. According to Guarani religious beliefs, death by murder or suicide is not the end of the story but brings additional troubles to all those involved. The Kaiowa feel particularly demoralised when, as happens quite often, a relative is murdered and the body simply disappears (Morais 2017). Violent deaths without a body to bury are considered to be very dangerous, given that a person has two souls and the bad one [*angue*] will linger on like a phantom, threatening the living. Caught up in a hyper-violent situation that affects both the dead and the living – further aggravated by the election in October 2018 of a right-wing president, which immediately triggered new waves of attacks on indigenous groups and many other racial minorities (as reported by Fuhrmann 2018) – the Kaiowa-Guarani have responded according to their means and have formed some limited but important alliances with national and international organisations, universities and churches. They have, therefore, disrupted the pace and the configuration of frontier making, leading to a mosaic of spaces, as discussed next.

... but an insurgent indigenous geography

The Kaiowa-Guarani, along with countless other indigenous peoples in South America, had their territories invaded and socio-cultural practices disrupted as part of the wider process of frontier making. The socio-spatial frontier enveloped them like an avalanche and triggered a long process of aggression, intolerance and forced assimilation. The 'Kaiowa problem' – more accurately, the problem brought to the Kaiowa and their forced conversion into a problem (Ribeiro 2015) – has been an acute process of commodification (in the nineteenth century of forests and labour, and in the twentieth century of land, labour and water), facilitated by the production of racialised spaces that marginalised indigenous populations in their own territory. While the Kaiowa were historically at the margins of official national history, frontier making left them even more ostracised and oppressed than during the colonial years. Out of the four million hectares originally occupied by the Kaiowa in the region, indigenous families were left with around 40,000 hectares of regularised land, spread across various reserves and resettlements (Benites 2014; Brand 1998; Cavalcante 2014). Some reserves are extremely small (only a few hectares per family, or even less, as in the case of the Dourados reserve, where 15,000 people live on just 3,000 hectares) and land tenure is not clear because of objections from farmers and other business sectors (even after the lengthy process of regularisation). Despite all this, the Kaiowa have demonstrated an unfailing ability to adapt to the new world order and to retain crucial elements of their identity, culture and knowledge, certainly of help to them in their struggle for land and recognition. Combining multiple strategies, which have included settling in remote corners of the large farms, seeking employment outside the reserves, making their voices heard in public and forming strong internal and external networks, the Kaiowa have managed to engage with the advancing frontier and, in recent years, secured some modest but nonetheless tangible political and territorial successes.

Through the mobilisation of their customs and religious values, the Kaiowa-Guarani have vividly replicated, in accordance with their own circumstances and way of life – what they call *ava reko* – shared elements of the social and agrarian transformation that has been taking place around the world over the last few centuries of capitalist history.⁵ It is a dynamic geography of general similarities or commonalities, but also with distinctive cultural and politico-ecological characteristics. Kaiowa existence is particularly differentiated by a scalar and deeply religious conception of space, extending outward from the household to the network of settlements and indigenous reserves. Following the Kaiowa cosmovision, people do not own or trade the land, but live there, sharing it with other creatures and constantly having to negotiate their conditions. These creatures hold or belong to the spirits (*jaras*), whose categorisation depends on the relations established between humans and non-humans (Pereira 2010). These religious, cultural and social experiences are constantly mobilised in favour of their daily survival and, in cases of dispossession, the prospect of returning to the lost areas. The skilled resistance of indigenous groups demonstrates both the inadequacies of the modernising project and the resilience of non-Western societies when protecting livelihoods and cultural practices on their land. In this way, Kaiowa groups have become one of the most active geographical protagonists in the region, constantly trying to adapt and respond to pressures, as well as protect and restore elements of their previous life conditions disrupted by frontier making. This is materialised in the diversity of spaces through which the Kaiowa subvert and complicate the course of frontier making, as described below.

Indigenous reserves – despite serious management problems, reserves constitute the most stable spaces available to the Kaiowa, largely accepted by wider society and reasonably well protected by the state. The reserves were established in two main phases. The first involved the creation of the eight SPI reserves, totalling around 18,000 hectares, in the first decades of the 20th century. The process imposed the ‘peasant model’ on the Kaiowa, fixing them in certain state-owned areas where the land can be cultivated by the community (Oliveira 1983). This was certainly not a stress-free process, given that not all the reserves were established in the areas where indigenous families originally lived, but were merely determined by bureaucratic convenience (most of these first reserves even had their area reduced due to pressure from neighbouring farmers, assisted by corrupt civil servants). Against the will and the traditions of the indigenous people, the land in the reserves was divided into private lots, a practice in direct conflict with their tradition of common land (*tekohakuaah*) (see Figure 4). One very serious issue was the accommodation of different extended families or ethnic groups (Kaiowa-Guarani, Nhandeva-Guarani and Terena) in the same reserve, which only generates new tensions and nurtures disputes. Levels of violence and crime in the reserves are directly or indirectly related to growing frustration with persistent abandonment, racism and discrimination. Stories about youth violence in the reserves are favourites in the local and national media, particularly those involving sexual assaults, gang killings and drug trafficking.

⁵ The eighteenth-century English experience is a case in point, described by Thompson (1993), where enclosure took the commons away and made people strangers in their own land. At the same time, the appropriation of common land and the reduction of food security in England triggered riots, which were the rational response of poor people with some remaining power to help themselves.

Figure 4 – Indigenous family household in the Pirajuí Reserve



The second phase of reserve formation was launched by the approval of a new Brazilian constitution in 1988, which officially recognised indigenous lands (Article 231) as areas traditionally and permanently occupied by indigenous peoples and indispensable to their productive activities, to the preservation of environmental resources needed for their well-being, and to their physical and cultural reproduction in terms of uses, customs and traditions. The same constitutional article determines the nullification of any act that led to the occupation or appropriation of indigenous lands, stating that these are inalienable and the rights over them imprescriptible. Approval of the new constitution coincided with the adoption of the Indigenous and Tribal Peoples Convention (ILO-Convention 169) in 1989 and the growing international importance of the principle of ‘free prior and informed consent’ (FPIC). The problem for the Kaiowa-Guarani has been the lack of enforcement of these formal rights and their refusal to consent to the confiscation of their lands. A protracted struggle invariably unfolds through the various layers of the judiciary, with endless appeals and explicit political pressure exerted on local judges (normally themselves large landowners and members of wealthy regional families). Among the 51 existing reserves, only 24 are reasonably stable, although this does not mean they are free from tensions (Zelic 2018). Policy failures and still unmet demands are rationalised by politicians and authorities on the grounds as an outcome of the need to follow due process, but really they benefit the agribusiness sector and reflect the social need to accept the costs of development (as so often, the victims are blamed for their own misfortune).

Roadside encampments – Because of organisational, behavioural and demographic problems in the official reserves, a significant proportion of the Kaiowa-Guarani people – around a quarter of the total population – have opted to move out and live in encampments next to the main highways and secondary roads. These encampments may be relatively permanent sites of residence (there are cases of families who have stayed in such dreadful conditions for many decades) or temporary campsites for families hoping to move back to reclaimed areas (*retomadas*). In both cases, though, people living in encampments maintain close connections with relatives in other sites and in the reserves, always with the expectation of better conditions and the hope to return to the areas where they or their families used to live. The Kaiowa have resolutely resisted the antagonistic rationality that led to this fragmentation and privatisation of space, closely promoted and

coordinated by the Brazilian state (Barbosa and Mura 2011). The space of the encampment, regardless of the unpleasant and insalubrious circumstances, is also a space of anticipation and potentiality. This ambivalent situation, among other aspects, is presented in the documentary film *Martírio* by Vincent Carelli, released in 2017, which shows how precarious and risky the conditions are for the Kaiowa, but also reveals their firm commitment to survive and honour their ancestors. A constant threat is posed by farmers and paramilitaries (as mentioned earlier, militias hired by farmers and rural companies, normally employing retired or active policemen). There are also the serious risks of road traffic accidents and wildfires spreading from sugarcane fields ahead of the harvest. Despite recurrent cases of violence, the police express little interest in finding those responsible for the crimes, and the judicial system is quite unprepared to punish. These forms of treatment only fuel resentment and, paradoxically, lead more individuals to join roadside encampments ahead of future *retomadas*.

Areas of *Retomada* – literally, *retomada* means ‘taking back,’ but more significantly it implies reaction and spatial re-occupation (social movements in Brazil reject the politically derogatory term ‘invasion’). The *retomada* is the return to the original places from which the older Kaiowa generations were expelled in the 1950s or 1960s (many elders are still alive and able to testify to their connection with the sites in question). Through the *retomadas*, “indigenous families reoccupy areas where they can carry out their community life, establishing their dwellings, planting smallholdings, and practicing their ritual and religious life” (Oliveira 2018: 12). The *retomada* is a political expedient of peasant-like resistance that relies on the construction of material, organisational and ideological means for its utilisation (Ferreira 2007). In Guarani, *retomada* is described as *jeike jey* (*jeike* comprises the verb ‘enter’ modulated by a reflexive prefix, here translating as ‘we enter’ or ‘let’s enter’ [we inclusive], while *jey* means ‘again’; thus *jeike jey* literally signifies ‘we enter again,’ which may be translated as return or *retomada*). After a frustrating wait and exasperation over unfulfilled promises, indigenous political and religious leaders realised that the official approach to creating reserves was misleading and would never address their economic and cultural needs. These leaders (invariably, obvious targets for new assassinations) organised a group to take action and evict the actual invaders – the current farmers – and attempt to self-demarcate their legitimate lands. *Retomadas* are moments of rupture, when dominant politics is subverted and indigeneity can emerge through “an insurgence of indigenous forces and practices with the capacity to significantly disrupt prevalent political formations” that render “illegitimate the exclusion of indigenous practices from nation-state institutions” (de la Cadena 2010: 336).

The fundamental difference between the original SPI reserves and *retomada* areas is that the operationalisation and risks involved in these initiatives are assumed exclusively by the indigenous groups, outside the tutelage of the state (see Figures 5, 6 and 7). “Given the nonexistence of other efficient alternatives, the retakings [*retomadas*] have turned into the main strategy of indigenous people for recognition of their territorial rights, at present, having been incorporated as a flag of struggle by the indigenous movement... They constitute a post-tutelary form of the exercise of the policy by the Indians, implying a different mode of conceiving their relationship with the State” (Oliveira 2018: 13). CIMI has registered at least 88 areas demanded by the Kaiowa-Guarani, but the list is certainly much longer (Morais 2017) and the struggle now is to recover areas much larger than the old reserves (*retomadas* from farmers with more than 10,000 hectares), which of course infuriates the agribusiness community and allied judges and politicians. It is crucial to note that this autonomous movement is more than just a form of indigenous agrarian reform: it expands into an intense site of spatiogenesis where traditions, new influences and articulation with other sites and other groups converge to consolidate the newly retaken land. Ethnographic work has revealed that the *retomadas* “imply deep movements of cultural revitalisation and social and political reconfiguration for these peoples” (Oliveira 2018: 14).

Figure 5 – *Retomada* in the vicinity of the Dourados Reserve



Figure 6 – Private security guards (paramilitaries) hired by farmers to contain a *retomada*



Figure 7 – Indigenous family in a *retomada* on a soybean farm in Caarapó



Globalised Kaiowa space – another important space competently produced by the Kaiowa as part of their political agenda of survival and territorial affirmation is an international arena of protest, involving a network that includes academics, artists and multilateral organisations. In the last few years, various Kaiowa leaders have been interviewed by global media channels, invited to speak in international forums and taken part in publications, movies and documentaries. The insertion of the Kaiowa in globalised space is evidently related to broader indigenous movements around the world (see Lennox and Short 2016). All of this has attracted growing attention from the international community, enabling the movement to be compared with prominent campaigns articulated by other ethnic and cultural minorities. The activism of the Kaiowa in national and international circles shows that their leaders have realised the importance of employing an effective, articulate discourse and learning to engage with non-indigenous players. Public outrage over the Kaiowa genocide has soared across the world and triggered multiple reactions. On 24 November 2016, the European Parliament approved a resolution strongly condemning “the violence perpetrated against the indigenous communities of Brazil,” deploring “the poverty and human rights situation of the Guarani-Kaiowa population in Mato Grosso do Sul,” reminding “the Brazilian authorities of their obligation to observe international human rights standards with respect to indigenous peoples” and, among other things, expressing “concern about the proposed constitutional amendment 215/2000 (PEC 215), to which Brazilian indigenous peoples are fiercely opposed, given that, if approved, it will threaten indigenous land rights by making it possible for anti-Indian interests related to the agrobusiness, timber, mining and energy industries to block the new indigenous territories from being recognised.”⁶

⁶ Those worries attracted another resolution by the European Parliament, approved on 3 July 2018, against the violation of the rights of indigenous peoples, including the impacts of land grabbing.

PEC 215 is essentially a canny manoeuvre by the Brazilian parliament to stop the creation of new indigenous reserves (which would become an exclusive prerogative of the agribusiness-dominated congress).⁷ This would have terrible consequences for most Kaiowa who have been forced from their ancestral lands.

Spectral space – the Kaiowa-Guarani cultural background contrasts with the rigid, artificial limits of private property institutions, which constrain social mobility and interfere with traditional agricultural practices based on the rotation of cultivation sites. According to Kaiowa-Guarani traditions, the space required for a family needs to be constantly regenerated and reconfigured by a movement through the landscape that is essential for the fulfilment of their way of life. The consequences of land commodification and the advance of the agribusiness frontier were thus extremely negative for these indigenous groups. Even so, in a way that was unanticipated by governments and farmers, the Kaiowa have resisted and recaptured some tracts of land, and their population is on the rise. They have represented an uncomfortable presence in the regional economy and a nuisance from the perspective of local elites – a threat constantly present in the Guarani names for places and things and the alarming presence of ‘these strange people’ in roadside encampments who, from time to time, come together to demand another area they associate with their heritage. Their leaders have repeatedly emphasised that their long-term, non-negotiable goal is to reinstate most of the original Kaiowa territory, instead of the small islands granted to them so far by the state (Barbosa and Mura 2011). The political crux of the matter is that the land demanded by the Kaiowa is legitimately theirs not only because indigenous populations used to live in these areas (which is the main legal stipulation for the return of ancestral land) but, more importantly, because the possibility of a meaningful future for them fundamentally depends on their physical and metaphysical interdependencies with this land. In other words, the Kaiowa, just like other subaltern and proletarian groups, are politically relevant not because of their past, but because of their future based on anticipated ownership of the land (as Figure 8 shows, the Kaiowa reject the current spatial configuration and use road signs to affirm ownership and the right to name their own land).

Figure 8 –Indigenous name of the land painted over farm signposts



⁷ Another extremely controversial measure, adopted by the Supreme Federal Court and now under analysis in the same parliament, is the *marco temporal* (arbitrary cut-off date for land claims). The intention is to restrict the legal right for claiming traditional territories to land physically occupied on 5 October 1988 (the date of approval of Brazil’s current constitution).

Kaiowa geography evolves in different directions and contains multitemporal elements from their past that shape the visible present and the desired future. A crucial part of this geography is the large 'space in waiting' that is dreamt about, constantly narrated and re-narrated for younger generations, an anticipation of a concrete future reality that will reinstate the past. It constitutes the spectre of a lost world that nonetheless will be restored one day if they continue to actively envisage it. The distribution of the existing reserves on the map shows this palpable spectre (the vast land in between reserves and encampments), a constant reminder of the perennial defiance and forthcoming action of the Kaiowa to recover land that is theirs.⁸ Their spectral condition is a shameful sign of the misplacement of things and, to the frustration of politicians and farmers, they have national law and universal human rights in their favour, although still poorly enforced. They have the moral high ground of those who were brutally invaded and subjugated for spurious material gain. Nowhere does the Kaiowa spectre cause more anxiety and theatrical vociferation than in the Brazilian House of Representatives, notoriously dominated by agribusiness interests. Congressional members of the Parliamentary Farming and Cattle Raising Front (*Frente Parlamentar da Agropecuária*), in particular, like to put on a show in front of the cameras to impress voters and supporters. The 'Indian problem' is a juicy topic, able to mobilise parliamentarians from different parts of the country, and in this context the Kaiowa-Guarani represent the most combative threat and a 'bad example.' For instance, in a public audience of the Agricultural Commission held on 8 May 2013, with the presence of several Secretaries of State, to discuss growing demands for the rehabilitation of indigenous areas (the main focus was on Mato Grosso do Sul), some of the more vociferous congressmen spoke as follows:

Is the Government's goal for 25% of Brazilian territory to be indigenous areas? I have seen a FUNAI⁹ report saying that the aim is for 25% of Brazilian territory to be indigenous areas. It says that there are 611 areas due to be created as indigenous lands [...] A new indigenous Guarani nation is about to be born. (Valdir Colatto)

There was no solution, and the problems were getting worse [...] We are seeing, in this process, orchestration, abuses, the pressure that the Indians make [...] [The Indians] leave their land to create other reserves [...] If we do not take action, they will be creating Yanomami, Guarani, and other nations. And they have the support of the King of Norway, who funds NGOs [...] I am of German origin – my ancestors came from Germany in 1853 – but I am Brazilian, I defend this country and I will defend it intransigently. We cannot give in to this pressure... (Luis Heinze)

In Mato Grosso do Sul, we have had numerous invasions of rural properties, with the support of FUNAI, to where Indians are taken, clearly with documents from Paraguay. (Reinaldo Azambuja)

Leaving aside the poor syntax of the strident politicians, the acrimonious, racist and bitter speech suggests that the establishment is on the defensive and, at the very least, deeply disturbed by the indigenous peoples' moral and legal upper hand. Hegemonic groups and their political representatives are less in control than they would like. This meeting of the Agricultural Commission was organised a few days after a flamboyant invasion, in the middle of a plenary session, by dozens of indigenous leaders (17 April 2013) in protest against PEC 215 (see above). Dialogue seems quite impossible (as Marx put it, "force is the arbiter"), even more so in a National Congress where a significant proportion of members – who also own large farms and are often involved in massive corruption scandals – sponsor a clear anti-indigenous agenda.

⁸ This can be consulted at <https://terrasindigenas.org.br>

⁹ FUNAI (the National Indian Foundation) is the government body that deals with policies relating to indigenous peoples. In 2019, it was removed from the Ministry of Justice and became part of the Ministry of Human Rights, while responsibility for the demarcation of indigenous areas was transferred to the Ministry of Agriculture (controlled by the agribusiness sector and openly against the recognition of indigenous land rights). The minister appointed by the new president in January 2019, Ms Tereza Cristina, is a large-scale farmer and a congresswoman representing Southern Mato Grosso, who selected as close advisors a team of lawyers who had fiercely attacked the Kaiowa-Guarani on behalf of landowners.

Numerous bills have been introduced aiming to erode legislation on the regularisation of indigenous areas, while deepening the commodification of labour and nature has been a top priority in recent times in Brasília (CIMI 2018b). This reinforces the paradoxical situation that those who are ostensibly vulnerable and powerless are clearly able to alarm those who are nominally powerful, but who have fundamentally abused their mandate and turned their back on justice and democracy.

Reconstruction of the Kaiowa space

Morirò... ma invindicato
il mio nome non sarà,
il mio sangue avvelenato
mille morti costerà!

Pery, in the opera *Il Guarany*, by Carlos Gomes (1870)

The Kaiowa, despite their troubles and the abject violence they have experienced, have written one of the most intriguing stories of contemporary, multicultural Brazilian society and its perennial dependence on frontier activity. It is a situation fraught with tensions and hidden complexities. From the perspective of indigenous groups, frontier making is a process of hyperbolic action that generates its own antipode, as movement in one direction often ultimately leads to opposite results.¹⁰ The Kaiowa-Guarani have had to resist an antagonistic rationality that has invariably led to the fragmentation and privatisation of space, promoted and coordinated by the national state. There has been a terrible banalisation of aggression, regular assassinations, and most of their ancestral land is still a spectre, which seems to prove that the Kaiowa are merely on the losing side of regional development. Their land was grabbed, their social life violently disrupted, their world will never be the same. Yet, the experience of frontier making endured by the Kaiowa demonstrates that indigenous groups are, in effect, both victims and protagonists. The very presence of indigenous peoples in the region, after decades of abuse, reveals a remarkable capacity to cope, despite all the difficulties, with the negative impacts of the advancing frontier and suggests that such groups are among the most resilient and skilled of those embroiled in frontier making. It is true that the impacts of colonisation affected the Guarani groups later than the majority of other indigenous peoples (for a number of historical reasons, including the Jesuit missions and their hiding in the forests), but it is also the case that their recent history has been marked by extraordinary courage in handling market-based globalisation, the commodification of common resources and the homogenisation of culture.

Indigenous peoples have commonly been portrayed in mainstream Brazilian political debate using normative language which represents them as responsible for their own condition. In this way, their action has been judged against criteria and values that are foreign to them. This is an *ex post facto* construction of their fate that leads to further misunderstandings. Many of the subtle elements in their culture and value system are not easy to bring into the realm of westernised academic comprehension, but it is not too difficult to perceive a wealth of sensibilities that help to fill many of the social and ethical gaps of frontier making. The Kaiowa have a fundamentally different association with the landscape where their ancestors were buried and still are, given that, for them, both the living and the dead reside in this land, their life, identity and existence depend on this land, and at the end of their life they themselves become land. Areas beyond the farm fences are remembered, evoked, celebrated and, when the time is ripe, claimed and ultimately recovered. What is regularly missed in conventional accounts is the truly latent geographical agency of the Kaiowa: that is,

¹⁰ In the words of Galeano (1982: 63), “Colón, buscando el Levante, ha encontrado el Poniente. Leonardo adivina que el mundo ha crecido” (Columbus, looking for the Levant, has found the West. Leonardo guesses that the world has grown).

their ability and willingness to remember and dream of a different spatial setting, organised according to their own culture, values and knowledge. After the humanist lessons of Yi-Fu-Tuan, we know that geographical agency not only includes physical action, but also possesses a crucial subjective and symbolic dimension. The geographical agency of the Kaiowa – which is basically an expression of a political ontology – is translated into a landscape of potentialities in which the indigenous groups struggle to survive in the interstices of agribusiness modernisation and constantly nurture their preparations for a different spatial reality erected on the basis of a lived cultural heritage.

The recognition of such latent agency unveils the tripartite ontological configuration described by Deleuze (1968) at the intersection of the interdependent ‘registers’ of the virtual, intense and actual. According to Deleuze, intensive morphogenetic processes follow virtual multiplicities to produce localised, actual realities with extensive properties. Unlike how it is normally described, the political power of the Kaiowa is maintained independently of their immediate control of the territory, accumulated instead as a latent geographic agency eventually manifested in the *retomadas*. The virtual is actualised by way of intensive processes. Because of their geographical agency, the Kaiowa-Guarani have managed not only to recuperate their religious traditions, but to mobilise these in support of their social identity, political voice and spatial strategies. Their search for a better life is informed by the symbolism of a mythic land of peace and plenty. Different Guarani groups have distinct myths and narratives of the ‘land without evil,’ but for the Kaiowa the myth is certainly a source of hope and helps them in the difficult journey back to the lost areas (Chamorro 2010). Notwithstanding the many profound changes and influences that have affected the Guarani, their most cherished religious and existential creeds continue to underpin social values and interpersonal relations. According to Clastres (1975), the search for the new world has been pursued for centuries through physical movement across the South American territory, led by powerful spiritual leaders to overcome existing circumstances and socio-political crises. In this sense, the religiosity that infuses Guarani cosmology operates as a refuge and has left them prepared to cope with contemporary economic frontiers. Against all the odds, the Kaiowa-Guarani have revealed a deep persistence and wisdom in using their ancient religious beliefs to help them deal with twenty-first century challenges.

The theological thought of the Kaiowa corresponds to a particular time-space conceptualisation of the world in which deities enter terrestrial households and establish relationships (Mura 2006). The main locus of geographical agency is the interface between the extended family (with around 100 individuals) and the larger indigenous network that connects different reserves and settlements. The basic spatial unit is the *tekoha*, the specific area where one or a few extended families live, strongly connected with other *tekohas* through regular meetings, marriages and ceremonies. A *tekoha* has no rigid limits, but comprises the space needed to hunt and fish. It is broadly delimited by hills and rivers, and often includes a river basin (Benites 2014). Its meaning-content has more to do with the production of culture than with economic production (Meliá 1989 apud Brand 1998: 23). According to the Kaiowa-Guarani tradition, when there is a disagreement or need for more resources, part of the group moves to another area and establishes a new *tekoha* (Silva 2007). Spatial mobility (*guata*, which means wandering around, walking or perambulation) is thus a key vector of Kaiowa-Guarani culture and essential to maintaining a good way of life (Brand 1998). The movement associated with *guata* suggests a constant willingness to be free to resettle elsewhere in order to maintain the livelihood of the family and to guarantee social reproduction. *Guata* also enables contact with *tekohas* lost to economic development and fosters a perennial longing for return to such areas that still show marks of indigenous activity from decades ago (burial grounds, old settlements, cultivation plots, etc.).

According to Kaiowa religiosity, these lost areas remain populated by gods and invisible entities, some benign, some evil, so people must prepare themselves spiritually before they can return. The radicalism of indigenous spatial action (incomprehensible for the rest of society and apparently illogical, considering the level of killing and suffering they have experienced) is guided and anchored by the invisible world of their

ancestors and the dream of a land that will restore the desired connections between the gods, the dead and the present generations. The latent geographical agency – a true geography of potentialities – is directly and powerfully fuelled by the extraordinary emphasis on eschatology in the Tupi-Guarani world (which includes the Guarani nations). Their social life may be relatively simple but the taxonomy of the supernatural world is complex and this spiritual dimension has an active, intense presence in quotidian, material life (Viveiros de Castro 1986, 1996). Several scholars who have studied the Guarani have recorded the pre-eminence of religion over all social spheres and, more significantly, the practice of religion as a decisive locus of cultural resistance. The use of their own language, impenetrable to most outsiders, also works as a secret war code that helps to preserve their identity and enforce the meaning of their objects, actions and traditions. New generations are prouder of being indigenous, which is an important legacy of the last four decades of mobilisation and dialogue with allied non-indigenous groups. Clastres (1975) and several other authors have demonstrated the crucial role of religion in the rationalisation of dramatic socio-spatial changes that have affected the Guarani. Their religious beliefs are centred around the messianic expectation of the ‘land without evil’ that will eventually replace the imperfect, mundane reality of the lived world (although this myth has been questioned as a decontextualized academic fabrication: see Villar and Combès 2013). Guarani cosmology is also informed by the apocalyptic vision of the end of the world, now often associated with the inferno of monoculture farms (Morais 2017).

Benites (2014), an indigenous scholar, provides a vivid description of the violence historically experienced by the Kaiowa, but also the sophisticated preparation for *retomadas*, making use of cultural and religious heritages as an integrating and transformative force. The aim of the *retomada* is to restore the lost *tekoha guassu*, which is the territory shared by several extended families following influential religious and political leaders. From the narrative offered by Benites, it is possible to ascertain the crucial political and existential connection between families and their leadership revealed in the *tekoha – tekoha guassu* dialectics. The strategies of land reoccupation are intensely discussed and enacted in the large assemblies (*aty guassu*) organised by the Kaiowa since 1979, in which religious rituals are of paramount importance. Participants identify mutual needs, share tactics, make collective decisions, and prepare documents for public dissemination. The passionate ritualization of their practices and the importance of religion for their political action encourage them to fight. This is a moment of great risk, a real war, but it is more than a holy war against the invaders: it is a necessary struggle to maintain their world. During the *aty guassu*, the core assault group is selected, formed by religious people, their assistants, political chiefs, elders and children. This vanguard party spend months preparing themselves for the attack, praying and taking part in strenuous rituals. The four nights before the *retomada* is a time of even more intense religiosity, when the warriors are baptised, a procedure required for them to be recognised and accepted by the dead ancestors and to be protected against evil spirits and invisible beings. The night before, they paint their faces and parts of the body with *urucum* (a plant used to make red body paint) and the men hold their bows and arrows tightly as a sign of respect for the ancestors. After this lengthy preparation, they march for around ten kilometres during the night to collectively retake the land. If everything goes as planned, they immediately build huts and start to fish and hunt to feed the group. A new altar for the continuation of religious ceremonies is also erected. Using tactics like these, the Kaiowa have managed to recover more than 20 areas in recent years, although the farmers who claim ownership of the land have reacted in different ways, frequently through the use of brutal violence (many dozens of indigenous leaders have been murdered because of this open war, including Benites’s own father, who died in mysterious circumstances). In the end, this is the dialectics of suffering and healing that profoundly marks the contemporary frontiers of capitalism.

Conclusions

The previous pages have examined how the straightforward image of modernity and innovation that underpins contemporary development frontiers needs to be replaced with a much more complex picture. Frontier making, which has been a core politico-spatial driving force of capitalist development, remains a highly paradoxical phenomenon, in which progress and abundance are repeatedly promised, while the reality on the ground continues to be shaped by the old practices of exploitation, exclusion and racism. The landscape of the frontier seems simultaneously logical, organised and chaotic, out of place. In the case of Mato Grosso do Sul, agribusiness appears novel, but in fact recreates elements of the colonial past, particularly in the context of violence against local indigenous groups. The Kaiowa-Guarani, along with other peoples, are commonly depicted as living examples of stone-age savages, although their geographical practices demonstrate a sophisticated ability to comprehend and creatively react to socio-spatial pressures and economic changes. It is a situation fraught with puzzles and ambiguities. To a large extent, it is the Kaiowa who are offering innovation, while agribusiness encompasses inbuilt obsolescence. Agribusiness seems new, but it mobilises and is justified through practices introduced in colonial times, while indigenous people are historically old, but their reactions, creativity and aspirations are closely connected with contemporary debates on alternatives to development, market globalisation and cultural homogenisation. All this is happening in a highly politicised landscape where indigenous groups, despite all the tragedy, suffering, humiliation and severe neglect by the state, are in effect securing small, but precious, territorial victories. To the surprise of some urban and business groups, the Kaiowa have shown latent geographical agency shaped by religious practices, strong family ties and the ability to internally negotiate the return to their original areas. The wisdom and resistance of Kaiowa-Guarani groups derive from the simultaneous ethnicisation of space and spatialisation of culture. Far from any sentimental romanticism, we learn that for the last forty years the Kaiowa have been able to regain confidence, mobilise their language, culture and religion, and form strong networks between families and localities to both resist the trend of violence and, when opportunities arise, retake their long lost land.

Different indigenous groups will have diverse levels of association with the Westernised model of economic development (for an overview of development biases, see Escobar 2012). However, the manifestation of indigenous culture represents a challenge to the prospects of frontier making and reveals its ingrained contradictions in terms of socio-ecological violence, social exclusion and inequalities. Contrasting with the narrow rationality of agribusiness farmers and their political allies, the cosmovision of the Kaiowa encapsulates multiple layers in which the material and spiritual terrains converge in a way that allows them not only to labour in the areas currently occupied, but also to almost touch the spectral space that will be returned to them one day. The land of their ancestors belongs to the living descendants and the return to those areas depends, fundamentally, on the initiative and courage of present generations. Because Kaiowa land has a purely qualitative value, which is absolute, perpetual and beyond monetisation, the only logical attitude is to continue the struggle to the very last drop of blood. From their perspective, they are witnessing a 'territorial pulse': that is, their lands are only temporarily lost and are there to be reconquered. The Kaiowa never gave up their land – indeed, they could not, because it is part of their existence to be returned to the ancestral land. There are many lessons to be learnt here, in particular the talent of the Kaiowa to absorb the increasing and dissimulated brutality of frontier making and, at the same time, voice their political demands, form solid strategic alliances and coordinate land-recovery initiatives. The affirmation of indigenous identities and the pursuit of long-pending rights are relatively recent phenomena in Brazil and other South American countries, directly associated with the progressive strengthening of democratic reforms. In this context, the resistance and agency of indigenous groups, who are increasingly trying to restore valued elements lost to national development, are crucial components of a wider mobilisation for social and environmental justice.

The results of this analysis endorse the growing importance of indigenous geography in the early twenty-first century, a period characterised by sustained attacks on many of the important social and political achievements of the last two centuries (such as universal equality, rejection of racism and discrimination, basic human rights, etc.). The territorial and agrarian struggle of the Kaiowa-Guarani constitutes an emblematic chapter of a geographical mobilisation in the Global South of the planet that challenges the conventional, Westernised narrative of modernity or post-modernity (Ioris 2018c). The survival and expansion of groups like the Kaiowa actually represent an ‘inconvenient’ reminder that other worlds are possible and, quite conceivably, necessary. As social, ethical and political tensions increase, perhaps Brazilians can find helpful responses from those traditionally ignored: the descendants of the early inhabitants of the continent, who may hold answers to some of the problems accumulated through a highly uneven process of national development. Indigeneity is a relational construct, and, because of the incomplete erasure of colonisation, indigenous and non-indigenous identities co-constitute each other (Coombes et al. 2011). The Kaiowa, other Guarani populations and the more than 300 first nation peoples have much to offer in the collective search for a more meaningful way of life. Perhaps a biblical analogy can even be invoked in this context: non-indigenous Brazilians are the prodigal sons and the indigenous peoples the wise fathers (Figure 9). A huge dose of humility and willingness to learn will certainly be needed in order to move beyond the tragic geography of frontier making.

Figure 9 – Indigenous woman in a *retomada*



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The spirit underneath: development, race and moral economy in Central Mozambique

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Abstract

Since 2007, Tete, a province in central Mozambique, has been experiencing an economic boom. Multinational mining companies are exploring one of the world's largest - and virtually untouched - coal deposits. Led by Brazilian-based multinational Vale, the controversial billionaire investment plans caught the attention of international NGOs and cooperation agencies that flooded Tete province with development and democracy-building projects. Meanwhile, the inhabitants of Tete are suspicious. People in Tete have encountered various exogenous populations since pre-colonial times and are extremely familiar with the methodology of development organizations. However, the current "developmental and democratic times" pose an intriguing question to them: can we develop? To clarify this existential question - that has deep spiritual and racial implications - the article discusses the nature of inter-ethnic political community in the Zambezi Valley, correlating it with the region's pre-colonial and colonial history.

Key words: Development; Witchcraft; Moral Economy; Democracy; Mozambique.

O espírito latente: desenvolvimento, raça e economia moral no centro de Moçambique

Resumo

Desde 2007, Tete, província central de Moçambique, passa por uma grande expansão econômica. Empresas multinacionais de mineração estão explorando um dos maiores – e praticamente intocados – depósitos de carvão do mundo. Liderados pela brasileira Vale, o bilionário e polêmico plano de investimento chamou a atenção de ONGs internacionais e agências de cooperação estrangeiras que inundaram a província de Tete com projetos democráticos e de desenvolvimento. Enquanto isso, os habitantes de Tete estão receosos. Habitados a lidar com diferentes populações exógenas desde os tempos pré-coloniais, os tetenses também estão extremamente familiarizados com a metodologia das organizações de desenvolvimento. No entanto, os atuais “tempos de desenvolvimento e democrático” colocam uma questão intrigante para eles: poderíamos nos desenvolver? Para esclarecer esta questão existencial local – que tem implicações espirituais e raciais mais profundas – o artigo pretende discutir a natureza da comunidade política inter-étnica do Vale do Zambeze, relacionando-a com a história pré-colonial e colonial da região.

Palavras-chave: Desenvolvimento; Feitiçaria; Economia Moral; Democracia; Moçambique.

The spirit underneath: development, race and moral economy in Central Mozambique

Inácio Dias de Andrade

The purpose of this article is to analyze how development in Tete has triggered different understandings about modernization, race and politics. Since large mining companies began to arrive in Mozambique in 2007, Tete has become one of the most dynamic provinces in the country. With the beginning of coal prospecting in 2011, a considerable foreign white community settled in Moatize and Tete City, the provincial capital. Formed by engineers, miners, machine operators and administrative staff, the foreign white population of Tete lives in the mining companies' private condominiums and has little contact with the local population.¹

However, despite the social isolation of the companies and their workers, the massive presence of multinationals has dramatically altered Tete's landscape. It is impossible to ignore the presence of the massive piles of coal that rival the age-old mountains on the horizon. It is also easy to perceive the sudden change in the coloration of the sky when one arrives in the province. The clean and transparent air of the surrounding region becomes ochre-colored as one approaches Tete. Similarly, when one reaches the provincial capital, the tranquility of neighboring small towns and villages – which were once typical of daily life in Tete – is quickly altered. Tete's streets are filled with cars, *chapas*² and bicycles; informal merchants sell all sorts of goods on the sidewalks, and people from different regions and countries circulate downtown in the busy city. Many immigrants who came looking for a job in the foreign companies have given up and roam the streets searching for any kind of opportunity. Additionally, every person whom I spoke to could firmly point out the roots of these new turbulent times.

"It's development" said Celestino Nota, a young farmer from whom I rented a small room on the outskirts of Tete. "Before you could lie on the road for hours. No cars would pass, but nowadays ..." he said without finishing the phrase while pointing to the busy National Road 07 (NR-07) that links Tete City to the Moatize mines.

In this sense, even though Mozambicans and foreign workers don't share the same spaces, and despite the fact that the large majority of people in Tete cannot find a job in the mining companies, it is impossible not to notice the changes brought by "development times". This becomes even clearer when we compare the current period with the time of socialist rule, which was historically marked by food shortages, population flight, forced migration and civil war (BORGES COELHO, 1989; GEFFRAY, 1990, WEST, 2009). For representatives of FRELIMO (the Liberation Front of Mozambique), a former guerrilla movement and now the ruling party, the arrival of multinational companies is proof of Mozambique's entrance to a new world order of development, modernization, employment and circulation of consumer goods and money. As one elementary school teacher from Maputo gladly told me when he was digressing about the new mining economy: "Brazil is Mozambique thirty years from now".

¹ The ethnographic data were taken from my PhD Thesis "*Tem um espírito que vive dentro dessa pele*": feitiçaria e desenvolvimento em Tete, Moçambique (Dias de Andrade, 2016). The research was financially supported by CNPq and FAPESP.

² "Chapas" is the local term for minivans imported from Asia used for collective transportation all over Mozambique.

However, for most of the inhabitants of Tete,³ there are not many reasons for optimism. The advent of the mining economy was marked by social conflicts, forced evictions and police violence, while promises of new jobs, money and Western products for everyone were successively frustrated. Furthermore, for my interlocutors, the large crowd of immigrants who were suddenly transformed into a mass of unemployed seems to indicate that the development promised holds different and hidden elements.

In fact, for many of my interlocutors, the failure of developmental promises is directly linked to an unseen spiritual realm that precludes the development of African black populations. In this sense, the article aims to demonstrate that the local idea of development, based on the local experience of African populations and their centuries of coexistence with Portuguese colonialism, is encoded by a rigid and hierarchical perception about race and spirituality and is expressed in the language of witchcraft. Hence, my objective is to unveil the nature of a local system of moral obligations that defined how development is understood and put into practice.

I arrived in Tete for the first time in 2012. I wanted to understand how Mozambicans perceived this new era of development and Tete was the perfect location to do so. Vale – a Brazilian-based multinational mining company and the biggest investor in the region – had just announced a new ten-year plan that included US\$ 10 billion in investments until 2022.⁴ Vale began extracting the material in 2011 after an initial investment of \$ 1.88 billion. To increase extractive capacity, in 2016, the company inaugurated the Moatize II Project. Following conclusion of the Nacala railway in 2017, the production forecast for 2019 exceeded 18 million tons of coal. When production reaches its peak – estimated at over 22 million tons per year – more than 70% of the material extracted should be metallurgical coal, highly valued in the international market. According to government and company evaluations, the area granted to Vale alone has 1.87 billion tons of coal.

Unfortunately, the company's plan also included the eviction of thousands of families that were living on mining sites. By 2009, Vale had already evicted 2 thousand families and transferred them to another location. However, the construction of the houses, the transfer of people and the payment of compensation for losses were fraught with problems. In addition to building a residential condominium about 40 km from the people's original locations (which prevented many people from continuing their business that depended on their proximity to the city), Vale delivered poorly built houses whose structures cracked just a year after construction. Finally, the displaced population accused Vale and the government of not fully compensating them for their losses and several state officials were accused of corruption and mismanagement.⁵

Members and partisans of FRELIMO affirmed that the social impacts of mining were a necessary evil of the development path. In 2013, the 53rd anniversary of the promotion of Tete's capital to the category of a city, FRELIMO's politicians and supporters sang various songs about how FRELIMO brought development to Tete and disapproved of anyone who criticized the "development times". Meanwhile, the development lexicon was often used to celebrate the crowded streets, the vitality of formal and informal markets in the cities and rural villages, the intense circulation of people and cars, and the intensification of social relations among both relatives and strangers.

3 I use "people in Tete", "Tete's inhabitants" or *Tetenses* to refer to the autochthonous people with whom I worked with. I choose these designations instead of using local ethnic identities such as: *Nyungwes*, *Tongas*, *Nyanja* and others. These ethnic classifications are often used in Tete where the *Manyungwes* are by far the largest group. The current ethnic designations were forged among people of different origins in their secular relations with Portuguese settlers. Additionally, the recent economic expansion brought other ethnic groups to Tete. In any case, my research didn't focus on one specific population, but on how secular racial relations produced a long-lasting reciprocity system in Tete. Therefore, for my interlocutors, being "black" or "African" meant being part of a broader social category that defined the material and symbolic conditions of their lives. For a better understanding of how local ethnic boundaries were constituted and flourished, see Dias de Andrade (2016).

4 By 2014, Vale S.A., the largest investor in the region, had invested about \$ 1.9 billion in Mozambique (Silva, 2014). Vale also announced a \$10 billion dollar investment plan for the region until 2022. Although this amount has not yet been fully disbursed, the company's plan includes projects for a thermoelectric power plant, money for the development of a large farming project along the Nacala railroad, and social compensations to displaced populations.

5 In 2012, the evicted people paralyzed the company's production to demand better housing, job opportunities, full payment of compensation for losses and others claims. After a brief negotiation with the government, the police violently suppressed the protest. Tensions between the company and local population remain.

In fact, the first thing I noticed when I arrived in Tete was the heterogeneity of situations that “development” could describe. Although the concept of development is most often used by politicians, technicians and bureaucrats, the idea of development is not foreign to most inhabitants of Tete. To the contrary, in Tete, development is not a word restricted to macro-political analyses, media debates, academic texts or political promises. The concept of development is used throughout the province, and the most isolated peasants regularly talk about their lives in terms of the presence or absence of development. Development, as a local aid-worker once told me, is “the arrival of all the good things”.

In this sense, in Mozambique - and especially in Tete, “development” and “democracy” have become key concepts for defining current times. After the end of the civil war in 1992, Tete’s residents were told that things would change: new jobs, health, education and development would come after the end of the socialist government. To accelerate this process, various NGOs founded countless development and democratization projects across the province.⁶ But nearly all were failures whose promises were never met. Nevertheless, when the mining companies’ dollars began to flow, it seemed that the long-awaited development had finally arrived. For many foreign aid workers and politicians based in Maputo, Mozambique had finally left the colonial legacy behind and entered what they called a “virtuous cycle of development”.

Tete did experience an economic boom and dramatic changes in the social landscape were obvious. However, the local perception of development operates with various symbolic references and during my fieldwork discussions about development and the unfulfilled promises of modernity, the issues of colonialism, inter-racial relations and the spiritual realm of witchcraft were also raised.

A massive institutional and international economic structure seems to be overwhelming Tete Province with investments, jobs, goods, and projects. However, despite the impressive amount of money, products, industries and development programs that arrived in Tete in recent years, and contrary to the expectations created with the end of the civil war in 1992 and the arrival of democracy in 1994, local perceptions about the development period are increasingly negative. In the following sections I argue that to understand current perceptions of development times it is necessary to examine centuries of colonialism that built local understandings of inter-racial relations that are expressed in controversial statements on race, spirituality and politics.

“There is a spirit that lives inside this skin”: spiritual explanation for economic predicaments

“I asked if there were blacks in her country and she laughed and laughed. Oh, Fortin, you ask such odd questions! I was surprised: if there were no blacks then who did all the heavy work? Whites, she said. Whites? She was lying, I thought. After all, how many laws are there in the universe? Could it be that misfortune wasn’t distributed according to race?”

Mia Couto. “The Russian Princess” in: *The Picador Book of African Stories*, 2001, 216.

Much ink has already been spilled to define the object of the so-called anthropology of development. During the 1990s, the specialized literature sought to apprehend development phenomenon through an institutional critique of its practices and denunciations of the ethnocentric origin of its concepts. Many authors examined how development discourse legitimizes political interventions and social engineering projects in areas of the globe considered inferior to the developed North. Based especially on the works of Ferguson (1990) and Escobar (1994), anthropologists of development came to conceive of international NGOs, government agencies and other cooperation organizations as integral parts of a global governmental system “a governmental system that marked the geographical space and discursive field of the so-called Third World.

⁶ For a more detailed description of the postwar period in Mozambique, see Hanlon (2008), Smart (2008); Pitcher (2002) and West (2009). For a better understanding of postwar consequences in Tete, see Dias de Andrade (2016).

In this sense, focusing on the institutional complex created by the developmental discourse, anthropologists sought not only to disassemble the historical process by which certain countries were idealized as places for specialized intervention, but also to understand the practical effects of these widely disseminated policies.

Thus, in this perspective, the analysis of the developmental phenomenon should privilege the elucidation of its real purposes: to expand state bureaucratic power and depoliticize poverty, whose causes were reduced to technical issues, and to maintain the self-referenced network that the international aid system has implemented.⁷

However, in this article, I take a different conceptual approach to development. Although technical development networks and their methodologies and concepts are actively present in Tete, defining the ways in which money, projects and development benefits flow and create objects of specialized intervention, I argue that the perception about the development times in the Zambezi Valley is related to diversified and particularly local factors.

Based on the local experience of African populations and their centuries of coexistence with Portuguese colonialism, the local idea of development is encoded by a rigid and hierarchical perception about race and spirituality and is expressed in the language of witchcraft. In this sense, I am interested in unveiling the nature of a local system of moral obligations that defined the means in which development is understood and put into practice.

This idea came to me one afternoon when I was on my way to N'kondezi, a village about 130 km from Tete City. I was going to visit one of the communities assisted by the Integrated Program of Poverty Reduction through Rural Development. This is the name of a local NGO set up within the Salesian Mission of Moatize, funded by Jurgen Eine Welt, an Austrian Salesian organization, which receives money from the Austrian Development Agency. Portuguese Catholic priests, hired six Mozambican technicians, graduates from local universities, to run the NGO. The program consisted of a few weeks of workshops for selected villages on “modern rural techniques”, followed by courses on democracy and cooperative organization. By the time that the peasants were organized in “democratic groups” – i.e., after one or two months, depending on the villagers’ engagement – the PICPDR (the cacophonous Portuguese acronym for the program) would begin to deliver seeds, pesticides, fertilizer, cattle and water pumps to the cooperative’s members.

The total length of the program in each region would vary. Initially, the NGO supports the selected village for three years, although an extension of two more periods of three years could be granted. In villages where the coordinators noticed considerable potential for improvement, the program would continue. Otherwise, the technicians could consider the village to be incapable of meeting the program expectations and the project would be terminated. According to the Austrian consultant who spent one week in Tete assessing the program, the most common reason for ending a specific project in a village was the inability of the assisted peasants to perceive the project objectives as their own and “grasp the development with their own hands”.

However, as I said before, development in Tete is not an unfamiliar word or concept. The beneficiaries are well aware of how the development projects work. Any peasant who is assisted by international organizations knows, in one way or another, how they should elect their peers for the peasant associations, how the modern rural techniques work, what are the goals of each project and what they must do to ensure the program’s continuity. Development is a hot topic nationwide and Tetenses are constantly comparing their lives with the lives of the white foreigners who visit the province.

⁷ Despite good ethnographies concerning daily practices that escape institutional controls and about forms of resistance and subversion of projects, much of the discussion about development continues to focus on the analysis of the “technical apparatus and systemic logic of cooperation organizations, regarding it as a global phenomenon” (Cesarino, 2014: 28). To a large extent, this is because some authors - many of them participants in the developmental apparatus - analyze local perspectives to incorporate them into the technical corpus of agencies. In my thesis (Dias de Andrade, 2016), I argued that, in Tete, the expansion of the technical network of development is due less to internal mechanisms of reproducibility than to the spiritual and racial conceptualization of development.

Thereby, whenever I took a *chapa*, and my fellow travelers realized that they had a white Brazilian companion, the subject quickly turned to a discussion about how far Mozambique stands behind Brazil on an imaginary chart of development.

I was in my second period of fieldwork and after spending five months in Tete in the previous year I was preparing myself for six more months of research in rural zones of Tete province. Actually, I had become quite familiar with this kind of conversation and had created a mental routine to respond to the curiosity with which Mozambicans address any foreigner from “developed countries”.

That time was no different and I spent most of the three hour trip explaining how Brazilians lived – what we eat, how we cultivate our food and what the major cities that they were familiar with from Brazilian TV shows were really like.

After a while, one of my traveling companions told me that the kind of development I had described would not be possible in Africa. I had been careful to point out that there was also poverty in Brazil and that life was not as luxurious as they saw on television, but no matter how hard I tried, the insistent remarks about Brazilians’ high living standards continued.

Although, for Brazilian readers, the idea that Brazil is a “developed country” may seem to be a clear overstatement, as a matter of fact, at the time I was in Mozambique, the Brazilian economy was experiencing strong growth. Most of Brazil’s public infra-structure is more efficient and organized than in Mozambique, which was afflicted by two long wars in the past fifty years. Nevertheless, I was very careful to emphasize that any Mozambican or black person could be as developed as a Brazilian or any other foreigner. It was only a question of education, social class, economic infrastructure and cultural background.

However, my interlocutors accepted none of my arguments. In fact, for my small audience, the reason for Mozambique’s lack of development was different. Long after the discussion had calmed down, Francisco, a skinny little man seated by my side, told me quietly why Mozambique could never stand on the same level of development as Brazil.

“There is a spirit that lives inside this skin”, he said showing his arm and emphasizing his color.

With that sentence, Francisco began to tell me his story. Sometime before, he was making a lot of money from his own SIM card resale business. He bought each SIM card for 10 meticaís and resold them for 20 meticaís - a profit of US\$ 0.15 cents. His customers were foreign mining workers and his life was beginning to improve. But one night two men entered his house, and when he woke up and caught the thieves, one of them struck him with an iron bar in the middle of his face, knocking him out.

“It ruined all my teeth” he said showing me his empty mouth.

“They took everything I had. That is why we cannot develop ourselves. No Mozambican can see someone else get a better life for himself. Black people are like that” he said.

“We are envious”

Looking tired, he leaned against the window and thought for a few seconds:

“There’s a spirit in here”, he sorrowfully concluded showing his arm and his color once again.

That was not the last time I heard a racial and spiritual explanation for economic predicaments. Zé Nova, a peasant from Mameme, another location served by the project, also tried to explain to me why black people could not take part in the modern world. As he looked at the cross of a church, he told me:

“Isn’t Jesus white? Blacks and whites are the same, the blood inside our veins are the same” he said as he pointed at my arm, “but the skin and brain are different. God made us different, made the white smarter”

Felipe, a young man who like others was looking for a job in the many companies that have recently arrived in the region, summed up a common narrative in Tete, used constantly to explain the envious nature of blacks:

“When God created the world, He called the three races to talk and asked what they wanted for themselves. The white man said that he wanted to have lots of ideas and God gave him the gift of intelligence. The Indians said they wanted to do business, so they have a bunch of stores now. God gave them the gift of trading. But when God called the black man, he was laughing and joking, God, angry at his games, sent him to Africa and cursed him and all his children.”⁸

In Tete, black people associate themselves with tradition, envy and bad luck. God has doomed the entire race to the heavy work of farms and to the occult powers of witchcraft. For my interlocutors, “living by tradition”,⁹ as black people do, is the opposite of whites. The people I spoke with affirmed that white people usually work in an office, out of the sun and without the heavy efforts of rural life, and are surrounded by technology and comfort. This kind of life would only be accessible to a black person who would dare to cross the hidden line that separates the visible world from the invisible realm of witchcraft.¹⁰ In this sense, development - differently from what the NGOs’ international methodology describes - is not the product of a path taken jointly by the international staff and the beneficiaries, or even something able to arise from within the rural communities. Actually, Mozambique’s lack of development is a burden carried by people who are silently fighting battles against envy and witchcraft.

To understand the current “development and democracy times” in the Lower Zambezi, Tete province, I suggest that we have to situate the development and democratic practices within the historic experiences of these populations and the relations that they built with the “*vindouros*”, the Portuguese word for “those that came from outside” or *zobuera* in the local language.

In this sense, I use witchcraft stories to provide a symbolic background through which discourses, opinions and practices about current times circulate.¹¹ From this cultural perspective, people draw strategies to mitigate the primitive burden that they think they must carry. To understand the role that “envy” and “witchcraft” play in the political perceptions of Tete citizens and to unveil this belief in a supposed African incapacity to develop themselves, I think that it is essential to examine the historic relations between whites and blacks

8 Peter Fry (2000) described a very similar narrative in a Christian community in Chimoio, the capital of Manica Province. After discarding functionalist explanations - in which such accounts originate from the relationship between a local population weakened by the war and Catholic solidarity networks, in a way that disregards the existence of several local institutions that could meet this need, Fry argued that the combination of Protestant asceticism with local “revolted spirits” produced an endless spiritual warfare in the Zambezi Valley. According to Fry, in the midst of a scarcity economy (Foster, 1960), Christian ritualism offered interpretive elements to justify the inferior place of the black population. On one hand, the accusations of witchcraft would be an eternal reminder to individuals about the responsibilities they owe to the corporate kinship group; on the other hand, they state the impossibility of removing the bonds of tradition. However, this interpretation does not help to explain the spread of black people’s self-deprecating image beyond Christian communities. Likewise, it is difficult to understand the exponential growth in the number of associations willing to receive development projects despite the strong disbelief that its members demonstrate about the effectiveness of their methodologies and the possibilities of progress on the African continent.

9 “Viver à maneira” in Portuguese.

10 West (2009), in his ethnography conducted in Northern Mozambique, also described how witchcraft is associated to envy and to lack of development and democracy. Likewise, one can find in classical anthropology similar accounts about the relationship between envy and occult powers. E.E. Evans-Pritchard (2005) mentioned how the Azande understand witchcraft to be hereditary and that biological disease is triggered by a psychic act incited by envy, hatred or greed. Although recent studies have abandoned the paradigm of order and social integration incorporated by structural-functionalist analyses, current works of prominent anthropologists have shown that witchcraft practices and beliefs continue to offer a fertile subject for the study of material and spiritual insecurities boosted by political and economic changes (Comaroff & Comaroff, 1993, 1999; Austen, 1993; Geschiere, 1997; Ciekawy, 1998, Smith, 2008; West, 2009). In this new perspective, anthropologists have gradually focused on unveiling how morality and anti-social sentiments of a given community change over time, fostering analyses of local understandings of power, political relations and economic inequalities.

11 Extending Evans-Pritchard’s argument that witchcraft provides a social explanation for misfortune, recent works have referred to modernity as an expanding social world through which local conflicts have arisen. In the same way, several of these studies have argued that witchcraft is a local idiom that reorganizes meaning and provides ways of acting in a changing world (Comaroff & Comaroff, 1993, 1999; Austen, 1993; Geschiere, 1997; Ciekawy, 1998, Smith, 2008; West, 2009). This approach addresses the classical division that Evans-Pritchard had anticipated between witchcraft beliefs and witch-finding practices that, according to him, must be understood in relation to one another. However, in this article, I want to point out the idea, already suggested by Rosalind Shaw (2002), that in Africa witchcraft ideas emerged alongside colonialism, and express, until today, memories of its fierce regime. In this sense, I choose to address accounts of witchcraft as part of the process of inscribing difference (Montero et al., 2011) that is inexorably intertwined with colonization. Examining witchcraft practices as essential phenomena through which autochthons and settlers have theorized about themselves and others, I argue that colonial encounters made witchcraft stories an inescapable way of thinking about modernity and development in Tete (Dias de Andrade, 2016).

in the region. Furthermore, I argue that the inter-ethnic relations or the Zambezi “moral economics” – a discursive realm unavoidably linked to belief in witchcraft – is central to understand why people seem to despise democracy. Thus, to fully apprehend the origins of the popular idea that relates black people to envy, witchcraft and under-development, a brief excursion into the history of Portuguese colonialism is necessary.¹²

“We wanted political, not economic, independence from the Portuguese”: moral economies in Zambezi Valley

“Historians are familiar with seeing African societies break up under the influence of prolonged contact with Europeans. On the Zambezi it was the European society which dissolved, while the African, which was made up initially of fragments of other tribal organizations and language groups, developed new institutions and a new type of organization which proved better able than almost any other African society to resist European imperialism.”

Malyne Newitt. “The Portuguese on the Zambezi: An Historical Interpretation of the Prazo System”

In: *The Journal of African History*, (10), 1969, 67.

During the fieldwork, my interlocutors constantly reminded me about the impossibility of democracy in Mozambique.

“You, white people, can solve things democratically because you help each other”, Zé Nova, coordinator of the peasant association of Mameme said to me. He was trying to explain why the group created to distribute cattle in the village had fallen apart after the Austrian project ended.

“We, black people are envious. We can’t help each other. That’s why we are so less developed”.

In 2014, I spent about five months with Zé Nova visiting different villages around Mameme. We intended to investigate the rural development project implemented by PICPDR with Austrian Development Agency funding. Like so many others projects in Tete, the PICPDR program consisted in distributing inputs, seeds, equipment and animals to groups of peasants organized in associations that were expected to emulate civil society organizations from developed countries. Like most villages in Tete, the Mameme farmers plant corn during the rainy season – from November to March. Once harvested, the maize was ground and preserved as flour for the rest of the year. This stockpiled flour is used to make *xima*, a porridge prepared with water and maize flour that is the staple of family nutrition in Tete and Mozambique in general. Hence, to improve food security, international projects have developed particular methodologies to produce vegetables during the dry season. Using Western planting and production techniques NGOs sought to increase the variety and quantity of food available and stimulate the local economy, since the harvest surplus could be sold in local markets, increasing farmers’ income. To do so, NGOs provide local peasant associations with water pumps, seeds and cattle that should be used as draft animals to plow the fields. Zé Nova was one of the leaders of the Mameme association and was in charge of the Animal Management Committee. In this position, he became responsible for distributing a pair of animals to some members of the association. After the distribution, Zé Nova, who visited the beneficiary families to inspect the evolution of the project, should also redistribute the offspring of the original cattle to people who had not yet been assisted. It was his job to register families, organize committee meetings, and make sure the animals were being treated well, given tick baths and other veterinary care.

¹² As proposed by Foucault (1995) I try to escape the historiographic tendency of producing links between facts or reducing them to elements of an identifiable linear history. The intention is to problematize relations of power that produce realities, knowledge and ways of thinking and feeling the world. In this sense, I am not interested in the consecutive association of historical events, but in the process of forming a local epistemology through which African populations of Tete perceive the world and which was able to perpetuate local ways of life throughout the centuries

However, similar to what happened in other localities assisted by the project, as soon the farmers received their cattle, they sold them. Many farmers preferred to sell the animals in Malawi. According to Zé Nova, Malawian traders would pay more than Mozambicans. For Andreas, the European consultant to the project, it would take considerable time and effort for Mozambican farmers to realize that they could prosper more easily if they worked together in associations, sell their surplus and maximize their profits, acquiring new water pumps, seeds and equipment. Nonetheless, for the foreign staff of the PICPDR program, once the peasant associations were ready to perform their role in organized civil society, democracy could prosper and function from the bottom up, supported by grass-roots based organizations. It is not a coincidence that along with workshops on modern rural techniques, the farmers assisted by the project were also obliged to attend classes about democracy and political participation in modern societies. For Hannes Velik, International Director of Jugend Eine Welt, it was just a matter of time for the assisted communities to grab development by their own hands. As evidence, he presented the growing number of associations and beneficiaries of the Salesian development program. As matter of fact, in Tete, the total number of peasant associations grew exponentially over the last decade or so. In 2015, the UPCT (Provincial Union of Tete Peasants), the biggest peasant movement in the region, registered 176 associations.¹³

However, Zé Nova was assertive:

“Black people cannot decide things democratically”.

If people in Tete are quite suspicious about the possibilities of development and democracy in Mozambique, why do they insist on creating new associations and taking part in successive workshops about modern planting techniques and democratic values? For an anthropologist of development, this phenomenon could be explained by the ability of development institutions and their bureaucratic complexes to replicate desired project results. Nonetheless, I argue that by considering the historic formation of colonial society, the growing number of projects and associations can also be explained by the active participation of people located at the edge of this network.

In contrast to the democratic principle of equal rights and duties, the inhabitants of Lower Zambezi have their “traditional political system”.¹⁴ Despite centuries of colonization, a lineage system of reciprocity and control continue to politically organize Tete province. Actually, Portuguese settlers had reinforced the traditional political structures as part of the colonial administrative system. The lineage system is based on a concentration and redistribution of goods, rights, weapons, political power and other benefits by a powerful leader to whom other chiefs pay a tax. Given the fragile economic, political and military structure of Portuguese colonialism, the only way that some sort of European civilization could prosper in the region was by reinforcing these kinds of political systems (Pélissier, 1994; Capela, 1995; Schwartz, 2009; Thornton, 2009; Newitt, 2012; Rodrigues, 2013) – or as Allen first affirmed, by “Africanizing its institutions” (Isaacman, 1972).¹⁵

¹³ Since each NGO and development agency encourage new associations, creating an institutional network of their own, it is possible that this number is highly underestimated.

¹⁴ The adjective “traditional” refers to a complex array of categories of practices that people in Tete use to describe their daily lives in opposition to the way that they believe that white people live.

¹⁵ The notion of “Africanization” was first used in 1972 by Allen Isaacman in his *Mozambique: The Africanization of a European Institution: the Zambezi Praios: 1750-1902*. Based on the idea of cultural resistance to political and economic domination, Isaacman emphasizes the African origins of the social structure of the main trading ports and Portuguese cities in Central Mozambique, acknowledging the pivotal role of the Afro-Portuguese community – known locally as *muzungos* – and its acculturation process. Although the idea of Africanization can be related to an outdated anthropological discussion of acculturation, I would like to maintain the central idea of Isaacman’s argument that the building of Portuguese colonial society in the Zambezi Valley cannot be understood without analyzing the interlocking of two different types of societies. In this sense, the Afro-Portuguese society was based on a complex array of phenomena that allowed the integration of local and exogenous social structures – Catholicism, international trade, Portuguese colonial structures and African political systems – and the “disintegration” of metropolitan values – caused by drought and famine, small-scale settlement patterns with low levels of technology and banditry. For more information, see Landeg-White (<http://landegwhite.com/category/essays/page/2/>, last accessed: 19/11/2018)

In this sense, by transforming themselves into mediators between local societies and the international trade network, Portuguese settlers – known as *prazeros* – took the place of the big African chiefs.¹⁶ Some Portuguese settlers married powerful African women and integrated themselves into African kinship systems. Other *prazeros* traded Indian fabrics, beads and necklaces for political and military support and eventually became ritually married with traditional African Chiefs. In this way, just as King Monomotapa did when he unified the Kingdom of Gaza in the XIV century, the Portuguese began to distribute Indian products, European weapons and political rights to the tribes and lineages that submitted to their power and ruled through the traditional political system. In that way, Portuguese settlers, most of them originally born in Portuguese India, became the chiefs of a large African Army that negotiated and conquered land and new subjects for the expansion of the Portuguese colony of Mozambique. The Portuguese dependents would expand their network of dependents to strengthen their reputation, military power, commercial gains and political influence – in Mozambique and Portugal.

However, for many inhabitants of the Lower Zambezi, voluntary enslavement, which had previously been thought of as a form of vulnerability, became, considering the limits imposed on black people by colonial society, a chance to improve their lives. Slavery in the African colonies was nothing like slavery in the Americas. In Tete, several African villagers walked long distances to participate in the “*corpo vendido*” ritual, literally translated as the “sold body” ritual (Rodrigues, 2013). The ceremony consisted in a performance in which black vassals enact a kind of accident that breaks a personal belonging of a Portuguese chief. After the ritual, the African subject became the *prazero*’s dependent and one of his slaves.

Although the enslavement process in the Zambezi could also be established by imposed forms of subjugation – like war or slavery raids – it was mostly instituted by voluntary submission, especially in times of food crises.¹⁷ In the 1800’s the “sold body” ritual was widely spread throughout the province and the slave population grew. Consequently, a series of slave rights were created to ensure the continuation of the enslavement process and their proper treatment. Transgressions of this code by slave owners sparked massive desertions and revolts throughout the slavery period. Many *prazeros* were killed after being accused of excessively punishing their servants, not taking good care of them or selling them to slave merchants. There was an important code of conduct that should be respected by the slave master and their dependents. In this sense, for many, the submission to a kind and just master was often preferable to a free life with no food or protection (Rodrigues, 2013).

Moreover, depending on the task performed within the colonial production system, an enslaved African individual could really improve his life and political position in African societies. To become a *mussambaze* – a local tradesman that went to isolated villages to sell and purchase goods for his master – could change someone’s life. Although the *mussambaze*’s mission was to find products, slaves and new business opportunities for his master, they were always looking out for and aware of any profit opportunity for themselves. Through accounting tricks that were hardly checked by the *prazero*, they often bought slaves for themselves and brought back individuals and products that were quickly redistributed into their kinship and political networks (Rodrigues, 2013). This allowed them to increase their local prestige while increasing the *prazero* army. Commercial caravans were a great opportunity for enrichment and social mobility.

¹⁶ The name *prazero* came from the Portuguese word *prazo*, which was used for a time-limited land concession granted by the Portuguese crown. To encourage Portuguese colonists to settle in the African hinterland, the Portuguese administration created a three-generation system of land grants with mandatory succession in the female line. This system was widely utilized from the sixteenth to the eighteenth centuries throughout the Zambezi Valley.

¹⁷ In earlier studies, the “sold body” ritual was considered a minor event in Mozambique. For Isaacman (1972), most slaves were conquered through physical coercion. However, based on new documents and researches, both Rodrigues (2011 and 2013) and Newitt (2012) agree that the practice of offering oneself as a slave to a white lord, rather than being the exception, was the rule in Zambezi colonial society.

To recognize that some Africans used the colonial system to improve their living conditions is not to ignore that the colonial system was based on an extremely violent social structure. In fact, several populations that could not or did not want to take part in these Afro-Portuguese societies fled as far as they could from Portuguese rule. In many cases, running away did not prevent these populations from being captured by the *prazeros'* black army, who would sell them like slaves in the Americas.

In the first half of the twentieth century, after termination of the slave trade, gold mines were discovered in neighboring areas of South Africa and the Portuguese developmental state began to privatize lands and invest in Mozambique. The colony was conceived as a labor exporting nation and thousands of Portuguese were sent to administer the new economy in the biggest colonization enterprise of Mozambique. In this period, inaugurated by a new labor regime implemented in 1899, many Africans worked without any payment and were harshly punished if they did not comply. The new labor regulation required the indigenous population to work and established that “rebel” natives should be sent for “correctional work” periods. In this sense, the country’s new infrastructure, built during late-colonial times, was erected by the unpaid forced labor of black people and those African individuals that were not sent to the construction sites were used as a workforce on the farms of private companies (Newitt, 2012).

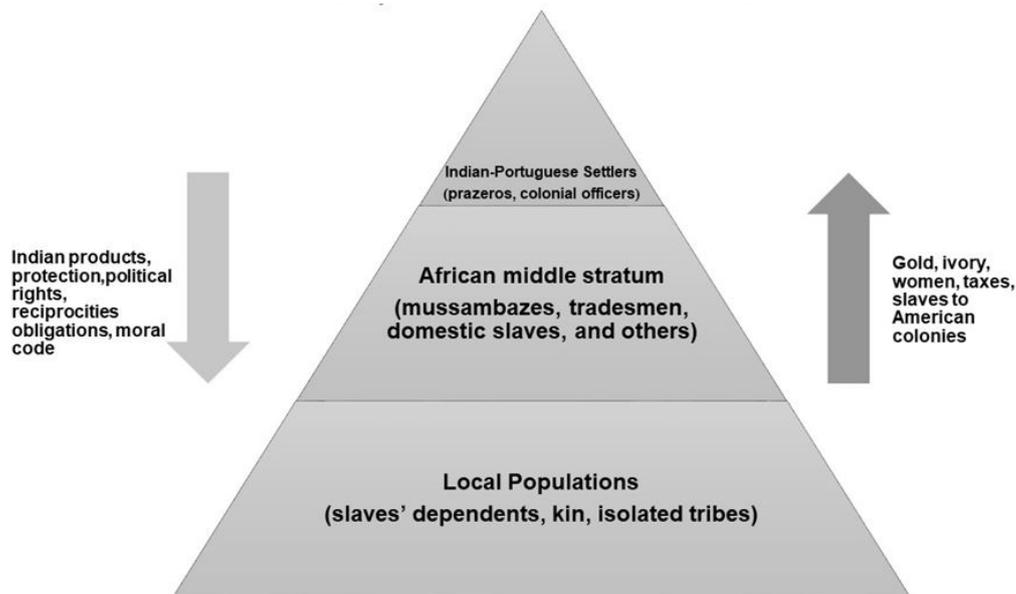
Although in the late colonial period labor relations and the dynamics of colonial exploration had changed, this did not affect the hierarchical structure of moral obligations established by the previous occupation. In fact, the opposite was true. The arrival of white settlers, factories, mining industries and the opening of new trade routes brought more products and economic agents into the Tete political system.

In this sense, despite the considerable violence, the colonization process also created a mid-level African social stratum that increased its power locally by dangerously serving as intermediary between white settlers and relatively isolated populations.

By redistributing products and benefits obtained through their influence over Portuguese settlers, many Africans became highly prestigious in their villages. Until the XVIII century, many of these Africans formed new ethnic societies known as *Tonga*, a Bantu word that in some Mozambican languages means “slaves”. According to some histories, the *Manyungwes*, the largest and most powerful ethnic group in Tete, shared a similar origin. The group was forged as an ethnically homogeneous people thanks to its relations with Portuguese settlers. In Zambezi, the colonization process created a moral economy in which access to white people became a privileged way to obtain and increase wealth and political power.¹⁸

¹⁸ In his historical study of the English crowd, EP Thompson referred to moral economy as a traditional perception based on norms and social obligations that organizes economic interests. In his own words: “my object of analysis was the *mentalité*, or, as I would prefer, the political culture, the expectations, traditions, and indeed, superstitions of the working population most frequently involved in actions in the market” (Thompson, 1993: 260). After publication of Thompson’s seminal book, the concept of moral economy gained a life of its own and was used in very fruitful ways by various authors in different contexts (Scott, 1976; Tausig, [1980] 2010; Austen, 1993). However, if, on one hand, the idea of moral economies provides a tool to address moral codes of local societies and their relations with broad exogenous structures, on the other hand, it could also help to sustain colonial perceptions of autochthonous practices. As Austen (1993) pointed out, the central trope in various attempts to define moral economy has been the opposition between the profit-oriented modern individual and the community ruled by a “subsistence ethic” (Scott, 1976) and by the concept of a zero-sum universe (Foster, 1965). Nevertheless, what should be emphasized in all these different studies is the importance of the economy of values and social norms of a group at any given time. Alternatively, as Austen affirmed: “Nonetheless, the moral economy school has a good deal to teach those more seriously concerned with culture. Most obviously, it demands that attention should be paid to the condition of access to material resources that determine, with some degree of autonomy, the understanding of capitalism possible within any community. Furthermore, in the revised version it provides detailed, socially sensitive accounts of political and economic strategies that illuminates any discussion of ideology” (Austen, 1993: 94)

Zambezi Valley Social Structure and Moral Economics



This helps explain why, until today, the fairness of a political system in Tete is indicated by the capacity of powerful individuals to redistribute goods and rights, while congregating in their surroundings a large network of dependents. To be seen as a merciful and just leader, Big Chiefs, white or black, should maintain these reciprocity chains of products, rights and benefits flowing. Otherwise they risk losing their men to better masters, facing revolts or even being killed. The same rule was applied to the dependents of white settlers, who were constantly reminded of their obligations towards their own villages.

In this manner, people in Tete tend to evaluate and identify different historic periods in terms of the activity within or rupture of this inter-racial reciprocity system. During late-colonial times, when Marcello Caetano, president of Portugal's Council of Ministers between 1968 and 1974, stated that the Zambezi Valley should be populated with one million white Europeans – at a time when the mining economy was mostly based on international consortiums and long-standing communities of white employees – the social structures of this moral economy were fully operating. At the time, driven by Portuguese state investment, Tete was experiencing unprecedented economic growth. Cabora-Bassa, the biggest dam in Southern Africa was under construction and lots of immigrants, money and products were flowing through Tete. When asked about the current development times, members of the generation who remember the late colonial period say it was more vibrant than today. As one old Mameme farmer said after returning from another failed job search at the region's mining companies:

“Today the Brazilians came to dig the mines, but we can't find any jobs. At least, in colonial times, the Portuguese gave some minor jobs to old men like me to earn a little change.”

The presence of a white elite surrounded by a cheap black labor force created a hierarchical society built on the surplus of expendable dependents. In this way, many individuals who were not hired – or forced to work – in the old colonial coal mines were required to serve as domestic servants. Others seized the opportunities to sell local products to black people who had some sort of salary or tried to negotiate directly with foreign settlers.

This all changed when Samora Machel, FRELIMO's revolutionary hero, a liberation army general and the first president of the independent nation of Mozambique, took power. The combination of an unsuccessful agrarian reform that relocated many peasants to communal farms, controversial international policies during the Cold War, and a long-lasting civil war financed by surrounding apartheid regimes that

gradually took on domestic traits helped to destroy the national economy and Tete's reciprocity network (Borges Coelho, 1989; Geffray, 1990; West, 2009). The desperate flight of Tete's white community that followed the rise of the socialist regime and preceded the outbreak of the Mozambican civil war also reinforced the idea that modernization and consumer goods were inextricably related to white men.

After the signing of the Peace Agreements in 1992 and the sudden arrival of development NGOs, people imagined that Tete's white community and the old local reciprocity network would be restored along with democracy. However, the end of the war overlapped with the professionalization and complexification of the socio-technical networks of development institutions (Mosse, Lewis, 2006). The increasing competitiveness of the international aid market led to a heated dispute over projects and beneficiaries throughout the Third World. The expansion of bureaucratic development structures became a way for large NGOs, agencies and international organizations to concentrate capital goods in the increasingly competitive globalized aid market (Vianna, 2014). In this sense, to compete in the market, international organizations promoted the creation of national and local NGOs that became valuable assets. The proliferation of local partners and the multiplication of social issues that were addressed by international organizations produced a variety of low-paid positions in the development network. Today, foreign aid workers are mostly based in Maputo, leaving field assignments to underpaid local employees.

Alexandre, a young man, who worked at the Tete Local Development Association (ADELT in its Portuguese initials) offered some interesting thoughts about the "development times" in Tete. The organization which he worked for was struggling to keep its doors open. ADELT had already managed some projects with the PICPDR on other occasions, but after the arrival of mining companies and the influx of new investments, the aid market in Tete became increasingly competitive. The international funding agencies began to require that projects, reports and assessment procedures be written in an indecipherable technical language that was easily understood by graduates of university development courses at European institutions, but completely obscure to Tete's NGO workers. The PICPDR managed to continue its projects with support from the Salesian philanthropic networks, but ADELT, founded by a Tete sociologist who sought to secure some of the investments that came along with the mining economy, was not so lucky. In commenting on the poor economic situation that the NGO finds itself, Alexandre compared current times with the hard but relatively prosperous life of colonial times:

"We wanted political independence from the Portuguese, but not economic independence. Eduardo Mondlane" [FRELIMO's first president who was killed by the Portuguese], "only wanted political independence, but Samora, when he gained power, sent all the Portuguese away"

There is no evidence that Mondlane really advocated any kind of long-term economic deal with the Portuguese after independence. However, in one of his first acts as President, Samora banished around 200 thousand Portuguese who were then living in Mozambique. Since the overwhelming majority of educated Mozambican personnel were white Portuguese, the measure not surprisingly interrupted all public services and infrastructure (Thomaz & Nascimento, 2012). Samora's regime tried to mitigate the state paralysis by signing a long-term cooperation plan with European socialist republics, but the long civil war that took Mozambique by surprise prevented any economic improvement. In addition, the failure of the communal farming system and the rural production reorganization program helped create a food crisis that lasted for sixteen years (Thomaz, 2008 and West, 2009). All this prevented local African populations from maintaining their local political systems.

Democracy, development and envious spirits: local perceptions of political power

Zé Nova was very disappointed with the last cattle breeders' association meeting. Once the Salesian NGO distributed livestock among the members, the association became powerless. No one would attend a meeting unless rumors of a new distribution arose. Moreover, the project's norms were completely ignored by the members. Disputes over the cattle's offspring were frequent and the progeny were often negotiated without the project's control, to attend local interests of each breeder. Zé Nova was exhausted after he scheduled several meetings that no one had interest in attending, but he knew exactly what was wrong:

"Democracy gave too much freedom to people. Today, people do whatever they please. When Samora was in power, people would never miss a meeting. They would come out of the bushes to hear him speak."

Ironically, the same associations that were celebrated by the foreign aid-workers as foundational pillars of Mozambican democratic society were seen by their members as sources of all kinds of problems. Actually, for my interlocutors, the expansion of the number of associations was perceived as a consequence of the erosion of political life and as proof of the incapacity of Mozambicans to deal with democracy.

"Black people don't help each other", concluded Zé Nova, "That's why we can't have democracy. There is too much freedom these days."

During the visits to PICPDR projects in the villages around Mameme, Zé Nova and I spoke with assisted farmers in Inhangoma. Curiously, I had already met the president of the association in Inhangoma on a different occasion. The same peasant association was part of a very similar rural development project through a different institutional path. A few months earlier, I met presidents from several peasant associations that were being assisted by a Norwegian NGO's project, which was implemented by UPCT. The goals of the two projects were the same: to improve local food security by supporting vegetable cultivation with modern planting techniques and democratic organizations.

The methodology employed was also the same. On lands divided into 5x7 meter plots, different crops are planted with modern and traditional techniques. In the traditional method, seeds were planted without a standardized distance between them; the land was not fertilized and the plants were not treated for pests or disease. In contrast, the modern plot was cultivated with improved seeds, which received an organic fertilizer produced at the location with compost and animal manure. During sowing, the seeds were aligned, obeying a distance of 50cm between beds. According to the foreign technicians, by comparing the results between the different methods, the farmers would realize the benefits of employing modern planting techniques and working collectively, replicating the techniques they learned in the association in their own crops. One hectare planted with the traditional technique produces from 800kg to 1.2 tons of corn, while the modern technique can produce over 6 tons in the same area.

In this scheme, the production of a surplus to be sold in the market is critical: with income from products from the association's collective farm, the peasants could afford more equipment for collective and individual use. In the same way, according to the Western technicians, introducing animal breeding and associative production was crucial to inducing a virtuous and endogenous cycle of sustainable growth, capable of creating the profit inflow needed to buy enhanced seeds, pesticides and fertilizers that would be used the next season. Initially, the improved seeds and other supplies were donated by the NGO. Afterwards, with some assistance from the NGOs, the peasants should be able to sow, grow, harvest and sell their products and earn enough money to buy new seeds, fertilizers and pesticides via the association. In this way, by helping peasants produce vegetables, the NGOs were simultaneously improving food security and introducing a new and valued product to local markets, since vegetables could be sold for more money than the traditional maize crops.

However, none of this is new for Tete farmers. In the past quarter century various NGOs have come and gone from the region. Some of the farmers assisted by international organizations are familiar with the techniques used since their forced exile in Malawi during the civil war. In Inhagoma and Mameme, any member of the association could masterfully execute these techniques in the 35m² designated plots. In this small area, the farmers could weed the soil, carefully measure the distance between the beds and count every seed they buried. They also knew how to collect manure, mix it with grass and spread it on the ground. It was a simple and trivial task that they performed perfectly after years of experience with various NGOs and rural development programs.

However, the use of these techniques on individual farms was extremely exhausting. First, the amount of fertilizer needed far exceeded the capacity of the village families. A PICPDR technician calculated that each hectare planted needs 800 kg of fertilizer per season. Spreading it was heavy and stressful work and the majority of men and young people had moved to the city in search of work in the mining companies. Thus, farming was a task performed almost exclusively by older women.¹⁹

In fact, with rising prices due to the installation of mining companies, farmers across rural Tete have been forced to increase their acreage to be able to buy clothing, groceries and other commodities. In the past, cultivating two hectares was enough to support a family, but now many farmers must plant close to 7 hectares to earn the minimum needed. As Zé Nova told me, a goat, that used to cost about 250 meticaís before the development outbreak, could be sold today for 1000 meticaís - and could cost up to twice as much depending on the skin color or origin of those who buy it.

If that is correct, why did the number of peasant associations grow exponentially in recent years? Why were farmers throughout Tete forming new groups and actively searching for new projects? Sometimes, as the Inhagoma case shows, one peasant association could take part in more than two projects simultaneously. During my fieldwork, I witnessed several people from different rural zones of Tete coming and going in the PICPDR and UPCT's offices asking for new projects. When I was in N'kondezi I was often confused for a foreign NGO technician and approached by different people who "would like to be part of a development project".

Even though farmers are aware that the techniques taught offer better results, the international methodologies were largely ignored by them when they cultivated their individual fields. The extensive amount of work demanded by international projects and the inflation that obstructed real gains from selling vegetables made the members of the association produce specific crops just for show. Each farmer devoted just a few hours per week to the association farm where they applied the modern techniques under the supervision of local aid-workers, spending the rest of the time on their traditional maize crops. Some farmers have a small designated area on their land where they use what they have learned. In this portion of land they grow part of their family's food, using it as façade crop to show to directors and consultants from foreign NGOs - even though this is usually an unnecessary concern, since foreign NGO staff almost never extend their visit far beyond the grounds of the association's.

Actually, the growing number of peasant associations in the Tete region can be explained by the updating of old local strategies for inter-racial alliances. The peasant associations are assuming a role previously played by the marriage between *prazeros* and local women and the members of associations have become mediators between a "developed world" and local populations. However, differently from colonial times when the positions of mediators were authoritatively defined by *prazeros* and Portuguese officials and were more easily identified and controlled by their local network of dependents, today, to encourage democratic participation in Mozambique, NGOs and international development agencies stimulate the dissemination and autonomy of peasant associations. This movement created a growing competition among farmers who are continuously forming and disassembling peasant associations. As Zé Nova precisely summarized:

¹⁹ In fact, in Tete, as a general rule, male migratory work became a tradition reinforced by years of colonization and forced labor. In most of the villages, the farming is performed by women, but in current Tete, this an increasingly devastating job.

“Today everyone wants to be chief”

In this sense, the associations developed ambiguous understandings of their function. For the members, the association is part of a strategic alliance between racialized counterparts through which goods, jobs and material gains are expected to flow. However, the goal of foreign technicians was to have the associations function autonomously and democratically with minimal outside interference or help. In this sense, the unmatched expectations on both sides produce frustrated technicians who are exhausted by constant demands from the farms’ and association members who keep asking themselves where is the development promised by democracy.

Moreover, different from what Tete’s inhabitants’ first expected, the arrival of foreign investment did not bring jobs, money or consumer goods. The recent neoliberal agenda and technological improvements changed the mining production system. Differently from old colonial mining companies – implemented as part of a colonization plan for the region – the contemporary extractive industries employ far fewer people on their production lines and require fewer specialized foreign employees.²⁰ To make things worse, since the end of the Socialist regime, people in Tete constantly ask where have all the white people gone to. Although Samora Machel is celebrated for ending the violent colonial regime, since the flight of Tete’s white community, its inhabitants search for new ways to acquire Western products and new people with whom to form alliances.

When coal mining was initiated in 2011, the newly arrived white community joined the declining foreign white society in Tete Province. When the civil war ended, the international community reallocated a significant number of white aid-workers to Maputo, opening new underpaid local positions for native black employees and clearing the way for the ramification of their bureaucratic institutions. Moreover, the mining companies’ employees in Tete live in fancy private condominiums near the mining site, and rarely interact with local people. The social distance also prevents the new white population from offering domestic jobs to the local population or from doing other kinds of business with them.²¹ In addition, the rising social inequality, the growing visibility of economic changes on the Tete landscape and the international communities insistence on failing methodologies led Tete’s inhabitants to conclude that development is not something that black people can cultivate.

Consequently, many southern *mashangana* women from Tete are marrying newly arriving white men in Maputo, preventing the women from settling in Tete and revising the former inter-ethnic reciprocity system. From the *Tetesenses*’ point of view, the absence of white foreigners and the subsequent lack of development is proof that *mashangana* – or top FRELIMO politicians – are monopolizing the means to access wealth and modern goods, transgressing the local moral economy. For them, this reinforces the ideas that black people are envious by nature and that democracy imposed a system of rules that no one obeys – which is a dangerous way to live in a land full of envious spirits. From this perspective, democracy is to be blamed for this recent disorder. By giving people “too much freedom”, democracy released the Africans’ envious tendencies.

20 According to Ferguson (1999), the current neoliberal investment model of large multinationals favors strategic investments in high technology poles that demand skilled, mostly foreign workers with higher education. For Ferguson, mining projects in Africa are industrial enclaves closely integrated with the headquarters of multinational corporations and metropolitan centers overseas, but abruptly isolated from their own national societies.

21 The white employees of Vale were mostly young recently graduated Brazilians who accepted work in Mozambique to make more money than they would be able to earn in similar positions in Brazil. Senior Brazilian engineers rarely accept to go to Mozambique without asking for much more money than the company would be willing to pay. In the first phase of Vale’s investment plan, the majority of Brazilians that came to Tete were single white engineers who lived in rental apartments downtown in the city of Tete or in large houses in Moatize - a village 30km from Tete’s capital where the mines are located. They don’t stay long and were hired to work in specific projects, returning to Brazil upon completion. They were responsible for the construction of the necessary facilities for the mining activities and were contracted to build the houses and other facilities that would receive the second wave of foreign workers. When coal extraction actually began, most Brazilian workers who arrived in Tete brought their families. They usually signed long term contracts and saw the job in Tete as a stepping-stone to a future position in Brazil. Since all the facilities were already built, the workers and their relatives lived inside the mining compound, in large blocks of houses surrounded by supermarkets, bars, sports courts, gyms and others amenities.

After repeated corruption scandals and without any sign of development, in 2013, the former guerrilla and leader of the civil war army RENAMO (the Mozambican National Resistance), Afonso Dhlakama threatened to return to arms. Before his death in 2018, several villages in rural areas were attacked. FRELIMO troops were also ambushed on different occasions and some mining companies' had their logistical infra-structure sabotaged.

For most people in Tete democracy has failed to provide a sustainable political order, putting the national political community at risk. For Harry West (2009: 3), one of the most important tasks for anthropology in recent years has been the comparative study of neoliberalism and the political cosmologies that find continued expression in this global form of governmentality. He affirms that translating democratic rules into local idioms of power would provide new ways to give voice and power to those affected by poverty and exclusion.

However, my interlocutors affirm that the democratic principle of egalitarian power is precisely the cause of their predicaments. Therefore, I argue that engaging new forms of representation in a neoliberal globalized world necessarily involves the dismantling of democracy's discursive monopoly about good governance. This discourse allowed Western countries to impose their political perceptions on non-Western groups. Recognizing that local societies have their own ideas about political order – and not necessarily democratic ones – and revealing how these ideas developed over centuries of colonialism, socialism and democracy - is the first step to understanding these societies as legitimate political communities.

Meanwhile, feeling lost in this fight between two powerful political groups and without any other leader to turn to, Tete's population feels increasingly helpless. Picturing themselves as a powerless people on the brink of a new civil war, the residents of the Zambezi Valley constantly repeat an old saying that seems to summarize their predicament:

“When two lions fight, the grass suffers”

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“Mestizo cattle is like us people”: reflections on cattle, family and coloniality

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Abstract

This article results from ethnographic fieldwork in farms that produce artisanal cheese, in the southwest of Minas Gerais, Brazil. The analysis focuses on the meanings of the practices developed there, especially concerning livestock, which conflict with recommendations of technicians working in the public sector. The latter have tried to manage both human and non-human lives, within a process of development supported by legislation and the insertion of technology, changing the traditional productive practices. This top-down managerial strategy has overshadowed the complex knowledge and the modes of existence empirically observed in these areas. I demonstrate how local practices of mutuality have provided answers that reinvent meanings for life.

Keywords: mutuality, cattle, coloniality, peasantry.

“O gado mestiço é como a gente”: reflexões sobre gado, família e colonialidade

Resumo

Este artigo é resultado de um trabalho etnográfico realizado em fazendas produtoras de queijos artesanais, no sudoeste de Minas Gerais, Brasil. O foco de análise são os sentidos das práticas ali desenvolvidas, especialmente a pecuária, que têm entrado em conflito com recomendações incididas por técnicos do poder público. Estes têm procurado gestar os modos de vida (humanos e não humanos) dentro de um processo de desenvolvimento que se apoia em legislações e na inserção de tecnologias, obscurecendo os complexos saberes e modos de existência empiricamente observáveis nessas unidades. Procuo demonstrar como práticas locais de mutualidade evidenciam respostas que emergem reinventando sentidos para a vida.

Palavras-chave: mutualidade, gado, colonialidade, campesinato.

“Mestizo cattle is like us people”: reflections on cattle, family and coloniality

Leonardo Vilaça Dupin

Introduction

“I don’t just need to have an idea of the microbiology of my milk. I need to have an idea of everything. The soil, the grass, the cow, the climate, it’s a whole thing. This is what makes me see that this specialization is a big idiocy, it’s because the blokes (from health inspection) can’t see anything of our cheese. [...] But it’s not his fault, it’s the school that taught him and made him that way. I have to forgive these blokes, but I have to warn them, because they were trained, catechized for that and the fault is of the universities that gave them only that one idea: it’s only right if you go through this way, that is the only way you can go through”. Luciano Carvalho, farmer, April 2016.

Throughout southwestern Minas Gerais, there is considerable variation in the definition of rural areas where the relation between land, work and family predominates. They tend to be called a “ranch” (*sítio*), ‘homestead’ (*chácara*) or “farm” (*fazenda*), according to their size, but also to distance from a city and the uses attributed to these places. Since dairy cattle breeding is the rule for most of the rural producers in the Canastra region¹, “farm” tends to predominate as a preferred designation. The label is generally associated with animal husbandry, although these spaces differ in use and size from the large properties in the region, which are likewise called “farms”².

Certain authors have sought to provide more precise definitions. E. Woortman (1983) defines the ‘peasant ranch’ as a system of diversified spaces, complementary to and articulated with one another, which periodically reorganizes itself in response to the historical process of the expansion of large properties (E. Woortman 1983: 164). According to the author, it is a place that evokes the house, but also the family and a process of descent associated with land use, much as I found among most of the local cheesemakers of the Canastra region.

According to E. Woortman (1983), as places that produce food for internal consumption, they have always been relegated to a marginal position in relation to the so-called noble cultivars – such as coffee and sugar cane – which have been central to Brazilian economic history. In what pertains to the focus of my research, artisanal minas cheese production in Canastra³, ‘marginal position’ is a suitable definition, considering its historical role as food supplier for mining cycles (Dias 2010), and in the present, because of the degree of informality that characterizes the activity. Indeed, although its means of fabrication is in accord with the traditional logic of the producers involved in its fabrication, most of them are in violation of the existing legislation for producing food in Brazil.

¹ This region is made up of seven municipalities (Piumhi, Bambuí, Tapiraí, Medeiros, São Roque de Minas, Vargem Bonita e Delfinópolis), located around the Serra da Canastra National Park.

² As E. Woortman (1983) claims, in a study carried out in the Brazilian state of Sergipe, the use of the term “farm” has undergone a historical transformation. Decades ago, it did not refer to large tracts of owned land, as it does today, but rather to the economic activity of livestock husbandry.

³ By this expression, I refer to food produced by traditional, family means in the region, which defines an artisanal mode of production, declared national heritage in 2008. I wrote a doctoral thesis about this food, defended in March of 2019, which discusses conflicts between producers and state agents. I carried out fieldwork in the region between 2014 and 2018.

There are estimated to be currently some 30,000 families producing food in Minas Gerais. Of these, only some 300 abide by legal norms, and are thus formally authorized to produce and sell their products⁴. In Canastra, a landscape of more than 800 families involved in the activity, only 57 families are regulated (which is around 7% of local producers)⁵. The vast majority are at the margins of the law, unable to legally place their products within the large distribution networks, since they do not abide by the set standards, which would demand modifications in how the cheese is handled and in the structure of the properties, but also transformation in local ways of life.

Returning to the predominant use of the term “farm” in the region, which stresses the role of cattle in the typology of properties, we encounter a first feature of the importance of these animals for rural producers. As we will see, cattle, which played a decisive role in the colonization of the region, acts as a subject in the construction of social identity and position for the families of the region. Cattle is both the product and a producer of places (farms) and people (farmers), but also an agent of work, affect and memories. This article concerns these animals and their owners.

In an article that describes the specificities of the construction of Brazilian elite cattle, with which I will engage in this article, Leal (2014) claims that cattle husbandry in Brazil is enacted as a “statement of alliances between humans and nonhumans: it is economy and symbol, purity and mixture, accident and design, medium and technology, nature and culture, and therefore an anthropological subject *par excellence*” (Leal, 2014:15).

I start not from a field of hegemonic power, as Leal did, but from small units of production, with characteristics of a peasantry, in which family work with these animals is predominant. The productive units and their actors – who “seal the pasture”, “make the cattle”, “create families”- will be described and analysed in their multiple relations, propitiating an understanding of the meanings that compose local ways of life, which are now confronted with exogenous knowledges and standardizations. In the pages which follow, I will discuss these producers, and also their animals.

The farm: seasonalities, mutualities and knowledges

It is early November. When the rains start to fall in the Matinha Farm⁶, Otusseziano Freitas (Otinho) cannot conceal his joy. Opening a wide smile, he exclaims: “Ohhhhhh St. Peter, better than this only a winterness”⁷. The rain welcomed on that day marks the passage between what is locally conceived as the two seasons of the year: the *drought* and the *green*. The first is marked by a dry period which usually starts in May and continue until the end of September. The second is marked by high temperatures and rains, covering the period between October and March.

4 It should be pointed out that the main health laws for dairy products in Brazil are currently divided between the federal, state and municipal spheres. The most important laws operating in the state of Minas Gerais are the Regulation for Industrial and Hygiene Inspection of Animal Products (Regulamento da Inspeção Industrial e Sanitária de Produtos de Origem Animal - RIISPOA), a national law of standardization, and the state law no 20.549, from 2012. For both laws, the established requirements associate “quality” with “harmlessness”, according to international standards for industrial production which, in general, demand investments in construction (cemented corrals, tiled cheeseries, mechanical milking, etc.), and require that producers undergo training courses and make use of such items as aprons, gloves, hairnets, masks and rubber boots. In short, legislation generates costs and imposes standardizations on the body of producers which are beyond the means and outside of the interests of most of them.

5 Data concerning Canastra come from research carried out in 2014 by the Association of Canastra Cheese Producers (Associação de Produtores de Queijo Canastra - Aprocan), in partnership with the Brazilian Aid for Micro and Small Businesses (Serviço Brasileiro de Apoio as Micro e Pequenas Empresas - Sebrae).

6 The property is situated eight kilometres from the city of São Roque de Minas, MG, straddling the Canastra Hills National Park.

7 “Winterness” (*invernada*) is a polysemic term in the region. It can indicate a prolonged period of rain over various days. However, it can also designate highland pastures in the rainy seasons or even how the animals get fat during the period. When I asked Otinho about its meaning, he said it meant “rain for many days” or “sealed pasture”. Despite their different referents, all of these meanings are associated with managing the animals of the property.

According to Otinho, this year the rains were “delayed” a few weeks and the drought was extended, threatening the food supply of the herd. After asking a few questions, I come to understand what the transition means to him: “it’s the time when the pasture gains strength and comes out”, when “it is sealed”⁸, but, more than this, the rains kick off his chain of work. “Rain is good. Pastures become green. It’s abundance”, he replies.

Pastures make up most of the farmland in the region. They tend to stick out in the hilly landscape of Canastra, occupying the horizon, shot through with stone walls that even today demarcate some of the limits between properties. The walls are the most visible legacy of the process of colonization, which began in the second half of the 18th Century, “characterized by the struggles of the *bandeirantes*⁹ against the Indigenous [...] and Maroon communities that occupied the left banks of the São Francisco River, where cattle farms were installed” (Fernandes, 2012: 28). The Portuguese brought the animals to the region as a means to occupy territory, and with these animals came the technology for cheesemaking¹⁰.

At present, in Matinha Farm – as, indeed, in all of the other properties I visited in the region – pastureland is divided into two portions: “pasture for bachelor cattle” and “pasture for lactating cattle”. The former is situated in more distant areas, far from the farmhouse, typically in steeper land. The latter is situated closer to the farmhouse and the corral. It is one of the most closely managed areas, and therefore one of the most compartmentalized.

Two years after observing the experiences of their neighbours and relatives (a common way of exchanging knowledge in the region), Otinho and his wife Eliana adopted the use of stakes and electric barbed wire fencing to divide their pasture for lactating cattle into 31 polygons. Each one of these is covered with a type of grass known as Mombaça (*Panicum maximum*), of African origin, but improved under laboratory conditions and introduced in Brazil by a public institute for agricultural research in the 1990’s¹¹. Mombaça is highly resistant to “pests” and to cattle, growing rapidly and densely, supplying a good quantity of food for the herd, allowing cows to gain weight and produce a fatty milk, essential for cheesemaking.

The property also has ‘fat grass’ (*Melinis minutiflora*) and signalgrass (*Brachiaria decumbens*), both also African genera of forage, the latter having likewise been introduced by research institutes, spreading rapidly throughout the Cerrado¹². Both species adapted well to local soils and climate, easily reproducing under the care of the producers. Today they are known as “tame pasture”¹³, “technological grasses”¹⁴, or “invasive species”¹⁵, according to, respectively, producers, technicians, and environmentalists – which indicates that they are a source of conflict.

8 The term indicates the regrowth of the pasture, which recovers with the rains from the dry period and cattle trampling.

9 Settlers and fortune hunters hailing from what is now the Brazilian state of São Paulo, who led expeditions to occupy the Brazilian interior.

10 Portuguese territorial occupation of the Canastra after 1750 was a way of expanding the agricultural frontier and ensuring Lusitanian dominion over the territory against Spanish ambitions. The Crown distributed lands, exempted settlers from taxes on agropastoral activities, and carried out campaigns to displace and exterminate Indigenous communities (composed mainly of the Kayapó and Cataguá) and maroons (the maroon communities of Ambrósio and Queimado) who occupied the region. Existing forms of organization were thus substituted by cattle farms, occupied by poor settlers, transformed into a dependent peasantry, and the agropastoral economy expanded throughout the region through these actors, who have historically composed the pattern of small landholdings that are at present spread throughout the region.

11 The grass was released in Brazil by Embrapa Beef Cattle in 1994.

12 Until the 1970s, fat grass was the most common grass in Brazil, before a replacement programme started substituting it for more productive grasses, mainly signalgrass species introduced by the defunct National Department of Research and Experimentation (currently Embrapa). Cattle in Minas Gerais consume mostly this type of grass at present.

13 A domesticated nature, good for human labour and for being eaten by animals.

14 Genetically enhanced in a laboratory.

15 This label is used when individuals of a non-native species arrive in a region through human assistance, and establish a population that comes to have negative effects on the environment.

Grass may, at first, seem to be of little interest to an anthropological study¹⁶. However, Otinho's views on pastureland are a clue that grass may provide a first step in understanding a series of complex relations between human-and-social ("humanos-e-sociais") beings and nonhuman beings, the latter capable of being socialized (Brandão 1999), involving the land as a space where life and work is organized. This set of relations, based on reciprocity as a value (Woortman, 1988), is encountered in many peasant societies, and, in the present context, has cheesemaking as its guiding thread.

Conceptualizations of these types of relations are varied: Woortman (1988) refers to *homo moralis*, to characterize this relation in which land as a value is counterposed to a utilitarian conception of its use. Brandão (1999: 17) points to the existence of a peasant *ethos* which works through values, principles and sensibilities, wherein codes of exchange are vitally and symbolically incorporated to social life, to the imaginary, and to social and cultural codes. Ploeg (2008) refers to co-production, which consists in the constant mutual interaction and transformation between the peasantry and living nature as a way of improving the resource-base of the property, thereby ensuring the autonomy of the agricultural unit.

However, as I see it, the relation in question here goes beyond the economic sphere – and I here include both the Functionalist and Symbolic-ecological approaches known as "good to eat" (Evans-Pritchard, 2013 e Harris, 1978) and the Structural "good to think" approaches (Lévi-Strauss, 1983). I propose to move toward the more contemporary repositioning of "companion", "interdependent" species, "good to live together" (Haraway 2008; Tsing, 2015; Paxson, 2013)¹⁷, studying relational processes of the co-constitution of social entities of all sorts, which dissolve the frontiers that isolate nature and culture, and which I will here call mutualities (Pina-Cabral e Godoi, 2014: 14)¹⁸.

In brief, this perspective considers a complex "ecology of beings" that cannot live apart, and which will therefore be described in contact with a wider world within which knowledge and life are deeply enmeshed. It is a matter of conceiving of dynamic means in which species do more than merely meet, since their relation emerges from co-evolutionary histories that involve processes of co-becoming within the complexity of worlds-in-processes, through the tangle of zones of contact and relations of power that can be historicized and described ethnographically. After all, "beyond mere survival, particular forms of life, in all their resounding diversity, emerge from interlinked patterns of living and dying, being and becoming, within a wider world" (Van Dooren; Kirksey; Münster, 2016).

In what pertains to cheesemaking in the region, these relations cut through the creation of pastureland, agropastoral lifecycles, and through the actions of bacteria and yeast in the fermentation of milk and the maturation of cheese, involving, still, inter-relations between numerous other species in their spatial-temporal patterns of organization. Through the mutual and constant interaction and transformation that emerges during food production, we begin to understand the relations of meaning, interests and affects. A network of relationships that, we will see shortly, contrasts with industrial, technoscientific agriculture, but also with hegemonic knowledges and powers, and which therefore are the object of constant tension.

16 What I mean by this is that the objects formulated by classic anthropological thought, which permeate the humanism and multiculturalism of the 20th Century, have almost always been framed in anthropocentric terms, registering a qualified life, described and analysed as political, cultural and social experiences, in opposition to an external, objective nature, which would be of little interest to the discipline.

17 The first two authors are part of a field of studies characterized by thorough practices of attentivity to an interspecific mode of being of species that are continually modelled and remodelled. Tsing (2015: 185) speaks of "complex relations of dependency and interdependency"; Haraway (2008) analyses persons and things mutually constituting each other as constituents in intra- and inter-relations. In a study of cheesemaking farms in the USA, Paxson (2013) calls this "cultured nature", resulting from the ability of farmers to work in collaboration with environmental agencies.

18 The sense used here is similar to that described by Pina-Cabral and Godoi (2014), who see mutuality as constitutive of the relations between persons. The concept here implies an intersubjective dimension, understood as the very possibility of interaction, whether between humans or nonhumans.

The first choices for Otinho, as for other farmers in the region, are in the pastures. These are the subject of calculations which soon drew my attention, standing out for the regularity with which they emerged as phenomena that involves the management of the whole property¹⁹. Pastures are involved in a universe of care that includes choice of foraging species, types of management strategy, number of animals to be kept, and, above all, timing. In other words, evaluations centre on the number of cows that the pasture's grass is able to sustain for a set period, without this relation entailing losses in herd productivity, such as reductions in the rutting time of the cows and the quantity of milk produced, as well as avoiding degradation of the forage and the soil.

The period of “rest”, when cows are removed from the pasture, allowing it to reach its ideal size for rumination, is what Otinho calls “time to seal the pasture”. This is a practice which depends on factors deemed to be natural (such as the seasons), but also on a family workforce (much of the time spent in the properties is dedicated to upkeep of the forage), and, increasingly, on technology developed beyond the farm, such as the selection of grasses, constant fertilization, etc. All of this determines the performance of the herd (and, consequently, the social reproduction of the family), since the amount of milk obtained is directly dependent on the conditions of the pastures.

“With this picket we stopped planting gardens and things got expensive for us. The picket is good, but to implement it in the nick of time, we spent some six thousand, two thousand Reais per hectare, but the true cost is 800 Reais to manage it. It increased 100 litres of milk per day, and allowed the property to sustain another 15 cows. I had 30 cows and the grazing land was all eaten up, there was no pasture, now I keep 45 cows and my pastures are sealed. And when your pasture is sealed it yields more milk, because it also keeps the cows fat, spends less fodder”. Otinho, December 2016.

The care that a farmer calls “zeal” veers toward the pastures. It is also in the pastures that we can see how the incorporation of technologies in Matinha has been occurring gradually, according to the calculations of the couple, involving knowledge transmitted down generations and relations of reciprocity (the exchange of experiences with neighbours and relatives, as well as the experiences of former generations). However, such incorporation has also been occurring via government demands that seek to standardize dairy production according to technological patterns, enclosing farmlands with fencing line with a rationalization process that seeks to limit the movement of animals (Andriolli e Pereira, 2016), bringing them closer, within a process of mercantile domestication.

Before the creation of the Parque Nacional da Serra da Canastra (Canastra Hills National Park, PNSC), in the mid-1970s²⁰, for example, most farmers in the region carried out seasonal transhumance, keeping two areas for feeding the herd: one high up in the tablelands, currently under the control of ICMbio²¹, where we find the predominance of a savannah vegetation composed of a variety of low-lying species, which acted as pasture reserves during the winter months; and another in the ragged valley bottoms, where we find mostly “fat grass”, which has been gradually replaced with signalgrass. As one farmer told me: “Everyone had land up there [in the tablelands], those who didn't rented it. (...) After it was expropriated, it was miserable, we had to stay only in the lower areas and had to plough and plant the signalgrass”.

19 On ‘peasant calculations’, see Carneiro (2015), who uses the expression to define a sort of knowledge that does not aim for an exact result, but toward subjective contingencies that create relations based on trust.

20 The PNSC was created in 1972, with 200,000 hectares, of which 71,525 were expropriated land (the area known as the Canastra tablelands), coming into the possession of the State. The remaining area is made up of private rural properties, mostly small to mid-sized farms used by peasant families that raise dairy cattle and carry out subsistence cultivation. These families have lived under the risk of expropriation ever since the Park was created, which is a source of great insecurity, having an impact on the dynamic of social reproduction of these families. See Cintrão and Dupin (2018) for a more detailed analysis of the theme.

21 Federal agency presently responsible for the administration of national parks in Brazil.

This is what happened to Otinho's family. During the wettest months, from October to March, his herd would feed in the lowlands, close to the foot of the hills. During the dry season, from May to September, when the lowland pastures were exhausted, the animals were taken to the tablelands, where there was an abundance of native grasses, allowing the planted pastures to recover. Some neighbours had retreats (the so-called 'stone corrals') to spend all of the rainy season with the herd. Others, like his father, would "bachelor cattle" and "lactating cattle" in the tablelands. What was crucial was that a few days before the animals went uphill the area was burned, and farmers took turn seeing to that.

The use of fire by farmers is an ancient practice, and though it may appear rudimentary (which is how the ICMBio employees see it), it has sophisticated elements, requiring a deep understanding of the environment, as evidenced in the narrative of the regional population. It is a science of the concrete (Lévi-Strauss, 1976), practiced seasonally, with native fields classified in three ways throughout the year: "field" (when the grass is green), "macega" (when the grass is dry) and "burnt" (when the grass reemerges, after the fire).

To burn the "field", local farmers take different factors into account, such as the time of year (after the first rains, while the soil is still moist), the gradient of the terrain (always from the top down, since "no one can stop fire going uphill and water going downhill"), wind direction (fire is set against the winds, and counter-fires are set with the winds so that they may find the fire in the other direction and put it out). Fallows and forest on the riverbanks are preserved by fire belts made during the day, cutting undergrowth at the edges, setting fire and putting it out, little by little, in order to widen the belts.

When it was allowed, fire was usually set at night, when it was cooler and the winds were less intense. It was also set in turns, with a biennial break: each farmland was divided into two and half of its area was burnt every year. Burned areas were alternated between contiguous farmlands. The technical process thus required collective planning, with work parties organized to help make the fire belts and to control the fire, the farmers of the areas being burned taking turns. Since the areas immediately beside those being burned had been burnt the year before, fire management was facilitated and, according to local farmers, rarely got out of control (Cintrão and Dupin, 2018)²². As one farmer said: "They say you can't set fire, but the counter-fire is a system in which you put out fire with fire. (...) People here know how to control fire because we're not arsonists, we set controlled fires".

According to local inhabitants, the practice was carried out following traditional knowledge and was adapted to the ecological characteristics of the region, respecting the reproduction of endemic species (emus, maned wolves, armadillos, deer, etc.). Native species were considered to be semi-domesticated by older inhabitants, since they lived in close proximity to local farms and "learned" the rotating system of the so-called "mild fire" (controlled), adapting to this management practice. According to farmers, emus, for instance, made their nests near water sources, and "when the fire came, she jumped in the water and wet the nest, protecting the eggs". The fire rotation was also seen to preserve the roots of the fodder by not burning them, since some two weeks after the fire, the "burnt" becomes a "field" and is again ready to receive fully-grown cattle.

Economically, the practice does not need an extensive workforce²³, has low costs and is very efficient, ensuring food for cattle and avoiding competition over arable land and the reduction of milk produced by the herd (Barbosa, 2007). Local people also claim that it avoids uncontrolled fires from reaching the areas where people live, since the belts prevent flames from moving into these areas, keeping them safe and maintaining areas of preservation, and, thereby, a water supply for cattle and the stock of timber for building tools, fences, corrals, houses and cheeseries.

²² I also heard reports in the influence of the lunar cycle in this process, adding another element that ensures that the fire is "thinner" with a "more beautiful rebirth" of grass.

²³ Farmers see this is one of the main problems that they currently face, since their children emigrate and they find it hard to hire employees in the region.

These management practices hark back to colonial times. They apparently result from a European practice that incorporated Amerindian techniques, undergoing small adaptations as a result of the biogeographical characteristics of the region. In a study of the Canastra region, Barbosa (2007) identifies the division and management of pastureland through the use of fire, and the system of allowing gardens to lie fallow, as legacies of Amerindian agricultural practices, which proved better adapted to the tropical environment than their European counterparts. “Within the range of choices put to the settlers, they selected those that they knew would work, watching Indigenous people or learning from enslaved Amerindians, often after trying and abandoning those techniques brought over from the metropolis for being inadequate” (Barbosa, 2007: 183).

The reproduction of agricultural techniques with these characteristics was studied by authors such as Cândido (1982) in the Bofete region of São Paulo, Brandão (1981) in Mossâmedes, Goiás, Woortman (1983) and Moraes (2009) in the São Francisco Valley in Piauí. Similar swidden techniques also seem to be found in Africa. In Evans-Pritchard’s (2013) classic study of the Nuer, for example, we learn that these Nilotic people lived from cattle pastoralism in the Sudan, migrating according to the seasons, and using fire in the savannas for regrowing grasses. The author sees burning, which occurred in the shift from the rainy to the dry seasons, as vital to the survival of cattle, and hence of the Nuer population²⁴.

Otinho and Eliane are currently two of the many farmers that live in the vicinity of the Park who claim that the creation of the conservation unit increased the number of fires in the region. Local people often have to protect their land from uncontrolled fires which, they claim, starts in the expropriated tablelands and reaches their properties:

“The fire comes from the Park at the wrong time, and then it’s worthless. Because fires need to be set at the right time, between the end of September and the start of October. After a good rain, you burn the field. Now the fire arrives in August, in that wild soil, and then it kills everything. Then it doesn’t rain, and the burning doesn’t stop, you know? And then instead of being a good thing, it ruins everything. It kills the field, doesn’t make pastures. Fire at the wrong time is just awful. (...) You need to burn the field every two years. Then what happens is that the Ibama won’t allow you to set fire. Then it’s five years without burning, and it gets this high. Then the fire comes, burns, and kills it all, it gets really weak. Now, if you burn every two years it strengthens it, you understand? It’s like when we cut our hair, it gets stronger”. Otinho in October of 2015.

The expropriated area was thus strategic to the local socio-productive system, a part of the economic and moral calculation of Otinho’s family, but also of other families in the region. However, with the establishment of the PNSC and technological innovations, considered more modern and efficient forms of management, serious restrictions to the use of this agricultural practice in the region were introduced, de-structuring (at least partially) the existing system. Thus, when Otinho’s father was forced to “sell” part of the lands to the State, he and other families in the region were forced to adapt the system that operated in Canastra, ceasing to set fires and to take the cattle to the tablelands.

Transhumance was gradually replaced by a system of rotating pasturage of technological grasses, use of silage – at present used during winter – combined with the incorporation of livestock feed in the diet of the animals. The same happened in the tableland areas expropriated with the creation of the Park, where the social

24 Eric Wolf (1976) claims that burning techniques are similar to the paleotechnical eco-types of the first agricultural revolution. At present, many biologists argue that the best way of preventing uncontrolled fires and preserving the biodiversity of the Cerrado, is, precisely, the controlled use of fire. They argue that the controlled use of fire reduces the amount of accumulated organic matter which acts as fuel during fires caused by lightnings or agricultural activities. Furthermore, it speeds up the process of recycling nutrients, allowing them to be used up faster by low-growing species, ending the vegetal dormancy of the seeds and creating fissures that favour the penetration of water and stimulate germination. See: http://agencia.fapesp.br/especialista_defende_manejo_de_fogo_no_cerrado/17303/

uses of these territories for agropastoral activities, hunting, fishing and food gathering, as well as for events of sociability (festive and religious rites), were suppressed within the administrative mechanism of the Park, which favours scientific research and tourism.

The standardizations of government power brought with them new meanings and ways of relating to space, causing sociocultural and technological transformations. However, these new standards were incorporated into a pre-existing cultural logic. As Brandão (1999: 57) states, they are only integrated as maps and modes of social dispositions of relations insofar as peasant culture incorporates and acts upon them, while operating the cognitive systems of a logic of nature and its relations to human society, and an ethical semiology of sensibilities and dispositions, involved in such acts of reciprocity. Fires thus never ceased to be set, which is a constant source of conflict with government agencies.

In the last decades, farmers have been criminalized by administrative agencies for perpetuating their traditional way of life, whether by the use of fire, or for other management techniques, including those stemming from restrictions imposed on the use of the Areas of Permanent Preservation, close to creeks, which are responsible for the decrease in the flatter and more fertile agricultural areas of the property, and also those related to food production that defy sanitary and productive standards (vaccination practices, ways of milking and fabrication). All of these standardizations, violations of which usually result in fines, but also in seizures and pressure to abandon outlawed activities, have placed farmers in a condition of illegality, and has legitimized, by means of resolutions, the incorporation of foreign technologies into their productive systems.

“Making cattle”: reflections on man, bulls and customs

Otinho and Eliane currently own 49 lactating cows, part of a herd composed of cattle that they call “mestizo”. It results from the acquisition of animals of different races (cattle and zebu)²⁵ and varieties of cross-breeding. It is known as “mestizo” because the procreation processes of previous generations included no formal monitoring²⁶, maternal and paternal lines not being expressed in pedigrees²⁷. In their herd there is no uniformization of the animals, which vary in colour, build and traits, though they identify some cows as Caracu, others as “facing” toward Nelore, Guernsey, Holstein Friesian, Gyr Cattle, and some which are “armadillo-snake”²⁸.

It is Saturday morning and we are in the corral. Otinho speaks of the difficulties he has been facing and the progress he has been enjoying for twenty years, since he married Eliane and acquired the property to carry out what he called “making the cattle”. This is a common expression in the region which, briefly, refers to the gradual quantitative and qualitative accumulation of a herd for daily care, which will economically guarantee the farm’s expenditures through the production of milk and calves, ensuring the reproduction the way of life of a “farmer”.

25 Bovine races can be separated into two main groups, cattle (*Bos Taurus*) and Zebu (*Bos indicus*). Although both originate from a common ancestral stock, they have evolved in very different environments, and therefore today diverge significantly in many aspects. As a rule, cattle (Angus, Simmental, Limousin and Holstein-Frisia) are European animals that evolved in temperate climates, while zebu (Gyr, Nelore, Brahman, Guzera) are Indian and have evolved in a tropical climate.

26 Despite the fact that breeders control the breeding of the herd, knowing how to describe the ancestors and progeny of each animal, as I will demonstrate shortly.

27 The pedigree (through inbreeding) is a mechanism that attests to purity and distinction through the publication of the genealogy of animals considered to be “noble”. It emerged in the 18th Century from the experiments of the Englishman Robert Bakewell, and later became a consolidated industry in various parts of the world. It is currently being used in “racializing” domesticated animals, such as cattle, horses and dogs.

28 The term indicates an animal of indeterminate race. I will return to it shortly.

In the region, one “makes cattle” by buying, selling and exchanging, but also through inter breeding that can confer some sort of adaptive advantage to the animals, such as physical resistance to the vagaries of local weather and acclimatization to the steep slopes, immunity to worms and ticks, and, particularly, to ensure that every animal is able to produce more milk without increasing the area of its pastureland these measures have been successful in Matinha over the last years (from 5 to 6.5 litres on average per animal). The incorporation of basic zootechnical notions of verification and the fixation of attributes has led people to speak of the blood of animals in terms of fractions: half-blood; 7/8 blood; 15/16 blood, etc... According to Otinho, his aim is to “verify the blood”, that is, to “fix” genetic constitutions in his animals, until they take on the characteristics of half-blood cattle, the Girolando (Gyr + Holstein)²⁹ cattle, which is simply managed and produces a greater quantity of milk without losing the “rustic” aspects that throughout the region are associated with resilience.

“Making the cattle” tends to be a long and complex procedure of biological construction, but it is also seen to result from work. Thus daily engagements with the herd are fundamental, as are relations with funding agencies, neighbours and relatives, with whom one exchanges, and the search for new clients to buy local products, such as calves and cheese. It often also involves relations between bosses and clients, the latter receiving a percentage of the offspring. With all this care, it is often heard that farmers “live for cattle”. Otinho likes to say that “we work together, we care for the herd and they give us a return”. Understanding this “bovine” idiom, to borrow Evans-Pritchard’s (2013) expression, is the next step we must take to understand the rationality between farmers in the region and to think of relations of co-constitution.

In a thesis on the invention of Brazilian elite cattle, Leal (2014) shows how, during the last century, cattle breeders made themselves into an elite along with their cattle, which they bred according to an original way of establishing pedigrees³⁰. They thereby consolidated themselves as a politically and economically influential elite in the country. Leal refers to the work of anthropologists who study kinship, reproductive technologies and human-animal relations, such as Mary Bouquet (1993), Marilyn Strathern (1999) and Rebecca Cassidy (2002), among others, who investigate themes such as purity, heredity and human-animal kinship.

Cassidy (2002), for instance, studies the “invention” of pedigrees among pure-bred racehorses in England. She argues that the market for these horses informs us much about local aristocracy, since pedigrees “carry” the history of the “bloodstocks” industry, based on patriarchal, hereditary and aristocratic criteria. As the author shows, it is no coincidence that these “pure-blood” horses are owned by families which are also “pure blood”, as it were. These elite animals, with a high market value, have become repositories not only of genetic material, but also of a racial ideal. Pedigrees do not only make evident mechanisms of inheritance, of belonging to a group, a race or a family; they also produce individual distinctions, whether between men or between animals, generating mutual prestige (Cassidy in Leal 2014).

As Leal (2014: 18) shows, the elite bovine market (of “blood stocks”) in Brazil is also constructed via a rhetoric of the “elite”, but with specificities related to so-called tropical zootechnique, such as the “control of the animals’ blood flow” and the regular publication of genealogies. As she shows, Brazilian breeders invented their own way of selecting and “racializing” cattle, which involves socio-economic, but also aesthetic, criteria. Thus if these animals are not the property of a “pure-blood aristocracy” in Brazil³¹, they are nonetheless undoubtedly the

29 The Girolando is the interbreeding of the zebu (mainly Gyr) with European cattle (Holstein). It was recognized by the Ministry of Agriculture in 1968. Some authors have observed that, in the past, the Canastra was the cradle of the Caracu breed, and gradually mestizo animals, stemming from zebu races which produced little milk, came to predominate. Even later, specialized races were introduced, resulting from interbreeding between zebus, mainly Gyr, and European races (Holstein), until the Girolando was produced. It is currently one of the most used races in the region (Meneses, 2006).

30 Leal studies the construction of Zebu cattle, through fieldwork in Uberaba, Minas Gerais, about 230 km from the Canastra region. The Uberaba area underwent a colonization process in which it maintained strong commercial ties with the Canastra (Lourenço 2005). Uberaba became one of the main towns of the Empire, and, in the 20th Century, a modernization pole in the interiorization of the country.

31 Unlike the United Kingdom, Brazilian titles of nobility were not inherited by “blood” and transmitted through a lineage, but bought from the Imperial government.

property of a wealthy upper class that made itself – and still makes itself – through their cattle and an idiom of kinship. As the author observes, for generations Brazilian breeding families have selected and commercialized bovine families. They are not the owners of these specimens, but detain the necessary knowledge to select and commercialize them, which is fundamental to constructing a market for elite cattle³².

According to Leal, the genealogies of these heads of cattle are more than registers of the transmission of substances and attributes. They result from authorship. By selecting specimens, breeders elaborate ideal matings, since they have a deep knowledge of the ascendancy of the cattle. Basing themselves in ideas of “blood”, heredity and genetics, they envisage the generation of superior progeny thus creating elite specimens. A successful bovine genealogy produces heads of cattle as much as it produces elite breeders (Leal, 2014: 20).

Leal (2014) is able to establish a correlation between men and elite cattle, which are dear to family markets like this branch of livestock breeding, where the kinship idiom (either through “blood”, heredity, genetics, genealogies, families) matters to “elite animals” and to breeders, making itself present in mutual evaluations. In the hands of the elite, these animals become objects of purity and distinction. The author concludes that the invention of the Brazilian formula for selecting these animals has a political, rather than simply zootechnical, meaning. Through “racializing” animals, occupying territories, and using biotechnology, elite animal husbandry links farmers and the State to a common project of family, nation and race.

Concurrently, it is telling that, at the opposite end of the “pure-blood” national cattle, far from the formal registries, in the midst of a “mini-landholding structure, where properties are generally smaller than 100 Hectares, where cattle breeding occurs in a traditional manner, lacking modern technologies” (IBDF, 1981: 29)³³, what predominates in genetic terms is cattle categorized as “mestizo”, of undefined bloods, diversified, resulting from inter-breeding different races. Breeding these cattle are fourth- or fifth-generation peasant families descended from a process of colonization that originates in wars against Indigenous and maroon societies, as well as mechanisms for fixing a workforce of free and poor whites of Iberian descent, such as those groups who led the occupation of the Canastra region and its agropastoral development (Lourenço, 2005). As I often heard in the region, ‘mestizo cattle are like us, they’ve got everything’.

Otinho’s definition of an animal as being an “armadillo-snake” – which synthesizes this process of inter-mixing – reveals how the race of the animals implies a socio-territorial segment. At the heart of it is a “blood” that ties men and cattle, to which certain qualities are attributed and which come to metaphorically represent a situational and relational ethnic boundary (Barth 2000), only explicitly activated in specific contexts that set the farmers of the region apart from a distant elite that possesses “pure blood”:

“The armadillo-snake is a head of cattle without a definite race. It has mestizo, Caracu, Gyr, Guernsey, everything in a single blood. So it’s not a race, it’s an armadillo-snake. It’s just like the Brazilians, because there’s Indian with Black with Italian with I don’t know what. Here in our region you still have the odd farmer who has a pure Holstein, any other race will be pretty hard to find. The land here is all small (...) In the Calçiolândia Farm³⁴ they make Gyr. There they’ve got the genetics neatly tied up. They’re the only ones with that good race. You see? Fifty years they’ve been making the cattle. Now there’s twenty years I’m making it, but first I didn’t have the cattle, I was buying little cattle to make, now I want to make my cattle from a Gyr (bull). I’ll put the Gyr and make the cattle.

32 See Preiswerk (1995) and Pellegrini and Marie-Dominique (2014) for other examples of how methods of management stamp emblematic identities on cattle, and pedigree books tend to promote the image of the race as a morphologically stable set of animals. These authors show how the idea of “pure race” is defined as resulting from choices effected by the members of genealogical books, and devices which mask a meticulous and deliberate process of selecting, construing this group of selected and adapted animals as resulting from a natural adaptation.

33 These words are taken from the first Management Plan of the PNSC, written in 1981.

34 The Calçiolândia Farm is located in the Municipality of Arcos, 115 km from São Roque de Minas. It is one of the largest breeders of dairy Gyr in the country, known for breeding, selecting and improving cattle. The farm belongs to one of the wealthiest families in Brazil, which has sought knowledge from the agrarian sciences in other countries since the start of the last century, acquiring a number of imported animals.

But it won't be special cattle, there'll be armadillo-snake in there, because we'll come out with some Girolandos, some only backed up, because my cows aren't pure" (Otinho, December 2016).

The speech is emblematic; it resonates with what Leal (2014) has written on how cattle breeding constitutes a monument (Foucault 1972)³⁵, which can, accordingly, be dismantled and investigated, thereby affording us new understandings, since it converges diverse concepts, themes and theories that relate men and cattle in the Nation State's modernizing project. It is thus necessary to investigate how these animals affect and are affected by people beyond the productive circles and places (the comparative denomination not being a coincidence here), mirroring political relations and identity politics more widely.

As was made evident during fieldwork, Otinho and most of his neighbours are not part of an economic or political elite. They are peasants, who store their savings in cattle. Since, historically, throughout the region, work in pastures and gardens was often paid with animals and ownership over the lands one worked on, these families composed a social mosaic that took form over many decades. At the margins of the dominant economic system, a network of kinship and knowledge was constituted, involving people and cattle, and which today is linked to cheesemaking farms in which neighbourly ties are fundamental elements in socio-economic organization.

However, since even today knowledge of breeding in the region is not exactly identical to that "invented" by tropical zootechnique, developed in research labs and published in scientific journals, the social representation of local herds – as conformed by public agencies of research and inspection³⁶ and their technicians – point to the demerit not only of the animals, but also of their owners, subsumed under a (symmetrical) shared ethos as "rudimentary", "backward", who should not even exist given their "technical inefficiency" and "precarious relations with the market". These technicians and administrators, sent to rectify local "deficiencies" (Ribeiro 2008)³⁷, with the power to determine standards (according to scientific and legal points of view) and, at the same time, to ensure that they are obeyed (as public morality), are guided by value judgements that obscure – or even make illegal – the complex knowledges and empirically visible ways in which these units function.

It should be stressed, as Leal (2014) reminds us, that heredity does not act alone in configuring the "purity" of elite specimens, since management is also an unavoidable condition of selection. The author argues that an elite specimen is also the result of a confluence of care, alongside factors such as pedigree and exposure. For cattle to be considered elite, it is not enough to embody exemplary racial patterns or to be a Pure in Origin specimen; it must also embody the efforts of the breeder who elaborated it (Leal 2014). Grading cattle thus also takes place by techniques, where feeding, for example, emerges as a type of knowledge that is essential for "animal improvement"³⁸.

Such "care" allows us to enhance "persuasive fictions", in Strathern's (1999) terms, which can mobilize reflection. If, as I have thus far shows, we have, on the one hand, the construction of mestizo cattle that is at home in the forest and is bred according to "rudimentary" or "savage type"³⁹ techniques, known as "rustic" or

35 Briefly, the concept of the 'monument' refers to a Foucauldian archaeological posture in relation to discourse, when the researcher, in the role of an archaeologist of knowledge of discourse, searches in its subsoil – the unsaid, ignored and sacred – for the deep units that can deconstruct the so-called surface-effects.

36 For an example of the affinity between types of administrative knowledge and scientific discourse, see L'Estoile (2003). Inspired by the Weberian idea that the modern form of domination is characterized not only by force, but also by a belief in its legitimacy, the author identifies a continuity between administrative knowledge and the scientific discourse of research institutes created by the colonial State. The notion of "national domination" emerges here, with knowledge-specialists (scientists) supplying information, but also interpretative frameworks, for acting specialists (administrators), which contributes to the belief in the possibility of dominating a complex reality, making this domination legitimate in the eyes of those who wield it.

37 As Ribeiro (2008) claims, prior to the existence of a development project, local populations could hardly realize that their fate could be sequestered by an organized group of people from the technical elites.

38 According to Leal (2014: 124), breeders and zootechnicians tend to claim that "half of the breed goes in through the mouth".

39 This expression appeared in the zootechnic manuals until the middle of the 20th Century (Leal 2014: 99) and relates to the type of management adopted in the colonial period, when animals were raised free, with the burning of pastureland. Valverde (1967: 247) notes that, during this period, breeders had to be watchful for herds to not go feral, and branding the with hot iron served not only to mark property, but also to tame them.

“brutish”⁴⁰, on the other hand we find “pure blood” animals which, as Leal (2014) describes, live in bays and “take regular baths and receive daily ‘toilettries’, have their pelt combed and cut, and their hooves treated”. These receive a “royal treatment”⁴¹, linked to control over cutting-edge technology (balanced rations, vitamins, medicines, etc.), practices which, if I may infer, are required of the contemporary civilizing process (Elias 1994), where custom establishes relations of domination and hierarchy.

Indeed, in what pertains to the term “custom”, I often heard the expression “cattle is custom”, and that it is undergoing a process of transition: “I don’t have the means anymore to transit with cattle (between natural pastures and rations). Today the cattle don’t go to the forest, as it was with more common cattle. Holstein, Girolando, these are cattle that don’t go into the forest. (...). Long ago you’d release a cow here and go get her close to grandfather’s, and there wasn’t this ration business”. The speech brings out the agency of these animals⁴², but also their approximation to the sphere of custom – as they approach families and their habits – in a process that is fixed as both temporally and spatially linear, associated with the modernization of agriculture. As Otinho told me, “a cow, if she’s raised on the trough and let loose in the field, she’s spoilt”.

“Making the cattle”, by blood or custom, reveals that these are hybrid animals, biologically given but also constructed in the field of work and family relations. However, as we cross this threshold from “rudimentary” breeding toward a technological pattern, animals become “natural models”, bearing a high genetic value, embodying characteristics of “advanced” societies, destined to be distributed (Escobar 1995)⁴³. There is thus a type of purification - in the Latourian sense (1994) - that tends to promote the image of the “race” as a morphologically stable set of animals, resulting from a natural adaptation (Pellegrini e Marie-Dominique, 2014), which conceals the results of choices made, and creates a hierarchy between mestizo cattle raised “in the forest” (as local knowledge) and pure-blood cattle “raised on the trough” (through technology and hegemonic knowledge), although both these orders may be interchangeable in many farms. There is here a clear perspective in which the race (of animals) expressed the social, moral and economic position of (human and nonhuman) actors: inferior and superior; archaic and modern; primitive and civilized.

As Garcia-Parpet (2009: 40) claims⁴⁴, when the condition of birth no longer matters as much for defining people, other references are sought out (and found) to define elites and, consequently, the less favoured classes. The end of the colonial period (and slavery) in Brazil seems to have demanded redefinitions in the differentiated criteria of citizenship, involving biopolitical strategies of control over bodies and (human and nonhumans) practices, which were in accordance with the modernizing projects that, from the second half of the 19th Century, sought to establish ways to include Brazil in the hall of so-called “civilized” peoples⁴⁵. Such projects were permanently articulated with another, that disqualified historically subaltern peoples, where the imposition of racial classification on cattle (rather than directly on people), based on what they lacked or had in abundance, is a fundamental feature of the production of difference.

As is evident, the aspects that indicate a border can change, without thereby affecting that subsisting dichotomy (Barth 2000). The relation established with specific animals – control over racialized cattle, which involves not only blood, but also a range of forms of management – seems to subjectify an ethnic border insofar as it produces stratification by instilling a notion of productive inferiority in its animals and ways of

40 Term used for animals bred free in the fields, which are difficult to domesticate. Not by accident, it is also recurrently used to designate individuals with “no social tact”, difficult to tame.

41 The term was taken from www.agrolink.com.br, a website dedicated to elite cattle.

42 In this context, it should be stressed that the cow is not a passive being, a mere recipient and reproducer of tasks, but an agent with a personality. In all farms which I went to, I heard words of respect and affection for the herd from farmers. “The cow is a very intelligent animal”, which, for example, “knew the way” of transhumance, which can “hide the milk” during milking, “is choosy in its feeding”, and which, therefore, influences and conditions the management of the producers’ different skills. I will return to this point later.

43 Or, in the opposite direction, they become synonymous with backwardness by being abolished through technical intervention.

44 The author studied the creation of elite food markets in France.

45 This term was later substituted by the expression “developed”. See Escobar (1995).

life as naturalized truth. As Otinho's speech makes evident, owning such animals defines those from "around here" and those from elsewhere, a symbolic demarcation is established between an "us", possessing cattle that are not "special", and a "them", possessing a genetic "purity", with animals of "good race" – the small and the big, "those who work one way and those who work another way". As defined by Barth (2000)⁴⁶, ethnicity does not decode a catalogue of objective differences (territory, language, customs, common values, etc...), but may extend only to subtle features, so long as they are locally significant, over which they share orientation and general scales of evaluation.

We see here how the structuring of interactions within a wider society enables the persistence of cultural differences that define social identities, always relational and contrastive. After all, according to Barth (2000) ethnic distinctions do not depend on the absence of interaction and social recognition. On the contrary, they are generally the very basis upon which the social systems that convey these differences are built.

It is interesting to observe that these hierarchy-positions attached to the herd have also been established and created in various ways. In the case of cheesemaking, for example, those who use herds of the Gyr race in the state have, in recent years, come to "bear" the benefits of producing a milk with the special properties of the order of the sacred ("the nobility of the most ancient bovine race in the world, sacred in India and Brazil") or the medicinal ("Gyr cattle produce practically 100% A2 milk, the protein of the milk does not cause intolerance or allergies"). A symbolic "distinction" – which gives these cattle and their producers access to elite cattle fairs⁴⁷ – constructing groups with "differentiated" status, making use of the characteristic rewards of "purity" fixed to the animal so as to produce and stress qualitative characteristics:

"In 2006, we bought the bull Lenhador (Gyr) from Calçiolândia, which entered our herd to change our destiny. With **its genetic force it made our still-backward matrix evolve in all necessary aspects for a modern cow** that produces milk. We always selected focusing the Serro Cheese, the flavour of the cheese we produced was different, everyone who tried it liked it and said so... This cheese is different, why? I would explain the **rustic nature of the Gyr that transmitted the flavour to the product and that's how the Gyr Cheese brand was born**, to bring to a close some one hundred years of producing Artisanal Cheese in Serro region, with **the nobility of the most ancient bovine race in the world, sacred in India and Brazil**, the Gyr race" Túlio Madureira, **farmer of the Serro** (my emphasis)⁴⁸

Although many farming families say that "mestizo" animals are adapted to the conditions that predominate in the region – claiming, for example, that "specialized" cows are more susceptible to health problems (such as mastitis⁴⁹ or complications during birth), demand greater care and costs (because of the use of medications and rations based on maize and soy, as well as needing contracted specialists to care for them), are ill-adapted to the steepness of the Canastra, and possess fewer aptitudes than local cattle (which have historically produced milk, but also meat, leather, fat, grease, horns, as well as being used in traction and transport) – their animals are seen to be signs of technological backwardness, linked to lack of knowledge, and with a low commercial value. In brief, they are very distant from any ideal of purity and distinction.

46 Barth (2000) criticizes the "definition of the ideal type" of an ethnic group corresponding to each culture that was popular in the Functionalism of the time. For him, ethnic groups are, on the contrary, ascriptive native categories that regulate and organize social interaction within and outside the group, based on a series of contrasts between the "close" and the "distant".

47 In 2017, these cheesemakers obtained exhibition space at the ExpoZebu. Although they lack the financial capital of those who invest in or breed zebu beef cattle, they have other sorts of cultural capital which places them in a privileged position within the group, allowing them access to certain legalized elite markets. It is no accident that one of the cheese producers that uses pure Gyr cattle has recently been invited to be president of the Artisanal Minas Cheese National Commission of the FAEMG, an agrobusiness agency that, as the site of the agency claims, "is an integral part of the Rural Patronage System, which is led by the CNA (Confederação da Agricultura e Pecuária do Brasil, Agriculture and Husbandry Confederation of Brazil)."

48 In: <http://www.sertaobras.org.br/blog/2016/01/29/gabriel-e-madureiras-encontro-de-criadores-de-gir-para-provar-o-queijo-mais-ecologico-do-brasil/>

49 This is an inflammation of the udder, caused by germs that enter the milk duct and propagates throughout the herd.

By seeking to “improve the blood” of their animals so that they obtain the characteristics of the Girolando, Otinho and Eliana once again toy with the incorporation of foreign techno-science that has increased the production of milk and cheese in the area – genetic improvement, but also nutritional and sanitary management – but which are absorbed into a contingent space of cultural intimacy, in which the affects and ethics of peasant exchanges carry weight, and transcend a standard of utility (Brandão 1999: 60). Along with an increased output, they also incur costs and risks by dependency on acquired technologies. They therefore proceed with care, running their calculations, fearing the loss of their productive autonomy, but also of altering their relations with other farmers and also with the animals. “Too much technology for us small farmers is not a good deal. If we put in a veterinarian, an agronomist, we go bust”, claims Otinho. As I heard from another farmer: “I’m even afraid of getting updated. Because of the loans and the rising costs”.

“Making the cattle” – which, in relational terms, means making oneself, since farmers make cattle and cattle make farmers – is a long process. If, on the one hand, it represent an archive, related to a social position, on the other hand it is also the place for work and managing the family, essential categories for the reproduction of a peasant way of life (K. Woortmann, 1988), which involves choices determined by relations that do not coincide with those recommended by technicians. As Woortman (1988: 17) notes, “it is not the past that survives into the present, but the past that, in the present, constructs possibilities for the future”.

Although agricultural policies and current standards have tried to homogenize these practices, in what concerns local relations the model of “making the cattle” is not only tied to a market interest in the herd and its commercial value. It implies invention and creativity in the choice of animals as a function of their different attributes, not being limited to a simple repetitive execution within this hierarchy structure, since each farmer confers distinct sense and meaning to their practices.

Thus, many farmers throughout the region have singularly sought out different ways of “making the cattle”, updating their husbandry model, based on choices that involve other forms of productivity, associated, for example, to qualitative aspects such as cutting costs and work time (due to the rustic nature of the cattle), better working conditions (due to the temperament of the animals), as well as factors of a moral order that imply other political and economic meanings.

“I think the good cattle are when each one has one colour, when it’s not very standardized. When you have genetic variety, it may be that you don’t have everything very good, but you won’t have everything very bad either. If there’s a problem, it won’t affect the whole squad. The idea is to escape from this standardization. (...) As I see it, there are many ways to understand productivity. You may lose, in the sense that a Guernsey gives 30 litres of milk, and then (mestizo cattle) will give you 10 litres, but you have other factors: quality, rustic nature, demands, etc.” Luciano Carvalho, farmer, December 2016.

Another interesting case that I was able to follow in the state of Minas Gerais, are those farmers that gamble on “making the cattle” via the recuperation of selected traditional cultural traits, thus “pitching” the race of the animals on the history of the region in a process linked to the valuation of the Canastra Cheese as a product with a differentiated provenance⁵⁰. “Inventing tradition”, some farmers have sought, for example, to “return” to the Caracu herd. This Zebu-like cattle has a low productivity when compared to other dairy breeds, but is tied to the knowledge of those who occupied the region and left it as their legacy. They thereby transmit the idea that this race is tied to a “more authentic” Canastra cheese.

50 Paxson (2013) observed a similar process among cheesemakers in the USA.

Making cattle and building families

As with all dairy producers and cheesemakers in the region, Otinho and Eliana get up every day before six in the morning. There, as in the dozens of farms I visited in the last few years, some of the windows of the farmhouse are turned to the corral. Whenever I slept in one of them, I would wake up to the mooing of the cows “waiting” to be milked. The proximity of the house to the corral is symbolic of what the animals mean to the families. Along with the land, it is the most prized good in the region. It is not uncommon to find houses which share a wall with the corral.

To start milking, Otinho calls out each cow by its name: Ant, Plum, Smoke, etc. The names are uttered in a grave tone, always in an almost unintelligible Minas dialect (hard to understand even for those born in the state), in which names are shortened. Thus, for example, Boa Vista becomes “Bovista... Bovista...”. He opens the doors and a cow strolls in the stall, without needing to make any great effort. In each of the troughs of the stall he puts two buckets with about 1.5 kg of ration. There are, however, variations among the animals. “It gives more milk, I give it more ration; it gives less milk, I give it less ration”, claims Otinho, who also says that each cow has its own trough where it feeds during milking, and each member of the family milks their own cows daily.

What we see are varied ways of creating affinity and leaving the animals calm, leading the work to be carried out faster and more leisurely, respecting each cow’s temperament. There are cows who “don’t like” to be milked far from the herd, and there are also those who “hide their milk” when they are displeased. I heard from a local farmer that the individualization of each animal is what makes them differ from the industry, since for them each animal is unique, with its own personality, which the owner must come to know, while also understanding other elements that influence the animals, such as climate, vegetation, disease, and so forth.

Alongside a second lateral door, which divides the stall into two parts, Otinho calls the calf that slept “apart” from its mother, in the company of other calves. He uses the same abridged words: “Bovista... Bovista... Bovista...”. The calf, called by the same name as its mother, crosses the door, also already conditioned by the daily breakfast, and is tied next to its mother (another way of calming it down). Once more I hear: “cow is custom, they do what we make them used to doing”.

When I ask Otinho why the calf has the same name as its mother, Otinho replies that the calf is called that way until it is weaned, after which it becomes nameless for the period in which it stays in the pasture of the “bachelor cows”. As I described earlier, this pasture is situated further from the corral and the farmhouse. If it is male, it will be sold after a few months, once it has gained weight, without ever having been named. If it is female, it will be baptized when it has its first progeny, and placed with the other lactating cows. “The calf is only baptized when it is an adult and will breed. Then it gets a name. Until it is weaned, it has the same name as its mother”, Otinho tells me.

This situation means that it is the cow which is baptized with the birth of its first calf. These names are important since, as some farmers told me, it is through them that animal families are created, but it is also through names that proximity to them is established, and this is important in conducting daily activities. I assume that the absence of a name during this period of the calf’s life is related to the distance of these animals, which for a period remain confined in the “pasture for bachelor cows”⁵¹ where the animals are, to use the terms I heard from a farmer, “less individualized”, in the sense that they are not inserted into the daily universe of work and, consequently, are less tied to the families building their herds.

⁵¹ Prior to the restrictions caused by the implementation of the Park, transhumance would take them much further away, to the tabletops.

In a study of cattle breeding in the French countryside, Deturche (2012) describes how the introduction of technical-scientific forms of breeding has been influencing the relations between breeder and herd, reverberating in the socio-political organization of the breeders. The author shows how the affective relations is detailed in a context where business management guidelines have ruptured the ties between breeders and animals, which lose their individuality. “De-individualized, cattle make up a compound bloc, placing the breeder, once again, in the neutral position of an administrator, since ‘they are only cows, you can’t mix everything’. Once more, by removing the affective side, the automatization of the herd follows” (Deturche 2012: 160)

This logic is perceived by the local farmers when they find their references challenged by modernization practices that have been gradually introduced into the region, as one of them made clear to me:

“Because with the breeding of beef cattle, the owner of the cattle doesn’t know the cattle, it’s all the same. [Our] cows all have a name. Every cow has a name, the calves learn the name of the cow. In my house, for example, we have a Brown, Browny, Black, Blacky. So, you call the cow and it comes. It is known by the name and it comes. And the calf comes too. And this is old as well. Just like in the time of my grandfather, great-grandfather” (farmer from São Jose do Bairro, October 2015).

In the Canastra, as we can see, the logic of proximity and individuation persists, with farmers organizing their activities according to the characteristics of each animal. The relationship established with them, as the report quoted above makes clear, emerges once again as a subtle definition of an identity boundary, differentiating local inhabitants through a historical and cultural process, in which the names of animals is of great importance.

When, for instance, animals which are considered to be ‘good animals’ die or are sold – typically because of their age – their names are recycled in younger generations. The names of outstanding animals thus become a sort of family surname. Families of cattle are mapped from these prestige animals, their descendants being recognized and distinguished from others⁵². Through them, memories of the best cows a farm ever had and their descendants are activated. In fact, these animals remain present even after their death. Through new generations, of course, but also through their skulls, hung in the corral, a custom found in all of the farms I visited, where these animals remain as a type of guardian to ward off evil spirits⁵³.

Following Ingold (2015)⁵⁴, we may say that race emerges as a generalizing “appellative” (a common noun) of the world of nature, proper to an industrial/colonial society that maintains interactions with a place, producing ethnic diversity within larger and more extensive social systems. This appellative is predominant in larger landholdings, with greater use of technology. In contrast, the names (proper nouns) singularize animals within a local universe of affects, conferring on them individuality, behavioural codes, memory and place in the world, introducing them as “almost human companions” (Ingold, 2015: 244-245).

52 Genealogies of cattle families, much like genealogies of human families, are dotted with preeminent characters. The existence of herd lineages is hardly new, and the elaboration of genealogical trees and the formation of herds by animals that one has bred is present in research among breeds in the Chamonix Valley (Barré 1997) and among the “races” of the *Hérens* cow (Preiswerk, 1995: 31-39).

53 In an article called *The Sacrificial Role of Cattle among the Nuer*, Evans-Pritchard (1953) reviews the work of a number of authors who also point to similar practices involving the role of the “spiritual guardian” of cattle in different localities.

54 In a study called “Naming as storytelling: speaking of animals among the Koyukon of Alaska”, Tim Ingold (2015) contrasts certain ways of naming and classifying in Western societies with the logic of Koyukon names for their animals. According to Ingold, two ways of classifying predominate in the West: one which singularizes the referent, which is the “proper name” (or just “name”) that is used exclusively for humans, except for certain pets; and another, generalizing, which is a “common noun” (or “appellative”), used for “wild animals”, plants and other things. According to the author, this distinction harks back to the nature / culture divide, which postulates the separation of human society from the domain of nature, and situates humans as unique individuals in opposition to a generic “nature”.

The singularization of these animals by names and their approximation to the family universe merits further attention. In a context in which young men pass into adulthood through their work – in which initiation in daily chores is a fundamental moment – the cow, previously considered a calf, also achieves this passage through “work”, which begins with its first progeny. This is when it starts to carry out its task in the farm, being moved to the “pasture for lactating cows”, close to the family space. The animal here gets named and starts to be a part of the “subfamilies” of cattle that are mapped in the memory of the farmers⁵⁵. The age of cows, but also their position in the herd, comes to be counted by the number of progenies it has had⁵⁶.

It is also interesting to think of the seasonal transference of “bachelor cattle” to the “pasture of lactating cows”. It is in this latter place that a cow ceases to be a calf and constitutes a family, and here we find an ambiguity, since there is an animal family – approximating the cow to the bull of the property and the calf that will be born – but also that of people⁵⁷. The history of the human family merges with the history of animal families; to speak of one is always to refer to the other, and both are in constant movement. Due to their relation of proximity and affect, it is sometimes said that they “are part of the family”.

In a study of the hinterlands of Pernambuco, Marques and Villela (2017) show how the category of the “family” is constituted through a “selection that depends upon various criteria”. Rather than being given, it is something that one learns and produces. They show, for example, that the signage on the ears of goats and the cattle irons are a graphic expression of the ways of making family. In their field, the “processes of lineage and territorial segmentation, of ramification and junction, of mixture and purity of “blood”, are partially coextensive and can be observed” (Marques and Villela, 2017: 40). Thus, if the family – in its distinct meanings and formats – is a notion tied to a pedagogy of daily life, I here opt for categories such as “work”, “memory” and “affects” as central factors in the dynamics of the constant and circumstantial constitution and redefinition of what is considered family, with people, but also animals, mutually composing each other⁵⁸.

This nearness might help to explain why cows are rarely slaughtered in the families of the region. In Matinha, for example, people eat pork, chicken and fish, all obtained from the farm, but meat is always bought in the market, a situation which is not uncommon in the region. “We don’t feel right killing them. Old people say it’s no good to eat cows from the land. And we also don’t like to sell them. It’s kind of a sacred animal to us”, told me Otinho.

Some years ago, health norms prohibited the slaughter of cattle within farms. However, the contempt for eating cows from one’s own farm in the region seems to precede this state-wide norm by quite some time. For example, in a report on his travels through the Valley of the São Francisco River in 1817, Auguste Saint’Hilaire indicates that this custom was already prevalent in the region:

55 Evans-Pritchard (1953) describes a moral identification between bulls and young Nuer boys, with the latter receiving the name of their favourite animal when they undergo the rite of initiation into manhood, both being brought into an intimate relationship that will last the rest of their lives. However, this new relationship with cattle does not only have a personal character, but also incorporates them into a wider lineage, with their symbolic use expressing the collective identification of clans and lineages with their herds.

56 Although the date of birth of each animal is marked into the cow’s skin, a requirement of the health agencies for vaccination purposes, breeders calculate the age of the animal by the number of progenies rather than by how old they are.

57 The terms used to qualify the biological relations among animals are the same used for human kinship relations, such as mother, father, daughter, grandmother. There are some differences, however: the term “sister” is applied only to matrilineal relations, that is, to cows how have the same mother (Deturche, 2012).

58 A similar situation is described by Preiswerk (1995), in a study of the ties between humans and cows in the Valais region of southern Switzerland. He studies the construction of a vast type of empirical knowledge between peasants which, he argues, operates as a sort of bricolage, in which families of animals constitute the collective memory of the region, transmitted through generations. In this region, too, some animals are considered to be family members.

“And if animals earn so little for their breeder, this is not due to the fact that, in this region, as in the south of Brazil, a part of the cattle is consumed in the meals of farming families, nor that they nourish themselves solely from the meat of their cows, since even wealthy people there only have beans, pork, milk, cheese and maize porridge at their tables” (Saint’Hilaire, 1937: 52.)

This relation recalls other ethnographic examples, such as the taboo on the “mother cow” among the Hindu, analysed by Marvin Harris (1978), who claims that the prohibition on consumption of the cow is a cultural response to an ecological adaptation, and the sacrificial rituals among the Nuer, described by Evans-Pritchard (1953). The latter author shows that, except on rare occasions of extreme necessity, the Nuer do not slaughter their cattle for meat, for slaughtering cattle outside ritual occasions is considered a grave trespass, which can harbour “ill luck”⁵⁹. In general, both authors highlight that if they were to kill their animals for food, both peoples would actually reduce their food resources, as well as uses for fuel, religious purposes, etc.

Among local cheesemakers, cows are only sold in times of financial difficulty, when a debt needs to be paid, or when it becomes completely unproductive (old or in case of some physical defect), becoming costly for the farm. If, to an extent, this points to an economical relationality in which cattle act as a sort of savings and insurance for the family in times of need, which men need and which cannot be accessed in the same way with money (Ferguson, 1990), it also involves a series of non-commercial relations in which, as Brandão (1999: 60) claims, one can discern the existence of affects and an ethnics of peasant exchange that cross the subtle tessitura of meanings and sensibilities, which are usually not noticed by (environment and health) agents, who periodically apprehend, and even slaughter, animals.

Despite being treated by men of science and public administration as a merchandise-artefact destined to be homogenized within biopolitical standards, cattle seem to participate in peasant lives as subjects, with which farmers establish daily affective interactions which involve a relation of identification and profound knowledge of the use of the environment, making these animals into more than mere economic goods. In this contingent of relationships, we find specific knowledge, accessed daily which, at present, challenges the asymmetry of foreign professional knowledge, anchored in legislation (Ribeiro 2008), but distant from the local universe.

Concluding Thoughts

Throughout this article, I have described the operation of a range of knowledges, temporalities and relations of mutual composition in a territory in the south of the Brazilian state of Minas Gerais, occupied by peasant families who have long been in conflict with constituted powers. The latter have sought to standardize local ways of life (for both humans and nonhumans) by different means, among which I draw attention to three: repressively (though different instances of the apparatus of inspection); morally (by adjudging the customs, animals and local instruments to be backward, and, therefore, replaceable); and economically (with incentives to adopt exogenous technologies, related to the loss of productive autonomy).

I have approached these three spheres by placing in the foreground complex ecological interactions with nonhuman forms of life that cross and co-constitute each other, making evident asymmetrical relations of power, forms of knowledge, interventionist policies, and modes of resistance. At the heart of the article we therefore find cattle, hybrid beings – effects of nature, but also the result of a mixture of a certain number of substances deriving from those who “make” them. From a dominant perspective, these have been constituted as “biological” artefacts⁶⁰ (Leal, 2014), used for centuries by an expanding agricultural frontier (still expanding

59 According to Evans-Pritchard (1953), sacrifice among the Nuer is not merely a negative injunction. They do not sacrifice their bulls because they are considered “sacred”, but, on the contrary, they are “sacred” only because they are set aside for sacrifice.

60 Taking Harraway as a reference, Leal (2014) refers to these animals in the hands of elites as artefacts of biological knowledge activated beyond scientific circuits.

in Amazonia), for social distinction, and, as I have shown, in a type of colonization of knowledge, expressing – through research institutes, rural extension projects, and inspection – a common order in an evolutionist line that situates *backward* and *advanced* people and animals (constructing moral centres and peripheries of knowledge), converted into practices of social control.

It may seem that I have here dealt with yet another controversy between science and traditional knowledge. Yet, as Leal (2014) shows, the construction of elite cattle – as the construction of mestizo cattle in the Canastra – is an effect of a science of the concrete rather than of a science of laboratories or university departments. According to the author, while the attributes that objectify an elite animal may be buttressed by technology, they are also of the order of the sensible, with animals being evaluated in their totality by the intuition of selectors and breeders. The fundamental question is thus the retention of an important type of capital: proximity to the State (and its technocratic management mechanisms), with the great political efforts of elite producers to construct races that converge with their idea of the nation, and with these actors occupying different instances in national public administration⁶¹, being responsible releasing funds, approving legislation and norms that standardize knowledge, and putting these into practice, after which they can be recognized and ratified by technicians.

In contrast, I have shown how these animals build memories, knowledges and ways of life. In the Canastra they are constantly reinvented, within possibility, as a task of daily re-existence, despite local actors rarely being taken into account during decision-making processes. As one farmer said: “Maybe the participation of a farmer is too important for some people, but there is this residue of colonization which is still very strong. If there isn’t a lab coat to evaluate it, then it’s deferred”. There remains an element of illegality, with the non-recognition and even challenges by the State (but also by private agents) of their practices and cultural references.

In what concerns environmental problems, for instance, this situation has currently generated in the Canastra hundreds of pending lawsuits involving farmers who countersue in expropriation claims and fines, demanding the recognition of their identity, their knowledge, and their right to remain in the properties as a traditional community⁶². In what concerns health norms, as mentioned previously, the vast majority of farmers survive in the informal market, with the food they produce travelling illegally, with traffickers, label falsifiers and detours from the main highways in the early hours of the morning to dodge inspection. All of this stems from mechanisms of political intervention, supported by networks of research and technical assistance, which imposes itself as the only possible and legitimate rationality.

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61 Leal (2014) uses the work of Palmeira (1989) to show that the State and rural businessmen are not exactly separate entities. More than an arbiter of the agricultural market, the State is the condition for the existence of rural businesses .

62 The case has become the largest conciliation process currently going through the Brazilian justice system, called ‘Canastra: Justice and Reconciliation’: <http://projetcocanastra.com.br>

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Machines among the crowd: on the political effects of algorithmic production of social currents¹

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Abstract

In this paper, I discuss a few ways that mechanisms for collective action are reconfigured by the activity of digital communication technologies. In particular, I examine how algorithms mobilized on the Social Web co-participate in the regulation of interdependence between the elements that compose contemporary figurations through the following mechanisms: by the production and organization of sociality by curating content, recommendations, and instructions for users; by their impact on the social production of the categories of time, space and identity; by the expansion of a business model that interlaces algorithmic activity and human action; and by the reconfiguration of the social modes of production and dissemination of knowledge. I conclude with the examination of the political consequences of this algorithmic activity in the production of social currents.

Key words: Political mobilization; Cyberactivism; Algorithms.

¹ This article originated from my participation in the panel discussion “Freedom, Emancipation, Democracy: The paradoxes of the digital” in November 2018 at the Maison de France Library in Rio de Janeiro, to which I was invited by professor Jorge de La Barre (UFF), alongside professors Dejan Dimitrijevic (Lyon II) and Laura Graziela Gomes (UFF). Produced in an interaction with Laura Gomes, this article was designed to offer a broad and therefore more theoretical approach to the tensions between digital and political institutions, while Laura’s article analyzed the same subject by taking a specific empirical situation as a starting point.

No meio da multidão, as máquinas: sobre os efeitos políticos da produção algorítmica de correntes sociais

Resumo

Neste artigo, discuto algumas maneiras pelas quais os mecanismos de ação coletiva são reconfigurados pela atividade de tecnologias digitais de comunicação. Em especial, examino o modo como os algoritmos mobilizados na *Web Social* coparticipam da regulação da interdependência entre os elementos que compõem as figurações contemporâneas através dos seguintes mecanismos: pela produção e organização de socialidades através da curadoria dos conteúdos e das recomendações e prescrições dirigidas aos usuários. Pelo seu impacto na produção social das categorias de tempo, espaço e identidade. Pela expansão de um modelo de negócios que entrelaça atividade algorítmica e ação humana. Pela reconfiguração dos modos sociais de produção e difusão de conhecimento. Concluo com o exame das consequências políticas dessa atividade algorítmica na produção de correntes sociais.

Palavras-chave: Mobilização política; Ciberativismo; Algoritmos.

Machines among the crowd: on the political effects of algorithmic production of social currents

Jair de Souza Ramos

Construction of the problem

Digital communication technologies, which constitute and are constituted by the Internet, have played an increasingly important role in social practices that have long been examined by sociology. One of these areas of research is politics, and my goal in this article is to analyze some of the changes that the internet has brought to this field. To do so, I present a question that based on the articulation of three ideas.

Two of these ideas are inspired by the work of sociologist Norbert Elias. Firstly, he argues that what we call society consists of figurations of individuals or broader units such as companies, states, parties, groups or classes, which are interdependent and function dynamically, in which no element can determine the overall functioning of this figuration. Therefore, they are at the limit, undetermined (Elias, 1980). Secondly, he calls attention to the existence of different mechanisms of regulation of this interdependence, ranging from gossip at the micro-level, to the state and market competition at the macro level, passing through several, as even the functioning process of a small configuration of individuals, such as a family, assumes the production, ownership and circulation of a set of information that is mobilized in the management of the bonds among these individuals. other intermediary mechanisms (Elias, 1994; Elias & Scotson, 2000).

The third idea I use as a starting point is network-actor theory as presented by John Law. To summarize his argument, we can say that social worlds are produced by heterogeneous networks in which not only human elements such as individuals are articulated, but also non-human elements such as objects and technologies (Law, 1992).

The articulation of these three ideas inspires the following question: In what way do digital communication technologies co-participate in the regulation of the interdependence between the elements that compose contemporary figurations? This question addresses phenomena that are both at the center of politics and go beyond it.

For instance, even the functioning process of a small configuration of individuals, such as a family, assumes the production, ownership and circulation of a set of information that is mobilized in the management of the bonds among these individuals. Remembering to congratulate people on birthdays, wedding anniversaries, graduations, and other occasions, are examples of this task of managing interdependence among family members. I choose this example because it is present in the everyday life of many of us and because it allows me to emphasize another element of this experience, which is the role of the Facebook algorithm in providing personal information about birthdays and that demands a certain behavior regarding this information.

This example allows me to deepen the formulation of actor-network theory, according to which social worlds are the fruit of the co-production of humans and non-humans, to address a specific type of non-human, the algorithm. Found in various forms, algorithms allow digital platforms that form the *Social Web*² (Facebook, Instagram, Twitter, and YouTube, to name a few) to act on the actions of humans.

Let's talk a little about this tool. In its simplest definition, an algorithm is a standardized sequence of actions used to obtain a result. But the algorithms used by digital platforms to induce users to take action online have at least two major differences with this simple definition. The first is that these algorithms, which we can call complex, are based on artificial intelligence, that is, they are constructed in such a way as to approximate as much as possible models of rational human action involving decision making, problem-solving, and the learning necessary to deal with new situations. This means that this type of algorithm is built to mimic human behavior and thinking (Christian and Griffiths, 2016; Russel, 2013).

There is a second important complexity in these algorithms. It is the fact that they operate on a database that includes not only the information entered by the programmer but also the information generated continuously by the use of the platform by humans. In this sense, every human – or supposedly human – action carried out on a digital platform, whether on computers or *smartphones*, can become a digital data source and serve as a base of activity for an algorithm. Platforms with a large user base and strong engagement with it, such as *Facebook* and *YouTube*, for example, produce gigantic databases. And it is in the treatment of this data that an algorithm can learn to get to know and classify agents and their actions and to deal with new situations, including the possibility of identifying and predicting, in an approximate manner, the behaviors and states of mind of users, as well as their material conditions: whether they are ill, their age, changes in marital status (married, single, etc.).

Now, we can go a step further, because if actor-network theory (Law, 1992; Latour, 2000) teaches us that objects are co-participants in the production of social worlds forming heterogeneous networks, this heterogeneity is not limited to the distinction between humans and non-humans, but also resides in differences among humans themselves, in the form of different agents, and the distinction between non-humans, in the form of different types of object. Thus, the objects that co-participate in these networks are also heterogeneous, and digital algorithms are a specific form of object, a historical novelty that requires examination. Based on these considerations, I would say that the specificity of *Social Web* algorithms lies in the way in which, through the articulation of artificial intelligence and a database, these objects are capable of acting intentionally on the actions of humans and the actions of other machines.

This specificity of the algorithm technology allows us to reformulate my original question in the following terms: How do algorithms mobilized on the *Social Web* co-participate in the regulation of interdependence between elements that compose contemporary figurations?

Algorithmic power and programmed sociality

Contemporary literature dealing with the social effects of algorithms is growing rapidly and a complete presentation of it is beyond the scope of this article. In an anthology published in 2016, and symptomatically titled *Algorithmic Cultures: essays on meaning, performance and new technologies*, the organizers affirm that algorithms are at the center "of all social processes, interactions, and experiences that increasingly hinge on computation

² The term *Social Web* designates the creation and organization of sites and software that are organized to encourage and further social interaction. According to Santos & Cypriano: "web 2.0, sometimes called the second generation of the internet, is fundamentally characterized by its user participation, its openness to use and the network effects it produces. Such participation occurs through a system that stimulates interactions, sharing and exchanges between netizens, that is to say, a system that incites the collaboration of whoever might be available to interact with others through the platform's mediation... involving the notions of exchange, sharing, and collaboration." (Santos & Cypriano, 2014:64). And we can say the sociality phenomena built upon these network structures have become a central object for digital sociology (Boyd, 2014).

to unfold; they now populate our everyday life, from the sorting of information in search engines and news feeds to the prediction of personal preferences and desires for online retailers, to the encryption of personal information in credit cards, and the calculation of the shortest paths in our navigational devices” (Roberge & Seyfert, 2016:1). Among the objects of sociological analysis that have been reconfigured by the presence of algorithms are mechanisms of power. This reconfiguration is the object of this article and is present in a recent, very important body of literature. Thus, based on an examination of how marketing and web analysis companies have implemented sophisticated algorithms to observe, analyze and identify users, forming large online surveillance networks, authors such as Cheney-Lippold have argued that these computer algorithms have the ability to infer users’ identity categories based on their web navigation habits, giving algorithms a place in a long history of biopower mechanisms and biopolitical tools (Cheney-Lippold, 2011). Furthermore, other authors posit that contemporary democracy faces an “algorithmic turn”, meaning that the data processing and automated reasoning that constitutes the algorithms play a vital strategic role in the conduction of electoral processes, consumer decisions, governing mechanisms and decision-making (Gurumurthy & Bharthur, 2018). In this article, I intend to contribute to the development of this field by intersecting two lines of research emerging from these texts. The first line inscribes the examination of algorithms in the long history of technologies of power, the second analyzes how the use of technologies of power and political disputes are reconfigured by the “algorithmic turn”.

The first step in answering the question with which we ended the previous section is to understand that the mechanisms for regulating interdependence operate as instances of power. To do this, we will take as the starting point the definition of power used by Foucault, according to which power has repressive and productive aspects (Foucault, 1995). In his studies on medical power, psychiatric power, and specific situations, such as pastoral power, Foucault criticizes what he calls the theory of zero-sum power, which affirms that power is the enhancement of the capacities of action of those who are subjects of power relations, at the cost of reducing the capacities of those who are the object of those relations. To the contrary, for Foucault, power relations constitute individuals on both sides. And they do so by increasing the capacity for subjects to act in a given direction, while simultaneously offering them a closed horizon of possibilities for action.

Foucault’s definition of the concept of power is a promising tool for analyzing the functioning of the Internet, since the digital platforms that constitute it are constructed as a kind of “open work”. That is, their design considers not only the actions of users, but a platform only exists completely when “filled-in” by such actions. In addition, the platforms provide mechanisms that strengthen users’ ability to act in the form of communication, production, and dissemination of textual and audiovisual content, information retrieval, memory enhancement, and pre-organization of countless actions. This increase in the capacity for action of users occurs simultaneously to an increase in algorithmic control over user actions, in an effort to maximize user engagement with a platform.

The term *Social Web* (or *Web 2.0*), popularized in the mid-2000s, emphasizes the multidirectional capabilities of the technologies gathered on the Internet, defining it as an environment of interaction and participation. This means that, instead of simply consuming content made available by the websites, users can and are encouraged to interact with one another through words, images and sounds, the so-called *posts*. As the capacity for information transmission increased, the possibilities for posting also grew, evolving from texts to drawings and photographs, to music and videos. In this new dynamic, users were redefined as *prosumers*, that is, as consumers and producers of content.³ In this direction, websites, redefined as platforms, were increasingly

³ The term *prosumer* precedes the generalized spread of Web 2.0. It was coined by Alvin Tofler in the 1980s in an attempt to predict future changes in modes of consumption, and, as shown by Costa, the ideas involved had already been developed by Marshall McLuhan and Barrington Nevitt in a 1972 work (Costa et al. 2013). Nevertheless, Web 2.0, with its bidirectional technologies for communication and content creation in virtual medias, provided the ideal environment for the spread of the concept, which went on to be widely employed in marketing studies.

conceived as a co-production between programmers and users. With this in mind, a *Facebook* page with no personal information and no added friends is a simple digital form that has yet to be filled in, because it is the activity of users and their relationships that fill-in a website.

Another famous example of this dynamic is the *YouTube* platform, which is constructed not only as a video repository but as a means to create an audience to compete with traditional media, especially broadcast TV. Thus, the platform offers users tools for editing, publishing and popularizing videos. The collaboration between the platform – in the form of tools and algorithms – and content-producing users, simultaneously produces the audience of the individuals themselves, the quantity of users and the number of hours they spend watching their channels and the YouTube platform. This dual production of audience results in possibilities for remuneration through advertising for the channels and the platform. It is thus clear that it involves increasing certain capabilities of action of individuals, while algorithms and the rewards for visualization increasingly induce them to seek an audience on the platform.

Tania Bucher proposes the concept of *algorithmic power*, establishing an approximation between the Foucaultian definition of power and the mode of operation of the algorithms which is very close to the analytical effort we are making here (Bucher, 2018). She draws attention precisely to the fact that the algorithms of digital platforms, especially those of the so-called *Social Web*, act intentionally to induce actions in the users and to co-participate in the production of sociabilities. Another important concept presented by Bucher is called programmed sociality. She uses this concept to describe the fact that these algorithms are built to produce social effects. This involves inducing different types of associations between users, such as encounters, memories, praise, criticism, congratulations, etc. With the term *programmed*, the author not only describes the fact that the algorithm is a computer program but also points to the fact that its work is to gather, and to organize this association, that is, to program interactions among people. Another crucial aspect of *programmed sociality* is the fact that, through these encounters organized by the algorithm, human agents incorporate norms and values about the social world.

Let's observe both aspects in a concrete situation. If we take the case of *Facebook* as an example, we will see that the platform constantly notifies users about the activities and status updates of other people that are part of their interpersonal network. It informs if people are near, what they are doing, and what has happened to them, giving users the ability to communicate with these people on the network, to congratulate them, criticize them, and interact with them. In addition, at certain times, for instance, on the birthday of a network member, the algorithm not only informs the date of the birthday but suggests that users congratulate their friends. So algorithms not only publish information, but also prescribe behaviors.

The platform is not limited to providing all the information about all members of an interpersonal network. To the contrary, an algorithm operates by trying to understand what attracts a user's attention and what information, about whom and about what subject and/or event would make a user more likely to respond. Based on the patterns learned, which are always dynamic, an algorithm selects the information that will be sent to the user. The algorithms are not simply a machine production, not even in the cases of machine learning. They are programmed by humans who have been socialized with social norms and values and, therefore incorporate them into the production of social algorithms. But this incorporation goes far beyond the replication of perceptual schemes in which the programmers have been socialized. Even in the cases of *machine learning*, a fundamental part of the raw material of learning – which consists in the apprehension of patterns – comes from databases that materialize social arrangements and productions ordered over time, and then loaded with historically constructed values and norms.

Another important, but often neglected aspect of the analysis is that these algorithms were fed with the result of anthropological, sociological, and psychological studies gathered by this consumer science of *marketing* to answer questions such as: what mobilizes people? What makes people connect and how do these

connections impact their actions? What should be placed in the foreground to attract people's attention and generate engagement? Such studies allow us to understand, for instance, the importance of family, the importance of certain dates and personal statuses, the importance of interpersonal trust in information, among other factors. The studies also show that people mobilize around childhood, situations of animals and children, situations in which the community they believe they are part of is in danger, and others. Once these principles of mobilization and association have been defined, they are introduced in the algorithmic programming and allow the operation of what has been called algorithmic curating, a concept that I will develop further on, which is related to the modes of selection and distribution of the information presented to the user⁴.

But this algorithmic activity is not only about producing social bonds – through which social values are built. It is also a matter of mobilizing existing social ties to produce connection and engagement in the platform. The operation of an algorithm supposes that a user is connected through the computer and, more importantly, the smartphone, since it is mobile and accompanies users throughout the day. For this reason, the primary objective of the platform is for users to install the application on their mobile phones and remain connected at all times. To induce them to perform these two actions, the platform relies on a user's interpersonal networks. Therefore, users are asked to provide access to their list of contacts to allow capturing a social network that already exists within the digital network. It is friends and co-workers who often suggest using an instant messaging tool such as *Facebook Messenger* or *WhatsApp* to directly communicate within the interpersonal network. Therefore, the refusal to take part in a digital network can impede the performance of actions within the interpersonal network. Again, following Foucault's concept of productive power, we encounter an increase in a capacity for action combined with a limiting of the field of possibilities for action.

These observations of algorithmic power and programmed sociality lead us to the conclusion that to be socially effective, algorithms cannot be neutral because they need to select the information that is socially meaningful and, by doing so, they update social values. Simultaneously, algorithms perform functions of socialization and operate in power relations to the degree that they strengthen capacities of action on a horizon of action supported by the machinic effort to produce connection and engagement. This definition offers the first answer to my central question about how algorithms co-participate in the regulation of interdependence in contemporary societies. I will now examine some specific situations of this regulation.

Algorithms and the social production of time, space, and identity categories

The idea I would like to develop in this section is that the sociality built through digital communication technologies produces and is produced by content that fill-in the categories of time, space, and identity and that this fact has political consequences. Readers familiar with sociological theory will recognize a Durkheimian theme here, addressed in the classic *The Elementary Forms of Religious Life* (Durkheim, 1989). As Horst and Miller (2015) show, it is necessary to recognize the multiple planes of the internet's materiality, and among them, what the authors call contextual materiality is exactly how subjects' experiences on digital platforms take place within a material frame of time, space, and identity that is co-produced by the organization of the platforms and the agency of users. We can, therefore, argue that digital platforms give materiality and specific meanings to these categories and therefore serve as a framework for political associations and struggles.

The relationship among the definitions of time, space, and identity, on the one hand, and political mobilization on the other, lies at the heart of Benedict Anderson's concept of an *Imagined Community*. Indeed, the idea that communication technologies in general build meaning and materiality for these categories

⁴ The concept of algorithmic curating has been developed in the field of communication studies with a similar meaning to the one I utilize in this text. According to Correa & Bertocchi, there is an overabundance of data on the digital web, and algorithms have performed a variety of actions involving organizing these data through criteria and selections (Correa & Bertocchi, 2012).

are at the basis of Benedict Anderson's conceptual discussion of the role of maps, censuses, monuments, literature, and, above all, the press in the production of imagined nations as communities (Anderson, 1983). The possibility to materialize when, where, and who (including the definitions of us and them) as a collective experience depends on collective means of representation and communication. In the gradual production of imagined communities, newspapers play a fundamental role thanks to their periodicity, the chronological and spatial organization of their narrative, their themes linked to territories and populations, and their emphasis on the very existence of the national. Thus, social media materializes categories of time, space, and identity and serves as a framework for the constitution of what Weber conceptualized as community social relations, that is, based on a shared co-belonging among the agents (Weber, 2004: 81).

Digital platforms are, first and foremost, communication technologies. But they are not merely a private face-to-face communication between a sender and a receiver. Platforms are not just an arena where individuals can relate. First of all, platforms harbor and enable collective communication. Several individuals produce and receive information simultaneously. Secondly, the distribution of information (what will be seen, under what conditions, and by whom) is organized by the digital platform. This makes platforms social communication tools. And it is in this condition that they generalize categories of understanding.

A well-known expression of social communication exercised by platforms and the way they generalize categories of understanding is the timeline, a tool that organizes what circulates as information and among whom. This organization is made by algorithms that operate from three domains: a) patterns of action and classification inscribed by programmers in the source code; b) patterns identified by machines in the actions and relations of human actors; and c) patterns identified by humans in the actions of machines and other humans. A *timeline* is the fruit of this circular relation in which machines and humans act and modify their actions based on the always dynamic understanding of how the other operates. In this sense, a *timeline* is co-produced by humans and machines. But this co-production does not establish an asymmetrical relation between the parties, since the organization of the social communication that permeates and constructs the platform rests, ultimately, on the algorithms. A timeline is the individualized face of a collective organization and not an individual organization per se.

The first aspect that I want to emphasize is the fact that a *timeline* produces a temporal ordering of the contents presented to the user. But, in addition to arranging the contents chronologically, a timeline forms an arrangement of the perception of time. Like a clock or a newspaper, it marks time for readers, informing them of what just happened – what is urgent; what happened some time ago – in the form of memories; what is the subject of the day, and other markings of time. Moreover, a timeline builds its own rhythm for updating information – the so-called *real-time* – which is briefer than that of other media, such as newspapers and TV news, and thus induces users to consult it constantly.

Another dimension that crosses a *timeline* is the dimension of place. Most digital platform applications – *Facebook*, *Twitter*, *Instagram*, among others – have mechanisms of spatial localization that allow users to identify from where other users access their accounts and post their contents. The main mechanism consists of extracting information from GPS devices on smartphones, but there are other features, such as the triangulation of cellular antennas, IP (internet access points) tracking, and the identification of patterns of displacement and location created by tracks left in online navigation. Thus, one of the central elements used in organizing a timeline is the definition of place, since the algorithm considers the location of users in the selection of the subjects and posts that are published.

The third element in the organization of timelines is the interpersonal network in which users are involved. This network is formed by a structured set of people and/or entities that produce content from which the algorithm extracts a selection and publishes it on users' *timelines*. Since we discussed this theme above, I only

want to emphasize the idea that this flow of information within the interpersonal network narrows the bonds between these agents and builds a collective experience of co-belonging as it produces a social reality of people interconnected by common events.

To summarize, since digital platforms function as social media spaces, the algorithmic ordering of information produces effects of simultaneity, by transmitting information at an algorithmically ordered pace and by broadcasting the same information at the same time in a network. This order also produces contiguity effects because algorithms consider spatial location in the distribution of information. In addition, the very definition of place and common space is determined by the way information is distributed. Finally, this interpersonal network in which algorithms produce a common definition of time and space is also the target of the production of an idea of us and them. That is, the algorithm promotes the existence of groups by distributing information about events and actions that are supposedly of common interest and that demand a collective positioning.

The business model of digital corporations: *marketing* as philosophy, algorithmic activity, and collaborative human actions as method

Since the early 2000s, the technological innovations found on the Internet have been hailed for their potential to democratize politics by transforming relations between citizens and institutions, whether they represent the state or private corporations (Castells, 2003). The representation of the cyber-activist, imagined as a fighter who, thanks to their expertise in programming, unlocks state and corporate secrets, was exemplarily embodied by Wikileaks in the famous leak of official US documents in 2010.

Paradoxically, almost parallel to this utopian project that is still under development, the Internet has seen a growing monopolization by some digital corporations, especially *Google*, *Amazon*, and *Facebook*. If the Internet is a network of networks, these corporations form gigantic sub-networks that aspire – especially *Facebook* – to capturing all the connections and navigation data that an individual generates on the network. Thus, they aim to contain the entire experience that each user has on the Internet.

When we discuss how algorithms play a role in regulating interdependence, we are addressing not what communication technologies can be, but rather how they are used by these large digital corporations. This is because the broad collective experience of using the Internet involves the experiences of the users of these corporations, at least in the past ten years.⁵

We discussed above the place of *marketing* in the organization of digital platforms and their fundamental intention to obtain increasing connection and engagement of users. We return to this topic to examine in more detail how it organizes the operation of the algorithms.

In general, the algorithmic activity of the platforms and the work of users are naturalized by a discourse that assumes the existence of a neutral rationality of machines and that users understood as communities supposedly share altruistic values (Christian and Griffiths, 2016; Russel, 2013). However, one aspect that is sometimes neglected in the discussion of artificial intelligence and which is particularly important to how sociology understands human intelligence and action is intentionality, that is, the motives for action and reflexive monitoring of action (Giddens, 2000). To some extent, this discussion is obscured by the idea that technology is neutral in terms of its intention and by the belief that motives for action can be summarized in the generic idea of “pleasing the user”. However, the closer *Social Web* algorithms come to artificial intelligence the more they are permeated by intentionality and their focus is not the desire of users, but the interests of digital corporations, which generally consist of finding ways to monetize users’ Internet activities.

⁵ To illustrate the reach of these companies, in 2012, Facebook had 2 billion accounts.

As Dominic Cardon has shown, when the Internet began its broad expansion in the 1990s, Webmasters, in their search for information that could be monetized, developed ways to measure the number of visitors to their websites. They were inspired by a basic operating procedure of traditional media such as TV and radio, which consisted of measuring audiences to use the data gathered when offering their media as a vehicle for advertising (Cardon, 2015). In this regard, the views were conceived as an audience. This mechanism later became the basis for a broad set of algorithms designed to measure views of a web page, which allowed digital platforms to compete with traditional media for corporate advertising. Currently, *Google Analytics*, which is a free service offered by the company to certify the number of views on a website, is the dominant tool used by websites that exist outside the spaces of the other large Internet companies, and audience measurement continues to play a role in monetization efforts. But monetization was guided by another fundamental marketing principle: the effort to know the characteristics of users and their online modes of action, for which simply counting visits to a website was not enough.

This need was met, as Cardon showed, in 1994 when a *Netscape* browser engineer invented the *cookie*, or connection statement, which is a technical procedure that stores the data exchanged between a browser and a page server in a text file created on a user's computer (Cardon, 2015). *Cookies* establish a link between the browsing program used on a particular computer, its IP, and an HTML page, and their function is to memorize information about users' online activities, such as passwords, items added in the shopping cart in an online store, *hyperlinks* that were clicked before, and others. This is the basic tool used by search engines to identify navigation patterns.

The initial goal of cookies was to increase the efficiency of navigation and the file associated to the cookie automates a series of actions and saves the user's time. More importantly, however, this file "*has become the Trojan horse of advertisers and digital corporations by penetrating the privacy of Internet users*" (Cardon, 2015:13). *Cookies* provide detailed information about users' browsing histories and their online actions – what they click on, how long they are logged on, and which websites they visited. This allows corporations to identify what attracts the attention and engagement of users, by providing material to build user profiles. In this regard, the more users on a platform and the greater their engagement, both in the older sense of simply accessing and clicking, and in the prosumer sense of their participation in the production of content on platforms, the greater the amount of information captured by corporations and the larger their databases, which become valuable assets. Since the effectiveness of an algorithm is directly related to the size and quality of the information it contains, a virtuous circle is established between programming, algorithmic learning, and the database.

This leads us to the second point that I want to emphasize, namely that the logic of economic functioning of these digital corporations is based on the idea of replacing human work paid for by the company as much as possible, on one hand by the activity of algorithms whose effectiveness, as we have seen, depends on the size and quality of the database; and, on the other hand, by the collective and free work of users, which in turn depends on users' commitment and willingness to evaluate agents, services, and content posted, in what has been conceptualized as a "collaborative culture".

One of the results of this logic, as we can see in companies such as *YouTube*, *Airbnb*, *Facebook* and others, is the small number of officially employed workers, compared to the large number of users. In this sense, the collaborative ideal from the early days of the Internet culture, as identified by Castells (2003), is captured here entirely by a logic of economic accumulation. The *prosumers* are not only consumers and content producers, they are also evaluators of services, producers of information about posts, about other users, about services, and about workers engaged in the platform. Thus, the consumer, producer, and unpaid worker are compiled into a single character as the engaged user.

Moreover, the effort to articulate algorithmic activity and collaborative human actions is part of the method of economic management of digital corporations. This articulation allows an exercise in curating that can evaluate services, people, and mainly contents that circulate on the network, dispensing the need for paid human work. Thus, the selection and diffusion of information is accomplished through the articulation between an algorithmic curation and a collective curation of the users that is also algorithmically mediated.

To conclude, we can say that all the corporations that organize the *Social Web* have two fundamental products: the attention and actions of users that can be monetized through ads related to the audience of the platform; and the information extracted from these actions and the attention of the users, which can be monetized by identifying their characteristics and behavioral patterns.⁶ In this regard, *Social Web* algorithms, that is the artificial intelligence articulated to a database, are driven by the goal of maximizing the production of information about users and their engagement on a platform, such as the time they spend online, their production of content and participation in collaborative actions to evaluate both posts and other users. This configuration gives meaning to the famous phrase: “When the service is free, it means you are the product.” To which we could add: you are the product and the unpaid worker.

The social organization of knowledge in the era of the algorithm

To return to the examination of how algorithms mobilized on the Social Web co-participate in the regulation of interdependence, I want to return to the expression “algorithmic curating” that I used above and explain its meaning. The root meaning of curate is to care for and store something. But it is not about storing everything, but rather selecting what deserves to be kept as part of the care. In the field of art, the term incorporates the idea of caring and selecting to exhibit in an organized way and make clear what deserves to be preserved and or promoted. So how do algorithms operate as curators?

Let’s see. Socio-digital networks interlink humans and objects and since the studies of the so-called “*Chicago School*”, we know that interaction among individuals supposes what Thomas conceptualized as “definition of the situation”, such as the fact that any individual action directed at another depends on a perception about the nature of the other and about the nature of the situation in which the interacting individuals are involved (Thomas, 2005). This concept and its broader implications are properly developed in an analysis that Gilberto Velho dedicated to Goffman’s work. According to Goffman: “*Every interaction, from the Simmelian dyad to the more complex social networks, depends on basic understandings that permit elementary sociability to the sharing of broader collective projects*” (Velho, 2008:147). Velho quotes Goffman: “*Information about the individual helps define the situation, making others capable of knowing in advance what he will expect from them and what they can expect from him. Thus informed, they will know the best way to act to obtain a desirable response*”. (Goffman apud Velho, 2008:147).

Velho draws attention to the fact that the definition of the situation should not be thought of as a consensus between the individuals that are interacting, nor does it assume transparency and absolute visibility of the agents interacting. To the contrary, the definition of a situation is structured through a dynamic of mutual performances and decoding that implies concealment and often produces misunderstandings.

⁶ The Cambridge Analytica scandal is one of the strongest examples of the ability of algorithms to observe, analyze and identify user categories and their use in political action. In March 2018, The Guardian, The New York Times and The Observer newspapers published a series of articles about a company that collected data from more than 50 million users without their consent, via Facebook and online psychological tests that were falsely presented as personality quizzes. This massive amount of data was used to produce behavioral and psychographic profiles for user categories, supporting the creation of targeted propaganda, polarizing messages and fake news directed to each category according to this classification. The ultimate goal was to both predict and induce behaviors in specific elections and plebiscites, and Cambridge Analytica apparently played an important role in the Brexit referendum and the 2016 US presidential campaign (Gurumurthy & Bharthur, 2018:41)

As we can see, interaction between individuals assumes social knowledge about several subjects: the individuals and their motivations, the nature of that interaction, the fundamental themes and problems at play, the place and moment of interaction, and others. The meaning of the term social here refers to the fact that individuals do not freely and individually produce such knowledge. It involves a collective production that depends on the mechanisms of social communication. Thus, we will see in the last section of this article that, in addition to the misunderstandings pointed out by Velho, we affirm that there is a political dimension involved in the concept of *definition of the situation* derived from disputes around its production.

In an earlier text (Ramos, 2015), we affirmed that when Simmel proposed a sociology of secrecy and stated that “all relations among people rest on the precondition that they know something about each other,” he was emphasizing a basic aspect of social relations, which is the necessary presence of the dialectical pairs trust/distrust, reveal/hide and lie/tell the truth (Simmel, 1999), involved in the self’s perception of the other and also in the self’s presentation to the other. Therefore, we can affirm that “*there is no social relation that is not mediated by the perception that agents have of each other, and in the construction of this perception, what is hidden and what is shown, what is known, and what is suspected have a key role. They are, as Maldonado (2011) shows, in the final instance, social forms of distribution and administration of information and knowledge. Since this is a characteristic of all social relations, we can only ask how it is present in the social relations mediated by the use of computers, smartphones and tablets on the Internet*” (Ramos, 2015).

Any experienced user of a *Social Web* platform – Facebook, Instagram, Twitter, among others – realizes, somewhat consciously, that they perform a *persona* online in relation to other individuals. What may not be as clear to the users is the role of algorithms in selecting a portion of the information that an individual posts and diffusing these posts selectively. This is the first meaning of the term algorithmic curating, which is the role of algorithms in caring, storing, and collectively disclosing information considered to be important about individuals.

This effects how individuals perform an online identity. If even a face-to-face interaction of individuals assumes a dialectic of showing and hiding, to this is added, in the case of online interaction, the mediation conducted by algorithms that selects what will be shown to whom, how often, and in what way. This takes us farther from an individual’s control over what is shown and hidden, since when they act online, they produce information about themselves and about those with whom they are associated. This is why the issue of privacy as an individual right is a misplaced because individuals never produce information only about themselves. The algorithm takes the network itself as an object and subject, and each individual profile is treated as an access point to the network. Another important aspect is the fact that individuals do not perform in front of a single other, but many others, on a network. Digital *personas* and their networked existence are therefore co-produced by individuals and algorithms.

The counterpart of this co-production of digital *personas* is the co-production of the definitions of the situation. We stated above that *Social Web* platforms operate as tools of social communication since they transmit information in a collective and organized manner. As such, as a result of the user’s actions and algorithmic activities, platforms present individuals with an organized set of information about who the others are, what is worthy of attention, and how the individuals are perceived. We argued above that algorithms co-participate in the social production of the categories of substance and of the contents of identity, as well as the categories of time and space. In this sense, the algorithms are consequently co-producers of the social definitions of a situation, and here we have the second meaning of the term digital curatorship, as mechanisms of social communication and co-producers of categories of understanding.

Let’s deepen the idea of co-participation. Every social network is a dynamic phenomenon and as a form of power, algorithms must account for this dynamism. This means acting in a contingent and relational manner. Agents come and go from the network, as well as change themselves in terms of presence and mode

of participation. To understand a network is to understand this dynamic of participation and belonging. The algorithms consider this dynamic by dealing with both moments of greater and lesser adhesion. In both cases, the goal is to produce adhesion where it does not exist or is decreasing and to increase adhesion where it exists. Apart from the goal of increasing adherence and action, an algorithm has no other purpose and its activities are contingent and relational. It depends on the nodes, on the intensity of the connections, and on whatever may circulate on the network. In this regard, algorithms contribute to the definition of the situation by organizing social communication, but without intentionally defining the content of the definition of the situation. The intentionality of the algorithms, as we have said before, is to produce connection and engagement.

The meaningful content of the definition of situation is constructed by the actions of humans and by the activity of the algorithm on these actions. The latter acts on the most promising nodes and on everything that can intensify adhesion. One of the main lessons of marketing as a science of consumption is the importance of mobilizing feelings to stimulate consumption. Therefore, the activity of the algorithms in the organization of the information is guided with an intent to mobilize feelings. This algorithmic activity is part of the production of both the echo chambers on *Facebook* and the intensification of indignation on *Twitter*, and the spread of controversy on *YouTube*. In each case, it is about working on what creates bonds and actions through the organized dissemination of messages.

Let's analyze the case of *YouTube* and *YouTubers*. These are people who make money by delivering first-person videos on *YouTube*, so the term relates to a new professional modality. Monetary compensation can be achieved in many ways, but the most common is the payment made by the platform itself, according to the number of viewers who watch a video and the time they spend watching it.⁷

In their videos, most *YouTubers* explicitly construct a performance of authenticity, marked by a collapse of the distinction between what is public and what is private, by the display of self, of their opinions and impressions about something, and aspects of their privacy, such as their home, clothing, and personal relationships. This performance does not only operate when *YouTubers* talk about themselves. Even product reviews or tutorials of techniques are performed as an authentic experience since they are performed in the first person. As Fonseca shows us, in this performance of authenticity, *YouTubers* often present themselves as people within reach of users, as opposed to TV and movie stars, for example. They also use a very intimate and emotional language to create a sense of identity between the audience and the person who produces the videos. *YouTubers* aim to build an emotional relationship with users who watch the videos on their channels so that these people evolve from interest to admiration and from there to a sense of proximity and personal identification with them (Fonseca, 2019).

But the performance of authenticity *YouTubers* employ is not the only engaging production tool. A key role is played by the algorithm that recommends videos for users to watch. According to Fonseca, Google defines *YouTube* as a "destination platform." This means that the platform strives to capture the user's attention in an increasingly intense and continuous manner, with each video seen as a thread in a web that will entangle users. This is initially done through notifications sent to users' mobile devices or computers informing them about news from the channels to which they have subscribed. Once users access the platform to watch new videos, they are offered a set of recommendations that are assembled by the algorithm based on

⁷ According to Luz, the term *youtuber* was incorporated into the Oxford English dictionary in 2016, and "refers to individuals who add, produce, or appear in videos on the *YouTube* platform. Although only recently recognized with a dictionary entry, the expression has been used for a long time by both the *YouTube* platform – especially by content creators when they want to refer to their performance – and in other media. In Brazil, the term first appeared in print media when news stories appeared about the opportunity to make money by creating videos for *YouTube*. On the website of the newspaper *O Globo*, for instance, articles related to the topic have been published since 2015, and in the *Folha de São Paulo* since June 2013. It is possible that the Brazilian press followed international trends, since the *The New York Times* had used the term in 2006, and *The Washington Post* in October of the same year." (Luz, 2018: 11)

what it identifies as user consumption patterns. According to the platform's official discourse (YouTube help), the channel recommendations are based on the following factors: which channels are watched by the same users; if the videos address similar topics; if the channels are appropriate for the same audience.

However, reverse-technology experiments, such as those done by programmers like Chaslot (2017), show that YouTube's Artificial Intelligence recommendations were designed to maximize the time that users spend online and that by doing so, increase the promotion of inflammatory videos, and thus perform a disproportionate role in the dissemination of so-called *alternative facts*. As Chaslot depicts in his blog: "We all heard about conspiracy theories, alternative facts and fake news circulating on the internet. How do they become so popular? What's the impact of the state-of-the-art algorithms on their success? Having worked on YouTube's recommendation algorithm, I started investigating, and came to the conclusion that the powerful algorithm I helped build plays an active role in the propagation of false information". (Chaslot, 2017).

Indeed, Chaslot shows in his experiment that it is not true that YouTube simply recommends what people like, since "liking" and "disliking" a video has little impact on what is recommended. He gives as an example the videos that claim that Michelle Obama "was born as a man". These videos have more dislikes than likes but are still highly recommended by YouTube, which leads to the conclusion that YouTube seems to place more weight on the number of views of a video and the time spent on them than on how they are evaluated by users. For this reason, if videos with absurd theories, such as "the earth is flat," for example, keep users online for more time than videos claiming "the Earth is round," videos with contents related to the flat-Earth theory will be favored by the recommendation algorithm and this produces a snowball effect that drives conspiracy theories since, let's not forget, viewing the videos generates compensation from the platform to owners of the channel.

As the author explains in his blog: *Once a conspiracy video is favored by the A.I., it gives an incentive to content creators to upload additional videos corroborating the conspiracy. In turn, those additional videos increase the retention statistics of the conspiracy. Next, the conspiracy gets recommended further. Eventually, the large amount of videos favoring a conspiracy makes it appear more credible. For instance, in one of the "flat earth" videos, the author commented: - There are 2 million flat earth videos on YouTube, it cannot be B.S.!* (Chaslot, 2017).

The example of conspiracy theories is extreme, but the importance of this quote is to show that the way that algorithmic mechanisms regulate the promotion of videos and stimulate their production leads to the organized dissemination of certain contents, which contribute to the predominance of a specific *definition of the situation*, both in its definition of what is real and what is not – as in its affective aspects – what is valuable and what is repugnant.

Conclusion: algorithms, social currents, and the political aspect of the definition of situation

...there are other facts that, without presenting these crystallized forms [of institutions], have the same objectivity and the same ascendancy over the individual. It is what has been called social currents. Thus, in a large assembly, the great movements of lively enthusiasm, indignation, and piety that take place have no particular origin. They come to each of us from the outside and can drag us along without us wanting them to do so. (Durkheim, 1984:4).

With this description of a conspiratorial snowball that we see above, we approach the phenomenon conceived by Durkheim as *social currents*. In fact, there seems to be little to add to this centennial quote from Durkheim if we tried to describe the waves that drive interactions between individuals on Social Web platforms. Here the concept of social currents is understood as a certain articulation of facts, ideas, and feelings that coerces individuals and operates through movements of opinions, among crowds, or restricted groups, influencing the perceptions and actions of individuals. The concept can, at least partially, describe how these interpersonal networks either become more narrow or expand with the circulation of certain facts, issues,

and problems, as well as the increase of affective and emotional voltage in the passage of these currents. It allows us to understand the moral demands for taking positions aimed at individuals. It gives us clues about what some authors have studied, such as the lynching of reputations, as well as what they describe as moments of moral panic.

But there is something to add. Firstly, the algorithms operate in this place of an absence of origin as identified by Durkheim. They possess the *humility of things* conceptualized by Miller, in which the more effective the objects are in their ability to affect the perceptions and actions of individuals, the more invisible that capacity becomes (Miller, 2013).

Secondly, there are individuals who, either alone or organized in groups or institutions, specialize in understanding the patterns of action of algorithms and the action on their activities, thereby obtaining results that benefit them. I classify them as *digital entrepreneurs*. With this expression, I want to emphasize the fact that they appropriate not only the tools offered by the platforms to increase their action, which is expected of the users as a whole, but they also understand how to act on the activity of the algorithms to make them work for their own projects, causing the digital machine to operate in favor of their interests. The most famous case involves the Google algorithm that, since the 1990s, classifies website relevance according to what the users are searching for and that began to have important effects in the production of online pages. Soon, website administrators began to develop practices that have been termed Black Hat SEO, which consist of tricks to inflate the importance that Google's algorithm gives to their websites and position them at the top of the search results. At the limit, this ability to drive algorithmic activity is considered by programmers and platform administrators as cheating. In this case, it is a matter of obtaining economic results by manipulating algorithms. But this same principle was soon applied to other algorithms, and in particular to the Social Web which, as we have seen, is involved in the production of programmed sociality.

A tragic example of this expertise in utilizing algorithmic activity to build a political consensus can be found in the use of Facebook in the spread of hate speech against the Rohingya Muslim minority in Myanmar. In August 2018, the UN formally accused the army of Myanmar of the crime of genocide and investigations revealed that Facebook had been widely used as a tool to legitimate the massacres. According to journalist Paul Mozur of The New York Times, based on their psychological warfare studies, members of the Myanmar armed forces created Facebook pages that appeared to be dedicated to Burmese pop stars, models and other celebrities. They accumulated more than a million followers by posting news and rumors about the celebrities, while simultaneously spreading fake news about the Rohingya minority, presenting Islam as a global threat to Buddhism, reporting false rapes of Buddhist women by Muslim men, and forging pictures of people who had supposedly been murdered by Rohingya. The posts were accompanied by inflammatory comments made by seemingly common users, although in reality, fake profiles had been created to stimulate the posts and generate a semblance of public opinion. One of the reasons this hate speech went unnoticed by Facebook was that it had very few employees who could read Burmese and identify the content of the messages. Curating was almost exclusively a task for the algorithm, which privileged the popularity and the seemingly organic sharing of the messages on these popular pages, leading Facebook to amplify the growth of the hate speech (Lee, 2019; Mozur, 2018).

In this case, the manipulation of the algorithm had extremely dangerous political impacts based on the vulnerabilities of this business model in which the information is curated through a co-participation between the algorithm and the collaborative work of users. Since even "collaboration" among users is mediated by the algorithms, we can see that in the model idealized by the administrators of the digital platforms the algorithms are more important for curating the information. Hence, those humans that can interfere with the activity of the algorithms also become capable of interfering with the collaborative action, and this has political implications. Let's see how.

According to Bourdieu, one of the crucial aspects of the political expression of the class struggle is the dispute over knowledge of the social world and of the categories that allow naming it, in such a way that it involves a “*theoretical and practical struggle for the power to conserve or transform the social world, conserving or transforming the categories of perception of this world*”. He continues: “*The ability to cause to exist in an explicit state, to publish, to make public, that is objectified, visible, speakable... that which, by not having reached an objective and a collective existence, remained in a state of individual or serial experience, unease, anxiety, anticipation, restlessness, represents a considerable social power, that of constituting the groups, constituting the common sense, the explicit consensus, of any group*”. (Bourdieu, 1989:142 – emphasis by the author).

To the extent that certain human agents develop both expertise in understanding the algorithms’ patterns of activity, as well as techniques and practices of their conduct, which involves collaborative action mediated by them, this expertise allows these agents to engage in disputes for the definition of the situation, that is to make explicit and name tensions, fears, and forms of unease that exist at the level of objective experience. Thus, to the degree that their strategies prove to be effective, they are able to use the way the algorithms operate to curate information at the service of disseminating a given definition of the situation and transforming it into a social current, in the Durkheimian sense, and from there, to create groups by creating the common sense of these groups.

As mentioned, the algorithms of *Social Web* platforms make an effort to produce and organize socialities by curating content, recommendations, and prescriptions directed at users. To return to our initial question, we can conclude that it is by curating information, administering its collective storage and diffusion, and from there, the production of definitions of the situation, that the algorithms mobilized in the *Social Web* co-participate in the regulation of the interdependence among the elements that compose contemporary figurations. And it is through the strategic action of human agents on the activity of algorithms that this algorithmic curatorship has contributed to the predominance of certain definitions of the situation that in turn are an intrinsic part of the constitution of social currents that have political effects.

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The 2018 Brazilian Elections and the Digital World: a case study about the digital game *Bolsomito 2k18*¹

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Abstract

This article is the result of a collective study conducted by anthropology researchers who study electronic games from the Center for Studies of Modernity (NEMO), INCT / InEAC / UFF. It is an analysis of a game produced during the 2018 election campaign entitled “Bolsomito 2k18”. The fieldwork began shortly after the game’s release, just before the first round of voting, and lasted until the forty-fifth day of the new Jair Bolsonaro government. The article is presented in three parts: in the first, we present a dense description of the game²; in the second part we raise considerations about the Spiritual Warfare and Seven Mountains doctrines preached by the pastor and now minister, Damares Alves.³ In the third part we discuss the ethnography and proposals of the plan for attaining power found in the Seven Mountain power plan, according to the theory of justification and *cités*, developed by Boltanski and Thévenot (1991).

Keywords: electronic games; 2018 Brazilian elections; Bolsomito 2K18.

¹ This article is an amplified version of a lecture realized in a round table during the event called: “Liberty, emancipation and democracy: the paradoxes of the digital” organized by Prof. Jorge de La Barre (GSO/UFF), at the French Consulate, Rio de Janeiro, in 11/21/2018. See also <<https://www.facebook.com/events/501628963685394/>>.

² Considering that many readers from the field of anthropology are not familiar with electronic games, we understand that it is important to conduct a detailed description of this game in particular. See also <<https://www.youtube.com/watch?v=tnZrWbiXCAY>>.

³ Minister Damares Alves is a pastor at the Igreja da Lagoinha neopentecostal church in Belo Horizonte, MG.

As eleições de 2018 e o mundo digital: estudo de caso sobre o jogo *Bolsomito 2k18*

Resumo

O presente artigo é resultado de um trabalho coletivo realizado pelo grupo de pesquisadores de Antropologia do NEMO (Núcleo de Estudos da Modernidade), INCT/InEAC/UFF que investiga jogos eletrônicos⁴. Trata-se de uma análise do jogo produzido durante a campanha eleitoral de 2018, intitulado, *Bolsomito 2k18*. O trabalho de campo foi iniciado logo após o lançamento do jogo, pouco antes do primeiro turno e durou até o quadragésimo quinto dia de governo do novo presidente eleito, Jair Bolsonaro. O artigo será desenvolvido em três partes: na primeira, apresentaremos uma descrição densa do jogo; na segunda parte, levantaremos algumas considerações que dizem respeito às doutrinas da Batalha Espiritual e dos Sete Montes da qual a atual Ministra Damares Alves é pastora; na terceira parte propomos uma discussão entre a etnografia e as propostas do plano de poder dos sete montes, a partir da teoria da justificação e das *cités*, desenvolvidas por Boltanski e Thévenot (1991).

Palavras-chaves: Jogos eletrônicos; eleições 2018; *Bolsomito 2K18*.

⁴ The work was conducted by Laura Graziela Gomes, coordinator of the project “Conflitos, controvérsias, identidades e moralidades nas plataformas digitais em perspectivas comparadas” [Conflicts, controversies, identities and moralities on digital platforms in comparative perspectives] (PPGA/NEMO/InEAC), Tony Bela Alves (master’s student/PPGA), Christian Thorstensen (master’s student /PPGA), and Isabele Acácio Soares (undergraduate student in anthropology, 5th semester), with support from Diogo Iendrick (master’s student /PPGA), and Diogo Castro (bachelor in anthropology/UFF).

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Introduction

Since Brazil's political and institutional crisis that erupted in June 2013, followed by the impeachment of President Dilma Rousseff, the judgement and incarceration of former president Luís Inácio (Lula) da Silva, and culminated in the electoral process of October 2018, digital platforms have had an active participation in Brazilian political and social life. Defamation campaigns conducted by sharing memes, images, videos and leaks on social networks, as well as the circulation of fake news on groups of *Facebook*, *Twitter*, *Instagram*, *Whatsapp*, wound up dominating other media. Even if these online activities were already part of people's daily lives, they became more intense and impregnated with meanings through their political and moral use, especially by supporters of the candidate Jair Bolsonaro who, according to electoral polls before the first term, would not have won the elections, if former President Lula was a candidate. It is important to emphasize this fact, because Bolsonaro was elected through his digital activism (particularly on Twitter) and the digital activism of his supporters and sons, also on their Twitter accounts.

It was in this context that on October 5th 2018, on the eve of the first round of voting, the electronic game *Bolsomito 2k18* was released for purchase with discounts on *Steam*.⁵ Produced and distributed by *BS Studios*, the game was classified as “violent”, “bloody”, “casual”, “political”, “indie”, “action”, and as containing “nudity”, by the developers and gamers. An important detail is that *Bolsomito 2k18* was initially scheduled for release on 28 September, and had its release delayed until two days before the first round of voting.

The narrative of the game is the trajectory of a “good citizen” called *Bolsomito* who, “tired of living in a society corrupted by the enemy”, goes out on a “great journey”, to destroy the fearful Red Army. It is another version of the struggle of Good against Evil imposed as a mission for the hero by a character called the *Oráculo* [Oracle] *de Carvalho*. The game has ten stages, each one with a title that indicates not only the sequences of the hero's journey to the conclusion of each one, but also who are the enemies to be fought and annihilated, where they are, what they do and who their leaders are. At the beginning of each stage, *Bolsomito* meets with allies before facing his enemies, all of whom are Non-Playable Characters (NPCs),⁶ although all of them were inspired by real people including his real supporters and even those he denominates as his enemies and linked to the “Red Army”.⁷

5 Steam is a electronic game sales platform. For more information, access: <https://store.steampowered.com/about/>. Accessed on 28 March 2019.

6 Characters not controlled by players (humans), but by the system of the game.

7 The “Red Army” combines the Workers Party (PT), the Landless Farmers Movement (MST), and the Homeless Workers Movement (MTST).

The first analysis made of the game concerns its playability. The first important observation is that a player has only one option when playing the game, which is to connect to the avatar of *Bolsomito*, because the game does not offer the option to connect to another character, even as an ally of *Bolsomito*. Thus, by imposing this condition on players, the game requires them to adopt the character's "point of view", from the beginning to the end of the journey. Before beginning the game, on the opening screen the player faces *Bolsomito* poking the Brazilian flag which is tattered and burning on the ground, in front of the Praça dos Três Poderes Plaza [Three Powers Plaza] in Brasilia, with the sculpture entitled "Os Candangos" melting in the background. To the right of the character is the main menu, and in the background we hear music in the *tecno brega* genre.

It may or may not be well-known, so it is important to highlight, that the electronic game industry in Brazil is already more profitable than "traditional" forms of entertainment. In 2017, for example, the income from games used exclusively on domestic computers was double that generated by music streaming apps, even with half the number of users, and this does not include money spent by users on games for smartphones and electronic consoles such as PlayStation. From a national perspective, in 2018 alone, revenues in the industry were estimated at US\$1.5 billion, from a total of 75 million players. These generalizations do not help us analytically, because we are dealing with an activity with many nuances and particularities. Nevertheless, it demonstrates that the practice of playing videogames is already routinely present in the lives of Brazilians.

Bolsomito 2k18 has certain characteristics that allow classifying it in the *Beat'em Up* style, a type of game that became known in the 1980s and '90s in video arcades and on game consoles. This categorization is important, because it allows us to support the analysis on certain structures of this genre to better understand the symbols found. We are, therefore, addressing the game not as a "support for transmission" of a content, but as a structure upon which the content was created with characteristics that are specific to it and create an opportunity for this analysis.

As we said, this style of game has a structure that divides it into steps or "stages", all of which present the same standard in relation to the actions of the hero and his allies: the avatar controlled by the player walks from left to right on the screen in one or more scenes that can change, according to the stage, facing the NPCs who represent the enemies, which are controlled by the program of the game. The enemies pass through the same scene in the opposite direction (from right to left). At the end of each stage, the controlled avatar confronts the "leader" of the enemies corresponding to that stage and scene. It is important to say that the player only has access to the next "stage" if the previous one is concluded by destroying all the enemies and their respective leaders. This characteristic is aligned with another that is also iconic to this genre, the development of narrative. Only to the degree that players continue to play, will they encounter the larger plot that involves all of the stages, which are not random, but have an hierarchical relationship to each other, given that the game begins with a confrontation of the enemy groups considered weaker until the most powerful is reached. In addition, the protagonists of this genre are always heroes or heroines who go alone on a mission to face an enemy group which is quantitatively larger. The game in question uses this narrative structure which will be described in the following paragraphs. Two games of this genre became famous: *Double Dragon* (1987) and *Streets of Rage* (1991).

It is in this context that a detailed description of *Bolsomito 2k18* becomes necessary, because since it is a game of "stages", to the degree that they continue playing with the *Bolsomito* character, players are introduced and affected by the logic of the larger narrative structure that relates all of the stages, given that their sequence is not random and develops an hierarchy and greater complexity, beginning with a confrontation of enemy groups considered "weaker" and structurally inferior until reaching the more powerful and structurally superior groups. The development of each stage takes place through dialog boxes in which *Bolsomito's* allies are also presented and communicate with him, and at the end, indicate the allies in the next stage, as well as the

enemies to be confronted. Leaders and chiefs of the enemies of each stage also communicate at times with the main character, and vice-versa (through dialog boxes). All of the dialogs are previously programmed, so that players have no influence over the speech of the only avatar that they control.

It is worth emphasizing that each stage has a “theme”, which is expressed in the spatial identification of the enemies (their respective territories) to be confronted and their leader. It is possible to interpret the ten stages of *Bolsomito 2k18* as a manifestation of the enemies attributed to Brazilian society (since 2016), as well as their respective domains of action that wind up justifying the name given to them, the “Red Army”, and whose elimination is the main mission of the protagonist. *Bolsomito 2k18* is introduced before the first stage, in a type of preamble, in which the order of the “stages” is presented by the system of the game. The last enemy of each stage is the antagonist who exercises leadership, power and influence over the other enemies of that stage. Thus, a narrative structure is observed that in addition to establishing an hierarchy of the stages, also creates an hierarchy of the enemies and the difficulties of the game. The first chief is the “weakest” and easiest to be eliminated, then the second, and so on.

The fieldwork consisted of buying and playing the game (conducted by Christian, Isabele and Tony), watching various *gameplays* of *Bolsomito* on *YouTube* (Christian, Isabele, Laura) by other players, and accompanying the comments that were posted by players on *Steam* (Christian, Isabele, Tony). It should be emphasized that in terms of the experience with the game itself, none of the researchers were able to reach the end of the game (this will be addressed later on). We now come to the description of the game, to show the images mobilized, the symbolisms, and actions related to them in the narrative, to capture the meaning of the game in its totality, based on its own playability, that is, incorporating the socio-technical dimension of the game itself, as an important part of the “critical moment” in which we find ourselves and whose events were in many ways forecast in the stages of the game.

The game begins in the house of the main character, in an emblematic scene – considered to be so because it represents a situation quite familiar to Brazilian social life, which is someone at home, watching the television news, and becoming upset. It is a domestic world with a morality that judges the public world, a fact that is quite naturalized among us because of telenovelas (Gomes, 2002), and is thus a situation immediately recognized by millions of Brazilians. Thus, right at the beginning, players are mobilized in such a way that they may be affected and induced to place themselves in *Bolsomito*’s perspective. In this way, the scene does not take place by chance, but has the objective of creating two important socio-technical facts: first, to affirm a continuity between the off-line and online (Gomes and Leitão, 2018); and second, to establish the identity convergence between *Bolsomito* and Bolsonaro (Ramos, 2015). In this sense, it is soon seen that the game was not made to promote fun, distraction or “identity divergence”⁸ in a parallel world, because from the beginning it imposes “the here and now” as crucial elements of the narrative. Secondly, given that there is continuity and convergence, the possibilities to create the empathy of players with *Bolsomito*’s point of view radically increase or decrease, with no middle ground, causing players to emotionally react with indignation, anger, rejection or adhesion, enthusiasm and admiration for the character. In fact, emotions are important throughout the game for a player to engage or not with the character in the actions that both will have to perform from that point on. The more a player develops empathy for the character, the more the actions practiced will tend to be reaffirmed and successful, with a strong chance that the player will reach the end of the game. In contrast, if there is no empathy for the fictitious and real character, the player could quit the game before completing all the stages, or “die” many times during the game. This is certainly an interesting problem to be discussed,

8 “Identity divergence” is the term we use to describe the effect that some digital platforms have on some users, who when on these platforms act as if they had a different persona from their “social” identity. These platforms permit the development of different experiences of “self” or “self” inventions.

because it was what we saw happen with various players who published comments about the game on Steam and with the researchers who experimented with the game and gave up playing it until the end because they became highly indignant. In this sense, it is implicit that to complete the game, the player must in some way be engaged with Bolsomito's actions, whose only objective is to defeat his enemies. In the cases that we accompanied, quitting the game nearly always followed a rejection of the real and fictitious character.

The graphics and scenes of the game are also very important for promoting adhesion or quitting, due to the representations made of the "enemies" as entire social groups, including the spaces (territories) where they live and circulate, as well as the symbolism attributed to them in the current Brazilian political situation, at the same time as those considered "allies", along with the respective attributes that establish that condition, and the leaders of each group, both enemies and allies. The scenery of the preamble is the living room of Bolsomito's house, beginning the game from the world of the home, reaffirming it as a fundamental space for understanding the Brazilian social grammar and immediately locating the series of fights that will take place from the perspective of the opposition between the home and the street, particularly in terms of the moral superiority and precedence of the former over the latter. According to DaMatta (1985), the living room is the most public space of the Brazilian home, and in the game, it is the place from which Bolsomito conducts his passage to the world of the street, communicates and interacts with the outside world – through the television, laptop and cell phone. Quite spacious, the room has emblematic objects and symbols that affirm it as a prominent place and one of passage: a cross (religion) and a Brazilian flag are mounted on the wall and in this case confirm Bolsomito as a "good citizen", because of his religious belief and "patriotism", as well as the moral superiority of domesticity over politics. Simultaneously, and no less importantly, a rifle is also seen, something that reaffirms some of Bolsonaro's most important dimensions, which is his belligerence, his attachment to weapons and violent confrontation and to a constant reference to adversaries as enemies to be banned or annihilated, which is associated to a promise of freedom to carry guns and the famous gesture of making a pistol with his hands, which became his trademark as a candidate and his public image as President elect. We thus have the inaugural scene when after the news *Bolsomito* decides to call *Prof. Oráculo de Carvalho*.⁹ Their conversation is essential, because *Oráculo de Carvalho* – visible only in a dialog box in the upper part of the screen – is who "enthrones", or better, gives the initial "command" to *Bolsomito* to "save Brazil" and make "the people stop suffering", in keeping with the character's eagerness to "declare war" against those who he judges to be responsible for the news. *Oráculo de Carvalho* says that to begin the mission *Bolsomito* should meet his friend, *Sargento Fagur*¹⁰ to get more details about the "battles" that will occur. Given this guidance, *Bolsomito* only responds: "Positive, Professor", thus beginning the first stage.

It is also important to highlight that *Bolsomito* only defeats his adversaries with the counsel and guidance of his allies. Meanwhile, the adversaries are more numerous, and each has many allies who try to impede the hero's progress, while *Bolsomito* confronts all the threats from the Red Army on his own. Therefore, since the beginning, there is a messianic narrative that has the objective to present *Bolsomito* as "Savior of the Country", the "envoy", the "anointed" by God. This messianic narrative is strongly expressed in the speech of his allies, especially that of *Prof. Oráculo de Carvalho* when he says, "you should go step by step. Win battles to win the war".

9 This is a reference to Olavo Luiz Pimentel de Carvalho, a journalist, essayist, ideologue, and Brazilian free thinker. Olavo is self-taught in philosophy, and currently one of the leading representatives of conservative thinking in Brazil. He is the intellectual mentor of President Jair Bolsonaro. Source: Wikipedia

10 This is a reference to Sargento Fagur, a retired state police officer from Paraná and a Brazilian politician, affiliated to the Partido Social Democrático (PSD) and a former member of an elite force of the 4th Company of the Paraná State Highway Police (PRE). Source: Wikipedia

Tutorial

Before *Bolsomito* begins his mission, *Prof. Oráculo de Carvalho* instructs him to learn some tricks with *Vand Silva*,¹¹ which will help him during the battles. The hero then goes to the fight club, which has a boxing ring in the right corner, two rows of lockers with two golden trophies on top. In the left corner, there is a punching bag for training, and exercise equipment like weights and ropes. At the club, *Vand* teaches *Bolsomito* how to punch and kick, how to defend himself, and how to use his “special blow”. Therefore, their dialog informs players what buttons should be pressed so that the different actions take place. That is, although it is a dialog between two characters, the instructions are being passed to the player. Finally, the instructor says that, if “you are a sensitive person”, you can escape from the weaker enemies. But you will have to face the stronger ones and stop that “*mimimi*”.¹²

At the end of each stage, the player/*Bolsomito* receives virtual “trophies” known as “Conquests”, each with specifically appropriate names. They are exposed in the profile of the player on the *Steam* platform, and can be seen by other players and users of the same platform. Each “Conquest” has a different name; players are always awarded when they find an enemy chief and when they defeat the chief. That is, in each stage players earn two different “Conquests”, with names related to the theme of the stage. We will now present a “dense description” of each stage.

Stage 1: “Social victims”

Each stage was designed and placed in sceneries using images that immediately identify the enemies and “their many affiliates” to be faced, as well as where to find them. There is a clear pedagogic intention in the game to present the stages with stereotyped images to have the players criminalize certain social groups due to their historic vulnerabilities. This is the case in this stage of, “Social victims”, where the enemies are mostly black, poor and residents of favelas or “peripheries”. They appear as “bandits”, at the same time in which the scenery where they are located represents a poor, abandoned, destroyed and dirty neighborhood. There is no subtlety or ambiguity in this scene, and there is no explanation about it. It merely repeats the relationship that is naturalized in Brazil between poverty and criminality considering any discussions that problematize them as guilty of “*mimimi*”, “playing the victim” and “leftism”. Not by chance, the ally in this stage is *Sargento Fagur*, while the strongest enemy is *Maria dos Presidiários* [literally Maria of the inmates].¹³ As mentioned previously, the game begins with the weaker groups of enemies and their allies, members of structurally inferior groups: poor black residents of the peripheries, and federal deputy Maria do Rosário as the enemy leader. The main names of the enemies in this stage are *Mano Bráulio*, *Xuxo* and *Tuca Alemão* (who are bandits). It is important to note that when all of the enemies, from the first to the last stage, are destroyed by *Bolsomito*, they are transformed into feces. The confrontations are in the streets of this poor peripheral neighborhood, as can be seen in the scenery, from the types of residences and constructions that are part of the landscape, such as walls with graffiti, phone booths, tire repair shops, bars, *Lan houses*, and beauty salons, even public institutions such as health clinics (which are closed).

11 Reference to Wanderley Silva, Brazilian MMA fighter, specialist in Muay Thai, who along with Rodrigo Minotauro, Fedor Emelianenko and Mirko Cro Cop was considered one of the best fighters of the former Pride FC team, and a living legend of full contact fighting. Source: Wikipedia.

12 “*Mimimi*” is a popular expression. In the context of Bolsonaro’s campaign it referred to playing the victim and is used by his supporters to criticize minorities.

13 Reference to Workers Party federal deputy Maria do Rosário, who was humiliated by Bolsonaro in front of television cameras. See: <https://www.youtube.com/watch?v=V-ls96iNofU>. Accessed on 28 March. 2019. Rosário filed suit against Bolsonaro because of his statement and the court ordered him to indemnify her.

In the first stage, the “Conquests” are called “A good crook is...”, and “You don’t deserve to be!”¹⁴, received when finding and destroying *Maria dos Presidiários*. At the end of this stage, the player finds that the first enemies to be defeated by Bolsonaro are mostly black and poor - not by chance, the largest social segment of Brazilian society.

Stage 2: “They shall not pass”

Stage 2 begins with *Bolsomito* meeting once again with *Sargento Fagur*. Fagur, after complementing him for the destruction of the bandits and of *Maria dos Presidiários*, asks that *Bolsomito* also fight against the enemies of his friend *Sara Vintre*,¹⁵ who is found in the adjacent neighborhood, because she needs help to fight “alienated people” who want to kill babies (a reference to those who defend decriminalizing abortion). This is how the player is introduced to Stage 2 which is a fight against “feminists”, who are considered the main enemies in this stage. In parallel, there is a change of the environment where these struggles take place. The streets are not in decay, there is much less graffiti and fewer abandoned buildings. There are shops and large commercial buildings, including the building where the name of the studio that made the game appears, as well as a restaurant, bakery, and residential buildings, giving the impression of a middle-class neighborhood.

At a certain moment, *Bolsomito* passes by a wall with graffiti of Lula’s face and another with a hammer and sickle, the symbol of communism. The enemies of this stage are presented as mostly white, and there is only one black character, in a proportion exactly opposite to the previous stage. The form of representing the feminists reinforces stereotypes and prejudices, such as masculinized nicknames like “Xaromba”, dyed hair, and exposed bellies and breasts. Farther on, *Bolsomito* passes a truck from *Casa do Baiano* [Casas Bahia is a large national retail chain], on his way to find his strongest enemy in this stage, *Manujeba da Vila*,¹⁶ who he destroys in front of the *Boteco Gamer*, [Gamer Bar] “The hangout for the weak and jealous”, in a clear allusion to leftist social movements.

The second stage concludes with his ally, *Sara Vintre* thanking *Bolsomito* for destroying all those women. He thanks her, saying that he would give his life to save the children, to which she responds by asking for *Bolsomito* to keep moving on, because there are many problems: “The schools and universities that should educate youth are doing the opposite. Agents of the Red Army disguised as educators are brain-washing students. Can you go to the university and solve this?” *Bolsomito* responds by saying that he will “take care of this right away”. Upon finding the boss, the player is awarded with the “Conquest” “Bath and grooming”, and upon winning the battle receives “High Class escort”. At the end of this stage, the player finds that the game reinforces the confusion made by Bolsonaro and his political allies that feminists support abortion.

14 This is a reference to a discussion that was recorded on cameras between President Jair Bolsonaro (when he was still a congressman) and Congresswoman Maria do Rosário, in which he said he “would never rape her, because she did not deserve to be raped”. The incident was in 2003 and became a scandal with national repercussion.

15 This is a reference to Sara Winter, a celebrity who is part of the Brazilian branch of the group that began in Ukraine, FEMEN, which was never recognized as being feminist and was later discovered to be led by a man. By becoming a Christian, Sara Winter became a reference for many youth, having been redeemed for her sins. She is now active, particularly at universities, in opposition to discourses focused on sexual diversity and gender, and mainly struggles against the legalization of abortion. Source: Wikipedia

16 This is a reference to Manuela d’Ávila, a politician and candidate of the Communist Party of Brazil (PCdoB) for vice-president as the running mate of Fernando Haddad, presidential candidate from the Workers Party (PT).

Stage 3: “Indoctrinators”

The third stage begins with *Bolsomito* at a university, meeting with the spirit of *Dr. Fantasméas*,¹⁷ who asks for *Bolsomito* to listen to him carefully. The request is the same as that of *Sara Vintre*: to destroy the elements of the Red Army who are infiltrated in universities and indoctrinating youth. The scene for this stage is a university hallway with various doors and one of them, half open, has the number 12, followed by another that is totally closed with the number 13.¹⁸ While *Bolsomito* fights and kills young students, the player sees a number of walls with various posters including those with LGBTs, infographics, etc. All of the enemies with whom *Bolsomito* fights are represented with knapsacks, most are white and only one is black. The most important moment of this stage is the meeting with an important adversary *Dilmanta*,¹⁹ who is easily recognizable wearing a red suit, with prominent front teeth and accompanied by a “stored wind”.²⁰

After fighting and liquidating *Dilmanta*, *Bolsomito* is complimented by *Dr. Fantasméas*. But before saying goodbye, the doctor reminds *Bolsomito* that there are other battles ahead. *Bolsomito* indicates that he understands this and the doctor requests that he go to the center of the city where he will find the leaders of a criminal movement who are obviously part of the Red Army. The doctor says it is a movement that takes advantage of “poor people” to invade property and earn profits. *Bolsomito* agrees and continues. The “Conquests” received are the “Generation *mimimi*” and “Praise the Cassava”. In this stage the player advances a step in the hierarchy of the enemies and there is an explicit mention of an important social institution, in this case, universities. Moreover, the adversarial leader of this stage is stronger than those in the previous stages. Upon completing the 3rd stage, the player perceives that the public university, an important institution in Brazilian society, is considered to be a den of enemies – professors and students.

Stage 4: “Invaders of property”

Already beginning in the streets, *Bolsomito* once again meets with the MMA fighter *Vand Silva*. *Vand* explains that he was going to the gym when a riot broke out. So *Bolsomito* moves on to resolve the problem and *Vand Silva* offers to help him with “some tips for confronting this bunch”. In this case, the bunch is composed of militants of the Homeless Workers Movement (MTST), women and men who are dressed in red shirts. In this stage, the situation is once again in the streets, but a bit different than in the previous stages. A large avenue is seen with many cars and buses, which run over the adversaries, and would even run over *Bolsomito* if he is not careful. The style of the buildings on the screen suggest it is Avenida Paulista in the city of São Paulo, with banks, currency exchanges, large office buildings, stores, etc. Not by chance, the most powerful adversary of this stage is called *Guilherme Boustas*.²¹

After fighting and killing *Guilherme Boustas*, *Bolsomito* is complimented by *Vand Silva*, who congratulates him for the deed and advises him to present his ideas to the media so that the people get to know him better. But he warns *Bolsomito* that he must be careful because the media is composed of snakes also trained by the Red Army. *Vand Silva* says he has a friend who can help him on this new undertaking. *Bolsomito* thanks him, and says that he knows how the media operates and continues to the next stage.

17 This is a reference to Enéas Ferreira Carneiro, a Brazilian cardiologist, physicist, mathematician, professor, writer and politician. As a politician, he founded the now extinct Party for the Re-edification of the National Order, Prona. He was a presidential candidate in the campaigns of 1989, 1994 and 1998. Source: Wikipedia

18 Doors 12 and 13 that appear in the scene at the beginning of Stage 3.

19 This is a reference to Dilma Rousseff, former President of Brazil who was deposed on 31 August 2016, through a polemical and controversial impeachment process.

20 This is a reference to a speech that President Dilma Rousseff made at the UN when she discussed the effort to develop technologies to store wind energy. Some of her political opponents ridiculed the expression “stored wind”. See also <http://www.fapesp.br/eventos/2014/05/UK-Brazil/Williams.pdf>

21 This is a reference to Guilherme Boulos, one of the coordinators of the MTST – Movimento Trabalhadores Sem Teto (Homeless Workers Movement), who was also a presidential candidate in 2018 for the Partido Socialismo e Liberdade) [Socialism and Liberty Party] (PSOL).

The “Conquests” of this stage are called “Retaking property” and “Slaughtering the invader”. Upon concluding stage 4, the player perceives that Bolsonaro’s declared enemy in this stage is an important social movement, organized to support the right to housing.

Stage 5: “Dirty Media”

In this stage, *Bolsomito* meets with *Palmito Gentil*,²² who promptly offers him help to be able to face the “dirty media”. He says that he was an unexperienced reporter, but that after “taking a beating from the Red Army media” he learned how to confront them. This scene takes place in a closed space, with black walls. There are television cameras in back, shelves, a large water bottle. While he moves through this room, *Bolsomito* faces men in suits and women in skirts and blazers, all of them white. Given the theme and name of the stage, it is possible to gather that they are reporters and journalists. After some fighting, *Bolsomito* reaches a room that has a black desk, with blue stripes on the side and a “futuristic” painting. Two chairs in the same style are at the desk. In back, there is a large screen with the following words “FN Eleições [elections] 2018” (an allusion to the logo of the *Jornal Nacional* [nightly national news program] of the *Rede Globo*- Brazil’s largest TV network).

At this moment, the *Bolsomito* player perceives that he is in a recording studio, because he then meets a man with horns, named *Corner*.²³ Dressed in a suit and presented as the enemy, *Corner* has horns. *Bolsomito* asks about them, but *Corner* avoids answering, saying that “The candidate cannot attack us and go unpunished. Not now, and not in 2028.” The battle has begun. At certain moments, *Corner* throws an object that looks like a car key: a black base, with rounded edges, and something thick and gray stuck to it. However, it is not possible to clearly identify what it is.

Upon defeating *Corner* who is also transformed into feces, *Bolsomito* once again meets *Palmito Gentil*. He says that he is sure that everything will be fine and that thanks to the Internet, “the people have awoken” (Marins and Moura, 2018), and the “dirty media” will no longer be able to manipulate them. *Bolsomito* agrees, responding that it is enough to state the truth for the people to understand. *Palmito* comments that he trusts in *Bolsomito* and asks him to help a friend in need in the city. He does not say what the problem is, and asks *Bolsomito* to go see for himself. Before leaving, *Palmito* also encourages him to continue the fight against the “politically correct”. By facing *Corner*, the player is awarded with the “Conquest” “Words harm”. Upon defeating him, he receives the “Conquest”, called “Fake news”. Upon completing this stage, the player perceives that another important social institution is considered an enemy, in this case, the television media represented by Brazil’s largest broadcast network, *Rede Globo*.

²² This is a reference to Danilo Gentili, a Brazilian comedian.

²³ This is a reference to William Bonner, chief editor and lead anchor of the *Jornal Nacional* nightly national news program of the *Rede Globo* television network (broadcast at 8 pm).

Stage 6: “The bald guy or the one with a mustache?”²⁴

The sixth stage of the game begins with *Bolsomito* once again in the streets, this time, heading in the direction of a LGBT Parade, where he meets with *Alexandre Frete*,²⁵ who explains to him another attempt to destroy values of the “traditional family” and good costumes. It is an interesting dialog, and perhaps the longest of the entire game, because it shows not only one more institution to be taken in and restored, but also a chance for players to discover details about the origins of many of *Bolsomito*’s followers. *Frete*’s talk leaves *Bolsomito* surprised by hearing from him a criticism of the LGBT community.

Bolsomito reacts by accusing him of having been involved with this “bunch there” pointing to *Frete*’s incoherence pretending to defend good customs. *Frete*, however, demonstrates that he has repented and recognized his sin, expressing his desire to participate and help “the myth” on his journey. *Bolsomito* responds, accusing *Frete* of possibly being an opportunist. *Frete* argues that, like *Sara Vintre*, he once defended the “bad customs of the Red Army”, but now opposes them. He tells *Bolsomito* that if he trusted her, he can now trust him. Although he is not totally convinced, *Bolsomito* gives a vote of confidence by listening to what *Frete* has to say. Both want to convey they are not homophobic by showing that they accept differences, the main problem would be to accept ideologies of the Red Army.

In relation to the adversaries of previous stages, in this stage the enemies do not present themselves according to traditional gender representations. In comparison with the adversaries of the stage of the “feminist women” (Stage 2), in this stage we have *Fox*, an avatar dressed as a fox and the only black person; *Machado*, who has the clothes of a pink ballerina, red hair and a beard; *Jean* is in workout apparel; *Rafael* is wearing all black, a *top* and bikini that is meant to be leather; and *Lana* is an avatar in *jeans*, a pink blouse and dark glasses, a reference to one of the largest groups of culture and variety on *Facebook*, created by and aimed at the LGBT public.

The scene is an avenue with non-residential buildings in the center of the city where there is a commercial center, a group of shops including a *plus size store*, law offices, a cybercafe, a home appliance store and a currency exchange office. Between the light posts there are many banners that read “Let your son use the Kit at School”.

Along the avenue there are also some kiosks, on which there are signs offering the “*kit gay*” for free to children who pass by. This is an obvious reference to a key element of the electoral campaign, the *fake news* about alleged distribution of a “gay kit” in schools. Kit was the term used to describe a book that was broadly mentioned by the conservative media. A few days before the first voting round in 2018 Bolsonaro mentioned it in an interview with the *Rede Globo* to explain the plans of the Workers Party presidential candidate Fernando Haddad, the former minister of education in the Lula governments.²⁶ Bolsonaro said that the book would be given to young children so that they would learn to be trans- and homosexuals, and that it would be distributed in all the schools of the country.

Finally, the most powerful adversary in this stage is *Cuspidor* [Spitting] *Willy*.²⁷ After defeating him, *Bolsomito* meets again with *Alexandre Frete*, who thanks him for the deed. *Bolsomito* says goodbye with a “hetero hug”, of his new ally, to then return to his house where he once again speaks by phone with *Prof. Oráculo de Carvalho*, who recommends a meeting between *Bolsomito* and

²⁴ This is a reference to a hateful comment made by Bolsonaro when he was still a Congressman. Believing it to be a “joke”, he said in an interview that the problem of homosexual couples having children was that you would never know if their mother was the “bald guy or the one with a mustache.”

²⁵ This is a reference to Alexandre Frota, a porn actor in gay and hetero films until a few years ago who assumed his bisexuality. Currently, along with Bolsonaro and his congressional supporters, Frota presents himself as a defender of the traditional family and someone who disdains the left. Source: Wikipedia.

²⁶ Bolsonaro’s narrative was disproven by the publisher of the book, and only on the second week after the first round of voting did the Electoral Court require the removal of this false news from all possible platforms.

²⁷ This is a reference to Jean Wyllys, teacher, politician, former federal deputy from PSOL in Rio de Janeiro. He was known for having participated and won the popular reality show BBB (Big Brother Brasil). As a politician, he got national attention for having spit at Bolsonaro.

Mando Boura.²⁸ Upon facing *Cuspidor Willy*, *Bolsomito* receives the “Conquista” named “At the end of the rainbow”, and upon defeating him the “Conquest” is named “No spit”. Upon completing this stage, the player perceives that the LGBTQI movement is also considered an enemy by *Bolsomito*.

Stage 7: “Fast and furious”

In this stage, upon meeting with *Mando Boura*, *Bolsomito* is convinced to go after a singer who is “trying to bring people from the Internet” to his side, the Red Army, and to make fun of *his* music. Unlike the previous stages, in this stage there is no physical combat. Actually, there is a massacre where *Bolsomito* enters in an ally’s car and simply runs over his adversaries. The dialog with the boss of his enemies in this stage is with *Titico Senta Cuz*.²⁹ The “Conquest” for reaching the chief is called “Petal to the Metal” and the “Conquest” for defeating him is called “Communist pig”. At the end of this stage, players understand that segments of the digital media are also under the power of the red army.

Stage 8: “The Alienated”

This stage begins with *Bolsomito* meeting with *Izas*,³⁰ who declares he is being persecuted. *Bolsomito* continues running through the streets to fight with *Izas*’ enemies, and at this time various mules and donkeys appear on the screen (an allusion to people from the Workers Party) with banners from PT, running in the opposite direction. *Bolsomito* runs over and kills them, as did the cars in the previous stage. Moreover, the scene changes, and is similar to that of the first stage of the game (a peripheral neighborhood). However, the scene quickly changes, returning to an urban scene where *Bolsomito* now meets with a powerful adversary called *Retarddad*.³¹ Upon seeing him coming in his direction, *Bolsomito* says: “Hey I know you, you are that famous mayor!” to which *Retarddad* responds: “Well, someone finally recognizes my work!” to which *Bolsomito* counters: “you were the first candidate for re-election in history to lose in the first round! Hahaha”. The fight begins, *Retarddad* is eliminated and *Bolsomito* continues moving towards the next stage. The “Conquest” for finding the *Retarddad* is called “Confronting the militants”, and after defeating him it is “Brazil above all” (as mentioned, the game was released before the first round of voting). To finish this stage, the player realizes that the Workers Party and its militants are an enemy, considering they were the strongest adversary in the presidential elections.

Stage 9: “Rural terrorism”

This stage begins with *Bolsomito*, upon *Izas*’ request, going to save a friend called *Eduardo Decostas*,³² who in the game is also a large landowner who is persecuted by the Red Army. After killing various militants of the Landless Farmers Movement (MST) on the way, *Bolsomito* finally confronts *Eduardo Decostas*. The scenery at this time is no longer an urban center, but a road that is completely blocked with traffic, trucks, buses, cars and militants from the MST, possibly a reference to the truckers strike that took place in May 2018.

28 This is a reference to Nando Moura, a heavy metal musician and music teacher who also became one of the main Bolsonarista *youtubers*. Recently, after being denounced a number of times for hateful discourse, *YouTube* removed advertising from his channel. Source: Wikipedia

29 This is a reference to Tico Santa Cruz, a Brazilian musician, composer, and writer. He is the vocalist from the band *Detonautas Roque Clube*. He studied social sciences at UFRJ. Source: Wikipedia

30 This is a reference to Arthur do Val, Mamãe Falei, an activist from the right-wing Free Brazil Movement (MBL), a *Youtuber* and state deputy from the DEM party. Source: Wikipedia

31 This is a reference to Fernando Haddad, a politician, professor, and former mayor of São Paulo and the Workers Party candidate for president in the 2018 elections.

32 This is the real name of a leader of farmers who was charged with killing a landless worker. Source: Wikipedia

To reach the MST leaders, *Bolsomito* and *Decostas* decide to get a truck that they use to run over militants until they meet the *Vampiro Temeroso*.³³ Questioned about his presence there, the vampire confesses he is trying to stop *Bolsomito*, thus admitting that he is part of the Red Army. After annihilating the vampire, *Bolsomito* is complemented by *Eduardo Decostas* who warns him that to win the war he will have to go to where the leaders of the Red Army are located. *Bolsomito* agrees and moves ahead. The “Conquest” obtained for reaching the *Vampiro Temeroso* is called “Terror in the fields”, and for defeating him the trophy is called “Sem temor” [No fear]. The next to last stage ends with the inclusion of another important social movement as an enemy, the MST, the movement responsible for the struggle for land reform in Brazil. It should be highlighted that the main ally in this stage is the rural leader Eduardo Costa.

Stage 10: “If you shout, you’ll catch a thief...”³⁴

The tenth and final stage begins with the encounter of *Bolsomito* and *Juiz Muro* [*Judge Wall*]³⁵ in Brasília, in front of the presidential palace, which appears to be blocked by traffic cones on the sidewalk and even a black and yellow barrier with a the sign “We Buy and Sell votes, speak with the manager”. *Muro* welcomes and thanks him for coming. He says that he has been trying to catch leaders of the Red Army for some time, and was able to get some, “but there are many of them and they know how to run away from me”. *Bolsomito* thanks the judge for his work, saying that now he will take command; he says the struggle will not be easy, but he knows his enemies’ tricks. They say goodbye and *Bolsomito* continues to the final stage, that is, the final confrontation with *Luladrão*,³⁶ the most powerful of all his adversaries. In the game, *Bolsomito* defeats *Luladrão* saying that he represents the past and now he, *Bolsomito*, will construct a new country. At the end of the final stage, *Bolsomito* reached the great leader of his enemies, the largest of all, *Luladrão*, while his main ally is Judge *Muro*.

At the end, *Prof. Oráculo de Carvalho* appears as an NPC saying that much will have to be done to improve the nation. The entire scenery of this final stage is in front of the National Congress in Brasília, where on the entrance ramp there is a black man sitting with the football World Cup trophy. This is the end of the game for those who complete all the stages, there is an image of a crowd of Brazilians with the national anthem playing in the background. The final “Conquest” for those who encounter *Luladrão* is “Brasília green and yellow” and the one for defeating him is “Impugned”.

The game and the Brazilian 2018 elections

Until 31 August 2018 the electoral slate formed by Luís Inácio “Lula” da Silva and Fernando Haddad was ahead in the polls. However, on 31 August the Federal Supreme Court definitively prohibited Lula’s candidacy, requiring PT to pragmatically nominate Haddad for president and Manuela D’Ávila of the Communist Party of Brazil (PCdoB) for vice president. Given the indignation of Lula’s supporters, the PT used Lula’s name when launching Haddad’s campaign, with the *hashtag* #LulaéHaddad, to encourage an immediate transfer of votes

³³ This is a reference to Michel Temer, senator from the MDB party, and the former Brazilian Vice-President who assumed the presidency after the removal of Dilma Rousseff in 2016.

³⁴ This is a reference to a common Brazilian proverb, applicable to situations where there is not a single innocent person “in the room”.

³⁵ This is a reference to Sergio Moro, a former judge who was responsible for the corruption investigation Operação Lava-Jato [Operation Carwash], who is now Minister of Justice in the Bolsonaro government.

³⁶ “Luladrão” is one of the many nicknames given by the far right to former President Lula.

from Lula to Haddad. Without analyzing if this strategy was effective or not, the fact is that on 6 September, one week after Lula's removal, Bolsonaro was stabbed in the abdomen in an attack in the city of Juiz de Fora, in Minas Gerais.³⁷

In this context, with Jair Bolsonaro hospitalized, Haddad became candidate for the presidency on the PT ticket, and began to give interviews, participate in debates, and travel through Brazil accompanied by his vice-presidential candidate Manuela D'Ávila. They were relatively successful, winning passage to the second round with 29.3 % of the valid votes, while Ciro Gomes, candidate for the PDT, remained in third place, with 12.5 %. Jair Bolsonaro led with 46 % of the valid votes.

Without discussing the reasons why Haddad did not receive the votes of all those who said they would have supported Lula, what is seen in the narrative of the game is that upon its release on 28 September 2018, Lula's removal from the ticket had been foreseen, as well as the defeat of Haddad and Manuela. Observing the stages of the game, the causes for this defeat are also found, foreshadowing the result of 28 October, when Brazilians who did not support Bolsonaro and Mourão became aware of the *fake news* promoted against Haddad and his running mate. In any case, this fact may even explain the delay of the release of the game until 28 September 2018, only nine days before the first voting round. If this was not clear to progressive voters, it is because there was hope that there would be a transfer of votes from Lula to Haddad and an expectation that Ciro Gomes would support Haddad's campaign. As is now known, Gomes did not support Haddad, but to the contrary, as soon as the first-round results came in, he left the country and refused to contact or support the PT slate, which took second place in the first round. In this regard, the game leaves room for reflection. Ciro Gomes does not appear in the game, not even as an NPC or in a dialog box, as ally or enemy. There is a single reference to him in the game, which is the number 12 [the number of his slate] on a half-open door to a room in the university in stage 3.³⁸ It is a bit strange that the game released on 28 September only focused on a dispute between Bolsonaro, Lula and or Haddad.

But the peculiarity goes farther. On 28 October 2018, the second round of voting was held, and the victor was Jair Bolsonaro, who took office on 1 January 2019. As mentioned at the beginning of the article, the objective in conducting an ethnography of the game was also to evaluate what could happen in the future after the result of the second round of voting, if the candidate did or did not win. In this case, Jair Bolsonaro won according to the script of the game. It thus becomes important to briefly mention how the game allows explaining or justifying what happened, especially between the first and second round of voting. It is important to remember that the game was released nearly on the eve of the first round voting, and certainly there was not enough time for the game to be played and seen for it to influence the first-round election results, differently from the second round. An important fact to be highlighted is that during the second-round campaign, Bolsonaro's attacks on his adversaries (both candidates and supporters), as well as the final election result, were very similar to the situations presented in the game, especially referring to the explicit mention of fake news that were triggered on social networks, precisely between the first and second round, and which guaranteed victory to Bolsonaro.

By now, August-September 2019, it has been confirmed that Bolsonaro was elected through the use of *fake news* promoted on *Whatsapp*, using illegal *robots* and false accounts, and combined with Bolsonaro's refusal to participate in any interview or debate with Haddad (see for example Soares and Grillo, 2018), using the excuse of the "attack" that he suffered.

³⁷ A few days before the first round of voting, Bolsonaro was "attacked" in Juiz de Fora. See: <https://www.youtube.com/watch?v=cF5vUjzjfrA>, last accessed on 28 March 2019. In December 2018, a documentary called *Facada no mito* was posted on Youtube and social networks, casting many doubts on the veracity of the attack, supporting suspicions that the 2018 elections were fraudulent.

³⁸ There is no other mention of Gomes, although he was a well-positioned candidate throughout the campaign and took third place, far ahead of the next candidate, Geraldo Alkmin of PSDB. Ciro Gomes was considered as a possible candidate on the progressive slate in the second round, if Haddad did not take second place. For the Workers Party, in reality, it was a risky maneuver to count on Lula's candidacy until the final moment.

Haddad had become prominent as Minister of Education in the Lula presidency, when he implemented measures that guaranteed greater access to the poor and minority population to public universities. For this reason he was represented in the game as a “retard” and a failure, and as being responsible for the main threat of moral corruption at universities, given that blacks, feminists, and LGBTIQ populations were among the minority groups that gained increased access to universities. Not by chance, these arguments were also used in fake news. In terms of women, the greater access to the university has been treated as responsible for their distancing from traditional social roles, as wives and mothers. Bolsonaro’s refusal to participate in debates organized by *Rede Globo* TV was also hinted at in the game, in *Bolsomito*’s hostile attitude towards the anchor of the nightly news program of the country’s leading broadcaster (represented by the NPC *Corner*). In sum, with the exception of the “attack”, what is known today about Bolsonaro’s victory was announced in the game, in such a way that if a player was paying attention, upon reaching the end of the game, he or she could be angry or not, but not be surprised. How was it possible that all of the situations that pointed to Bolsonaro’s victory were foreseen and announced in the game, even knowing that many of them were not true? How was it possible that all the suspicions about the victory and how it was obtained were confirmed in the game? Meanwhile, soon after its release, the game was denounced to the federal Public Ministry for inciting violence and intolerance. Nevertheless, it was only removed from the air on 28 January 2019, after Bolsonaro took office.

Neopentecostalism: the doctrine of the Spiritual Battle and the Seven Mountains

Now that the game has been described, to consider its playability, narrative and references to social groups, institutions and movements, the next step is to reflect on what followed the conclusion of the elections and inauguration. Analyzing not only the game, but campaign materials and especially observing the first months of the Bolsonaro government, and ministers and politicians who support him, we perceive a quite close causal relationship between the references used in the game and the “justifications” for them, including the aesthetic and images used. We turn to sources used by Bolsonaro supporters, many of them religious and Neopentecostal, to understand in their own terms the victory and the first months of government. The first important relationship appeared during the transition period, just before inauguration, when the name of Pastora Damares Regina Alves began to circulate in the media as the first woman minister to be appointed by Bolsonaro to occupy the Ministry of Women, the Family and Human Rights. With her indication confirmed, Damares became a constant presence in the media due to her polemical public declarations about issues important to her post. One stood out: “This is the moment for the Church to govern” (Campanato, 2018). Given this affirmation that conflicts with the principle of the secular state, we sought to learn about her religious trajectory and her church. We thus examined the Igreja Batista de Lagoinha (“Os Sete Montes da Lagoinha”),³⁹ which has “invested strongly in the view of the reorganization of society through a project called the Seven Mountains” (idem). When searching the internet for the expression “Os sete montes da sociedade” [The seven mountain of society] we found various relevant sites and one of them stood out for being the site of Jovem (Jovens com uma Missão) [Youths with a Mission], one of many international missionary organizations whose objective is to “contribute to the growth of the Kingdom of God in distinct segments of society” (“The Seven Mountains”), are a reference to: *Church and religion; Government and politics; Family; Media and Communication; Economy and Business; Education and Science; Arts and entertainment;*

³⁹ From September 2018 until the present, Evangelical blogs and video games have been followed that present doctrines of a few religious denominations. The blog *Graça Plena* [Complete Grace] is only one of the sites that can be found about the doctrine of the Seven Mountains. We use it as a reference because it is an international organization and because it was created by one of the “authors” or “founders” of the movement.

Conducting more internet searches about this doctrine, we found the text of Domingos Sávio Rodrigues Alves (s.d.), in which the author makes a summarized analysis of it. In sum, the doctrine originated in the 1970s when two Christian youths “established some important targets in society, which needed Christian influence. The objective was a better and more just world, based on the positive influence of Christians in various segments” (Alves, s.d.).

Later, “other people like Lance Wallnau, Randy Clark, Peter Wagner, and others, [...] mixed this vision of the seven areas with the Neopentecostal theology of the Spiritual Battle, resulting in what is now known as the Vision of the Seven Mountains, whose objective is to dominate the world” (idem). In sum, for the church to attain political power over the world it must control these areas in contemporary society. But why does the Church need to attain political power? What church is it speaking of?

The objective of the article is not to discuss Neopentecostalism in Brazil, but to propose a discussion about the origins of the political actor and of the belligerent messianic promise incarnated by Jair Bolsonaro/Bolsomito that led him to victory in the 2018 election, which was due in large part to the engagement of Evangelicals in Brazilian political life. This required us to examine these groups, especially their doctrines, in an effort to identify them in the game. In fact, there is a vast Neopentecostal literature that treats Spiritual Battles as a strong movement within Neopentecostalism in general and in Brazil today, not only because of the conflict with African-Brazilian religions, whose beliefs and rituals have been systematically demonized by these churches, but due to a project to refound Brazilian society. In this sense, it is possible to say that the successive stages of the game are inspired by and make references to the forms of action of “spiritual battles” against the demons that “control” the different areas or domains of society (in this case Brazilian), according to the Seven Mountains doctrine. It is not by chance that Bolsomito’s successive victories in the game are over those social segments to be reconquered, as indicated by the doctrine of the Seven Mountains. In this sense, it is important to briefly present these two doctrines.

In relation to the doctrine of “the spiritual battle” we opted to use as the first reference the report of a Presbyterian pastor Augustus Nicodemus Gomes Lopes,⁴⁰ that is, someone authorized from the field of Reformed religions. Not only did he present and discuss the Biblical passage that gave origin to the doctrine (Ef 6:10 - 20) of the “spiritual battle”, but he also criticized the Neopentecostal interpretation given by the creator of the movement, a missionary named J.O. Fraser who in the 1930s worked in a rural village in China. Nicodemus affirmed that according to Fraser, the inhabitants of the village believed in curses and demons and for this reason resisted conversion. Fraser made various attempts to combat these demons, because at a certain moment “he thought that his business was with the demons, no longer with the people and the Scriptures”. After various attempts he developed a pragmatic method that worked, because through it he was able to pursue the demons, invade the territories controlled by them and “bind them”. Until his death, this method had not been revealed. According to Nicodemus, the leading promoter of Fraser’s method was the writer Frank Peretti in a novel entitled *This Present Darkness* which became a best-seller in the United States and was translated into various languages. The novel took place in a small university town in the United States, where there were many students from other regions. Due to the arrival of these youth, the peaceful way of life of the town changed to give way to a mundane life with much vice and sin, according to the author, because of the demons who came to control the city. Based on this fictitious narrative, another missionary, Peter Wagner, then created the Spiritual Battle movement, whose main characteristic is a revival of a dualism (Manicheism) recreating the struggle between good and evil, as well as the combative posture as expressed in the biblical passage written by St. Paul in his letter to the Ephesians. As a Presbyterian pastor, Nicodemus is one of the leading Brazilian Protestant

40 See also <<https://solascriptura-tt.org/Seitas/Pentecostalismo/BatalhaEspiritual-OMovimento-Nicodemus.htm>>, <<https://www.youtube.com/watch?v=2mu2qgJKHHY>>, <<https://www.youtube.com/watch?v=ALNHfQtURPc>> and <<https://www.youtube.com/watch?v=ALNHfQtURPc>>.

pastors who criticizes the movement of the Spiritual Battles, especially because of the fact that this doctrine attributes to demons territorial specializations in certain fields or activities, and even for attributing as much or more power to the demons as to God, in conflict with the main dogma of Judeo-Christian monotheism, that the demon is a fallen creature submitted to and used by God for his own purposes.

Meanwhile, a search in the academic literature about Neopentecostalism and spiritual battles shows that despite the many works about this religious field, there are not many about the doctrine that is now a strong movement in this religious field in Brazil and throughout the world. Brazilian scholarly work about the doctrine of the Spiritual Battle especially concerns the climate of belligerence towards religions of African matrix, promoting a culture of religious and political intolerance in the country. Although, these analyses often have a perspective from outside the Neopentecostal camp and more focused on the impacts on the religious and minority groups it attacks. In this regard, perhaps one of the first studies to mention the issue is an article by Birman (1997), situating it as something not restricted only to the Neopentecostal field, but relative to the problem of evil and the fight against evil. In any case, the literature in this field is scarce, compared to that about ethics and the theology of prosperity that earned more attention from scholars of Neopentecostalism in Brazil.

In relation to the Bolsomito game, it can be said that the ethics of prosperity and its meritocratic corollary is subjacent as a basic premise in social life, although, what is highlighted in all the stages of the game and justifies it is the fact that if a part of Brazilian society does not accept this premise, and rebels against it, in favor of social “victimization”, these groups and all of their modes of existence must be eliminated or banished. In the game, these groups form the Red Army against which Bolsomito and his allies must fight in successive battles until they eliminate all of the enemies, given that for Bolsomito and his allies, the denial of the premise of meritocracy is due to the presence of evil, that is, because of the “moral corruption” found in Brazilian society, which places us before doctrines and movements of the Spiritual Battle and the Seven Mountains, both of which are important for their soteriological character and the purification of society. In our understanding, both inspire the candidate’s entire campaign through the countless crusades and moral purges conducted by the Neopentecostals, in the same way that their pragmatic *modus operandi* was appropriated by the game’s developers. Seeking references from academic works that study Neopentecostalism in Latin America, we found the article by Birman⁴¹ mentioned and articles by Clara Mafra, one of which (2012)⁴² was quite elucidative about the point that we want to highlight in this article. In it, Mafra explained that “the geopolitics of Christianity has been inverted: the largest Christian populations are found in the Global South and no longer in the North” (idem). In this sense, she asks along with other scholars about the “specificity of the growth and questions why, among so many possibilities for development of Christianity, is it precisely Pentecostalism that has been more accepted by the populations?”. Citing Joel Robbins, Mafra affirms that there is a consensus about this that attributes the “success of Neopentecostal proselytism” to the doctrine of the Spiritual Battle. Upon asking why the Spiritual Battle was so central, Mafra responds citing Robbins:

This is because Pentecostalism operates “as a repository of an enchanted dualism, which strategically serves to capture traditional cosmologies and attack them, deeply altering how they are understood” (Robbins 2004, free translation). This interpretative line supposes that the process of conversion to Pentecostalism involves a recategorization of the faithful’s previous cosmology of belonging: what was initially a divine entity, became, through the work of conversion, a demonic entity. This means that the operation of conversion concerns the learning of a new classification and a new mapping of the world, something that normally would be transmitted by missionary work – i.e., by the engaged ideologue in the tariff of proselytizing...⁴³

41 This is a reference to the author’s article in the book *O mal à brasileira*, published in 1997 by Editora da UERJ

42 <http://www.scielo.br/pdf/rs/v32n2/07.pdf>. Last accessed on 09/08/2012.

43 Mafra, Carla. “O percurso de vida que faz o gênero”. In *Religião e Sociedade*, Rio de Janeiro, 32(2): 124-148, 2012.

In fact, in all the stages of the Bolsomito game, we have various indications that the Spiritual Battle concerns the negation of a certain cosmology, forms of classification and representation of reality that until then morally justified the existence of these groups and their place in society, as well as the legitimacy of their demands. If we take the Brazilian religious cosmology constructed over more than five centuries of hegemony of the Catholic Church, “God is Brazil”, and thus loving (cordial), while the Devil or demon is a more rebellious version of the *malandro* and of *malandragem*⁴⁴, much more than a mediator and not by chance is identified with Exu of the African-Brazilian cults. Actually, until then, this identification was not explicitly questioned by practitioners of Candomblé and Umbanda, but accepted by them as part of the tacit agreement established by the principle of coercive harmony, (Nader, 1994; Gomes, 2002) the same principle that supports the myth of racial democracy and of the cordiality of Brazilians – despite social inequality. According to both Neopentecostal doctrines, the cosmology of Brazilian social movements and segments presented in the game, notably the movements for human rights, housing, feminists, students, access to land, and the media itself which in the past represented the search for justice, equality and solidarity, have come to be criticized and demonized as representatives of moral corruption, converting the national political debate into a moral conflict controlled based on a dualist Neopentecostal perspective.

By chasing, defeating and directly annihilating militants of the Workers Party and its leaders, the game shows that the existence of the Battle is real, and sustains a political and transnational project, which in the Brazilian case seeks to occupy spaces and positions of political power. It no longer involves convincing of or seeking legitimacy. That is, of gathering the congregants, because the human material available already guarantees a significant change in terms of votes that allow the substitution of the previously existing moral and symbolic order, if strong resistance is not made. This issue was quite eloquent as the stages of the game unfold. Although they are numerically superior, the enemies are not able to defeat Bolsomito, and his allies and advisors and it is at this moment that we can infer the inspiration of the doctrines of the Spiritual Battle and of the Seven Mountains on the developers of the game who convert these social segments into “enemies” who correspond to the “usurpers” (enemies and or demons, following Wallnau, Clark and Wagner), who would be occupying each “Mountain” in our society, in the different stages of the game, from the *Media and communication; Government and politics; Economy and business; Education and science; Family, Church and religion, Arts and Entertainment*.

In terms of the main mode of action of the Bolsomito character, the Weberian concept of causal adequacy helps us to understand how the doctrine of the “Spiritual Battle” was used in the game to present *Bolsomito* as a fighter, issuing “mortal blows” against his “enemies” to destroy and eliminate them. The problem became more serious, the more it was proven that most of the accusations against the different groups represented in the game were based on fake news. And, although the information was proven to be false, the candidate’s supporters continued to believe in them, and even accuse the traditional communication media of also being “leftist” and wanting to “damage the Myth”. One example of this hate and discredit in relation to the traditional media can be found during Bolsonaro’s inauguration ceremony, in Brasilia, when groups of supporters shouted “*Whatsapp*” and “*Facebook*” to journalists of *Rede Globo* who were covering the event.

Finally, on 19 December 2018, the Federal Public Ministry filed suit to suspend the game from the digital platform where it was being sold, (Steam, as the company responsible for the game was being investigated since 10 October 2018), the game was only removed from Steam on 28 January 2019, therefore, after Bolsonaro took office). What calls our attention is that in keeping with the narrative of the game, the stage of transition and the first six months of government of the new president of Brazil were based on actions that found strong references

44 DaMatta (1979) argues that the *malandro* is not a criminal or a marginal. It is a complex liminary brazilian category that stays “between and betwixst” the licit and the illicit. The *malandro* is someone whose acts are not easily perceived into a binary morality axis. It’s almost like a trickster with smart and quick practices, inserted in a brazilian context.

in many stages of the game, such as the growing demonization of feminism, LGBT movements, and even the warnings about education policies, entrance to public universities, the demonization of secular education, particularly higher education, with the consequent demoralization of science and scientists, synthesized in the scene in which *Dilmanta* appears next to an image of “stocked wind”.

How pragmatic sociology can contribute to this discussion:

As we affirmed in the previous section, during the first theoretical treatment given to the material collected after we described the game, we observed that there was a relationship between its narrative and two Neopentecostal doctrines - Spiritual Battle and Seven Mountains – both practiced in Neopentecostal churches in Brazil. To better understand this fact, we believe that the theory of justification proposed by Boltanski and Thévenot in their book *De la justification* (1991) [On Justification] and also in the article “Sociologia da capacidade crítica” [“Sociology of critical capacity”] can be promising (2007).

The authors affirm that there are two forms of resolving disputes in modern and contemporary societies: through violence or through justice. Once an option is made for the first, the doctrine of the Spiritual Battle can fit perfectly, to the degree to which it includes violence and a justification for it based on theological and New Testament arguments because as the text of Clara Mafra informs us, the Spiritual Battles movement has strengthened through a process of substitution of a Catholic cosmology that is more flexible in relation to the problem of evil for another form that demands a radical distancing from this previous mode of grasping the world. As seen in the game, in fact, from the perspective of Bolsonarism, there is no longer room for a middle ground or any form of mediation, mediators and negotiation between Bolsomito and his allies and their enemies (or with allies of the enemies). From the perspective of the player, he either dies if he is not able to kill the enemy or he kills them, turning them into feces, and thus the game continues until the last stage, which culminates with the definitive destruction of the head of the demons – Luladrão.⁴⁵

If justice is opted for, the subjects in dispute recognize universal principles and submit to them to resolve the dispute in question. Therefore, the authors conceive a model of justification based on these known universal principles that are shared in the Western world, disposed in six contexts, orders or *cites* [which has been translated as “polity” or “city”], where, depending on the nature of the dispute, these principles can be located and resolved. Although they admit that these principles vary, according to societies and according to the contexts where they take place, they are distributed as follows: the domestic order, based on loyalty and respect, in which tradition and hierarchy perform an important role; the order of work (industrial), whose principle is efficiency, in which performance, technique, and know-how have more importance than tradition and where professional knowledge has greater importance; the civic order, whose principles are laws, representativeness and democracy; the inspired order, whose principles are authenticity, creativity, and imagination, although domesticated by science, education and culture. Even if religion is included, the latter would respect the principle of secularity; the order of the market where the principles are interest and competition; and finally, the world of opinion, whose principles are fame, glory and mediatization.

Although this is a quick summary of pragmatic sociology, it allows us to visualize and compare the two models of *justification* that are found in dispute in Brazil today. The first would be the model that was “deposed” in 2016, having been conceived in the Constitution of 1988, based on the return of justice, through a republican, secular and modern Western representative model, and therefore closer to the proposal of

⁴⁵ To be accused by an Evangelical prosecutor as being the chief of the largest organized criminal, in Brazil, is equivalent to saying that Lula is/was the leader of the demons that took control of Brazil. The fact that he was condemned to prison without objective proof, passing above all the procedures of due criminal process, proved that Lula as the demon should be, if not totally destroyed, at least “bound” – an expression used in the jargon of the Spiritual Battle that refers to the possibility of restricting the powers of the demons. In fact, once imprisoned, as a demon, Lula was “bound” so that he could not impede the defeat of PT.

the authors of *La justification*. The second, which erupted in 2013, and which was “victorious” in 2018 and took power in 2019, would be that presented in the game *Bolsomito*, with a reference to the doctrine of the Spiritual Battle, in which there is no space to seek justice based on the laws of the secular state. In these terms, as we highlighted previously, violence is justified, because what is sought is to depose and destroy the previous model that involved a complete acceptance of the Brazilian secular state, as formulated in the Constitution of 1988, which initiated a new cycle in the Brazilian Republic, known as the “New Republic”. This period officially began with the government of Fernando Collor de Mello, the first civilian elected president after the fall of the military regime, and was consolidated in the following presidential administrations of the Brazilian Social Democratic Party (PSDB) and the Workers Party (PT). In this new period, the civil world (laws and democracy), certainly acquired more importance, supported by the world of the market, the world of opinion (FHC/PSDB), the industrial world and that of inspiration based on greater access to education and culture (PT). The proposal was to create a new cycle of national development that included a project for social inclusion, which would be made viable by the expansion of the world inspired by secular vocation in terms of universal access to schooling for the population in general, focused on the qualification of labor, an expansion of jobs, employability and improvement of public administration (open competitive hiring). In these terms, the domestic world, that of the market (particularly the financial market) and the mediatized order, although strengthened, would in principle be submitted to the civic world, that is, subordinated to laws and be at the service of guaranteeing justice, and politics encompassing democratic governments.

In contrast, what we have in the game *Bolsomito* is an example of an inverted reading about democratic governments in Brazil, given that these governments, are presented as totally “corrupt”, incompetent and promoters of communism and atheism (demonic work). We thus have what Boltanski and Thévenot call a “critical moment”, which in the Brazilian case has lasted some time, if we consider the period from Criminal Action 470 in 2005,⁴⁶ until the events that made possible the election of Jair Bolsonaro in 2018. In this period, the dispute took place through attempts to invert and submit the civil world to the world of inspiration, in the direction of a religious fundamentalism, with Neopentecostalism and the doctrine of the Spiritual Battle becoming the main arena where various measures and actions are being conceived with the goal of brusquely interrupting important public and social policies of the previous governments, thus creating an institutional crisis through the Brazilian social and political system. Although these measures of exception are being guaranteed by legal measures, it is necessary to consider that an arm of the Brazil judiciary has “converted” or is part of Neopentecostal churches or the charismatic and more conservative version of Catholicism which allied to the Neopentecostals, and therefore accepts innovations that were previously unthinkable, banal measures that had been considered illegitimate or of “exception”, such as preventive prisons and plea bargains within the Lava-Jato investigation. These measures have been followed by others, like the moral crusade that also comes from the world of inspiration, and are based on the predominance of the radical, charismatic and fundamentalist religious discourse that seeks to impose itself on all of society. It depends on the exclusion of other discourses, beliefs and religious liberties, which is one of the pillars of secularization, and is accompanied by unconditional support for the “domestic world”, through the concept of “traditional family” as the domain that should control all of Brazilian cultural life in terms of customs and values. All of this has corroborated and institutionalized forms of violence and established what has been called a “culture of hate”.

The second important context in the dispute has been the world of opinion in which, since 2006, a project has been underway to substitute the progressive narrative that was predominant until 2016, which valued democratic and social growth of the country, with narratives that use various strategies to deny reality. This involves a revisionist take on Brazil’s official history that had been consecrated and legitimate until then and

⁴⁶ Criminal Action 470 was a case involving the Workers Party purchase of political support from congressmen in other parties during the early years of Lula’s first government. It was widely known as the “Mensalão” or “monthly allowance”.

led to the process to demoralize both primary and higher education, including a fierce attack on the most important academic and scientific institutions of the country that have suffered devastating policies and budgets cuts. In this sense, much of the Spiritual Battle triggered by the current “winners” is being realized through mediatized actions, which include the intensive use of the internet, in the form of languages and genres until recently not present in the Brazilian political debate. It is in this context that the game *Bolsomito* appropriated a language that in principle is “ludic”, or in the style of traditional electronic games of “street fights”, to promote the *modus operandi* of the doctrine of the movement of the Spiritual Battle, which justifies and legitimates the use of violence (physical and symbolic).

Conclusion

For those who participate in the community or culture of electronic games, the game *Bolsomito 2k18* may appear crude, naive, Manicheist and even dull - given the diversity and variety of genres and styles of games found today. Nevertheless, as we sought to show in this article, the observation of the game and of comments (positive and negative) made by players, allowed us to identify a successful attempt to appropriate this type of narrative structure for political and electoral purposes, and moreover, to corroborate the substitution of a world view, as Carla Mafra affirmed in the article mentioned. Thus, during the recent presidential campaign, this style of game, combined with the doctrines of the Spiritual Battle and of the Seven Mountains, allowed normalizing categories of accusation against social movements, minorities, militants and supporters of a political party that was historically important to the revival of democracy in Brazil, by transforming all of these political actors and segments into the internal “enemy” of the nation. Moreover, the game strongly corroborates Mafra’s identification of a substitution of world views in Brazilian society. In this sense, it is possible to say that one of the fundamental elements of Brazil’s current political crisis is the substitution of a Catholic-based culture based on coercive harmony (Nader, 1994:18-29) that includes the Republican project deposed in 2016, by a Neopentecostal model, based on Spiritual Battles.

Considering the doctrine of the Seven Mountains that is also present in the Neopentecostal project, it was possible to use the theory of justification of Boltanski and Thévenot (1991, 2007) to consider the domains of society that are being disputed by the new project. In this way, what surprised us was not only the content of various stages of the game that explicitly opposed social minorities, institutions and public figures, because the media in general certainly present similar contents, but the use of a electronic game genre – the street fight – in which the stages of the fight were organized through environments that express these domains in dispute and where, according to the Neopentecostal narrative, the evil is found that has afflicted Brazil.

Bolsomito 2k18 channeled and promoted this process of substitution highlighted by Mafra, while mobilizing national symbols, representations, associations, sentiments and emotions that were present and circulated in our society long before the 2018 elections. Having the game take place in stages, in which each one constitutes an escalation in the “Myth’s” [Bolosnaro’s] epic struggle against evil, allowed creating a performatic form based on two important Neopentecostal doctrines to advance this movement in a digital and ludic environment of entertainment related to youth culture.

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Safeguarding, its Genealogy and Governance.
Two Essays on UNESCO's
Convention for the Safeguarding of Intangible Cultural Heritage

Safeguarding. A key *dispositif* of UNESCO's Convention for the Safeguarding of Intangible Cultural Heritage

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Abstract

The expression 'safeguarding intangible cultural heritage' was formed within the context of transformations in the instruments and strategies for protecting cultural elements usually designated 'folklore and traditional (and popular) culture'.¹ The adoption of a 'cultural heritage approach' to this subject was a somewhat turbulent process that drew, since the mid-twentieth century, a winding path of dialogues with, and divergences from, common sense notions and mainstream preservationist culture. Throughout this process, political and conceptual possibilities for social engineering were envisaged, some were discarded, choices were legitimized and, no less importantly, networks were formed of agents and narrators of the political and legal negotiations that eventually lead to designing UNESCO ICH Convention as officially adopted. This path will be explored in the following comments on the formation of safeguarding as a cultural heritage policy *dispositive*² and significant contrasts to other instruments, in relation to which it has acquired specificity, meaning and scope.

Key words: Unesco; Convention for the Safeguarding of Intangible Cultural Heritage; safeguarding; cultural heritage dispositifs; intellectual ethnography.

¹ This wording follows the *Recommendation on the Safeguarding of Traditional Culture and Folklore*, adopted by the UNESCO General Conference, 15 November 1989, hereinafter the 1989 Recommendation.

² I follow the definition as provided in Michel Foucault (1977), hereafter 'Le jeu de Foucault'.

Salvaguarda. Um dispositivo-chave da Convenção da UNESCO para a Salvaguarda do Patrimônio Cultural Intangível

Resumo

A expressão ‘salvaguarda do patrimônio cultural imaterial’ constituiu-se em meio a transformações dos instrumentos e estratégias de proteção de elementos culturais que vinham sendo denominados ‘folclore e cultura tradicional (e popular)’. A adoção de uma ‘abordagem patrimonial’ para esses temas foi um processo razoavelmente turbulento, que desenhou, desde meados do século XX, um caminho tortuoso de diálogos e divergências em relação a noções do senso comum e à cultura preservacionista dominante. Ao longo desse processo, possibilidades conceituais e políticas de ‘engenharia social’ foram vislumbradas, algumas foram descartadas, legitimaram-se escolhas e, não menos importante, formaram-se redes de agentes e narradores das negociações políticas e jurídicas que conduziram finalmente à concepção da Convenção da Unesco do Patrimônio Cultural Intangível adotada oficialmente. Essa trilha será examinada nos comentários que seguem sobre a ‘salvaguarda’ enquanto dispositivo de políticas patrimoniais e seus contrastes com outros instrumentos em relação aos quais ganha especificidade, significado e amplitude.

Palavras-chave: Unesco; Convenção para a Salvaguarda do patrimônio imaterial; salvaguarda; dispositivos de normativas patrimoniais; etnografia intelectual.

Safeguarding. A key *dispositif* of UNESCO's Convention for the Safeguarding of Intangible Cultural Heritage

Antonio Arantes

Subject and framing

My framing of this theme requires rethinking notions such as 'metaculture' and 'heritage regime' that today pervade discussions of heritage (Kirchenblatt-Ginblett 2004; Bendix et al. 2012), but which I use here with specific meanings. I begin with the concept of metaculture, inspired by the distinction first formulated by Roman Jakobson between *language object* and *metalanguage*. For the linguist, metalanguage is a dimension of everyday communication that can be termed reflexive since it performs a 'gloss' function (Jakobson 1963). Analogously, in the case of cultural heritage, preservation can be conceived to perform a metalinguistic function in relation to its 'culture object.'

Cultures, similarly to languages, are observable through the overall variations in their occurrences, the latter being indissociable from the agents who realize them and the circumstances of their realization. Even those that are more specialized or less socially disseminated seldom occur in a single version. What we find are sets of variants of phenomena of the same kind, produced by diverse social agents. Furthermore, practices are not dissociated from one another but integrated in systems (Arantes 2009). Thus, by selecting one of these variants – or even a set of them – as an object of safeguarding, following the principles of 'authoritative heritage discourse'³ proper to each regime, processes are set in motion that will predictably provoke effects and repercussions on the system of which they are part. By being transformed into metaculture, the version or variant object will acquire specific values and connotations that potentially transform it into an ideal version of the real, so to speak, exemplary in the double sense of the word: as illustration and model. In the case of built heritage, we can recall the example of palaces and cathedrals, more resplendent perhaps than they ever were in the past, alongside temples and manor houses not encompassed by the authoritative parameters and thus not afforded such prominence. In the case of intangible elements, we can consider choreographies never before executed with such precision, perhaps, or with such eye-catching costumes, alongside performances of the same kind realized in everyday clothing.

Preservation has been guided by social history, architecture, archaeology, geography, law and, more recently, anthropology. These are some of the areas of knowledge that support the preparation of dossiers – legal documents that identify, delimit, legally institute and regulate the management of what is being preserved. Such modes of knowledge form the basis for defining the norms that end up guiding the trajectory – or biography⁴ – of preserved items, following their inclusion on register lists or books, and the authoritative heritage discourse, legitimized by erudite knowledge and implemented by heritage institutions.

³ Cf. Laura Jane Smith (2006). I prefer to reinterpret the formula by using the expression 'authoritative heritage discourse' since this expression, differently from Smith's, does not dissociate agent from agency, or an argument of authority from whoever gave authorization to its utterance. Some heritage discourse can be authorized by a third party, but do not necessarily express what is institutionally correct and acceptable; 'authoritative' inherently expresses the authority of the argument itself.

⁴ See argument about 'trajectory of commodities' and 'politics of value' in Appadurai (1986).

From this viewpoint, the construction of heritage realized by preservation in general, and ‘safeguarding’ in particular, should not be confused with culture on the ground, with life as it really is, so to speak. Instead it can be considered a second-level construction, culture *about* culture, irrespective of whether the latter is indigenous, aboriginal, popular, erudite or other, produced in the interaction of the various social agents involved (local and institutional), that creatively amalgamate and embed it in social life, old and new, flavoured with renewed senses of tradition and authenticity.⁵

This line of reasoning suggests that the actions catalysed by preservation, given that they are not merely reiterative but inaugurate qualified meta-realities, can produce reflexive and potentially dislocating effects that alter the values that ordinarily constitute the culture object. Here I am not making value judgments but underlining the fact that, by seeking to strengthen cultural elements, preservation can add socio-political agendas and symbolic meanings to them, associated with new guises that magnify their public presence. Formulated in more generic terms, the contiguity between this metaculture, framed by the seal of heritage and highlighted by official promotion, and the reference culture, hostage to the (mis)fortunes of its everyday context, probably has effects on the values attributed to both. But while the proximity valorises both, it does so in opposite senses, tending to draw attention to what is interpreted as a support to an ‘outstanding universal value’ (in the case of material items) or to what was ‘curated’ as a prime example of the safeguarded ICH – in both cases, the instances that best correspond to the preservation norm. As a consequence, the hypothesis that should orient the interpretation of scholars and occupy the attention of preservation agencies is that this contiguity can erode the legitimacy and symbolic efficacy of the culture object, which remains subject to the vicissitudes of the everyday, and, in terms of the social condition of its agents, to their political power and capacity to negotiate in customary social exchanges.⁶ By performing a metacultural function, therefore, the registered standard can acquire the sense of a highbrow form and become a criterion for the aesthetic evaluation of the actual performance. It is under this new condition, as a metacultural reality, that the preserved cultural element – whether tangible or intangible – maintains reflexive relations with social practices on the ground and with the ways of life on which its continuity and resignification depend.

One consequence of this argument is that the juxtaposition enabled by safeguarding makes evident differences between life and heritage as representation. It might be said that the latter questions and dislocates its referent – the culture object – through its endorsement by the seal of official preservation. Under this new condition, tangible and intangible heritage affects the legitimacy of the elements to which they refer – both positively and negatively – as well as the meanings of continuity and belonging associated with them by their agents, i.e., communities, group or individuals (hereafter CGIs). Certainly, heritage cannot be considered simply an ‘inheritance’: it becomes a ‘bridge’ technically constructed towards the future, “*by knowledge produced by whoever ‘encountered’ the [reference] objects of the past*” (Davalon 2015). Consequently, it becomes an ethical responsibility of the preservation agents to mitigate the negative effects of their policies on the wider context in which safeguarding actions are implemented.

I turn now to the notion of heritage regime, which I associate with the Foucauldian concept of *dispositif* (Foucault 1977) highlighting two aspects of directly relevance to the subject of my remarks. The first is that the concept articulates both discursive and non-discursive aspects of its object. In the philosopher’s words:

⁵ See the argument about ‘invention,’ ‘convention’ and the importance of ‘creativity’ in Wagner (1975).

⁶ It is worth clarifying that here I am referring generically to situations frequent in ICH safeguarding processes in which particular social agents question the criteria adopted by preservation agencies for inclusion in inventories and participation in safeguarding actions, as well as the distribution of the benefits deriving from them. In my view such claims indicate that some interpretations or variants may correspond more than others to the officially registered version. Consequently, performing a metacultural function, the registered pattern may acquire the value of a ‘highbrow form’ and become the criterion used to appraise other contemporary manifestations.

Ce que j'essaie de repérer sous ce nom, c'est, premièrement, un ensemble résolument hétérogène, comportant des discours, des institutions, des aménagements architecturaux, des décisions réglementaires, des lois, des mesures administratives, des énoncés scientifiques, des propositions philosophiques, morales, philanthropiques, bref : du dit, aussi bien que du non-dit, voilà les éléments du dispositif. Le dispositif lui-même, c'est le réseau qu'on peut établir entre ces éléments (Foucault 1977: 1).⁷

The second refers to the notion of *épistémè*, which is associated with the concept of *dispositif* and proves especially pertinent to these comments. Foucault replies to his interviewer in the cited work with the following explanation:

Si tu veux, l'épistémè, je la définirais, en faisant retour, comme le dispositif stratégique qui permet de trier parmi tous les énoncés possibles ceux qui vont pouvoir être acceptables à l'intérieur, je ne dis pas d'une théorie scientifique, mais d'un champ de scientificité, et dont on pourra dire: celui-ci est vrai ou faux. C'est le dispositif qui permet de séparer, non pas le vrai du faux, mais l'inqualifiable scientifiquement du qualifiable (Foucault 1977: 3).⁸

The *dispositif* acts as an apparatus, a tool, constituting subjects and organizing them. Its political efficacy, Foucault avers, referring to the power of governors and State apparatuses, has “pour condition de possibilité, l'ancrage dans les comportements, les corps, les relations de pouvoir locales, où il ne faudrait pas voir du tout une simple projection du pouvoir central” (Foucault 1977: 5).⁹

The regimes simultaneously create and regulate clashes between powers and counter-powers, which take place in the public sphere and are motivated by social demands of diverse kinds, usually political or economic in nature. In the case of heritage, these demands are also academic and professional. All such regimes, like the one instituting the safeguarding of intangible cultural heritage, are products of their time. While in its early days and for half a century after, preservation practices were embedded in elitist culture and values, referenced to artworks, monuments and sites of outstanding universal value, we enter the twenty-first century with democratic political demands and under the aegis of movements campaigning for citizenship rights, based on ethnic and geopolitical differences, in the name of universal values, such as freedom of expression, environmental protection and gender equity. As David Harvey (2001) astutely argued, referring to heritage as a process, this phenomenon forms part of political change, more specifically those relating to citizenship rights, and, if it is to be adequately understood, needs to be contextualized within the dynamic relations between civil society and State – which, in my view, include changes of political regime and to political culture.¹⁰

Returning the philosopher's reflections, in this dynamic context it becomes especially important to the understanding of 'safeguarding' that, as a *dispositif*, “tel discours peut apparaître tantôt comme programme d'une institution, tantôt au contraire comme un élément qui permet de justifier et de masquer une pratique qui, elle, reste muette, ou fonctionner comme réinterprétation seconde de cette pratique” (Foucault 1977: 2)¹¹. I am suggesting, therefore, that safeguarding, as a *dispositif*, triggers an effect of duplicity, 'a second interpretation'

7 “What I am attempting to discern by this name is, in the first place, a resolutely heterogeneous ensemble consisting of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions – in short, the said as much as the unsaid, these are the elements of the *dispositif*. The *dispositif* itself is the network that one can establish between these elements” (Foucault 1977: 1, free translation).

8 “If you wish, I would define the *épistémè* (...) as the strategic *dispositif* that allows the selection from among all possible statements of those that will be acceptable within, I would not say a scientific theory, but a field of scientificity, and of which one can say: that one is true or false. It is the *dispositif* that allows the separation not of the true from the false, but of what qualifies as science from what does not” (Foucault 1977: 3, free translation).

9 “as a condition of possibility its anchoring in behaviours, bodies, local power relations, which we should avoid seeing as a simple projection of a central power” (Foucault 1977: 5, free translation).

10 Article 216 of the 1988 Brazilian Constitution clearly illustrates this fact. Described as a 'Citizen's Constitution,' it promoted changes to the concept of cultural heritage, defining it no longer in relation to hegemonic historical and aesthetic values, but “to material or immaterial items (...) that bear references to the identity, action, memory of the different groups forming Brazilian society.”

11 “it may appear sometimes as a program of an institution, sometimes, on the contrary, as an element that enables the justifying and masking of a practice that itself remains silent, or functions as a second reinterpretation of this practice” (Foucault 1977: 2, free translation).

of its object, dislocating it and presenting itself as a materialization of the highbrow form (the institutional regime). Under this new condition, as ‘a second reinterpretation’, it can conceal and silence its referent by raising it to the condition of prototype at the level of the everyday, a living example of the regime that applied to it and that, in a new guise, ceases being a metacultural reality and becomes instead a reference point, an expression of life as it came about to be. In these new guises it disputes for visibility – and, who knows, even for legitimacy – with raw experience, the reality lived by social agents from which it originated.

Hence it is up to the managers of safeguarding to mitigate the reflexive effects of the realities in whose creation they participate. These realities can become more attractive and more convincing than the culture object, despite being dependent too on the new conditions of production that the common social agent, the cultural community, does not control and to which this population is submitted insofar as they are controlled by the State and mediated by political ideology, when not by party interests. Consequently, to understand safeguarding not only in the abstract, as I do in my present commentary, but concretely, with regard to their effects on the historicity of heritage (see also Arantes 2009) and on the quality of life of its agents, it is essential to take into account the specific conditions in which it is implemented. This poses problems for managers interested in constructing generic performance indicators for evaluating public policy results in this area.

Mutations to the notion of safeguarding

As I pointed out at the beginning of these reflections, the notion of safeguarding was born out of the problematics surrounding what in the 1950s was called ‘the defence of folklore.’ *Folklore and traditional (and popular) culture*, encompassing music, arts and crafts, as well as diverse genres of oral expression such as myths, folktales, epic poems, riddles and so on, were collected by institutions and private researchers long before the nineteenth century, when they gradually became reinterpreted as national cultural emblems.¹² Safeguarding, as envisaged by the ICH Convention (Article 2.1), pertains to objects historically formed through this expressive dimension of culture and cultural policies.

The initial focus of this historical trajectory are music and the diverse manifestations of orality. Some collections, such as the one assembled from 1948 onward by Folkways Records and incorporated into the Smithsonian Institution in 1987, as well as the collection available to researchers at the Maison des Cultures du Monde, created in 1997,¹³ became an international benchmark for the methodologies employed in the identification and documentation of ethnographic material. However, the objective of the ICH treaty is not the register of cultural expressions and the formation of collections per se. Its aims, innovative for their time, were constituted over the course of a process that includes important changes in the conception of the objects of protection, the motives that feed it and the aims of the strategies adopted.

As I understand it, at the start of this process the objective was to conserve the authenticity and the historico-documental value attributed to particular cultural expressions, saving them from undesirable changes provoked by the culture industry and the emerging mass media. By 2000, when the Convention was being drafted, the continuity of living processes of constructing senses of identity had become the main issue to be resolved. This is the line of inquiry I seek to explore over the following pages.

¹² Examples include the Pitt Rivers Museum (Oxford, 1884); the Museum of Archaeology and Anthropology (Cambridge, 1884); the Peabody Museum of Archaeology and Ethnology (Harvard University, 1866); and the Musée de l’Homme (Paris, 1937).

¹³ For further information see <<https://folkways.si.edu/folkways-records/smithsonian>>and <<http://www.maisondesculturesdumonde.org>>

A matter of copyright?

Until the mid-1950s, few legal instruments addressed these issues. ^{Those that were created}¹⁴ focused, perhaps with little practical effectiveness, on protecting the copyright of ‘folkloric’¹⁵ musical expressions in a context that had begun to be dominated by the culture industry and the mass media. Along these lines, it is worth noting that the pioneering demand for the creation of an *International instrument for the protection of folklore* had first been introduced into the multilateral political sphere by the Bolivian government in 1973. At the request of the Andean country’s Ministry of Foreign Affairs and Religion, the Director General of UNESCO submitted the examination of this proposal to the Intergovernmental Copyright Committee, along with “*the results of the Committee of Experts Charged with Drafting a Model Law on Copyright for Developing Countries in Africa*”.¹⁶ It was only at the end of the 1970s, however, and the start of the 1980s, just when globalization was taking hold, that UNESCO implemented a number of measures that would eventually develop into what is today defined as ICH safeguarding.

In the next section I briefly examine some of the documents produced over the course of this trajectory, focusing on the main shifts in the strategies formulated to preserve what today falls under the rubric of ICH. I also seek to identify precedents and surrounding issues that, as commonly held views, are also frequently expressed in the demands and arguments of various stakeholders, revealing an entire semantic field that gives life and broader significance to ICH and to related management strategies.

Folk arts

I begin with a series of questions debated by participants at the *Symposium on the elaboration of a Ten-year Plan for the Preservation and Promotion of the Performing Arts and Music in Africa and Asia* (hereafter Ten-year Plan), organized by UNESCO in 1977.¹⁷ This document presents a detailed list of procedures designed to confront what was then identified as a ‘triple threat’ to the continuity and ‘authenticity’ of music and performing arts, namely, the “*rivalry of the new entertainments, in particular those dispensed by the mass media; the rapidity of social and cultural evolution; the ever-increasing influence of alien factors*” (Ten-year Plan, Intro, Para.13).

The preservation and promotion measures, initially advocated for Africa and Asia, followed later by Latin America, included: identifying the individuals and groups practicing ‘folk arts and skills’ (ibid: Intro, Para. 4) on these continents and encouraging the continuation of their practices; researching, documenting and increasing the circulation of productions; promoting festivals as a form of stimulating exchange between groups; the creation of official performance groups; finally, an endless number of measures of apparently questionable viability and effectiveness, given the complex realities that were and still are found on these continents.

Despite the proviso made by the signatories to the effect that contemporary “*creations in traditional style*” and “*authentic African and Asian creations which borrow forms and means from other cultures*” (ibid: Item II, 1.d) should not be discouraged, the guide to drafting the ‘Ten-year Plan’ proposes a wide-ranging and herculean effort to avoid changes already made and irreversible in a world in? transformation. However, the institution’s assessment of these safeguarding measures was apparently positive, as declared in the official report:

14 Among the precursory initiatives we can highlight Japan: Law for the Protection of Cultural Properties, 1950; Brazil: National Folklore Commission, 1947; Campaign to Protect Brazilian Folklore, 1951; Federal Decree 3551, 2000; Bolivia: Supreme Decree 08396, 1968, for the protection of folkloric music produced by native groups; Supreme Decree 12626, 1977, for the protection, promotion and safeguarding of the country’s folkloric expressions that form part of Traditional Culture. Mexico: National Museum of Popular Cultures, 1982.

15 Reinforcing and complementing footnote 1, I emphasize that when referring to documental sources I seek to maintain the original vocabulary wherever possible, highlighting in italics and between quote marks, and contextualizing it whenever necessary. The citations will follow the format adopted by this edition.

16 UNESCO Document IGC/XII/12. Paris, 1 October 1973.

17 The meeting of experts was based on *Recommendation No.3 of the Final Report of the Intergovernmental Conference on Cultural Policies in Asia*,” 10-20 December 1973; and No. 12 of the *Final Report of the Intergovernmental Conference on Cultural Policies in Africa*,” 27 October – 6 November 1975.

“The success of UNESCO’s programme on African national languages in 1960s and 1970s is well known to the world.” As evidence, the report cites the efforts “to settle the problems of transcription, spelling, grammar and dictionaries of more than 70 African languages on the basis of recorded oral traditions.”¹⁸ Mention is also made of the production of more than 150 LPs and seventy compact discs and cassettes, some of which had already been used to ‘revitalize’ musical pieces that no longer existed, as well as the organization of regional festivals in Africa, Latin America, the Caribbean and the South Pacific, which ‘have done much to enhance the revalorization of the traditional cultures.’¹⁹

I cite the *Ten-year plan* since it registered the need expressed at the time – not coincidentally, by emergent nations²⁰ – for legal protection of cultural products circulating in an incipient international market and indicates the scale of the shift taken by heritage policy in the run-up to the *World Conference on Cultural Policies*, held in Mexico City in 1982.

Democracy, development and identity

The *Mexico City Declaration on Cultural Policies* (hereafter *Mondiacult*) enunciated a set of theses based on a conception of cultural preservation fairly compatible with the ideals and methods of the ICH Convention. But what is ‘safeguarding’ in the context of *Mondiacult*, and to what does it refer?

From the outset, it is important to note that this treaty leaves out the concept *folklore* and the adjective *popular* then in vogue and, furthermore, diverges from these concepts by proposing a definition of culture not limited to the simple listing of domains of social life.²¹ On the contrary, the *Mondiacult* declaration attributes meanings and generates some important implications by announcing that culture “includes not only the arts and letters, but also modes of life, the fundamental rights of the human being, value systems, traditions and beliefs” and that “it is culture that gives man the ability to reflect upon himself.”²²

New elements and important perspectives are introduced into the debate – with regard not only to safeguarding, but cultural policies in general – by adopting identity, democracy, respect for diversity and social responsibility as key reference points. Here, preservation is undertaken against “damage or destruction” and “urbanization, industrialization and technological penetration,” as had also been the aim, to some extent, in preceding instruments, but also against “illicit trafficking,” “colonialism, armed conflict, foreign occupation and imposition of alien values” (Item 25). On this last aspect, the *Mondiacult* declaration responds to contemporary concerns to include in the “principles that should govern cultural policies,” the viewpoint that the culture industry and the advance of technology “often disregard the traditional values of society and kindle hopes and aspirations which are not in keeping with actual needs of its development,” compounding by the fact that “the absence of national cultural industries may, particularly in developing countries, constitute a source of cultural dependence and give rise to alienation” (Item 38).

Specifically, in the field of heritage, the *Mondiacult* treaty innovates by associating preservation with motives and meanings different to those that guided previous instruments, exposing their limitations and lending support to demands to readjust them. In other words, by acknowledging the dynamic reality of culture and, at the same time, the power imbalance existing between local agents (principally in developing countries) and the culture industry – especially at international level– the new treaty created the logical and political

18 Report of the International Expert Meeting for the Safeguarding and Promotion of the Intangible Cultural Heritage of Minority Groups in Vietnam, Hanoi, 15-18 March 1994. Annex VIII, p. 6. (GN).

19 Ibid.

20 Significantly, in 1955 the *Asia-Africa Conference* had taken place in Bandung, Indonesia, referred to by Sukarno, then President of the country as “the first intercontinental conference of colored peoples in the history of mankind” (cited in Tsing 2005: 83).

21 See Edward Tylor’s (1832-1917) definition of culture as “that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society” (1958: 1).

22 *Mondiacult*, Preamble.

framework for proposing actions designed to promote this dynamic and rebalance the forces in this field, abandoning the impossible mission to freeze change. Moreover, by associating heritage with ways of life and with *'harmoniously balanced'* development (today one would say 'sustainable'), this treaty situates preservation at the level of social policies, affirming the right of communities to protect their heritage and their corresponding responsibility (Mondiacult, Para. 24) to respect the rights of others.

"Culture," the declaration states, "*is the essential condition for genuine development*" (ibid: Para. 41). "Cultural identity," it continues, "*is a treasure that vitalizes mankind's possibilities of self-fulfilment by moving every people and every group to seek nurture in its past, to welcome contributions from outside that are compatible with its own characteristics and so to continue the process of its own creation*" (ibid: Para. 3).

Responding to this task, UNESCO acquires a position of "*capital importance*" (ibid: Para. 52) "*to further the development of mankind*" and the "*establishment of a lasting peace*" (ibid: Para. 51), objectives to be attained by an overall development of society that "*calls for complementary policies in the fields of culture, education, science and communication with a view to the establishment of a harmonious balance between technological progress and the intellectual and moral advancement of mankind*" (ibid: Para. 30). In the heritage area, the verbs describing the stances taken by nations in response to these threats are "*preserve and appreciate,*" "*defend sovereignty and independence,*" "*affirm and promote,*" "*restitute*" (ibid: Paras. 24, 25, 26). We can observe a conception of emergent States and social entities as proactive agents operating in a world in transformation. As a metacultural construction, heritage acquires creative force, impetus and movement that resituates it vis-à-vis demands for copyright protection. Moving beyond the culturally produced objects themselves, attention is already being paid to the conditions under which they are produced.

A lesson of folkways documentation

The *Recommendation on the Safeguarding of Traditional Culture and Folklore*²³ (hereafter the 1989 Recommendation), cited in the Preamble to the ICH Convention, merits closer scrutiny. As implied by its title, the object of this treaty is "*folklore (or traditional popular culture)*" as in previous documents, defined as "*the totality of tradition-based creations of a cultural community, expressed by a group or individuals and recognized as reflecting the expectations of a community in so far as they reflect their cultural and social identity*" (1989 Recommendation, Para. A).

To these ends, the treaty in question provides a detailed description of the measures to be taken to identify, conserve, preserve, disseminate and protect folklore. The detailed descriptions of the actions encompassed by these diverse rubrics – which, indeed, are repeated over the course of the process analysed here – provides a clearer insight into the future imagined by its drafters and signatories. In principle, the treaty follows the direct line of the Ten-Year Plan mentioned earlier in referring specifically to "*tradition-based creations of a cultural community*" (ibid: Para. A). However, they differ in one very important aspect, which relates to the articulation of these cultural creations with the social context in which they occur, whether practiced or registered in traditional settings, or showcased and made available by the market of cultural goods, "*as an integral part of cultural heritage and living culture*" (ibid: Considerandum 3). It is important to consider the consequences of this change of conception for the purposes of implementing the actions advocated in the document. Some of its *dispositifs* provide important clues and suggest additions to the general comments presented previously, in the sense of identifying the specific outlook of this instrument.

²³ Adopted by UNESCO General Conference in Paris, 15 November 1989.

In terms of identification, the treaty recommends “*national inventories of institutions concerned with folklore*” (my underlining) associated with updating “regional and global registers.” It also proposes the creation of “*identification and recording systems (...) in view of the need to co-ordinate the classification systems used by different institutions*” as well as “*stimulate the creation of a standard typology*” (ibid: Para. B, a – c).

Conservation refers to documentation and its use by “researchers and tradition-bearers.” On this point, the 1989 Declaration includes the significant proviso that “*while living folklore, owing to its evolving character, cannot always be directly protected, folklore that has been fixed in a tangible form should be effectively protected.*” Specifically, it proposes to establish national archives, “*a central national archive function for service purposes*” and museums or folklore sections at existing ones, which “*emphasize the living or past aspects of [popular] cultures.*” It also recommends harmonizing collection and archival methods, training specialized personnel and providing the means to “*securing the cultural community an access to the material*” (ibid: Para. C, a – g).

On the question of preservation, Member States, for the “*protection of folk traditions and those who are the transmitters*” against “*the impact of the industrialized culture purveyed by the mass media,*” should disseminate folklore through “*formal and out-of-school curricula,*” “*guarantee the right of access of various cultural communities to their own folklore,*” set up “*inter-disciplinary national coordinating bodies,*” “*provide moral and economic support for individuals and institutions studying, making known, cultivating or holding items of folklore*” and promote scientific research on these topics (ibid: Para. D, a – e).

The next aspect is promotion. The Declaration proposes “*a fair dissemination*” of folklore, stating that “*distortion during dissemination should be avoided so that the integrity of the traditions can be safeguarded.*” The instruments to achieve this end are organization of events, better coverage by the media, full-time jobs to folklorists, production of educational materials, ensuring the availability of adequate information, promotion of national and international exchanges between people and institutions, and a commitment to “*encourage the international scientific community to adopt a code of ethics ensuring a proper approach to and respect for traditional cultures*” (ibid: Para. E, a - g).

In relation to (legal) protection of this heritage, it can be observed that the 1989 Declaration Para. F conceives heritage as “*manifestations of intellectual creativity whether it be individual or collective*” and, as such, “*must be safeguarded by and for the group (...) whose identity it expresses*” (ibid: Para. B, my underlining). Individuals and groups “*express*” (ibid: Para. A) and ‘*transmit*’ (ibid: Paras. D and F.b.i) their collective creations. The treaty thus enunciates the conditions under which these individuals and groups become people with rights, affirming, in the 1989 Declaration Para. F, that folklore “*deserves to be protected in a manner inspired by the protection provided for intellectual productions*” (my underlining). The caution observed in the latter text is justified since although “*there are various categories of rights which are already protected and should continue to enjoy protection in the future*” (ibid), the 1989 Declaration draws the attention of “*relevant authorities*” to the need to create instruments that protect diverse ‘*intellectual property aspects*’ [ibid: Paras. F(a); F(b)], both in the interests of local agents and in those of “*the collector*” of folklore and “*the archives.*”

It is worth observing that this recognition of the limitations of the legal instruments protecting folklore then in force, inherently national in scope,²⁴ also applies to the work developed by UNESCO and WIPO: according to the 1989 Declaration, “*this work relates to only one aspect of folklore protection [intellectual property rights] and that the need for separate action in a range of areas to safeguard folklore is urgent*” (ibid: Para. F.a). At the time – and even today in diverse sectors of ICH, such as, for example, craft and popular art – legislation did not sufficiently or adequately consider the collective nature of these intellectual creations, nor the role of individual agents or even concrete groups in their transmission and creative reproduction. In the context of safeguarding ICH, this area of rights remains a topic of debate still today. Indeed UNESCO’s 2001 Secretariat Report concluded that

²⁴ See note 23.

“recent meetings (the World Forum on the Protection of Folklore organized by UNESCO and WIPO in Phuket (Thailand) in 1997, followed by four regional meetings in 1999), came to the conclusion that intellectual property does not give appropriate protection to expressions of folklore and a *sui generis* regime specific to this purpose needs to be developed.”²⁵

Given both the detailed nature of the declarations, presented here in summarized form, and its standardizing and somewhat centralizing aim in terms of institutional structures and some of the advocated methods, this legal instrument clearly exemplifies what, in my opening remarks, I called a *dispositif*. The 1989 Declaration leaves a legacy, undoubtedly, as the enunciation of a basic agenda of what we today call ‘safeguarding’ and that, in this treaty, are largely subsumed by the idea of ‘preservation’ still, a generic term then adopted in relation to diverse types of heritage. But as an instrument for generating and orienting effective policies, it would be difficult to apply in a world as politically diverse and controversial, and as economically unequal, as our own. Not by chance, what was intended as a legally binding instrument became merely a declaratory statement.

Convergence in Hanoi

The paths to safeguarding begun in the discussions on folklore and popular culture in Africa and Asia, and the guidelines established for cultural policies in Mondiacult, converged at the expert meeting held in Hanoi, 1994, in response to changes in the global political and economic setting.²⁶

Although this meeting was designed to address national questions pertaining specifically to Vietnam, it included a number of aspects involved in the construction of safeguarding as a heritage policy instrument that are worth exploring here. In the opening speech of the meeting, referring to emerging countries in general, the Director of the Division of Arts and Cultural Life, representing UNESCO’s Director General, declared that:

*in the wake of sudden transformation of the world political and cultural situation, newly emerged states and groups in search of their own identity began to look closely at the situation of the safeguarding and promotion of their traditional heritages. UNESCO felt the urgent necessity to readapt its cultural policy to the new situation of the world.*²⁷

In support of this work, he presented four priorities, endorsed by the international conferences, held in 1993, which established new guidelines for intangible cultural heritage programs: (1) “the urgent need (...) to recognize the value of the traditional cultures which merits great respect and the vital need for their preservation and transmission”; (2) “revitalization of the intangible cultural heritage,” considering that “culture is in a constant state of flux” and that “revitalization of traditional cultures should not necessarily mean reviving old cultures as they used to be”; (3) “the need to safeguard the heritage which are threatened with disappearance”; and (4) “some intangible heritages constitute the basic factor for the attainment of sustainable human development.”²⁸

We can straight away highlight use of the expression ‘intangible cultural heritage’ to designate the object of these policies, a theme that had occupied UNESCO’s attention since at least 1984, when it convoked a meeting of experts to define what was then called “non-physical heritage.”²⁹ Moreover, important elements of safeguarding had already been announced, anticipating their institution in 2003: these included the priority given to the subcategory then designated “heritage threatened with disappearance,” a more flexible approach to the relationship between heritage and tradition following acceptance of the principle of “readaptation to the modern

25 UNESCO 161 EX/15. Report on the Preliminary Study on the Advisability of Regulating Internationally, Through a New Standard-setting Instrument, the Protection of Traditional Culture and Folklore, by Janeth Blake, 2001. Para.13.

26 Expert Meeting for the Safeguarding and Promotion of the Intangible Cultural Heritage of Minority Groups in Vietnam, held in Hanoi, 15-18 March 1994.

27 Report of the International Expert Meeting for the Safeguarding and Promotion of the Intangible Cultural Heritage of Minority Groups in Vietnam, held in Hanoi, 15-18 March 1994. Annex VIII, p. 6.

28 Ibid, pp. 7-8.

29 UNESCO. Consultation of experts to define the non-physical heritage. Paris, 27-30 November 1984. CLT 84/ Conf. 603.

world,”³⁰ and attention to the connections between heritage preservation and sustainable human development. At this point, we can observe that the meanings of safeguarding had reached a level where change no longer necessarily posed a threat, nor preservation simply the saving or rescuing of fragments of a vanishing world.

Intangible masterpieces³¹

The Proclamation of the Masterpieces of the Oral and Intangible Heritage of Humanity (hereafter Masterpieces Program) was issued in 1997. It referred to the general guidelines of the 1989 Declaration and, according to the “Regulations relating to the proclamation by UNESCO of masterpieces of the oral and intangible heritage of humanity” (Item 1, a), aimed “to pay tribute to outstanding masterpieces of oral and **intangible** heritage of humanity” as well as “to outstanding masterpieces of the oral **and tangible** heritage of humanity, which would be cultural spaces or forms of popular or traditional cultural expression and which would be proclaimed *masterpieces of the oral and intangible heritage of humanity.*”³²

This somewhat eccentric formulation suggests the institution’s endeavour to create a standard setting instrument of actions based on regimes founded on very different, not to say mutually incompatible, conceptual bases in terms of objects and the notion of value. On one hand, it foregrounded a type of object that, for the specialists, no longer fitted into the straightjacket of the conventional notion of folklore and celebrated the singularity of cultural expressions. On the other hand, it adopted a principle of value that was necessarily comparative (present in the idea of the masterpiece) and universalist in inspiration (outstanding universal value), ingrained in institutional practices and in the public opinion established by the Convention Concerning the Protection of the World Cultural and Natural Heritage, adopted in 1972 (hereafter the 1972 Convention).

The requirement of exceptionality established for candidacies to this program – a requirement itself difficult to identify and measure – proved inadequate in the case of ICH, according to UNESCO’s own assessment, since it presumed an undesirable hierarchy between cultural elements and potentially stimulated competition between social groups, if not nations, and did not encourage the desired peace and mutual understanding between peoples.

It is notable that, for practical purposes, the words ‘*masterpiece*,’ ‘*exceptionality*’ and ‘*uniqueness*,’ despite later being abolished from the language of the UNESCO/ICH regime, is sometimes employed by States Parties, and indeed by local stakeholders, when referring to the presence of their cultural elements on the Representative List created by the ICH Convention. This shift from the ‘everyday’ to the ‘exceptional,’ so to speak, also suggests that the amplification of the symbolic effects along the lines stimulated by the Masterpieces Program – undesired by the ‘founding fathers and mothers’ of the UNESCO/ICH regime – is strongly echoed and appropriated at a popular level. In terms of safeguarding, aesthetization is a significant undesired effect that must be mitigated.

Safeguarding, in the Masterpieces Program as in the 1989 Recommendation, which sets out its technical parameters,³³ implies identification and inventorying; research and documentation; enhancing the transmission to younger generations; awareness raising; legal protective measures; and dissemination through specialized curricula in schools and universities. Diverging from the latter, the Program does not address questions relating to the ‘revitalization’ of those cultural elements at risk. Its main practical contribution to the establishment of a new heritage policy has been to raise awareness of the public and of Member States concerning the symbolic

³⁰ Ibid, p.7.

³¹ Created by UNESCO’s General Conference in 1997 and regulated by the Executive Board’s decision of 25 August 1998. Proclamations were issued in 2001, 2003 and 2005.

³² Italic and bold characters as found in the original document.

³³ See the Report by the Director General on the Precise Criteria for the Selection of Cultural Spaces or Forms of Cultural Expression that Deserve to be Proclaimed by UNESCO to be Masterpieces of the Oral and Intangible Heritage of Humanity, Annex I.

potential of this heritage for the promotion of cultural diversity and for the international visibility of countries and ethnic groups around the world. In this way, the Program planted seeds that would be harvested in the implementation of the 2003 Convention, especially in its ratification by the Member States.

From appreciation of folklore to empowerment of living cultures

The need to create a new binding instrument to protect what had already been enshrined as ‘intangible cultural heritage’ would become widely debated over the 1990s and culminated in the preparation of the *Preliminary Study on the Advisability of Regulating Internationally, Through a New Standard-setting Instrument, the Protection of Traditional Culture and Folklore*, by Janet Blake (2001), a document that ended up referencing the next stages of the process being analysed here.

Prior to its assessment and acceptance by UNESCO’s General Assembly, the study was examined at an expert meeting in the city of Turin (Italy), which issued a favourable opinion and approved an Action Plan (hereafter the Turin Action Plan). Some points are worth highlighting in relation to safeguarding.³⁴ It is immediately evident that the proposal was inspired at a technical level by the 1989 Recommendation, though it diverges from the latter on some crucial points, including the following:

1. It considers use of the concept of folklore inappropriate and urges UNESCO to “*use the terminology and working definitions*” proposed in the Turin Action Plan (Para. 6);
2. Furthermore, it understands this to encompass artistic products “*but also the knowledge and values enabling their production, the creative processes that bring these products into existence, and the modes of interaction by which these products are appropriately received and appreciatively acknowledged*” (Turin Action Plan, Paras. 7 and 9), which signals an extremely important shift of focus in safeguarding practices from the objects themselves to the processes involved in their production;
3. It reinforces the agency of “*creators, audiences, NGOs and various actors of the private sector*” (ibid: Para. 8), affirming that “*the grass-roots practitioners, creators and their communities (...) should be recognized as primary agents in the formulation of cultural policy*” (ibid: Para. 10) and that safeguarding must “*be conducted by the creators and practitioners so that they will continue to fully enjoy freedom of creation, expression and transmission of their cultures*” (ibid: Para 13);
4. It recognizes that the meaning of safeguarding “*must be founded on universally accepted human rights, equity and sustainability and on respect for all cultures that respect other cultures*” (ibid: Para.12, a) and points to various consequences of this principle (ibid: Para 11);
5. It suggests that safeguarding is not a defensive strategy but requires “*creativity and enactment by the agents of the communities that produce and maintain it*” (ibid: Para.12, b) and, therefore, “*should facilitate, encourage and protect*” their right and capacity to develop “*their own approaches to manage and sustain it*” (ibid: Para.12, c),
6. And finally, in relation to action methods, instead of detailing the constitutive elements of an ideal and normative approach, as was done previously, the Action Plan adopts a stance that privileges the capacity to formulate solutions to specific problems by proposing that the States Parties “*encourage, disseminate and proclaim best practices*” (ibid: Para.14).

³⁴ Experts Meeting on “Intangible cultural heritage – working definitions.” Turin (Italy), 14 to 17 March 2001.

By way of conclusion

The proposals of the Turin Action Plan apropos safeguarding were largely incorporated by the ICH Convention, creating significant possibilities for the development of a democratic heritage policy as sui generis as its object. As we have seen, though, the process was far from unilinear and finalist. Accompanying the debates of the cultural policies of its time, it manifests a back history of ideological and political disputes, which reflect structural problems endemic to the sociopolitical contexts typical of their object in all its diversity. Notably, the theoretical impasses and methodological challenges within the field of cultural preservation did not have the same importance as questions relating to the meaning and objectives of preservation. Indeed, the safeguarding measures adopted in Article 2(3) of the Convention³⁵ never left the stage throughout the period. The disputes concerned the objectives that these procedures should serve and the strategies that should guide these procedures in order for them to attain this aim, subsumed to the idea that “[s]afeguarding means measures aimed at ensuring the **viability** of the intangible cultural heritage.”³⁶

Not by chance, the first public administration instruments to focus on manifestations of cultural diversity at national and international level were the initiatives of Third World countries or created vis-à-vis objects located in Africa, Southeast Asia and Latin America. One of the reasons can be traced to the fact that, in these same countries, until this period ethnic diversity was – and to a large extent still is – strongly associated with the lack of equity in terms of access to material resources and citizenship rights, in particular that of manifesting and celebrating identities different from the dominant. At least from the view point of these regions, the specific sense of the process studied here – and, perhaps, the reason why a large number of emergent countries readily supported to the Convention as States Parties or States Non-Parties – is related to the tension between the ruling elites and the indigenous popular heritage communities, mediated by mechanisms for (re)constructing hegemonies.³⁷

Obviously, this framework is not valid everywhere worldwide and also varies in time, according to the political and economic (trans)formations of each country. Numerous exceptions can be listed. Nonetheless, this, I think, is the dominant situation on various continents and, when the reality diverges from this pattern, ‘public administration’ is frequently based on vestiges of elitist and authoritarian political institutions and cultures, which also tend to be male-oriented. Not coincidentally, the objectives of the heritage regimes outlined here were, for a long time, to collect artefacts and register supposedly ‘pure’ and ‘authentic’ manifestations of the culture of populations whose extinction was seen as inexorable. Alternatively, the aim was to eternalize testimonies to human ingenuity in its supposedly maximum splendour and placing them in the pantheon of the ‘masterpieces of humanity’. The underlying notion is the same in both cases: heritage is seen as collections of reified entities, dissociated from the social bases and circumstances that created them.

The critique and resistance to the use of the concept of folklore in Latin America, where the adjectives ‘indigenous’ and ‘popular’ are preferred (most often used in the plural), is, precisely, an outcome of this antagonism, explicit or latent, between the interests of administrative institutions and those of the population. In this region, one of the main uses of the ICH Convention derives from its potential to mitigate historically established inequalities. Perhaps in some African regions the priorities are other and sometimes seem to relate to ethnic and national border conflicts or alliances. In countries that were once behind the Iron Curtain, some priorities seem to be to liberate popular cultural expressions from institutions where they were confined

³⁵ Article 2(3) mentions the following measures: identification, documentation, research, preservation, protection, promotion, enhancement, transmission and revitalization.

³⁶ Ibid., my emphasis.

³⁷ On this problematic, especially the conception of ‘cultural communities,’ see the collection edited by Nicholas Adell, Regina Bendix, Chiara Bortolotto and Markus Tauschek (2015).

for a long time. The possible reasons are multiple, and I have no wish to speculate on them. But diverse clues appear to corroborate the hypothesis that the metaculture produced by heritage regimes, in the case of what we today denominate ICH, is perceived and administered as a *dispositif* of power.

The trajectory delineated here – which is an open process, given that the Convention’s implementation poses successive new challenges to its managers – seems to suggest a series of advances and setbacks to social empowerment. If so, then, in our feedback – as researchers, activists or agents - it remains for us to strengthen, diversify and modulate our channels of communication to be able to hear more clearly and respond more promptly to the voices manifested all about us.

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Errata

In Volume 16, of *Vibrant: Virtual Brazilian Anthropology*, published in February 2019, in the section “Articles”, the article by Antonio Arantes, **‘Safeguarding’, a key dispositif of the ICH convention**, with DOI number: <http://dx.doi.org/10.1590/1809-43412019v16a201>, was published in the wrong section. This article is part of the dossier **Safeguarding, its Genealogy and Governance. Two Essays on UNESCO’s Convention for the Safeguarding of Intangible Cultural Heritage**:

For:

Article

Read:

Dossier Safeguarding, its Genealogy and Governance. Two Essays on UNESCO’s Convention for the Safeguarding of Intangible Cultural Heritage

In Volume 16, of *Vibrant: Virtual Brazilian Anthropology*, published in February 2019, in the section “**Dossier Safeguarding, its Genealogy and Governance. Two Essays on UNESCO’s Convention for the Safeguarding of Intangible Cultural Heritage**”, the article of Antonio Arantes with DOI <http://dx.doi.org/10.1590/1809-43412019v16a201> had their titles changed.

In English:

For

‘Safeguarding’, a key *dispositif* of the ICH convention

Read

Safeguarding. A key *dispositif* of UNESCO’s Convention for the Safeguarding of Intangible Cultural Heritage

In Portuguese:

For

‘Salvaguada’, um dispositivo-chave da Convenção do Patrimônio Imaterial

Read

Salvaguada. Um dispositivo-chave da Convenção da UNESCO para a Salvaguada do Patrimônio Cultural Intangível

Safeguarding, its Genealogy and Governance.
Two Essays on UNESCO's
Convention for the Safeguarding of Intangible Cultural Heritage

The Governance of *Safeguarding*. Comments on Article 2.3 of UNESCO's Convention for the Safeguarding of Intangible Cultural Heritage

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Abstract

Reflexions on the key *dispositif*¹ adopted by Unesco's Convention on the Safeguarding of Intangible Cultural Heritage (Article 2.3). In these Comments, I initially situate the notion of 'safeguarding' in the context of transformations of other preservation instruments which it dialogues and to whose semantic field it belongs. Challenges to its implementation and possibilities opened by this treaty for the protection of what has been designated as 'folklore and traditional (and popular) culture'² are addressed. After offering an interpretation of its textual meaning in the Convention, I seek to explore how this device is articulated to others in this Convention, and to reflect on its possible practical reach.

Keywords: safeguarding; UNESCO ICH Convention (Art. 2.3); operational directives; folklore and traditional (popular) culture; intangible heritage management.

¹ My understanding of Foucault's definition of 'dispositif' as applied to heritage theory and practice, as well as other conceptual issues raised in this essay, are discussed in Arantes 2019.

² I use this formulation taking as a reference point the Recommendation on the Safeguarding of Traditional Culture and Folklore, adopted by the UNESCO General Conference on 15 November 1989, hereinafter the 1989 Recommendation, cited in the Preamble to the 2003 Convention.

A Gestão da *Salv guarda*. Comentários ao Artigo 2.3 da Convenção da UNESCO para a Salv guarda do Patrimônio Cultural Intangível

Resumo

Reflexões sobre o dispositivo-chave da Convenção da UNESCO para a Salv guarda do Patrimônio Cultural Intangível (Artigo 2.3). Discutem-se desafios à sua implementação e questões práticas abordadas pelas Diretrizes Operacionais. Nestes Comentários, situo inicialmente a noção de ‘salv guarda’ no contexto de transformações de outros instrumentos de preservação com os quais ela dialoga, e a cujo campo semântico ela pertence. Focalizo desafios à sua implementação e possibilidades abertas para a proteção do que tem sido designado ‘folclore e cultura (popular) tradicional’. Após oferecer uma interpretação do seu significado no texto comentado, procuro explorar como este dispositivo se articula com outros previstos nesta Convenção, e refletir sobre seu possível alcance prático.

Palavras-chave: salv guarda; Convenção da UNESCO para a Salv guarda do Patrimônio Cultural Intangível (Art. 2,3); diretrizes operacionais; folclore e cultura (popular) tradicional; gestão do patrimônio intangível.

The Governance of *Safeguarding*. Comments on Article 2.3 of UNESCO's Convention for the Safeguarding of Intangible Cultural Heritage

Antonio Arantes

Subject and framing

The 2003 Convention³ defines 'safeguarding' as follows:

"Safeguarding" means measures aimed at ensuring the viability of the intangible cultural heritage, including identification, documentation, research, preservation, protection, promotion, enhancement, transmission, particularly through formal and non-formal education, as well as the revitalization of the various aspects of such heritage.

This notion provides conceptual and practical parameters of central importance to the implementation of the 2003 Convention, since it concerns what Article 1 characterizes as the first of its purposes:

Purposes of the Convention. The purposes of this Convention are: (a) to *safeguard* the intangible heritage; (b) to ensure respect for the intangible cultural heritage of the communities, groups and individuals concerned; (c) to raise awareness at the local, national and international levels of the importance of the intangible cultural heritage and of ensuring mutual appreciation thereof; (d) to provide for international cooperation and assistance (emphasis added).

Safeguarding cannot be properly understood without taking in account its agents⁴ and the specificities of the objects to which it refers.⁵ It should also be considered that this regime is an instrument of a public policy that, by 'safeguarding' cultural practices, does not aim to conserve them as they occur in the real world but adds new constraints and possibilities that affect their original conditions of production and make them the object of new values and meanings. Consequently, these second-order cultural constructions, *cultures on cultures*, can be interpreted as metacultural realities⁶ distinct from their pre-existing social referents. It is in this new condition that they become part of the universe of Intangible Cultural Heritage (hereafter ICH) and establish reflexive relations with the social practices and ways of life on which they depend for their continuity.

³ Acronyms and abbreviations. **1972 Convention**, Convention Concerning the Protection of the World Cultural and Natural Heritage. **1989 Recommendation**, Recommendation on the Safeguarding of Traditional Culture and Folklore, 1989. **2003 Convention** or the **Convention**, Convention for the Safeguarding of Intangible Cultural Heritage. **CGIs**, Communities, groups and individuals concerned. **GA**, General Assembly of the States Parties. **IAR**, International Assistance Requests. **ICH**, Intangible Cultural Heritage. **IGC**, Intergovernmental Committee for the Safeguarding of Intangible Cultural Heritage. **Masterpieces Program**, Proclamation of Masterpieces of the Oral and Intangible Heritage of Humanity. **NGO**, Non-Governmental Organization. **OC**, Organs of the Convention. **OD**, Operational Directives. **RGP**, Register of Good Safeguarding Practices. **RL**, Representative List of the Intangible Cultural Heritage of Humanity. **SP**, States Parties. **USL**, List of Intangible Cultural Heritage in Need of Urgent Safeguarding.

⁴ Here I consider, under the terms of the Convention, the following agents: Organs of the Convention (OC), namely the General Assembly of the States Parties (GA) and the Intergovernmental Committee for the Safeguarding of the Intangible Heritage (IGC), States Parties (SP) that act through the intermediation of diplomatic representatives at UNESCO and their own preservation agencies, and Non-Governmental Organizations (NGOs).

⁵ Articles 2.1 and 2.2.

⁶ On the notion of metalanguage and object language, see Roman Jakobson (1963) and Barbara Kirschenblat-Gimblett (2004).

As a consequence, it is essential to examine – albeit succinctly, given the space limits of these reflections – the ways in which safeguarding affects the social experience of cultural communities.

As conceived under the Convention, safeguarding actions are primarily aimed at the communities, groups and individuals (hereafter CGIs) who comprise the social agents in whose ways of life the safeguarded cultural elements, the so-called ICH, are embedded. Nevertheless, these should not be understood as passive targets of these actions, since the effectiveness of safeguarding depends on their active participation. The respect shown by the Convention for the agency of the CGIs should also be stressed, along with the fact that they enjoy the prerogative of self-representation (Article 2.1), i.e. of recognizing aspects of their own social practices “as part of their cultural heritage” which, as a consequence, become an object of safeguarding.⁷ Members of the general public at local, national and international levels are here understood as indirect targets of the Convention (Article 1.b).

Given the necessarily broad scope of these reflections, dictated by the complexity and amplitude of the subject matter under consideration, and taking into account the space limits of this publication, I refer the reader to the database available at www.unesco.culture.ich, where detailed ethnographic information can be found on the situations discussed here, along with a number of critical studies cited over the course of this exposition.

Mutations to the notion of safeguarding⁸

Strictly speaking, the notion of ‘safeguarding,’ in the sense that interests us here, does not exist prior to or outside of the 2003 Convention, which institutes it as a device of a *sui generis* heritage regime.

Certainly, instruments for promoting and documenting cultural expressions, especially those identified as traditional, have been formulated and implemented over the decades. Museums and collections were created in metropolitan centres, especially over the nineteenth century, in the formation of nation-states.⁹ However, there were no international norms to protect what became known as ICH until the turn of the twenty-first century, when a series of national and international initiatives helped delineate some of the key parameters of safeguarding, in an already globalized world.

David Harvey’s (2001) reflections on heritage are worth recalling here since, according to him, this reality, contextualized by the changing relations between civil society and the state, is a process that participates in the political changes of its time, proving to be closely connected to the dynamic of citizenship. In this sense, the 2003 Convention inaugurates a conception of heritage and advocates forms of safeguarding appropriate to this *sui generis* object, adopting a paradigm of social participation and democratic access to culture rights which, though far from being universal, is both possible and viable in the present historical context.

In this process, political and conceptual possibilities for social engineering were envisaged and discarded, choices were legitimized and, no less importantly, networks were formed of actors and narrators of the trajectory that would lead to the realization of the 2003 Convention.¹⁰ According to diverse sources,¹¹ the initial landmark in this process was the promulgation of the Recommendation on the Safeguarding of Traditional Culture

7 On this point, questions of free, prior and informed consent, as well as intellectual rights ask for careful consideration. See for instance Kono (2009).

8 Records of the various meetings that preceded the 2003 GA can be consulted at <https://ich.unesco.org/en/working-towards-a-convention-00004>, except for the International Meeting of Experts on Intangible Cultural Heritage “Establishment of a glossary” at UNESCO Headquarters in Paris, 10-12 June 2002 reported by me and appended to the present Comments.

9 Examples: Peabody Museum of Archaeology and Ethnology (Harvard University, 1866); Musée de l’Homme (Paris, 1937); Pitt Rivers Museum (Oxford, 1884) and Museum of Archaeology and Anthropology (Cambridge, 1884); among others.

10 Among the numerous actors participating in this process, we can highlight Lourdes Arizpe (Assistant Director-General, Culture Sector, 1 July 1994 - 30 June 1998), Noriko Aikawa (former director of the ICH Section of UNESCO since its creation in 1992), and Koishiro Matsuura (appointed on November 12, 1999 to serve a six-year term as Director-General of UNESCO).

11 See for example Ikawa-Faure (2009).

and Folklore¹² (hereafter the 1989 Recommendation), cited in the Preamble to the Convention alongside the UNESCO Declaration on Cultural Diversity (2001) and the Istanbul Declaration (2003), as “a main spring of cultural diversity and a guarantee of sustainable development.”

1989 Recommendation

The effects of the 1989 Recommendation remain to be assessed, but they were probably limited in nature since this was not a legally binding instrument. However, it did set out parameters for the discussions and negotiations that led to the 2003 Convention. It will be useful to review this document, albeit quickly, in order to understand the textual meaning of ‘safeguarding’ adopted by the Convention. Additionally, it helps identify issues that reverberate around it and that, as commonly held views, are frequently expressed in the demands and arguments of various stakeholders, revealing an entire semantic field that gives it life and broader significance.

The object of the 1989 Recommendation is defined as folklore (traditional popular culture), understood as “the totality of tradition-based creations of a cultural community, expressed by a group or individuals and recognized as reflecting the expectations of a community in so far as they reflect their cultural and social identity.” Setting out from the premise that these cultural legacies should be safeguarded by and for the group whose identity it expresses, this instrument provides a detailed description of the measures for identification, preservation, dissemination and protection. These measures would seek to mitigate the forgetting or complete loss of these tradition-based creations threatened by mass culture and to contribute to the revitalization of culture expressions at risk. Member States would be responsible for taking measures to strengthen research, the forming of collections and the archiving of records, to stimulate the dissemination of these traditions, and to protect the intellectual rights of those who are the transmitters of this legacy. Meanwhile its interpreters would have the mission of transmitting and revitalizing it.

Proclamation of the Masterpieces of the Oral and Intangible Heritage of Humanity¹³

This Program (hereafter the Masterpieces Program) focuses on cultural elements of “outstanding value as a masterpiece of the creative genius of humanity” that present “excellence of skill and technical qualities” and are “threatened to disappear.”¹⁴

This initiative was inspired by the 1989 Recommendation (which also highlighted the role of interpreters and transmitters, while emphasizing the cultural elements found to be at risk) and by the Convention Concerning the Protection of the World Cultural and Natural Heritage of 1972 (hereafter the 1972 Convention), like which it sought to raise the global profile of what it declared to be “unique testimonies” of the “creative genius of humanity.”

As in the 1989 Recommendation, this Program privileged the production of knowledge on the selected cultural expressions, their documentation, transmission to the future interpreters and to the public in general, promotion, and the protection of intellectual rights.¹⁵ The proposed lines of action were: identification and inventorying; research and documentation; enhancing the transmission to younger generations; awareness raising; legal protective measures; and dissemination through specialized curricula in schools and universities. Differently to this Recommendation, the Masterpieces Program did not really address questions relating to

¹² Adopted by UNESCO General Conference in Paris, 15 November 1989.

¹³ Created by Decision 23 adopted by UNESCO’s General Conference at its 29th Session, 1997, and Regulated by Decision 155 EX/3.5.5, adopted by Executive Board at its 155th Session, 1998. Proclamations took place in 2001, 2003 and 2005.

¹⁴ Wording adopted by ‘Regulations relating to the proclamation by UNESCO of masterpieces of the oral and intangible heritage of humanity,’ adopted by Executive Board’s Decision 155 EX/3.5.5.

¹⁵ Although the instrument does not specify as such, it may refer to performance and image rights.

the ‘revitalization’ of the Masterpieces at risk. The listed procedures can be interpreted as relatively ‘non-invasive’ from the viewpoint of their interference in the conception and performance of the safeguarded cultural elements, depending, of course, on the way in which these actions were executed.

The requirement of exceptionality – a prerequisite itself difficult to be identified and measured – proved to be inadequate, according to UNESCO’s own assessment, since it presumed an undesirable hierarchy between cultural elements and potentially stimulated competition between social groups, if not nations. It thus contradicted the guiding principles of the ICH Convention which was then being elaborated as an instrument that aimed to “protect elements of the ICH that are relevant for the identity and continuity of groups and communities,” encouraging peace and mutual understanding between peoples.

Arguably the main contributions of the Masterpieces Program were to raise awareness of the public and Member States concerning the symbolic potential of this heritage for the promotion of cultural diversity and the international visibility of countries and ethnic groups around the world. It is worth noting that Member States with fewer programs dedicated to natural or built heritage protection and promotion quickly applied as candidates to the Masterpieces Program, either through national requests, or through multinational proposals that enunciated the demands of ethnic groups whose traditional territories had been divided up by the colonial system.¹⁶

It is notable that, for practical purposes, the meanings of ‘masterpiece,’ ‘exceptionality’ and ‘uniqueness,’ despite being abolished from the language of the UNESCO/ICH regime, tend to be employed by States Parties, and indeed sometimes by local stakeholders, when referring to the presence of their cultural elements on the Representative List. This shift from, so to speak, the everyday to the ‘exceptional’ also suggests that the amplification of the symbolic effects undesired by the managers of the UNESCO/ICH regime along the lines stimulated by the Masterpieces Program is strongly echoed at a popular level. In terms of safeguarding, aestheticization as an important effect of the safeguarding of intangible heritage, even that practiced in accordance with the 2003 Convention.

The path to the 2003 Convention

The conceptions germinated over the 1990s became explicit and were debated at diverse meetings¹⁷ promoted by UNESCO with the final objective of producing a draft version of the Convention. To illustrate the extent of these divergences – which in some ways are still present on the intellectual and ideological horizons of the innumerable actors involved in the implementation of this regime – I shall turn to comment on one of these meetings in which the aim was to establish a glossary capable of serving as a working tool for writing the draft of the Convention. I compare the records of the debates that took place on the theme of safeguarding – and the notion of ICH corresponding to it – in two documents, namely the text that served as a reference point for the meeting (hereafter Draft Glossary)¹⁸ and the text resulting from this meeting (hereafter Glossary)¹⁹ which was, soon after its elaboration, presented to the smaller group of draft writers approved by the GA and largely absorbed in the final version of the Convention.²⁰

¹⁶ The *Gule Wamkulu*, Malawi, Mozambique, Zambia, 2015. *Urtidin Duu* (Traditional Folk Long Song), Mongolia, China, 2015. *Shashmaqon* Music, Uzbekistan, Tajikistan, 2003.

¹⁷ Chronology of the meetings according to the UNESCO site. Minutes of the meeting for preparation of the Glossary, Compare the text of the glossary and the text approved by the GA.

¹⁸ Draft glossary, Dutch experts convened by the bureau of the Netherlands National Commission for UNESCO (*TER/CH/2002/WD/4*).

¹⁹ Results of the International Meeting of Experts on Intangible Cultural Heritage ‘Establishment of a Glossary,’ in Paris, 10-12 June 2002, edited by this group between June and August 2002 (the Netherlands National Commission for UNESCO, doc. 00265/2002).

²⁰ In these comments, I also refer to the minutes of the two meetings at which these documents were discussed, namely the 1st and 2nd Drafting Group Meetings Reports, of 12-13 and 13-15 June 2002 (respectively ‘Report approved by Participants,’ unnumbered, and Doc 005152-En), hereafter Report1 and Report2.

The conceptual shifts that occurred during the debates on the Draft Glossary towards its final version were described with precision in the minutes to this meeting, from which I cite the following:

the vast majority of experts consistently argued that one distinctive characteristic of this type of heritage is its intrinsically dynamic nature, due to the fact that it is an integral part of the social organisation and history of the communities concerned. It was also consensual that the future policies should not only take into account, but also actively recognise, the right and capacity that cultural communities have in making their own choices as to whether or not give continuity to aspects of their own culture. So, it became clear that the word that most adequately and broadly describes the particular kind of intervention that would be adequate to the nature of this heritage is *safeguarding*, and consequently that this should be chosen as the basic notion implied in this context. Consequently, the plenary endorsed the wording used by other commissions in the elaboration of the preliminary versions of the Convention. The types of action referred to in the definition of safeguarding (i.e. *identification, documentation, promotion, revitalisation and transmission*) are those that the experts felt adequate to this new policy and which are considered compatible with the definition produced by this meeting (Report 1, Agenda item 6).

This citation summarizes fundamental decisions concerning three important aspects of safeguarding according to the regime inaugurated by the 2003 Convention. One, perhaps the most fundamental, is the meaning of safeguarding actions, or in other words the reply to the question: what should they serve for? Intended in the Draft “to shield certain cultural practices and ideas,” here they were designed “to ensure the viability” of the ICH. This is the finality to which the different planned measures would contribute.

In addition, considering that actions like conservation, preservation and protection, already well-established in preservationist practice, “may not be applicable to all aspects of intangible cultural heritage,” the Glossary asserts: “for the purpose of the future convention, the adoption of the term ‘*safeguarding*’ is endorsed” and goes on to recommend that each of these actions should only be applied when appropriate.

The citation points to other important aspects of the UNESCO/ICH regime relating to social participation, to the recognition of the “creative ability of the people and of the constant transformation of heritage,” and to the fact that “emphasis should be put on cultural processes, on the culture-bearing communities and in local agency, rather than in their products.”²¹

In relation to the sensitive topic of revitalisation, instead of simply proposing that the agencies responsible for the heritage policies of the States Parties “reactivate or reinvent, or encourage people to reactivate or reinvent, cultural practices and ideas which are no longer in use, or are falling into disuse,” as proposed by the Draft, the Glossary proposes that the subject should be approached at two levels: “[*If referring to practices developed by the cultural community:*] Reactivating or reinventing *social practices and representations*, which are no longer in use or falling in disuse. [*If referring to heritage policies:*] The encouragement and support of a *local community*, developed with the agreement of that same *community*, in the reactivation of *social practices and representations*, which are no longer in use or falling in disuse.” This fundamental difference presupposed, therefore, the active participation of local social agents in the decision to continue their practices or not, respecting in full their right to decide whether and how to do so.

‘Safeguarding’ in the 2003 Convention: thematic axes

Over the course of drafting and maturing the text of the Convention, we can observe the concern to define its own object and the form of safeguarding appropriate to it, diverging from other Conventions with which it implicitly dialogued and from which it sought to distance itself, as in the case of the 1972 Convention.

²¹ Quoted from Lourdes Arizpe’s opening address to the 1st Drafting Group Meeting.

The need to recognise the specificities of the different modes of safeguarding appropriate to objects of an intangible nature conferred the concept of ‘safeguarding’ – as we shall see below – a meaning quite distinct from that attributed to the concept of ‘preservation,’ widely adopted in the heritage field. It should be observed, however, that, in practice, ‘safeguarding’ ended up becoming an umbrella term covering a semantic field where ‘preservation,’ ‘conservation’ and ‘protection’ designate degrees and modes of intervention in different aspects of this object within which each State Party, each local manager, each consultant and even each cultural community make their choices when developing concrete safeguarding actions.

From the viewpoint of the theme focused by these Comments, the final version of the Convention meets most of the innovative theses resulting from the meetings of specialists organised by UNESCO, the most important and more problematic of them, in strategic terms, being the one referring to the role of the agents of cultural communities in the safeguarding process. On this point, it is worth observing that the practical application of the Convention imposes changes to the understanding of key devices, as occurs with the theme which in the Preamble is presented as follows: “Recognizing that CGIs play an important role in the production, safeguarding, maintenance and recreation of ICH (...).” In the document *Ethical Principles for Safeguarding ICH*,²² issued in 2015, the same theme appears as follows: “Communities, groups and, where applicable, individuals should have the primary role in safeguarding their own intangible cultural heritage.” The critical point of this topic is the nature of the relation that the States Parties establish with the CGIs through their heritage agencies. However, this issue depends on the conditions in which, in each country, society participates in the public sphere, a question that goes beyond – far beyond – the limits of the provisions of a multilateral convention.

To present the theme of ‘safeguarding’ as conceived in the 2003 Convention in a summarized form, I shall use the resource of identifying axes at whose intersections I heuristically situate this notion. These axes show themselves to be relevant to understanding problems that emerge in the application of this heritage regime, which, due to a lack of space, cannot be discussed in these reflections.

I turn, then, to comment on each of these axes, adopting the framework announced at the start of these reflections, in which safeguarding is understood as a verb,²³ that is, as an action implemented by determined agents, directed at specific target communities, aiming to affect particular aspects of the cultural dynamic of concrete social formations and to produce determined effects on this dynamic.

1. *Intangible elements.* ICH elements are practices and knowledge associated with these practices, not artefacts. Tangible objects can participate in the universe of realities to be safeguarded – through identification, documentation, research, preservation and protection – as preconditions for realizing these practices and implementing this knowledge, i.e. merely instrumentally, as occurs with language, which is included only as a vehicle of the ICH (Article 2.1; Article 2.3; Article 14.c).

2. *Nurturing mutable actions, not collecting documents.* The main objective of safeguarding is not to produce and collect ethnographic records per se, as ethnographic archives and museums have done for more than a century. ICHs are not frozen in time. They transform in the same way as the social practices transform that provide their context, nourish them and give them a *raison d’être*, making their continuity viable, or non-viable. Changes and the abandonment of social practices are commonplace in the history of humanity and it would be impossible to argue for a cultural policy that sought to preserve some practice without the active adhesion of the social groups that practice them, develop them, know how to enrich and transform them creatively. The understanding expressed in Article 2.1 concerning transformation as an inherent aspect of the ICH contrasts with the structuring conceptions of other heritage regimes, as in the case of the regime governed by the 1972

²² Approved at the 10th Intergovernmental Committee Meeting in 2015.

²³ Inspired by D. Harvey (2001).

Convention. The fundamental point to consider here is that the vitality of intangible cultural heritage is associated with its resilience, that is, precisely with the capacity of the CGIs to “constantly recreate” [ICH] “in response to their environment, their interaction with nature and their history” in a way that provides CGIs “with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity” as affirmed by Article 1.1. To be effective, safeguarding must respond to this condition of resilience.

3. *Human beings: tangible roots of the intangible.* Given the immaterial nature of ICH, through what means can a ‘safeguarding’ action attain its objectives? One reply to this question, which may appear odd, is to admit that ICH is a reality anchored primarily in people – not in territories, but in bodies and ways of life, in human beings. Here it is a question of embodied knowledge and forms of expression, whose development and transmission frequently depend on learning skills and knowledge expressed in gestures and movements, that is, bodily actions. Safeguarding thus becomes inseparable from the decision of the CGIs to actively pursue their practices and include them in their aspirations and future projects. As a result, they have a central role in safeguarding their heritage, which confers full meaning to the provisions of Article 11.b and Article 15.

4. *Flexible territoriality.* Unlike the built and natural heritage whose spatial localization is recognisable and whose continuity in the same space, given that they are immobile assets, is predictable, the object of this regime, as well as being dynamic and mutable, is mobile. Although ICH requires socioenvironmental conditions and resources for its realization and frequently expresses territoriality and a sense of place, it does not necessarily have ties ‘of origin’ with the geographic space where it occurs. Many elements of directly observable ICH derive from repertoires developed by communities different from their current exponents, located in other places and times, although in their current amalgamation they encounter their *raison d’être* and the meanings of identity attributed to them. Hence ICH elements can also be practiced today by migrant communities and dislocated populations living outside their territories of origin. In each case, the territory, socioenvironmental conditions and artefacts have different levels of impact on the safeguarding conditions, i.e. on the reproducibility of ICH. Hence ICH can be understood as practical and symbolic resources that move about with the populations, transported by practitioners or transmitted by the means of communication, and which, therefore, can flourish and bear fruit in new sites, distant from the locations from which they originate. There are indissociable, therefore, from the CGIs that practice them. (Article 2.1)

5. *Universality, singularity.* Due to the necessarily universalizing status of this multilateral agreement, it generates an immediate tension with the singular social formations from which its object emerges. The tension between the singularity of the practices and the universality of the devices contains an important underlying issue with at least two dimensions: while, on one hand, the Convention establishes the heritage value recognised by the practitioners as a primordial criterion for the selection of the object to be safeguarded, on the other it defines the inventory as an obligatory procedure (Article 11; Article 12) in its identification, just as in the heritage regimes relating to movable and immovable property whose nature is indeed more suitable to this procedure.²⁴ Furthermore, the Convention proposes to contribute to the viability of a determined cultural element, yet it can only do so as an outside agent, a provider of resources that the community itself will never be sure to be able to control. Hence, it is essential to note that, despite all the emphasis and effort towards adopting a participatory paradigm in the implementation of this heritage regime, it derives from the logic and cosmology of the preservationist tradition, and not from the view of the world and the self of the social agents to whom the ICH is connected. It is highly unlikely that any community will spontaneously conduct systematic surveys and (methodo)logical selections of its own cultural practices. This tension between the logic of safeguarding and the logic of cultural reproduction, or between the power relations present in the two

24 Debates on the adaptation of inventories as identification procedures for ICH elements.

cases, leads to innumerable problems relating to the efficacy of safeguarding, a topic that cannot be ignored in these Comments and which has been explored in a number of enlightening case studies (Foster & Gilman 2015; Bendix et al. 2013; Adell et al. 2015).

6. *Social value, not exceptionality.* The regime established by the 2003 Convention, unlike others in force, rejects the notion of ‘exceptionality.’ The social value of the ICH for the communities involved, recognized by the States Parties and by those who participate in its relational universes, is one of the preconditions for the acceptance of its candidacy as the object of ‘safeguarding.’ However, these elements tend to have, by themselves, greater visibility than other components of cultural repertoires in their own contexts of origin. Moreover, they are frequently highlighted by the local media and disseminated through academic studies produced prior to their safeguarding, or stimulated by it. The seal of official safeguarding is frequently appropriated by the culture and entertainment market to its own benefit, very often with the consent and active participation of CGIs, in the expectation of receiving some of the benefits deriving from these enterprises. These factors need to be mentioned since they all contribute to an effect of exceptionality being produced, directly or indirectly, by safeguarding. A desire for visibility for the cultural element in question, or even for the CGIs through it, may be a motive that precedes their proposal for inscription in one of the Convention’s Lists, but it will probably be an outcome stimulated and fed by the safeguarding process, whose collateral effects need to be mitigated by responsible heritage management (Arantes 2017).

7. *Modalities of safeguarding.* The safeguarding actions specified by the Convention can aim to revitalize a cultural element that finds itself in need of urgent (or extremely urgent) safeguarding and that can be included in the USL or, in the case of those included in the RL, directed more appropriately to the other actions specified in Article 2.3. Although an explicit definition of ‘revitalisation’ is absent from the Convention and the ODs, for the purposes of these Comments I shall make use of the understanding expressed in the Glossary cited previously and the contents of ODU₃, which refers to “safeguarding measures that may enable the CGIs to continue the practice and transmission of the element.” Although revitalisation is an exclusionary measure in relation to the others cited in Article 2.3, it is important to distinguish it by considering the effects of safeguarding on the vulnerability of each situation to which it is applied. For common sense reasons, projects that aim to promote and enhance ICH should not precede the overcoming of situations in which, in the terms of ODU₂ (a), “the element is in urgent need of safeguarding because its viability is at risk despite the efforts of the CGIs and of the State Party concerned,” or ODU₂(b), “the element is in extremely urgent need of safeguarding because it is facing grave threats as a result of which it cannot be expected to survive without immediate safeguarding.”

Returning to the question of the participation of CGIs in safeguarding, mentioned earlier, we should take into account that the ICH Convention is based on the principle of the “widest possible participation and involvement of CGIs” (Article 15) in all actions aimed towards the general objective of “ensuring the viability of the intangible cultural heritage.” The provision should immediately be added that “to ensure the viability of the ICH” is a mission that goes beyond anything that any manager can achieve. In any event, the practical application of the principle of the widest possible participation slips up on the unequal distribution of wealth, power and access to the knowledge associated with these inequalities, which so strongly mark the historical reality in which we live, ourselves and the heritage communities. Furthermore, safeguarding also enters into friction with the marked differences in worldview – if not in ontologies (Henare et al. 2007), as has been posited more recently – between the diverse cultures in confrontation. And being, as I argued earlier, a work of metacultural construction through which a key cultural element migrates, so to speak, from the initial context of occurrence to those of UNESCO’s Lists, it is to be expected that the diverse safeguarding measures encounter resistance, provoke misunderstandings and political difficulties, as has been shown by some recent studies, as pointed out above in item 5.

Abstractly, we can anticipate the following situations that illustrate the complexity and diversity of problems arising from the implementation of the safeguarding measures advocated by the Convention. The identification of an element of the ICH depends *almost* entirely on the CGIs for a question of principle, as specified in Article 2.1, and this ‘almost’ here is important given that a community would be unlikely to delimit *motu proprio* an element of its culture in the way expected by the Convention and without the input of the conceptual schemas brought by so-called facilitating agents. The activities of research and documentation, as well as promotion and enhancement, for their part, are based on knowledge and on technical and ethical norms that are defined, in the former case, in the academic environment, and in the latter case, in design and communication. Needless to say, these forms of knowledge and skills tend to be largely unknown by most of the CGIs, despite the existence of training activities for indigenous researchers, photographers, filmmakers and cultural agents, generally promoted by NGOs. Preservation and protection, in turn, are practices based on legal systems, administrative regulations and technical procedures that foreground heritage management agencies and agents with whom the CGIs have little or no contact, or in relation to whom they lack the intellectual and technical repertoires that would enable direct dialogues and negotiations to be initiated. For precisely this reason, civil society organisations enter at this point as mediators and heritage policy agents as facilitators. Finally, revitalization and transmission. These activities involve almost exclusively local agents since they depend on the status occupied by the agents transmitting the tradition within the local social structure, their legitimate access to the sources of knowledge, as well as the capacity and authority to create and recreate the ICH element according to the dictates of the language, values and worldview of the universe to which they belong. In this context, it is important to differentiate between ‘transmission’ and ‘dissemination.’ The former is an activity that results in the creative reproduction of social reality, a matter internal to the group, while the latter is a synonym of promotion, an activity that can be secondarily executed by anyone as long as they have the free, prior and informed consent of ICGs.

8. *Mediation, negotiation.* The heritage regime inaugurated by the 2003 Convention (Article 11.b; Article 15) creates a political space of negotiation – not necessarily of dialogue and participation – between the managers of the Convention and the CGIs. This is the strategic space in which ‘safeguarding’ may or may not take place. In pragmatic terms, the proposal is for the ICGs to negotiate with the public agents to identify those elements that they recognize as possessing a heritage value and that can be safeguarded. Their effective inclusion in the safeguarding actions is dependent on intellectual, legal, political and practical filters established by the process of inclusion or exclusion, acceptance or rejection of these candidatures on the lists created by the Convention, which will define the status and prerogatives of each of them vis-à-vis the diverse safeguarding instruments adopted. Following a favourable decision to include a cultural element on one of the Lists or international aid projects, a new stage is inaugurated in the trajectory of the selected practice, in which the State Party and the Organs of the Convention will subsequently monitor its evolution over subsequent years through regular assessment reports to be presented by the State Party involved. As I pointed out earlier, the UNESCO/ICH regime does not emerge from the experience of the heritage communities. With the aim of achieving the best possible outcome for the safeguarding process, therefore, the Convention proposes (Article 14.2) specific educational and training programs, as well as the accreditation of NGOs whose prior knowledge of the CGIs and political relations previously established with them can be elements facilitating the adequate participation of the CGIs in safeguarding. This comprises a tight-knit space, constructed by complex webs of mediators, in which the CGIs correspond to the furthest extremity of the Organs of the Convention.

Final considerations

I conclude these Comments by once again calling attention to recent studies that have demonstrated the complexity of the processes through which the procedures advocated by the Convention have become a reality. In order for safeguarding to be effective, it is essential to create mechanisms of communication and participation that open up channels between the diverse cultural and power spheres that its actions need to transpose. In part, this is a task relating to the normative provisions of this regime, inscribed in the text of the Convention and in the Operational Directives, which comprise a flexible instrument more permeable to the reflexive effects of safeguarding and can always be improved.

But this alone is not enough. It is also necessary for the parties in confrontation to know each other, as far as this is possible. It is not difficult to imagine – and those readers familiar with the practice of this regime will certainly recognize this fact clearly – that the cultural distances to be spanned by the safeguarding agents are diverse, broad and complex, and that sometimes the strength of the political obstacles to be overcome is immense. Here I am not referring solely to the resistance of the CGIs, but mainly to the ideological and party-political barriers imposed subtly or openly by the States Parties, which moreover vary according to the political conjunctures of each country at any particular moment.

It therefore becomes a primordial task of those who implement this instrument to direct their energies towards ensuring that the complex system of mediations and negotiations created by this regime recognizes the conceptions, demands and aspirations of the CGIs and becomes responsive to them. Safeguarding involves the development of a two-way process. Considering the question from an ethical standpoint, it is more defensible that the managers promote the adaptation of the Convention's objectives and instruments to the realities found locally, with all their variations, rather than act like international politics and try to reconfigure – or at least reformat for the purposes of dossier production – enrooted cultural practices with a high value for awareness of the self and the other.

In fact, when it comes to ethics, in order for mutual understanding and partnership to exist among the safeguarding agents, the action must be based on shared principles and not simply excused by the questionable free, prior and informed consent of its recipients or target public.²⁵

Translated by David Rodgers

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²⁵ Work in this direction was undertaken by the IGC which approved the 'Ethical principles for safeguarding intangible cultural heritage,' which establishes, at the outset, that "CGIs should have the primary role in safeguarding their own ICH."

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Annex

International Meeting of Experts on Intangible Cultural Heritage

ESTABLISHMENT OF A GLOSSARY

UNESCO Headquarters, Paris, 10-12 June 2002

Report

Session 1: June 10, morning

Agenda item 1. Opening Remarks

Mr. Mounir Bouchenaki, Assistant-Director General for Culture of UNESCO, opened the meeting. He recalled the purpose of the occasion, which is to bring elements of clarification to the expression “intangible cultural heritage” and to various notions related to it. He mentioned that the protection of this heritage has been the subject of several experts’ meetings and documents, such as the 1989 *Recommendation on the Safeguarding of Traditional and Popular Culture* and the 1999 *World Evaluation of the 1989 Recommendation*. He stressed that during a meeting held in Turin (March 2001) an agreement was made on an operational and synthetic definition of that expression and that an indicative list of related terms has been outlined. He also recalled that in the Rio de Janeiro meeting (January 2002) experts recommended the preparation of a glossary in order to clarify the drawing up process of the future convention. Finally, he noted that during the meeting of the Restricted Drafting Group held in March 2002, the experts suggested that the terminology adopted for the convention should be more specific than the one used in the Turin meeting, and that an indicative list of domains of intangible cultural heritage should be elaborated. He concluded by urging the experts to establish such a list of basic concepts and domains. He proposed that the meeting should be held under the presidency of H. E. Judge Mohamed Bedjaoui, the vice-presidency of Mr. Sompong Sucharitkul and Mr. Wim van Zanten and reported by Mr. Antonio Arantes.

H.E Bedjaoui welcomed the participants. Presenting the domain of intangible cultural heritage as a new field of concern for UNESCO, he outlined the aims of the meeting stressing the following aspects: i) the necessity, underlined in the Rio de Janeiro meeting, to elaborate a glossary of useful terms and notions for the drafting of the new convention, ii) the necessity to bear in mind the critical remarks made during the last session of the Executive Board in the sense that although the definition of intangible cultural heritage retained during the Turin meeting is perfectly valid from a scientific point of view, it is too abstract for operational application. For the same reason, domains should be listed and the experts should elaborate elements of conceptual clarification. He emphasised that the glossary should be considered as a working tool, and not as part of the future convention.

Agenda item 2: Presentation of the document TER/CH/202/WD4: *Draft Glossary*, by the experts convened by the bureau of the Netherlands National Commission for UNESCO.

Mr. Rieks Smeets, the Secretary General of the Dutch Commission, welcomed the participants and introduced the set of draft definitions of terms to be used in the Convention as prepared by the Dutch group of experts in response to a request made by UNESCO's Secretariat. He underlined that this group of experts took into consideration the critical remarks made by the Executive Board in its last session.

Agenda items 3 and 4: The definition of intangible cultural heritage and its constitutive domains.

The following text, elaborated by the Dutch commission, was provided as a first draft of the definition: *“Intangible cultural heritage: all processes and practices – together with the knowledge and skills, instruments, artefacts, and spaces involved – that provide living communities with a sense of continuity with previous generations and are important to cultural identity, as well as to the safeguarding of cultural diversity and creativity of humanity. Communities and individuals in the contemporary world continue to recreate their intangible cultural heritage in constant response to their environment and to historical conditions. The intangible cultural heritage consists of such human creations of the mind that are recognised as having significance for a social group and which represents exceptional attainment of human talent. These may be listed – without a claim to exhaustiveness – as below: oral expressions; performing arts; social practices, rituals and festive events; knowledge and practices about nature.”*

Opening the discussion, Ms. Lourdes Arizpe gave an overview of the context in which the definition of intangible cultural heritage was formulated in the Turin meeting. She noted that it had to compress a century-long debate in the social sciences about the concept of culture, as well as important political changes that took place in the world in the last decades. Four main issues were discussed in Turin: i) in order to adequately account for the present situation of intangible heritage, emphasis should be put on cultural processes, on the culture-bearing communities and in local agency; ii) the safeguarding of cultural diversity should account for the conditions that create and recreate it in time, as well as provide the means for the communities to enjoy these cultural/social differences; iii) modes of social interaction as well as artistic products should be taken into account; iv) the importance of human, political and religious tolerance for the present world should be stressed. She asked Mr. Antonio Arantes to inform the audience about the Brazilian legislation and on the outcome of the international meeting of experts held in Rio de Janeiro.

Mr. Antonio Arantes observed that in the Rio de Janeiro meeting the concern for intangible heritage in modern cultures was in line with the critique of the nostalgic and romantic understanding of such realities and with the assumption that culture is constantly produced, reproduced and transformed. He gave examples from Brazil and added that one should be flexible with the notions of “tradition” and “autochthony” while drafting the future convention. He argued that the experts' meeting therefore supported the view expressed in Turin that in the definition of the parameters for this new policy, the main emphasis should be put in the understanding of heritage as the result of dynamic social practices in particular historical contexts and natural environments.

He summarised the legislation and provided an overview of the four domains that constitute the Brazilian Registry, namely: *Knowledge* [including traditional crafts], *Celebrations* [rituals and festive events], *Ways of Expression* [except natural languages] and *Places*. The definition of these items, he noted, was oriented by the understanding that intangible heritage are constitutive of social practices and that, consequently, its identification should be based on the following aspects of social life: agency, people and process. Intangible heritage, he concluded, are resources that people develop and use in everyday life; so to his view it is fundamental that safeguarding policies be implemented with a view to develop the social and economic potentialities of these resources for the well-being of their bearers.

Finally, he listed the main outcomes of the Rio meeting, namely: the agreement with the main aspects of the definitions elaborated in Turin; the need of flexibility in the definitions adopted by the convention, given the heterogeneity of the national and regional contexts to which they will be applied; the recognition of the right to difference and to cultural diversity as a baseline for this new policy; the importance of intangible heritage for sustainable development; the emphasis on people and processes; the use of internal and external criteria in the selection of items to be listed as heritage; the need for a holistic approach interrelating intangible heritage with the natural resources and with the material objects that are needed for its existence.

In the discussions that followed, several participants made reference to two interrelated issues: i) the safeguarding of the material and social conditions in which intangible cultural heritage is produced, ii) the recognition of the creative ability of the people and of the constant transformation of such heritage.

Several experts manifested their preoccupation about the issue of who has the authority to define intangible cultural heritage. Should the responsible authority be the bearers of the local culture, or rather professional experts or state agencies? The dominant opinion was that such authority should ultimately rest on the local people itself. The ability of people to recreate or reinvent their own traditions for the purpose of social cohesion was again stressed. It was strongly argued that in this policy balance should be achieved between what the external agencies consider worth of becoming part of the internationally safeguarded heritage and the choices made by the communities themselves.

The debate then focused the list of domains proposed in the Dutch draft document. Besides suggestions concerning the terminology in use (e.g., to replace “oral expressions” by “oral traditions”), the inclusion of “arts and crafts” as one of the domains of intangible heritage was suggested. Against such view, it was argued that handicrafts often fall under the category of market-oriented commodities.

It was also proposed that the idea of intangible cultural heritage as social representation should be retained by the Convention. Thus, it was suggested that the expression “collective creations” should be replaced by “individual creations that are adopted as representation by communities”. Another participant argued that individuals work and create within groups and that reference to the term “individual” should be therefore avoided.

The need of establishing a close link between “tangible” and “intangible” aspects of heritage was also addressed. Some participants expressed their concern for the protection of tangible aspects of intangible culture. Participants acknowledged the view that at one point, creative processes develop into material objects. It was recalled that in both common law and in Roman law, such a link is admitted and conceptualised. The Secretariat, in its turn, underlined that the protection of many aspects of material culture was already covered in the 1970 Convention on illicit traffic and in the 1955 UNIDROIT Convention. It was also argued that the process of producing artefacts, as well as the meanings associated to them, are more relevant to intangible heritage than the material objects themselves.

It was observed that WIPO mainly deals with the protection of recent and individual creations, but not with objects created by groups “from times immemorial”. Thus, the inclusion of the term “artefact” in the domains covered by the convention was suggested. The Dutch commissioner recalled that the term “artefacts” had been originally included in the list. Another participant noted that it was urgent that the policy concentrates on the specifically intangible aspects of heritage, since they have been quite neglected, especially in Europe.

The question of who should have the authority to decide about the safeguarding of intangible cultural heritage was again addressed. In order to clarify the matter, Ms. Sue Wright pondered that there are two possible procedures. One is the elaboration of a *registry* inspired by the UNESCO program “Memory of the World” (paragraph 4, item 4.3.3 and 4.3.4), where the nominating process can be taken over by “any person”; the other is *listing*, a procedure that raises the issue of whether the selection should rely on criteria such as quality, uniqueness, exceptionality, or, alternatively, risk. Each has different implications from the point of view of the subject under discussion.

Session 2: June 10, afternoon.

Agenda items 3 and 4: Definition of intangible cultural heritage and its constitutive domains. (continued)

The session was opened by the Vice-president Mr. Wim Van Zanten, with the proposal of discussing in detail the domains to be enumerated in the Convention, taking as a reference the text elaborated by the Dutch commission.

There were several proposals indicating that social practices and forms of social organisation created by the communities (such as systems of kinship and marriage), as well as rites, celebrations and other social practices, should be considered as heritage. In this context, the distinction between everyday culture and the exceptional manifestations of human creativity was discussed. The dominant opinion was that the inclusion of social practices as a domain of intangible cultural heritage would make the definition excessively vague and, consequently, not very useful.

The relation of intangible cultural heritage with social continuity and identity was then discussed and the general feeling was that conceptions about social life based on ideas of consensus and homogeneity should be avoided. They do not account for the reality of dynamics and change that take place in history.

The theme of the tangible side of intangible heritage was again addressed, with reference to the fact that the word “product” (used in the Turin definition), was missing in the draft under discussion. A long discussion followed in relation to the concepts of “artefact” and “object”, the first one being considered as more adequate for the present context because of specifically referring to products of human practices. Finally, both terms were adopted because each describes a different aspect that is crucial for intangible heritage: man made and natural resources.

The Vice-President made a summary of the results achieved by the experts up to that stage of the meeting. The discussion then focused the use of the notion of “exceptionality” in this context. Although some participants stressed that the definition of intangible heritage should include a wide range of social practices, the dominant idea was that heritage – particularly as object of the Convention - could not be identical to “daily life”.

The Secretariat of UNESCO pointed out that, if there is a list, the second part of the definition should indicate the domains covered by such heritage, as it is the case in the 1972 Convention. The necessity of having explicit criteria was put as fundamental.

It was then stressed that it had already been agreed by this assembly, as well as in the previous meetings (Rio de Janeiro and Turin), that one criterion for selection should be the relevance of the cultural item to the communities themselves. Besides this, heritage should also be significant to humanity and consistent with human rights. It was pointed out that the use of the idea of “exceptionality” could also induce the misleading and unacceptable principle that some cultures are better or richer than others. Alternative criteria such as “distinctive” or “outstanding” were then proposed as a way of avoiding this bias in the elaboration of lists. One participant proposed to include the phrase “contribute to the creativity of humanity” as figured in the Turin definition.

The next question under discussion was that the definition should start with a broad characterisation of its object and that another provision should state the conditions under which it will be safeguarded. This was the perspective adopted by the assembly.

The President proposed that the rapporteur prepare a report of the meeting and that the definition be proposed for final discussion in the morning session of Wednesday 12 June.

Session 3: June 11, morning.

Agenda items 3 and 4: Definition of intangible cultural heritage and its constitutive domains. (Continued)

The vice-president opened the debates taking as reference the following text produced by the Rapporteur, as a consolidation of the results of the debate so far: *“Intangible cultural heritage consists of all processes and practices - together with the knowledge, skills, instruments, objects, artefacts and spaces involved - that provide living communities with a sense of continuity with previous generations. These processes and practices are relevant to the cultural identity of the people concerned as well as to cultural diversity, and contribute to the creativity of humankind. Communities and individuals in the contemporary world decide how to recognise their intangible cultural heritage and continue to recreate it in constant response to their environment and historical conditions of existence. As an object of the present convention, and within the limits set by the Declaration of Human Rights, intangible cultural heritage is constituted by the distinctive and outstanding achievements of human creativity. These may be listed - without a claim to exhaustiveness - as below: 1. Oral expressions. 2. Performing arts. 3. Social practices, rituals and festive events. 4. Knowledge and practice about nature”*.

Two main issues were raised in the discussion. On the one hand, whether or not an explicit reference should be made to “human rights” and to “distinctiveness” as a criterion to be used in the proclamation of intangible heritage. On the other hand, how to articulate a general definition of intangible heritage as such, regardless of policies developed by UNESCO, with the necessity to set limits to its application with the context of the Convention. In the context of those limits, the inclusion of principles such as “respect for other cultures” and “observation of the human rights” as part of these limiting criteria was again addressed.

Concerning the question of human rights, it was argued that the idea of “respect for human rights” should not be included in a theoretical definition of intangible heritage as such and that a specific clause should state that no item would be enforced by the Convention if it violates those rights. It was also noted that the phrase “safeguarding of cultural diversity and creativity of humankind” included in the definition already addressed this issue and precluded the inclusion of any kind of harmful cultural practice in a future heritage list. Others argued that reference to human rights should be made in the general definition in order to make it clearly consistent with the discourse and ideals promoted by UNESCO. It was consensual that the Convention should clearly state that this policy should not contemplate practices that were harmful to other cultures.

Various proposals were made concerning the inclusion of an explicit reference to human rights and to the question of distinctiveness in the Convention. It was also suggested that this topic could use the wording of article 12 in the Turin action plan (i.e., “must be founded on universally accepted human rights, equity and sustainability and on respect for all cultures that also have respect for other cultures”). It was finally decided that the article stating the definition of intangible cultural heritage should be written in three levels, each concerned with a specific aspect of the matter: the general definition, the list of domains, and the criteria to be adopted by the policies derived from the Convention.

Several changes and amendments were proposed. The following text consolidates the dominant views so far: “2 (a) *Intangible cultural heritage means the processes and practices - together with the knowledge, skills, instruments, objects, artefacts and spaces involved - that provide living communities with a sense of continuity with previous generations and are constitutive of their cultural identity. It contributes to cultural diversity and to the creativity of humankind. Communities and individuals in the contemporary world decide how to recognise their intangible cultural heritage and continue to recreate it in constant response to their environment and historical conditions of existence.* 2 (b) *these processes and practices may be listed –without a claim to exhaustiveness - as below: 1.Oral expressions. 2. Performing arts. 3. Social practices, rituals and festive events. 4. Knowledge and practice about nature.* 2 (c) *The safeguarding of intangible cultural heritage must be founded on universally accepted human rights, equity and sustainability and on respect for all cultures that also have respect for other cultures”*

Sessions 4, 5 and 6: June 11, afternoon through June 12, afternoon.

Agenda items 2 and 5: Elaboration of a glossary

The vice-president opened the debates about the glossary draft prepared by the Dutch commission, which includes thirty-five prelisted categories. (Document **TER/CH/202/WD4: Draft Glossary**). The discussion and reformulation of these concepts, as well as the inclusion of new categories and the refinement of intangible cultural heritage definition were the issues focused by the experts until the end of the meeting, in the afternoon session of June 12.

Four new categories were included as a consequence of the discussions held on the previous sessions of this meeting: 1) *Living (contemporary) community*. 2) *Social practice*. 3) *Culture*. 4) *Knowledge and practices about nature*. Other nine were added by the plenary: 1) *Performing arts*. 2) *Festive events*. 3) *Place*. 4) *Sustainability*. 5) *Agency*. 6) *Representation*. 7) *Creativity*. 8) *Documentation*. 9) *Researchers, administrators and managers*.

From the total of forty-eight categories under scrutiny, thirty-eight were discussed exhaustively in these three sessions. Sixteen items were suppressed from the glossary draft either because it was of general agreement that they were not relevant for the Convention, or because no specific connotation was added by the present context of use to their current meaning. These were: 1) *Indigenous*. 2) *Indigenous people*. 3) *Local population*. 4) *Social group*. 5) *Ethnic group*. 6) *Actor*. 7) *Indigenous knowledge*. 8) *Traditional knowledge*. 9) *Living culture (community)*. 10) *Folklore*. 11) *Mixed (hybrid) culture*. 12) *Tradition*. 13) *Traditional*. 14) *Product*. 15) *Knowledge and practices about nature*. 16) *Ritual*.

The plenary arrived to consensual definitions about the following twenty-two categories: 1) *Community*. 2) *Cultural community*. 3) *Indigenous community*. 4) *Local community*. 5) *Culture*. 6) *Traditional culture*. 7) *Popular culture*. 8) *Social practice*. 9) *Agency*. 10) *Process*. 11) *Representation*. 12) *Creativity*. 13) *Safeguarding*. 14) *Preservation*. 15) *Protection*. 16) *Conservation*. 17) *Documentation*. 18) *Bearer*. 19) *Practitioner*. 20) *Custodian*. 21) *Creator*. 22) *Researchers, administrator and managers*.

The discussion of each term of the list was long, careful and dense. It took as a reference the draft prepared by the Dutch commission as well as texts elaborated by Mr. Paul Kuruk (*safeguarding, preservation, protection, conservation*) and by Mr. Oskar Elschek and Mr. R. Regenvanu (*practitioners, custodians, creators, bearers, researchers, administrators, culture professionals*). A summarised report about the discussions that took place during the meeting would not provide an accurate picture of the work done by the experts on this matter. As the whole session has been tape recorded, these live records can provide the needed background of the present text. Nevertheless, some aspects of that discussion should be highlighted here.

In the first place, the plenary was very attentively critical to any definitions that would contribute to a reification of the idea of intangible heritage or derived from an understanding of society as a homogeneous, undifferentiated and static context. Consequently, the definitions are coherent with the notions of *practice, process* and *agency* that today have a very widespread use in Anthropological research and have been emphasized by the experts' meetings that took place in Turin and in Rio de Janeiro.

Second, the use of the notion of *folklore* in this context was very extensively debated. Some argued, particularly Mr. Paul Kuruk, that in several contexts and predominantly in African countries, this category still has a positive connotation and covers important cognitive, religious and symbolic domains. However, this is not the case in many other parts of the world, such as the Americas, Europe and the Pacific, where it is often associated with entertainment industry or with evolutionistic and nostalgic views about the past and the so-called "primitive" societies. So, it was agreed that other categories and expressions should be preferred.

A third aspect to be highlighted is the discussion about the ideas of *preservation, conservation* and *protection*, as this has also raised a very long and rich debate. The question was: to what extent a terminology that has been consolidated through decades of application to material objects and built structures is applicable to

intangible heritage? Some members of the assembly suggested that these notions could have their meanings adapted to the specific characteristics of this type of heritage. The UNESCO Secretariat, on its turn, emphasized that these notions are consecrated in the field of heritage, and that it is plausible to foresee that they will be broadly used also in relation to intangible heritage.

However, the vast majority of experts consistently argued that one distinctive characteristic of this type of heritage is its intrinsically dynamic nature, due to the fact that it is an integral part of the social organisation and history of the communities concerned. It was also consensual that the future policies should not only take into account, but also actively recognise, the right and capacity that cultural communities have in making their own choices as to whether or not give continuity to aspects of their own culture. So, it became clear that the word that most adequately and broadly describes the particular kind intervention that would be adequate to the nature of this heritage is *safeguarding*, and consequently that this should be chosen as the basic notion implied in this context. Consequently, the plenary endorsed the wording used by other commissions in the elaboration of the preliminary versions of the Convention. The types of action referred to in the definition of safeguarding (i.e. *identification, documentation, promotion, revitalisation and transmission*) are those that the experts felt adequate to this new policy and which are considered compatible with the definition produced by this meeting.

Agenda item 7: Conclusion

Since the time planned for this meeting was not enough for an exhaustive discussion of all the categories and issues raised by the experts, it was decided that the discussion about the ten following concepts, provisionally defined during the meeting, should continue by means of the Internet: 1) *Revitalisation*, 2) *Promotion*, 3) *Transmission*, 4) *Oral expression*, 5) *Oral tradition*, 6) *Performing arts*, 7) *Festive event*, 8) *Cultural space*, 9) *Place*, 10) *Sustainability*.

A complete and final version of the definitions produced by this group of experts is presented in the document entitled *Draft Glossary on Intangible Heritage*.

As a final topic, the plenary analysed and approved the following definition of intangible cultural heritage and its constitutive domains: (i) *For the purposes of the present Convention, intangible cultural heritage means the practices and representations – together with their necessary knowledge, skills, instruments, objects, artefacts and places – that are recognised by communities and individuals as their intangible cultural heritage, and are consistent with universally accepted principles of human rights, equity, sustainability, and mutual respect between cultural communities. This intangible cultural heritage is constantly recreated by communities in response to their environment and historical conditions of existence, and provides them with a sense of continuity and identity, thus promoting cultural diversity and the creativity of humankind.* (ii) *Intangible cultural heritage, as defined in paragraph (i) above, covers the following domains: 1) Oral expressions, 2) Performing arts, 3) Social practices, rituals and festive events, and 4) Knowledge and practices about nature.*

Closing session: June 12, afternoon.

Mr. Mounir Bouchenaki, Assistant-Director General for Culture of UNESCO closed the meeting, thanking the experts for their relevant contribution to this important task, particularly mentioning the contributions of the Dutch commission for the preparation of the draft documents, of Mr. Wim Van Zenten who presided most sessions, and of Mr. Antonio A Arantes as rapporteur.

Meeting documents available at https://ich.unesco.org/en/events?meeting_id=00082

Glossary. Intangible Cultural Heritage. Prepared by an international meeting of experts at UNESCO, 10-12 June 2002. <https://ich.unesco.org/doc/src/00265.pdf>

Errata

In Volume 16, of *Vibrant: Virtual Brazilian Anthropology*, published in February 2019, in the section “**Dossier Safeguarding, its Genealogy and Governance. Two Essays on UNESCO’s Convention for the Safeguarding of Intangible Cultural Heritage**”, the article of Antonio Arantes with DOI <http://dx.doi.org/10.1590/1809-43412019v16a201> had their titles changed.

In english:

For

The governance of *safeguarding*. Comments on Article 2.3 of the ICH Convention

Read

The Governance of *Safeguarding*. Comments on Article 2.3 of UNESCO’s Convention for the Safeguarding of Intangible Cultural Heritage

In Portuguese:

For

Gestão da *salv guarda*. Comentários ao Artigo 2.3 da Convenção do Patrimônio Cultural Intangível

Read

A Gestão da *Salv guarda*. Comentários ao Artigo 2.3 da Convenção da UNESCO para a Salv guarda do Patrimônio Cultural Intangível

Patrimonial Citizenship

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Abstract

In this article, I present the concept of ‘patrimonial citizenship’- based on my trajectory as an anthropologist working in the field of cultural heritage, articulating a conceptual repertoire with the field experiences, accumulated in my academic research well as the production of technical reports required by authorities managing patrimonial policies. I revisit James Holston’s notion of *insurgent citizenship* and dialogue with anthropological approaches to cultural management. The notion of patrimonial citizenship is inspired by the concepts of *insurgency* and *agency*. In my analysis, the myth of the nation and its operability in affirming the hegemony of national culture are thought through the lens of cultural patrimony. I associate this with the idea of social action, or praxis, in which the adhesion or the resistance to and the negation of totalizing patrimonial policies frames the action of social and ethnic collectives modulated between the myth and anti-myth of the nation.

Keywords: Cultural heritage; Citizenship; Anthropology.

Cidadania Patrimonial

Resumo

Apresento nesse artigo o conceito de cidadania patrimonial tendo em vista a minha trajetória antropológica no campo do patrimônio cultural convergindo o repertório conceitual com o acúmulo de experiências de campo relacionadas às pesquisas acadêmicas, assim como na produção de relatórios técnicos demandados da gestão de políticas patrimoniais. Resgato a noção de cidadania insurgente de James Holston e dialogo com autores antropológicos e de gestão cultural. Com inspiração nos conceitos de insurgência e agência para construir a noção de cidadania patrimonial. Na análise, o mito da nação e sua operacionalidade na afirmação da hegemonia da cultura nacional são pensados por via do tema do patrimônio cultural, mas associado com ideia da ação/práxis social em que a adesão ou resistência/negação às políticas patrimoniais totalizadoras da nação configuram ações dos coletivos sociais e étnicos moduladas entre o mito ao anti-mito da nação.

Palavras-chave: Patrimônio cultural; Cidadania; Antropologia

Patrimonial Citizenship¹

Manuel Lima Filho

From heritage to citizenship

I have thought about cultural heritage both within an academic context – through my lectures, student supervision, the coordination of institutional research projects and the constitution of the network of anthropologists making up the Brazilian Association of Anthropology (ABA) – and also outside academia, in actions materialized as technical reports, heritage education workshops and formal applications to register Brazilian intangible heritage.

From the standpoint of the anthropologist’s knowhow, I have produced various reflections on the interaction and friction between the anthropological concept of culture and the notion of cultural heritage as seen from the State’s perspective (Lima Filho 2009, 2012, 2013 and 2015).

Years of professional activity in this field have encouraged me to seek a dialogue between the theoretical repertoire (concept) and the (technical) practice of anthropology. In countries like Brazil and others in Latin America, as well as Africa, the themes of race, ethnicity, gender, violence and subalternity resonate with a past of colonial conceptions and practices. Moreover, anthropological practice does not shy away from confronting political issues directly related to human rights, social justice and democracy. Heritage is clearly no different. Setting out from this perspective, the concept that I denominate *patrimonial citizenship* now deserves to be narrated through writing, one of the vectors making up the anthropologist’s work (Cardoso de Oliveira 2000).

Participating in a study group on the situation of Latinos living in the United States, which put to work concepts such as identity, multiculturalism and cultural citizenship, Renato Rosaldo (1997) observed that, the notion of citizenship is understood as a universal concept in which all citizens of a particular nation state are held equal before the law. However, he argued, it is also necessary to distinguish the formal level of a universal theory² from a substantive level of exclusionary practices directly related to race, gender and class. Rosaldo argues that contemporary citizenship policy must necessarily take into account the role that social movements have played in exercising the claim for rights in new areas such as feminism, black and indigenous movements, ecology and vulnerable minorities such as children (Rosaldo 1997: 27). While Hall & Hell (1990, quoted in Rosaldo 1997) warn of an increasingly quantitative view of cultural citizenship, for Rosaldo this expansion is more qualitative in kind because the idea of citizenship is traversed by the notion of culture: “we need to understand the way citizenship is informed by culture, the way that claims to citizenship are reinforced or subverted by cultural assumptions and practices” (Rosaldo 1997: 35).

Antonio Augusto Arantes (1996) adds another dimension that permeates the contemporary theme of citizenship: the right to information and the access to symbolic goods, substantiating the field of social communication, the market and the interpenetration of the public and private spheres. Arantes argues that “citizenship does not have an ‘essence,’ but it is a movable and changeable political-cultural artefact” (Arantes 1996: 10).

¹ In *ANTROPOLÓGICAS*, ano 19, 26 (2), 134-155, 2015 (translated from the Portuguese original by Nuno Porto; revised by David Rodgers).

² The majority of sociological studies exploring the term citizenship refer to T. H. Marshall (1950) who in turn drew from the publication of Hobhouse of 1916 in associating the rights and duties of the citizen of a certain State. Marshall related citizenship to the notion of social class and presented a description of the development of civil, political and social rights in Great Britain between the eighteenth and twentieth centuries, as Morris (2010: 41) and Svarlien (1987: 177) point out.

Here it is worth recalling the Marilena Chauí's reflections on the topic (2006), building on her experience working in the São Paulo Department of Culture as manager of the city's policy for the supports of social memory and cultural heritage. Public power as a cultural subject and, thus a producer of culture determined "the forms and cultural contents for society, defined by the ruling groups in order to reinforce their own ideology" (Chauí 2006: 47). Mass communication was used by the cultural with the aim of producing and operating an official culture, exhibited nationally and internationally, in which authority and the monumental marked an authoritarian tradition. The hegemony of this tradition provoked Marilena Chauí to ask: Are the politics of historical, cultural and environmental heritage condemned to the miserable and pompous form of memory and the celebration of the victor's history?" (Chauí 2006: 123). Discerning another conception of cultural policy, historical, cultural and environmental heritage became acknowledged, in the implementation of São Paulo's public policies, as the social and cultural practice of many different social agents and memory as a right of the citizen, seen as an action involving all social subjects, not as the official production of history. Based on her experience in cultural management, lists the following propositions inherent to the practice of cultural citizenship as a process: the right to information, the right to cultural enjoyment, the right to cultural production and the right to participation (Chauí 2006: 96-101).

Roberto Da Matta (1991) takes citizenship as a central theme of his interpretations of Brazil, presenting the categories of *variation* and *perversion* of citizenship, which, in the Brazilian case, combined with practices of power, hierarchy and social relations. Consequently, the anthropologist distrusts any notion of universal citizenship:

Can we speak of a single conception of citizenship as a hegemonic form of political participation, or we compelled to discuss the hypothesis of a society with multiple forms and sources of citizenship? (Da Matta 1991: 85)

And he concludes:

[...] there is a form of universalist citizenship, built upon modern roles that are linked to the operation of a bureaucracy and a market, and other forms of membership to Brazilian society – other typically relational forms of citizenship emanating from the spaces of the house. In other words, there is a Brazilian *nation* that operates on the basis of its citizens, and a Brazilian *society* that works on the basis of traditional mediations. (Da Matta 1991: 93, author's emphasis)

Moving forward on the topic of citizenship, I turn to James Holston's ethnographic research in Brazil, including his historical analysis of the urban context of São Paulo city. For him, the Brazilian case combines the formal notion of citizenship, based on the principles of the nation state, with a more substantive character marked by the distribution of rights, meanings, institutions and practices to some citizens only – that is, certain categories of citizens. In other words, there is a social production of citizenship, which generates a paradox or even an aporia: the aim is citizenship for all, but citizenship produces citizens of distinct classes, women, the elderly, pregnant mothers, among others. I highlight two central ideas of Holston's study that seem to me useful to correlate with the theme of cultural heritage. For him, the agency of the citizens studied in Brazil is not just one of resistance: it also produces commitment, persistence and inertia. Citizens, therefore, actively maintain a committed regimen of citizenship as much as they resist it. The other concept is that of *insurgency* applied to citizenship. In the author's words, "insurgency describes a process that is an acting counter, a counterpolitics, that destabilizes the present and renders it fragile, defamiliarizing the coherence with which it usually presents itself" (Holston 2009: 34), coining the term *insurgent citizenship*. Although James Holston thinks citizenship informed by the conjuncture of a localized and comparative urban anthropology, here I am interested in the connotation of the term insurgency that includes engagement but also inertia,

and that in some ways approximates what Antonio Arantes calls ‘cultural inflection’ and what Renato Rosaldo identifies as the strengthening or subversion of citizenship by cultural practices and assertions. Marilena Chauí aligns citizenship as a process that connects information, enjoyment, production and participation of social actors, while Roberto Da Matta employs the categories variation and perversion to describe a sub-citizenship in the Brazilian case.

Such positions some extent compliment each other from different directions studies of districts of São Paulo; the ethnographic mapping of Latinos in the United States; the organization of a book on citizenship edited by Brazil’ National Heritage Institute (IPHAN)³; the experience of cultural management as a state policy; and, finally, the variations of the citizenship theme in Brazil in the relational perspective between house and street. One cannot think of the concept of citizenship and its applications without taking into account the conception and the cultural and historical trajectories of the social and ethnic groups that experience them and their respective agencies. I particularly identify myself with the definition formulated by Emirbyer & Mische (1998), who conceptualize agency as⁴

...a temporally embedded process of social engagement, informed by the past (in its ‘iterational’ or usual aspect) but also oriented toward the future (as a ‘projective’ capacity to imagine alternative possibilities) and toward the present (as a ‘practical-evaluative’ capacity to contextualize past habits and future projects within the contingencies of the moment). (Emirbyer & Mische 1998: 962)

The above in mind, I apply these anthropological and managerial considerations to the topic of how social collectives have responded to the patrimonial policies of the State, internationally idealized through UNESCO, primarily in relation to the policy of registering⁵ and recording intangible or immaterial patrimony.⁶ In this sense, insurgency, inertia, engagement or cultural modulation set the tone of the confrontation between such groups and national state policies, particularly in Latin America where all countries are signatories to the UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage.

Framed in this manner, I consider *patrimonial citizenship* to be the highly plastic operational capacity for social action that social and ethnic groups possess, in their collective or individualized dimensions, to build strategies to interact with (adhere to or resist) patrimonial policies at international, national or local level, thereby demarcating a field in which identity becomes constituted, either through the alignment of equals or through the radicality of difference. These kinds of cognitive abilities and agencies make use of categories developed in the epistemic construction of anthropology, including culture, nature, territory, tradition, kinship and identity, in interaction with patrimonial categories like registration and inventory and, finally, framed by native categories such as us and not-us, objects, myths, rites, human and nonhuman, relatives, consanguineal and affinal relatives, chiefs, shamans, artists, the body, painting, the young and the old, those with know-how, and many other categories indexed by specific linguistic and cultural systems.

3 TN: IPHAN is the acronym for the Instituto do Patrimônio Histórico e Artístico Nacional.

4 The concepts of action and agency are correlated and a traditional theme in the social sciences. The debate has explored the relationship between structure and agent – in other words, the tension between society and individual – with theories that emphasize the social order, structure or dynamics of agents. Thus the reflections of symbolic interactionism, pragmatism, phenomenology and the notion of networks have all contributed to this debate. Emirbayer & Mische associate the ‘interactional,’ ‘projective’ and ‘practical-evaluative’ (Stones 2010: 13-17) elements with the phenomenon of agency and give conceptual impetus to the term. In anthropology, the writings of Marilyn Strathern have had great impact because, different from the previous theories that associate structure and subject, Strathern, inspired by her studies in Melanesia, calls attention to native theories of the agency in which the relational principle of the subject is operated by a Native decoder (Strathern 2006). I particularly think that the notions of agency developed by Strathern, Emirbayer & Mische, and Giddens also, can be modulated to the types of case analysed.

5 In Brazil, the heritage registration law, based around the notion of exceptionality, was instituted by Decree No. 25, of November 30, 1937. The decree establishes that cultural goods must be inscribed in four Books of Record: Book of the Archaeological, Ethnographic and Landscape Record; Book of the Historical Record; Book of Record of Fine Arts; and Book of Record of Applied Arts.

6 Decree No. 3.551 of August 4, 2000 established the registration of intangible cultural assets as a component of the Brazilian cultural heritage, based on the notion of relevance. The decree establishes that intangible assets must be entered in the following books: Book of Knowledge; Book of Record of Celebrations; Book of Registration of Forms of Expression; and Book of Registration of Places, The same decree created the national intangible heritage program.

In other words, heritage is inserted in the myth of the nation and through it one can aspire to cultural citizenship by means of intercultural modulations. However, patrimony may equally reside outside the myth (as non-patrimony) and may not legitimize the discourse of national culture replicated by hegemony of the nation, as marked by some of the Brazilian anthropological literature on national culture, as Mônica Pechincha has astutely observed (2006: 35). What place does the subaltern occupy in the representation of Brazil's national heritage, the figure who cannot be categorized under exceptionality or relevance/representativeness? The reverse of heritage takes place in patrimonial citizenship, bolstering forms of insurgent citizenship. This possibility has been neglected by other authors when they write about heritage. And yet an analysis of heritage that distances itself from the myth of the nation is only possible if we consider notions of conflict and insurgency as integral to the concept of citizenship. In this sense, patrimonial action generates a scale that spans from the nation's myth to its refusal/negation by social actors who situate themselves politically on the margins, in the cleavages – that is, towards an idea of the anti-myth⁷ of the nation.

The operational elasticity that I impute to patrimonial citizenship allows individuals and collectives to enter a field marked by the asymmetric production of state power, instructed by a colonialist historical practice and by the maintenance of a liberal economic model, which is nourished by the maintenance of hierarchies fantasized by an uncritical multiculturalism adhering to the conceptual framework of the culture industries – a phenomenon already denounced by the Frankfurt School, notably by Adorno (2002). The notion of registration (*tombamento*) and recording is embedded in this bias, legally indexed by the Brazilian State under notions of exceptionality and relevance, and previously analysed by myself in an earlier text as conceptual and pragmatic reducers:

I perceive a conceptual trap from which the creators of the decree were unable to escape. In its first article, second paragraph, the legal text says: “Entry in one of the books of record will take as a reference the historical continuity of the good and its national ‘relevance’ to the memory, identity and formation of Brazilian society’. [...] Now, it is notable that the word ‘relevance’ is for the Law of Intangible [Heritage] as the word ‘exceptional’ is for the Law of Registration [*Decreto de Tombamento*]. Both are selective, exclusive. (Lima Filho 2009: 622)

In this power game, whether in order to restrict the reach of the net of patrimonial policies, or as a resource ultimately determined by the human condition of survival in the social contexts of countries like Brazil where the basic conditions of life such as health, safety, housing and education are often lacking, social actors either assume themselves to be participants in a game of political action (Bourdieu 1997), reminiscent of Weber's instrumental rational action, or they subvert order within politics itself and turn culture into a resource of cultural economy, a convenience (Yúdice 2006) or weapon:

[...] ‘natives’ from the four corners of the planet have appropriated the category [culture], in the name of the value of their own ‘culture,’ in order to defend their specific ways of being in relation to human and institutional alterities with their own distinct parameters. There is often an unexpected agency, the formation of networks and spaces of sharing with horizons that open or close [...] the metaphor of ‘culture as a weapon,’ the capacity for ‘objectification’ of the recognition of culture, something that occurs when someone from the outside is willing to represent what communities live and experience. More than this, we have a continuity in reverse of this process, as when the ‘objectified’ subject appropriates the representation and presuppositions of the observer [...]. (Mafra 2011: 607)

⁷ The notion of anti-myth was developed by Roberto Da Matta (1970) in his analysis of two myths: the conquest of fire and the civilized origin of the Timbira. Here, though, I refer to the interpretation of anti-myth associated with ideology, which, in the words of Julio Cesar Melatti, is “a myth of a more dynamic character, which makes possible the creation of new categories and the passage to a more complex order, that of political ideology” (Malate 2016).

The complexity of this intercultural weaving on a case-by-case basis averts falling into the trap of a totalizing heritage policy of registration or recording. Here a more horizontal conception of heritage is conceived, one which is not equivalent – although this may occur – to the collections. Thus heritage is not necessarily a category of universal recurrence, as Pomian (1997) thought, an idea that also seduced Gonçalves (2009: 26 and 2007: 45). Heritage is a Western category and what non-Westerners do with it involves a modulation of the encounter of history with culture. This is why heritage policies anchored in representativeness, exceptionality or relevance, as UNESCO advocates and as adopted by Brazilian policies, are imploded – to echo an already classic insight of Marshal Sahlins (1990 and 2003) – by the cultural thinking of otherness: closely connected or radically distant from us, but in permanent effervescence within a plethora of cultural re-appropriations, marking the construction of social subjects by means of a mythical/historical, intercultural narrative identity.

On one hand, therefore, we have the Weberian cartography of the economic sphere, alerting us to a totalizing Western dimension of heritage with the semantic/ideological use of a category of diversity imbued with colonialism and with what José Jorge de Carvalho has called an ‘aesthetic impunity’:

While a choreographer from the Rio-São Paulo axis can ‘anthropophagically’ appropriate a particular performative knowledge of a Creole drum from Maranhão, for example, no Creole drummer can exercise this same cultural cannibalism over an ‘erudite’ dance group performing at the Municipal Theatre of Rio de Janeiro. [...] The anthropophagic motto works, in practice, as a kind of secret code of *aesthetic impunity* (my emphasis) and the maintenance of the privileges of the Brazilian ruling class. In this anthropophagy (obviously, a one-way anthropophagy), two interconnected classes celebrate, through national symbols themselves, their privileges vis-a-vis the artists of indigenous and Afro-Brazilian communities: the class that has always felt impunity to accomplish the always celebrated modernist cultural synthesis (based on cultural loans that, over time, become theft) and the class (which is its historical continuation) that now proposes and executes the inventories of Brazil’s intangible cultural heritage... (Carvalho 2004: 07)

But I also think that the Other, the target of anthropophagy in its cultural referents, is not passive, and if positioned only at an extreme pole of passivity, runs the risk of being essentialized. While Mônica Pechincha (2006: 62) argue that Roberto Da Matta, in his interpretation of citizenship in Brazil, creates room for representation but not for the voice of the Other, I would note that in the patrimonial processes of registering cultural referents, social groups have assumed a *topos* in the relational conjuncture with State policies.

Hence the notion of insurgency attached to citizenship can help us think about the game of heritage or the ‘weapon of culture’ in intercultural praxis. We have, therefore, the configuration of an intercultural operability driven by a native habitus, an alterity more or less close to us, mixed or distant, but in factual interaction. In this way, heritage is useful whether or not the Portuguese language, non-indigenous schools and political offices are useful to indigenous peoples in the intercultural power play. The Karajá doll⁸ can and should be sent to the Museum and its patrimonialization can increase the empowerment of women and domestic arrangements in an ethnic group strongly marked by the gender dimension. The Aruanã masks, however, should be burned – they involve not a native collection, but the manufacture for ritual usage circumscribed by the principle of culture. When found in museums, the Aruanã masks are examples of colonialist, unethical, violent practice, whatever level of interaction may have occurred among the Karajá, travellers, ethnologists and bushmen.⁹

8 The Karajá dolls were registered as Brazilian intangible heritage on January 25, 2012, in the Book of Knowledge (Knowledge and Practices Associated with the Modes of Making Karajá Dolls) and in the Book of Celebrations (Ritxoko: Artistic and Cosmological Expressions of the Karajá People) (Silva 2015).

9 As an example, we can turn to how the Aruanã masks were negotiated between the Karajá and the ethnologist Ehrenreich (1948) in the constitution of museum collections: “It was thanks to the help of the boss Pedro Manco that I was able to bring some interesting masks. Without his intercession, the superstitious distrust of the members of the tribe could hardly have been overcome, for a series of travellers, especially Spinola himself, had been imprudent enough to desecrate these sacred objects.” He continues: “nevertheless, they did not allow us to carry the masks found in the forest in any old fashion since they thought there were women in the vicinity. To transport the masks to our camp, our comrades had to wear them especially for this purpose” (Ehrenreich 1948: 72-77).

Heritage is good to play when the players are disposed to do so.¹⁰ Otherwise, heritage will be refracted by social groups. This capacity to refract – or to choose how far the patrimonial game should proceed – is another aspect of the malleability of the notion of patrimonial citizenship. That is, refraction/choice breaks with the passivity of inertia.

It is through the exploration of these social and ethnic cleavages and fractures that patrimonial citizenship works to extract from heritage an infusion of performative and identificatory energy in the sense of “...activating local knowledge, discontinuous, disqualified, non-legitimized, against the unitary theoretical instance that would purport to purify them, to hierarchize them, and order them in the name of a true knowledge, in the name of a science held by some” (Foucault 1979: 171). This means being aware of the Bakhtinian location of speech or non-speech or, in Spivak’s terms (2012), the knowledge of the subaltern: indigenous people, bushmen, the peasants, Maroons, river-dwellers, slum-dwellers¹¹ and the multiple ways of being present in a world crisscrossed by cultural polyphony and by a permanent power production game.

With this in mind, I turn now to examine some processes involving the registration of cultural heritage within and outside the official policies of Brazil’s intangible heritage registry in order to make visible the connotations of what I have called modulation and its connections to the concept of patrimonial citizenship.

Modulations in heritage practices

Patrimonial citizenship is directly related to the Weberian notion of social action (Weber 1979) whose rational and irrational dimensions (in the field of subjectivity) comprise a methodological strategy to understand and interpret the movements of social and ethnic collectives in contact with patrimonial policies. Likewise, the notion of agency broadens and complements the effectiveness of the Weberian strategy since it includes the complexity of the contemporary world, governed by information flows, the high permeability of social subjects, and multiple identity affiliations (gender, religious affiliation, class, and ethnicity), which are in permanent contact with increasingly available sources of information and enable these same social subjects to break from cultural/political/citizen inertia. The notion of agency proposed by Anthony Giddens (2009), which combines the ability of people (agents) to do something (action) with the notion of power exercised by social subjects, even in cases of subordination (Long & Ploeg 2011), also supports the operability of patrimonial citizenship. The same applies to Emirbyer & Mische’s (1998) proposal, which connects engagement to temporal forms by articulating the present (capacity for evaluation), past (memory) and future (projects).

The notion of modulation that I attach to the concept of patrimonial citizenship allows the response of rupturing this inertia in accordance with the personal/collective biography of the actor(s) targeted by patrimonial policies. A biography traversed by historical, economic, political, gender, race, class and social identity dimensions. Hence the modulation.

¹⁰ As an antidote to being lured by a romanticized vision of the patrimonial game, we can turn to the critique made by Coombe & Baird (ou Baird, (2015) of the uses and limits of cultural heritage, shaped by the complex network of neoliberal actions at work behind categories such as community protection, human rights and indigenous knowledge, while still employing professionals to implement practices of self-interest in ‘heritage’ areas: “Heritage is obviously being taken up as a political resource in new and surprising ways. As international heritage bodies are called upon to involve and engage local communities in the project of protecting heritage and safeguarding intangible cultural heritage, their work is increasingly imbricated in encounters with corporate, indigenous, and transnational actors who have incorporated heritage norms into their own agendas. If such intersections pose limits to the emancipatory expectations we should have for heritage governance in some instances, they also suggest that heritage governance on resource frontiers is a site of intensified struggles whose outcomes are unpredictable. Industry actors are using international heritage vocabularies in new exercises of corporate social responsibility that might be considered novel forms of public-private policy in which industrial and community agents voluntarily take up and reframe global legal principles of sustainability, community, and heritage for their own ends. [...] Mining companies have attempted to usurp or co-opt global norms that position heritage as a development resource by funding tenure-track faculty positions, endowing research chairs, and offering their own staff as experts to serve in global heritage institutions” (Coombe & Baird 2015: 349).

¹¹ TN: *Favelado* in the original, meaning someone who lives in a favela (slum). The term is usually used with a pejorative intention.

I begin with two distinct examples of modulation inherent to patrimony citizenship. When I presented the proposal to the Karajá of the village of Santa Isabel do Morro, in the House of Men, about registering the Karajá (*ritxòdò*) dolls as Brazilian cultural heritage, a man at the meeting argued in favour of the idea, claiming that if they were to be classified as Brazilian then everything was fine. Now, the history of the Karajá from this particular village is directly related to the mid-twentieth century government Westward March program,¹² receiving visits from presidents Getúlio Vargas in 1940 and Juscelino Kubstichek in 1960 (Lima Filho 2001). In the case of the ceramic dolls, the modulating factor was the prestige of the nation: the past gave meaning to the present (Lima Filho 2015). But things were different when, some time later, a young leader from the same village saw a photograph of an Aruanã mask on the website of the National Museum: annoyed, he warned me that he would prosecute the National Museum as these masks – according to the strict cultural principles of the Karajá – cannot be shown to women. Here the same group used the artifice of the nation (a lawsuit) against the nation itself in the form of a federal research and postgraduate education institution. Differential modulations with patrimonial policies, via patrimonial citizenship. As an example of the same kind of reasoning,¹³ I would cite the statement made by a young Tapirapé student from a Tupi village in Mato Grosso, enrolled on the intercultural graduate program at the Federal University of Goiás: he said that he was at the University to learn only what he was interested in applying in his community, the rest was irrelevant. An intriguing case of intercultural modulation. This modulation is also exemplified in the control exerted by the *mãe-de-santo* Mãe Meninazinha d’Oxum at São João de Meriti in the Baixada Fluminense, Rio de Janeiro, during the recording of candomblé music, telling the anthropologist Edmundo Pereira (2016) what could or not be recorded, where to record, and which photos to use in the CD project – in other words, what was restricted to the field of the sacred and its members, and what could be made public:

The first decision was that the recordings would be made at Ilê itself, where a small mobile studio was mounted. [...] It was up to Mãe Meninazinha d’Oxum, with suggestions from other members of the [candomblé] house, to choose the repertoire to be recorded. The cover was chosen so as to represent, via the objects, the two patron Orishás of the house: the necklace of beads of Oxum and the popcorn offered as food to Omolu” (Pereira & Pacheco 2004: 01).

I turn now to the first steps taken by the Brazilian State to install a national intangible heritage registration policy. The initial movement was to register Kuarup registry, a mythological/ritual complex of the indigenous peoples of the Upper Xingu River (Agostinho 1974), but they: *Body Painting and Graphic Art* was included in the Registry Book of Expressive Forms in 2002, which, the following year, also received the title of Intangible Cultural Heritage of Humanity from UNESCO at the initiative of the Council of Wajãpi/Apina Villages.

In November 2003, UNESCO selected ‘Graphic Expressions and Orality among the Wajãpi of Amapá’ as a Masterpiece of Oral and Intangible Heritage of Humanity. This registration represented another step in the Wajãpi’s long process of thinking about their ‘culture.’ It was, and continues to be, a stimulus to resume discussion in the villages of a whole series of problems related to the disinterest of the young generations – and of many adults – in their traditional knowledge and practices, devalued or even held in suspicion by virtue of living in close proximity to the bitter prejudices of most of the representatives of the surrounding society who interact with the Wajãpi. Their expectation is not to ‘eternalize’ their culture but to consolidate their capacity to appropriate new objects, techniques and knowledge in a way that does not, as has occurred hitherto, hinder their own cultural practices.

12 TN: The so-called ‘Westward March’ was a project led by the Getúlio Vargas (1882-1954) government in the *Estado Novo* period (1937-1946) to occupy and develop the interior of Brazil, where indigenous groups were seen as non-existent. This project was launched on the eve of 1938.

13 I had access to this information in a lecture by the anthropologist Mônica Pechincha about her experience with the indigenous intercultural graduation of the Federal University of Goiás in 2015.

The 'Integrated plan for valuing traditional knowledge for the sustainable socio-environmental development of the Wajãpi do Amapá community' presented to UNESCO aims to mobilize the community around actions that value, in the villages, both oral forms of transmission and the knowledge related to resource management, health, village history, cosmology, rituals..." (Gallois 2006: 69-70)

Notably, the first patrimonial actions follow a trajectory from a pole of rejection (by the Xingu people) to a pole in favour, led by the Council of the Wajãpi/Apina Villages. However, even with the adherence of the Wajãpi to the purpose of Brazilian heritage policies and after the UNESCO listing, attention should be paid to anthropologist Dominique Gallois's reflection on the experience of registration with indigenous peoples:

The safeguarding of indigenous oral traditions, as well as the practices associated with them, is a new field for public policies, especially in Brazil. In some indigenous communities, strategies are being tested that supranational programs and national agencies seek to improve with the collaboration of universities and nongovernmental organizations, forming a still fragile panel of very diverse and sometimes contradictory experiments. The difficulties refer, above all, to the conditions made available for the protection of indigenous intangible heritage, which fluctuate in accordance with the political and economic contexts. Thus, the adequacy of protection measures always involves complex negotiations. Who are the agents responsible for the inventory of these cultural traditions? Who has the power to choose between one or another tradition, between one or another community? What is meant to be preserved in a tradition: the productions, the recording of these productions, or their means of expression? How to effectively engage a community in preservation policy? [...] the 'conservation' procedures commonly used for the protection of material assets are inadequate for the preservation of intangible heritage, which requires a much more complex set of procedures. (Gallois 2006: 72)

The exercise of patrimonial citizenship in the first cases of intangible heritage registration in Brazil already presents the characteristic of modulation. A modulation that can be better observed when we focus on the cleavages of the groups and the peculiarities in their responses to public heritage policies. I turn now to the first two cases of registration of Brazilian intangible heritage, which possessed in common the issue of conflict, contextualized by the application of patrimonial policies.

The first registration was the local pottery craft in Goiabeiras (ES) in 2002. As Dias (2006) describes, the potters association – which had already undergone a singular organizational process characterized by family arrangements and the threat of losing the plots of land from which they extracted the clay, having ceded some areas for the construction of a state water treatment plant – experienced tensions within their political organization when they became interlocutors with state agents during the ritual performance for obtaining the registration of their craft as Brazilian intangible heritage:

During the period when Berenícia was president of the APG [*Associação de Paneleiras de Goiabeiras: the Goiabeiras Potters Association*], the group consolidated its presence in the regional political context. It was Berenícia, as a representative of the association, who passed on the suggestion [of the local IPHAN] to the Minister of Culture, Francisco Welfort, while he was in Goiabeiras, in a document requesting its inclusion in the cultural heritage list of the National Institute of Historical and Artistic Heritage [IPHAN]. In 2002, clay pottery, made by women from Goiabeiras, was the first registration listed in the Book of Knowledge. (Dias 2006: 132)

Like the potters from Vitoria (ES), the *baianas* of Salvador (BA)¹⁴ had their craft of acarajé making¹⁵ listed in IPHAN's Book of Knowledge in 2005. The conflict was not internal to a specific association, as observed among the potters, but centred on the tense interactions with another group of *baianas* who represented a dimension of the sacred (Protestantism) different and opposed to the Afro-Brazilian tradition:

When the registration of intangible heritage was instituted in 2000, the activity of tray selling¹⁶ was embroiled in a controversy with evangelical vendors [...]. In 2001, a picturesque but very striking episode – since a large number of the *baianas* selling acarajé mentioned it in our conversations – seems to have prompted the traditional *baianas* and their supporters to embark on a more energetic performance. The promoter Lícia Fábio [...] created the *Golden Acarajé* award for the best seller in Salvador, with voting via the internet. Surprisingly, the winner was the Blonde,¹⁷ [...] a street vendor with dyed hair, according to some saleswomen, with a little known tray in a remote and unpopular neighbourhood, which was also evangelical. It was the height of the visibility of the controversy with the evangelicals. A woman who least represented, because she wanted to look blonde and modern, and because she followed a religion contrary to the roots of the delicacy, had been rewarded the prize precisely because of the delicacy from which she made her living but which at the same time she disdained, in the opinion of the other acarajé *baianas*. Most of the *baianas* and others [...] remembered the indignation generated by the fact that the blonde had snatched the prize. After this episode, Abam, which had been in business since 1992, initially to help obtain social security benefits for vendors, reacted institutionally to the controversy. It joined forces with one of the Candomblé houses [...] listed by IPHAN, *Opô Afonjá*, and the CEEA (Centre for Afro-Asian Studies) to apply for the registration of acarajé, a product representative of the Bahian crafts, in the Book of Knowledge. The request was made almost immediately after cultural heritage registration was instituted in 2002, and there seemed to be a certain urgency, not only due to the one-off indignation over the prize awarded to the evangelical seller, but much more probably due to the constant daily controversy with evangelicals setting the precedent for another form of commercializing acarajé, disconnected from the women's tradition. (Martini 2007: 238-239)

The registration of the *Samba de Roda* in Bahia's Recôncavo region in 2004 also presents ethnographic aspects of relations between the groups belonging to the Association of Sambadores and Sambadeiras of the State of Bahia (ASSEBA) and those groups outside the latter, based in the Bahian hinterland, as Silveira (2015) explains.¹⁷ In this case, patrimonial citizenship only became effective when the group becomes part of the association and its institutional and political dimension. In the hinterland, however, the groups continue to promote their festivals like the Festa dos Reis, establishing strong relations between spaces and people, outside patrimonial politics:

The critique relates, then, to the type of patrimonialization that presents a harmonic ideological justification but in practice excludes some groups from this process. However, for the groups of the Recôncavo this process has benefited many people, from the visibility of the samba to taking care of the health issues of the masters. However, it is not a process free from contradictions and exclusions. Some groups from the Bahian hinterland end up being pushed to the margins of this whole process. (Silveira 2015: 07)

14 TN: *Baiana* (feminine noun and adjective) refers to a woman from the state of Bahia. In this context, it refers to the black women who sell a particular street food, *acarajé*, and thus relates to a specific form of popular culture.

15 TN: Acarajé is a popular savoury cake made from mashed beans, fried in palm oil and filled with *vatapá*, a paste of bread, shrimp, peanut and palm oil. It may be spiced with pepper, coriander and cumin and it is considered to be of Yoruba origin. It is also a 'saint food' – that is, an edible offering in Afro Brazilian religious practices.

16 TN: Acarajé is sold on trays. Each vendor has her own tray consecrated to a specific entity in a particular Candomblé House, with whom she shares her successes.

17 TN: *Samba de Roda* is a specific form of Samba from the region called Recôncavo Baiano in the state of Bahia. Sambador (masc. adj.) Sambadora (fem. adj.) man and woman who do samba.

Finally, I turn to one last example of heritage registration, in this case the office of masters, listed by both Brazil and UNESCO. The particularity of this case is that one capoeira master claimed that this cultural reference was equally African, thus amplifying the notion of the myth of nationality:

[...] during the registration process, a renowned Bahian master disagreed with its recognition as cultural patrimony of Brazil, since he wished capoeira to be registered as 'Afro-Brazilian cultural heritage,' even though there was no legal instrument which would allow such a prerogative. The master organized an event to discuss the matter, convening the IPHAN representatives who were coordinating the registration process, capoeiristas, intellectuals and black leaders from Bahia. This fact reveals the complexity of patrimonialization processes and the variety of possible identifications and perceptions that capoeira can have. It also draws attention to a possible need to create instruments that extend beyond the borders of national identities. Capoeira here simultaneously marks and is marked by a discussion that goes beyond its practice. [...] How can the discourse of diversity been maintained under homogenizing labels like those of national patrimony and humanity? [...] complexity emerges when we perceive that the formation of national identity can no longer be seen as singular and watertight, perceived instead as multiple and taken up by new actors of various kinds, who have appropriated the culture, legitimizing it in the search for policies of reparation and recognition. (Castro & Vidal 2016: 185-197)

I think these examples are sufficient to demonstrate the elasticity of the actions of social and ethnic groups when interacting with patrimonial policies, whether negating them – as happened with the indigenous peoples of the Xingu and the Roma of Trindade (Goiás state). The actions in internal disputes or with representatives of the nation state exemplified by the Goiabeiras potters and the Bahian street sellers, or the demand for inclusion of *sambadeiro* groups from the hinterland of the Bahian Recôncavo, work to extend patrimonial citizenship beyond the borders of the nation, just as in the cases of capoeira and the Wajãpi. Patrimonial experiences already processed and those still under way invite us to observe both epistemic and practical caution, listening to the voices of alterity that imbue the complex game of cultural heritage with diverse meanings. Seen from an anthropological perspective, the notion of patrimony, like culture, is always slipping between our fingers. Dealing with this poses a permanent challenge to the anthropologist's work.

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Technique, power, transformation: views from Brazilian anthropology

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Abstract

The article presents contemporary approaches to the anthropology of technique, its theoretical-methodological specificities and the form in which it is expressed in Brazil today, exemplified through the set of ethnographies making up this dossier. Exploring different types of transformations, these articles raise questions concerning the relationship between technique and power, involving environments and territories, plants and animals, objects and skills. In seeking to overcome the limitations of the nature/culture dichotomy and its derivatives, technique-based approaches have turned to ethnographically grounded solutions that move beyond discourse and avoid the collapse into other ethnocentrism, expressed in a total symmetrisation or in the mere projection of human properties to non-humans.

Keywords: Anthropology, technique, Brazil, transformation, power.

Técnica, poder, transformação: visões da antropologia brasileira

Resumo

Este texto apresenta as perspectivas contemporâneas da antropologia da técnica, suas especificidades teórico-metodológicas e a forma como ela se expressa no Brasil atualmente, através do conjunto de etnografias que compõem este dossiê. Abordando diferentes tipos de transformações, estes artigos evocam questões sobre a relação entre técnica e poder, tratando sobre ambientes e territórios, plantas e animais, objetos e habilidades. Defende-se que, ao tratar de superar as limitações da dicotomia natureza e cultura e seus derivados, as abordagens da técnica buscam soluções etnograficamente fundamentadas, que vão além do discurso e que evitam recair em outros etnocentrismos, expressos numa simetrização total ou na mera projeção de propriedades humanas aos não humanos.

Palavras-chave: Antropologia, técnica, Brasil, transformação, poder.

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The idea that technical transformations are a feature of modernity, or even an effect of globalization, is undeniably commonplace, just as we can frequently encounter reflections on the political impacts and power relations implied in these phenomena. Some endeavours within anthropology have sought to frame this kind of problem in other terms, mobilizing the ideas of transformation, technique and power, not only as objects of study but as analytic categories and as guidelines for ethnographic approximation. This has led, including in Brazil, to a series of approaches founded on ethnography and has contributed new perspectives on themes that include relations with animals, plants, objects, skills, environments and territories, stimulating a debate on the potential meanings of these terms through a vision of processes.

Technique: the idea of technology and the anthropological approach

Whenever anthropology manipulates or interrogates wide-ranging notions that comprise central categories in western thought – such as economy, religion or individual – it is essential that some process of critical reflection is developed, usually based on an ethnographically informed perspective. The same applies, naturally enough, to the notions of technique or technology. It is important, then, to begin with a panoramic view of how these terms have been used in anthropology, including their limits and possibilities.

At one level, their use can be traced back to the initial phases of the discipline, whether in relation to magic (Malinowski, 1984), museological interest (Hicks, 2010), or even proposals concerned with the relation between culture and environment (Steward, 1955; White, 1949; Guille-Escuret, 1989). However, it can be said that the positing of technique or technology as a problem or a form of approach, such as it appears in the contemporary anthropological setting, became configured and deepened over the last two decades of the twentieth century through the interconnections of a set of researchers with different influences and interests – from hunter-gatherers to studies of science and technology, passing through economic anthropology and archaeology. A diverse spectrum of bibliographic production reveals the emergence and evolution to the present of an academic field with themes, concepts and debates that transcend national borders and styles. Over his period we can note the emergence of specialized journals (like *Techniques & Culture* and also *Journal of Material Culture*), as well as the publication of books (Latour, 1996; Ingold, 1980; Lemonnier, 2012; Coupaye, 2013) and collections of individual articles that present ethnographic material and contain conceptual, analytic and methodological propositions focused on technique (Ingold, 2000; Sigaut, 2012; Hornborg, 2017). This includes the republishing (Haudricourt, 1987; 2010) and translation (Mauss, 2006a; Leroi-Gourhan, 1993; Schlanger, forthcoming) of authors considered to be important references. There are also collations and comparisons (Coupaye & Douny, 2009; Bray, 2007), collective works (Latour & Lemonnier, 1994; Lemonnier, 1993; Schiffer, 2001), texts on the state of the art and/or theoretical-methodological positionings (Pfaffenberger, 1992; Lemonnier, 1992; Ingold, 1997; Akrich, 1989; Buob, Chevallier & Gosselain, 2019), as well as entries in specialized dictionaries (Sigaut, 1994; Lemonnier, 1991, 2011; Cresswell, 1991; Bril, 1991).

A striking feature of this movement are the reservations concerning the various meanings of what Pfaffenberger (1992) called the “Standard View of technology”: necessity is the mother of invention, the meaning of an artefact is a matter of surface style, and development is a cumulative and unilinear progression. Generally speaking, these everyday meanings of technology in western modernity have led anthropologists to either reject the term completely (Pfaffenberger, 1988, 1992; Ingold, 1997, 2000: 321) or try to redefine it (Lemonnier, 1992; Hornborg, 2014) for their own use. One point that surfaces frequently in these critiques is the need for anthropology to avoid setting out from the idea of technology as an autonomous and pre-existent system available to ethnographic discovery (Ingold, 1997: 132). Such a premise implies taking technology to be exterior to society, thus enabling a determinist attitude, as well as its relativist counterpart, inevitably activating dichotomies like nature/culture, material/ideal and subject/object. It was precisely this posture that allowed anthropology to ignore the theme – since it was presumed to exist outside the domains of culture – or to adopt an approach devoid of appropriate concepts and methods, purely descriptive and excessively focused on inventories or formalist descriptions, isolating objects from their real-world setting (Hicks, 2010).

On the other hand, the idea of technology as a scientific-industrial phenomenon can lead anthropologists to separate the study of so-called modern and traditional technologies into different areas or to apply different methods in their exploration, an attitude that has been rejected (Schiffer, 2001; Mauss, 2006a). Indeed, the ethnocentric potential of the term is embedded in this distinction (Ingold, 1997; Pfaffenberger, 1992), which mobilizes the idea of a sophisticated science-based technology (hence the suffix *logos*) in opposition to a simple and empirical kind. The same applies to the supposition that a set of relations exists between materials and artefacts (so-called technology) that differs fundamentally from other sets of relations – social, symbolic or environmental, for example. Much of the problem ends up residing in how to avoid the ‘fatal dichotomy’ between technique and society, which figures as a central concern of one of the influential collections in this field, edited by Latour and Lemonnier (1994: 13).

Despite these critiques, it is important to remember that the meanings and uses of technique, technology and correlated terms in anthropology vary significantly, a fact made clear in the articles featured in the present dossier. In the Francophone environment, for example, technology may signify the study or reflection on technique (Sigaut, 1994: 422; Latour, 2010: 21). This has implications for anthropology, as Coupaye (2009) indicated, which is connected to the tradition inspired by Mauss’s reflections on the topic (Mauss, 2006a). We should begin by recalling that the translation of Latin authors, especially Francophones (see, for example, Latour, Foucault, Ellul, Daumas, Mauss, Lemonnier), generates some confusion since *technologie* is very often rendered as *technology*. More than a few French authors have taken issue with use of the term technology, considering it mistaken or abusive (Séris, 1994: 3-6; Sigaut, 1994: 442; Latour, 1994).

It is not our intention here to defend the notion of technique against that of technology, but to point out the risky and uncertain implications (Marx, 1997) of the latter, which, in fact, emerged very recently in western history.¹ Precisely for this reason, it is worth anthropologists taking heed of the warning of French philosopher Jean-Pierre Séris (1994: 1): “technology should not hide techniques from us.” Indeed, while recognizing its limited use in English, here we adopt the term technique, rather than technology, precisely to demarcate a distance in relation to the premises contained in the latter and to allow more inclusive perspectives on the topic. There are important precedents in Anglophone anthropology for preferring the term techniques, among them Ingold (2000: 314-7), whom we follow to a large extent here.

¹ Understanding the presence and effects of the notion of technology in western modernity, and the marked increase in its use over the course of the twentieth century, has been the focus of a number of recent studies. Among them we can note the historiographic approaches of Marx (1997) and Schatzberg (2018), who also explore appropriations of the notion of ‘technology’ in the social sciences. The consequences of these works have had repercussions too in anthropology (e.g. Coupaye & Pitrou, 2018).

But given all these reservations and difficulties, why insist on this theme at the current juncture? One of the first points is that technique should not be considered merely as an object of study, as a phenomenon in and of itself. Neither should it be taken simply as the action of a subject on an object, or the human being on the environment. More productively, it can be thought of as (diverse) forms of relation or mediation. This is why asking about technique signifies addressing some of the central questions and dilemmas of the contemporary scenario, such as the distinction between nature and culture, or the debate on the epistemic scope and possibilities of *anthropos* itself. In this regard, it is necessary to point out the specificity of the technique-based approach compared to other contemporary movements that seek to extend anthropology's attention to objects or non-humans in general.

The technique-based approach retains specificities vis-à-vis the so-called agentive turn or material cultural turn (Hicks, 2010; Chua & Salmond, 2012), which broaden the reach of anthropology's theoretical apparatus to encompass new beings and things (Apparadurai, 1986; Miller, 2005; Gell, 1998). True, there are many proximities and complementarities, but while sharing the same aim to amplify anthropology's scope, technique-based approaches adopt a different epistemological strategy to these other movements: less the 'amplification' in the range of the theoretical-conceptual apparatuses used by the social sciences, and more the 'introjection' of new empirical sensibilities and research questions into anthropology. This is the case, for example, of actor-network theory and its initial approach to everyday objects and innovations (Latour, 1992; Akrich, 1992), French cultural technology and its attention to the operational dimension, objects and gestures (Lemonnier, 1993; Sigaut, 1994) and Ingold (1997, 2000, 2011) and his perspective of life, the environment and skill. The notion of technique is affirmed by these authors essentially as a form of perceiving and dealing with relations and processes invisible to the usual concepts and methods of social or cultural anthropology – the proposal of notions like translation, operational sequence and skill characterize well this objective of renewing ethnographic potentials.

The contemporary relevance of this introjection of new themes, concepts and empirical sensibilities becomes evident in the comments to the book by Lemonnier (2012), which updates a number of convergences between different approaches to technique. Despite the disagreements, Latour (2014) recognizes that the more localized and detailed approach promoted by Lemonnier (1993) aligns with the contemporary political urgency of focusing on the singularities of different 'material infrastructures.' Ingold (2014: 520), for his part, though more critical, displays a degree of convergence with Lemonnier's empirical approach, arguing the need for anthropology to go 'back to basics' – that is, resume its empirical contact with the dynamic of things and movements.

These specificities provide a basis for us to comprehend how the attention to technique has been assuming broader contours within anthropology, far from remaining bound to a narrow instrumentalism. After a lengthy period of ostracism, therefore, it seems to be recovering a more relevant position, including in anthropological studies that aim to develop more general reflections, especially those concerned with rethinking the status of the human and its relation to the environment (Descola, 2013; Ingold, 2000). At the same time, renewed uses of the term are also being proposed by authors seeking to investigate life processes (Pitrou, 2015; Coupaye & Pitrou, 2018). Similarly, technique or technology have been mobilized – sometimes in a divergent or even contrasting way – by authors concerned with the Anthropocene (or Technocene) and the political and cosmological (or cosmopolitical) reasons and consequences of the disparity in the modes of existence impelled by present-day capitalism on a planetary scale (Latour, 2013; Hornborg, 2017).

One of the motives for this resurgent interest in technique within anthropology seems to be that it provides a way to move on from the theoretical critique of the nature/culture distinction through forms of ethnographic approach that explore the relations between humans, environments, objects and animals. This helps explain why authors who developed their approaches via epistemological positions that expressly avoided mobilizing, even critically, the dilemmas of nature/culture, subject/object and discourse/practice have attracted much interest

today, figuring as central references in studies of technique. Such seems to be the case of Leroi-Gourhan (1993), whose ideas have been disseminated by Ingold (1999) in the Anglophone environment, since, by thinking a new interface between biology and anthropology through technique, the former's work converges with the latter's critique of the oppositions between humanity/animality and subject/object (Mura, 2011). We can also mention Haudricourt (1969), who Descola (2013: 105-6) cites in order to explore his seminal ideas on the homology between social relations and relations with nature, and whose work has also been revisited in order to propose a theory of action (Ferret, 2014). We should not forget either the revisiting of Mauss's thought on technique (Mauss, 2006a), which is markedly relational. Also included in this scenario is the influence exerted by the thought of the philosopher of technique and individuation, Gilbert Simondon (1989; Ingold, 2013; Sautchuk, 2019, 2015). Its interest in anthropology would appear to reside precisely in the empirical approximation to phenomena like technique and individuation (physical, biological, psychological and collective) without resorting to the theoretical paradoxes that arise from the notions of nature and culture, or matter and form. Simondon's (2016) treatment of the technical object offers viable alternatives to perceiving the configuration of effective combinations between the living and the non-living that are rendered more or less imperceptible through the notion of artefact (Guchet, 2017). By recuperating the approaches of these authors, different notions have been revisited, such as technical trend (*tendance technique*), gesture, operational sequence and behaviour, concretization and individuation.

This overview allows us to highlight the fact that, for contemporary anthropology, the relevance of the proposals for exploring technique is strongly methodological in character. In other words, in the dialogue with these authors, the aim is to encounter solutions for dealing empirically with the dynamic of diverse processes that bring together humans, animals, objects, environments and so on. However, in the contemporary context of proposals that seek to overcome the limitations of dichotomies like nature/culture, subject/object, human/animal or ideal/material in anthropology, technique-based approaches offer an ethnographically grounded solution that avoids the collapse into other ethnocentrism, expressed in either a total symmetrisation or the mere projection of human properties to non-humans. In sum, the approximation to operations, fabrications and forms of action enables us to observe that power relations, which could be taken as exterior to technique (determining or being determined by it), are actually situated within its own dynamic.

Technique and power: looking at operations

Studies of power in the social sciences tend to concentrate on the economic, social and symbolic effects created by relational disymmetries, as well as the construction of hierarchical systems and the implementation of logics of domination and management of people and energy resources, as found in the works of classic authors like Karl Marx, Karl Polanyi, Eric Wolf, Claude Meillassoux, Max Weber, Norbert Elias, Michel Foucault, Louis Dumont, Leslie White and Pierre Bourdieu.

Frequently these studies make use of metaphors taken from physics to describe the mechanisms that define power and its effects on the life of humans and beyond. Elias (1978), for example, illustrating how social configurations are constructed, draws inspiration from game theory in order to define power as a differential system of forces, in the physical sense of the term, existing between two or more human subjects, which implies the formation of hierarchically ordered social relations. Foucault (1975), for his part, considered power relations to be a microphysics and a technology. Along these lines, he cites notions and ideas derived from particular techniques performed by humans, such as herding, in order to classify and differentiate the distinct modalities of managing and governing humans themselves (Foucault 1994). Use of the metaphor of the herder in the ancient world, Foucault claimed, originated mainly from the Middle East and was based on the experience of

herding sheep and goats, where detailed and differentiated recognition and treatment of each animal subject was a fundamental aspect. Tutelary power itself came to be considered by the French author as an expression of this detailed form of caring for and conditioning human individuals too.

As can be noted, significant connections exist between Foucault's conceptualization of power and his concerns with techniques, beginning with the idea of techniques of the body, which implies thinking of all action as deriving from a specific tradition and form of transmission (Mauss, 2006b). The fact that for Mauss the principle of social action is not external but situated within the flow of life itself (Karsenti, 1998) is what allows us to glimpse a connection between such proposals as diverse as Leroi-Gourhan's technical gesture (1993) and Foucault's disciplinary power and techniques of the self. Canguilhem's (2008) thought contains the most explicit articulation of these two fields, when he emphasizes the normative character of processes, including the body, the technical dimension and the relation with the environment. The repercussions of this approach have been widely explored by the social sciences in specific fields – notably in medicalization processes – and surveying these works here in detail would be impossible. However, it is worth briefly pointing out how this articulation between technique and power can be explored via questions relating to life, action and intention.

We take two ethnographic examples. In a text on domestication processes, Carole Ferret (2014) relates that the Yakut describe mosquitos as 'little shepherds' and adds that this is not simply a metaphor. In effect, the active participation of the mosquitos allows horses to be attracted towards points of smoke where they can protect themselves from their bites. The mosquitos cannot be said to have the intention of contributing to the herding of the horses, but the effects of their actions are precisely the same. In this sense, and considering the process led by the Yakut, the mosquitos behave like little shepherds. On the use of analogies, a similarly interesting comparison is made by a prestigious Kaiowa shaman to explain to a non-indigenous interlocutor how a *ñengáry* functions – that is, a chant used to move vertically through distinct levels of the cosmos (Mura, 2019). The shaman compares it to an elevator that allows access to the various floors of a building. In this case, we might think that the elevator has a metaphoric value. What would happen, though, if this same shaman had to explain how an elevator works to a relative who had never seen one? He would probably use the *ñengáry* mechanism, which for the Kaiowa is something concrete, based on physical principles. This would lead to an inversion of the metaphoric relation, or more exactly, the perception that comprehending both phenomena require us to go beyond the use of metaphors.

In fact, these ethnographic examples allow us to conclude that, in general, conceiving of technical and physical relations and principles as metaphors is more the outcome of a preconceived division between a sociocultural dimension and another material dimension, rather than an attempt to distinguish between specific properties of forms of acting. Moving beyond the material/immaterial dichotomy, therefore, instead of mere metaphors we could more accurately speak of analogies, homologies and, in the specific case of herding, even variants of the same way of directing an action towards specific beings in order to govern or induce them into a particular form of action.²

Haudricourt (1969) presents an argument that is, to some extent, complementary to Foucault's. While the latter argues that we need to turn to the relation with animals to understand relations between humans, Haudricourt's argument points to the inverse. He compares different forms of domestication and agriculture, those from the Mediterranean region with others from the Far East and Melanesia. In the first case, what he defines as a 'positive direct action' takes place: that is, human activities in the breeding of animals and in agricultural work is characterized by a high degree of intervention and direct control over the behaviour of

² In this sense, governing oneself implies a political attitude. We can speak of political technique in terms already posed by Plato, considering it a technique of use, that seeks to administrate and govern other techniques of production and acquisition (Cambiano, 1971; Mura, 2017). In turn, taking political behaviour as the search to achieve a particular objective within a framework of actions and relations characterized by a power differential, as already defined by Swartz, Turner and Tuden (1966) in the introduction to the classic *Political Anthropology*, suggests the need for a post-metaphoric and post-dichotomic approach to the relation between technique and politics.

domesticated species. The other model is ‘indirect negative action,’ acting on the environment in order to interfere only with the conditions of the characteristic actions and processes of plants or animals. He then identifies a homology in the principles of action between each of these two models of cultivation or breeding and the different forms of government (what he calls relations with the other) characteristic of these two regions.

Reclaiming Haudricourt’s formulations but with the aim of overcoming his schematicism, Ferret (2014) proposes using the notion of ‘manipulation,’ borrowed from semiotics. As well as speaking of a subject and its objective, therefore, it would also be possible to include the object of an action, thereby forming a trinomial. This would allow us to observe how, within specific processes and practices, subjects and objects condition each other, making it possible to apprehend the objective as something emergent from these actions. Setting out from Haudricourt, therefore, Ferret proposes extending the variety of modes and intensities of action to include others like: making the other do (intervention), preventing the other from doing (prevention), not preventing the other from doing (*laissez-faire*), not making the other do (non-intervention).

Ferret’s proposal (2014) proves highly productive in terms of delineating an anthropology of action since, as the author herself states, it shifts the focus from ‘why’ to ‘how,’ making practices and processes central to the definition of relational models. Hence, it is possible to imagine that technical choices emerge from the actions themselves derived from each context. By focusing on processes and shifting away from intention, this type of approach points to one of the main interests of the approaches to technique, namely a vision internal to processes. True enough, it is notable that the gestures and rhythms in the development of an activity are linked to the consolidation of positions and power relations, which allow certain intentions to condition some processes more than others.³ In other words, this kind of approach is not incompatible with analyses of the structure of social action, like those of Barth (1992), which takes intentions to be acts focused on producing sequences of events, which become conditioned in the process. Indeed, technical actions should always be considered within a set of relations in a specific socio-ecological-territorial context (Mura, 2011, 2019). On the other hand, it is worth noting that governance practices can be conceived as political techniques, generating a distribution of forces and the differential mobilization of materials and beings. If all these actions were always symmetric and equivalent, we would end up with stasis. Operational movements are precisely not the result of equivalences but of differentials of various types.

It should be noted that the aim here is not to instigate a debate on whether or not techniques or artefacts manifest political agency. Rather it is a question of avoiding any pre-differentiation of those relations we consider as techniques and others we consider as social or political in kind. It follows that we need to think of technical objects and living beings from a perspective that does not define them in advance, but also simultaneously does not fail to perceive their characteristic properties within a specific type of relation and interaction. This approximation between the technical and the living is an important aspect of the ideas of Canguilhem, which directly influenced not only Foucault, but Simondon too.

For Simondon (2016), it is only possible to comprehend technique through a vision of the processes of individuation (see Sautchuk, 2019). Consequently, if there is no absolute difference, there also exists no identity between the technical object and organisms – this relation and difference is precisely an empirical question and lies at the core of every technicity. Indeed, this is one of the main points of contact between his proposal and that of Leroi-Gourhan, who adopts this approach to technique to comprehend gesture and tool,

³ Here it is important to emphasize that although studies of power and social action consider intentionality in terms of the behaviour manifested by human beings, which predominate, it is not exclusive to them. This fact is related in particular to the capacity of every living organism to acquire, transmit and manage information, giving life to specific operational behaviours (Leroi-Gourhan, 1993). Intentionality, therefore, depending on the characteristics of the species and the environmental experiences of the specimens related to each other in a determined context, involving factors of differentiation of abilities, skills and social status, contributes to the formation of a dissymmetric interplay of power relations fed by the force, direction and intensity of the actions to which each human and non-human element will give life in this context. It is also important to emphasize that these elements in the context and process of individuation and transduction cannot be understood to constitute two separate categories, subjects and objects – that is, treated as substantives. Each element in this flux can be the subject of one action and the object of another action promoted by other elements (Mura, 2011).

but also the bodily constitution and technical behaviour of diverse beings, including their spatial projections. This type of consideration by-passes the idea of an agency that could be distributed or projected, exploring instead different forms and types of action on relational configurations.

The relation between technique and power cannot be considered in terms of causality or determination, thinking about the control or effects of a given technique. We need to take into account the modes through which different beings and processes become implicated and their properties emerge in the flux of relations. This leads us precisely to argue that to inquire into technique is to speak about processes of transformation.

Transformations: variants of technique in Brazilian anthropology

In Brazil, the first associations with this forming of an interest in technique in contemporary anthropology emerged in research with indigenous peoples, such as those studies on the inclusion of new materials and the meaning of technical actions (Mura, 2000, 2011), as well as on the connection between objects and their uses and meanings (Silva, 2002). To this we can add the interest in the relationship between technical skills, personhood and environment based on the dynamic of fishing in Amazonia (Sautchuk, 2005, 2019, forthcoming). This initial scenario, after expanded, had already signalled an important trait, namely that the recourse to technique should be conceived as developing or connecting to other thematic fields.

Here, the interest in technique to some extent runs parallel to the emergence of a more general interest in the relation between humans and non-humans, which has configured around approaches linked to science and technology. It is precisely the studies of indigenous material culture, productive activities in the rural world, and relations with the environment that have been combining with explorations of the new biotechnologies, especially in the fields of medicine and healthcare, associated too with the emergence of an interest in the practice of scientists (Sautchuk, 2010).⁴ All of this assumes specific contours in the Brazilian context, considering two characteristics of the anthropology produced in the country. The first relates to the different gradations of alterity that mark the practice of anthropologists in Brazil (Peirano, 1991, 1999; Simião & Feldman-Bianco, 2018), which always generates a range of political reverberations. The second is the relatively diverse and eclectic form in which different anthropological currents on technique have been convoked to interconnect with themes and perspectives already consolidated in the country. Indeed this is how we should understand the mobilization of an approach to technique among anthropologists in Brazil, which is presented here in three sections: one concerning the question of environments and territories, another on the human relationship with plants and animals, and a third on skills and objects.

The attention given by anthropologists working in Brazil to techniques highlights processes of change under way, whether due to an interest in the emergence or diffusion of new practices, or due to the way in which different phenomena – ranging from the environment to animals or humans – are transformed through certain technical processes. What follows is a representative sample of this movement, including anthropologists

⁴ Anthropologists dedicated to the study of technique have been constituting collective initiatives over recent years in Brazil. The *Reunião de Antropologia da Ciência e da Tecnologia* (ReACT: Meeting of the Anthropology of Science and Technology), held biannually, tends to include research along these lines, alongside other approaches like STS, multispecies studies and perspectives based around the ontological turn. The last three editions of the *Reunião Brasileira de Antropologia* (Brazilian Anthropology Association Meeting) have included a thematic group on the Anthropology of Technique, dynamized by the organizers of this dossier and authors contributing to it. The project *Transformações técnicas em perspectivas locais* (Technical transformations in local perspectives, funded by the Brazilian National Council for Scientific and Technological Development) has given impulse to collective research, which added other initiatives at a colloquium held in Brasília, 2015, the results of which can be found in the first collection of texts on the theme to be published in the country (Sautchuk, 2017). Another important factor in the consolidation of technique as a theme was the seminar *Ambientes, percepções e práticas* (Ambients, perceptions and practices), organized one year before in Florianópolis and that also involves the participation of various authors of the present dossier. We can also cite the creation of research groups in different regions of the country, uniting anthropologists around the technology theme: the Laboratory of the Anthropology of Science and Technique (*Laboratório de Antropologia da Ciência e da Técnica*: LACT, University of Brasília), the Ambients, Perceptions and Practices Study Collective (*Coletivo de Estudos em Ambientes, Percepções e Práticas*: CANOA, Federal University of Santa Catarina) and the Technical Processes Study Laboratory (*Laboratório de Estudos em Processos Técnicos*: Téchnai, Federal University of Paraíba).

from all over Brazil, presenting ethnographic research conducted in the five regions of the country. Set in the country's diverse biomes or metropolitan cities, here we present a varied panorama, characterized by urban and rural situations, referring to indigenous peoples or medical practices, historical perspectives and analyses of gestures, the introduction of computers and the utilization of industrial devices and materials in fishing techniques.

In the first section of this special number, on environments and territories, Fagundes presents us with a scenario in which the management of burns and wildfires in the savannahs of Central Brazil involves disparate perceptions, mobilized by agents of the state or quilombola communities. Based on the concept of *normativity* of Canguilhem (1991), the author shows how the technical transformations implemented in these spaces and environments through the work of the quilombola populations are focused on producing a "harmonious and rhythmized existence between fire and forms of life," producing a "territorialisation of milieus and rhythms." Through these practices, the quilombola communities rebalance the power relations arising from the state's application of fines and bans on burning.

As in the case of fire, the rhythmic dimension of technical relations is fundamental to comprehending how the Panará indigenous people of southern Amazonia undertake their hunting trips. As Bechelany shows, it is through this mode that they produce an ontogenesis of technical and social relations, including the act of walking in the forests and the forms of collaboration and perception. Inspired by Simondon (2005), the author takes individuals (humans and animals, hunter and prey) to be "unstable realizations where the problem is the maintenance of a unity, whose important characteristic is its *functional autonomy*, not its morphological unity."

Araújo, meanwhile, discusses mobility in space and relations in the mangrove environments in which Potiguara indigenous families develop their activities and domestic ecology in the Brazilian Northeast. Primarily making use of the concepts of *technical trend*, *technical environment*, *technical fact* and *technical set* of Leroi-Gourhan (1971), in this work the author shows how experiential trajectories, skills and acquired knowledge enable this indigenous population to design, through their domestic units, domains in which flows of materials of local and industrial origin are organized and mutually associated in the fabrication of objects and tools.

Concluding this section, Aderaldo's work reveals another aspect of the perception of space and the technical transformations that enable conflicting modes of constructing territories and urban territorialities. The author examines cartographic production as the generation of technical objects that involve political and symbolic factors, inspired by Akrich's work (1989, 1992) on the formation of sociotechnical systems and the description of technical objects. Thus, hegemonic maps, whose intentionality is focused on rendering invisible the everyday, the gender dimension and the manifestations of diverse social segments, are questioned by associations and activities that seek to contrast their power effects, producing as an alternative "critical maps" that allow people to "inhabit experiences."

In the next section, different processes of change in the human relationships with plants and animals are studied. Oliveira explores the situation of pluriethnic indigenous communities on the border between Brazil and Guiana through a technogenetic approach to the manioc-stem. The way in which these plants are transformed into food and, at the same time, activate certain indigenous relational modes is studied in detail through the methodological employment of the notion of operational sequence, taking it as a transect (Coupaye, 2017) capable of perceiving heterogenic aspects like vital flows, gestures and discourses.

Di Deus explores another plant central to the history of Amazonia, the rubber tree (*Hevea brasiliensis*). He focuses on the response of this tree to the technical gesture of extracting the latex, linking contemporary plantations in the state of São Paulo with the beginnings of the famous transportation of this tree to Asia at the end of the nineteenth century. By focusing on techniques through the percussive blow (Leroi-Gourhan, 1971) and the rhythm of human-plant interaction, paying special attention to strategic operations (Lemonnier, 1992: 21-24), his ethnographic and historical study sheds fresh light on the topic. He questions the simplistic

narrative of the transportation of the seeds, highlighting the relevance of Amazonian knowledge and practices (Nugent, 2018), thus emphasizing the need to speak of technical systems in diaspora.

Deturche also adopts the notion of rhythm to explore changes in the relationship between technique and life dynamics in the intensification of production. His interest is in the mechanization of milk extraction in France, rediscussing the complexity of domestication through milking robots. If these machines transform the system of domestication itself, it is because their concretization implies both a level of indetermination (Simondon, 2016) and a redesigning of skills (Ingold, 2000). Exploring these questions, the author shows the reaction of cattle breeders to the intentions of the engineers. So, while the latter see robotization as a way to lessen the time spent with cows, for the former this relationship redefined through ludic and affective finalities. Consequently, abandoning the unilinear conception of domestication processes does not imply ignoring the power asymmetries and relations involved.

Also backed by the ideas of Simondon (2016) and Ingold (2000, 2011, 2013) on technique and perception, Devos, Barbosa and Vedana join in the same type of critique of a dichotomy between modern technologies and traditional techniques. They examine the adoption of new technical devices (such as mobile phones, walkie-talkies, webcams and social network pages) in the revival of mullet fishing in Florianopolis on the south coast of Brazil. They emphasize its articulation with the technicity of collective practices and knowledge systems of artisanal fishing in contexts that can be comprehended through the notion of distributed cognition (Hutchins, 2001).

The negotiation of a field of actions and power between humans and animals, as well as the rediscussion of the theme of domestication, appear in the research of two authors studying animal participation in support or therapy for humans. Von der Weid presents a detailed analysis of the apprenticeship of guide dogs as an animal assistive technology to facilitate the mobility of the visually impaired. She emphasizes the emergence of a human/dog team, based on a kind of anthropozootechnical agency. This sophisticated and crucial cooperation, especially in terms of mobility, depends on the formation of technical devices and dispositions, which she interprets through the dialogue with animal studies, such as the proposition of its *umwelt* (Uexkull, 2010) and the ludic dimension of gesture (Massumi, 2014).

Teixeira, for her part, focuses on zootherapy, approaching it as a technical skill. Thus, the role of animals in healing or care processes leads to thinking about the transformations that these cause in humans and animals. Proceeding with a detailed analysis of these interactions through the studies of Haudricourt (1969) and methodological developments relating to the anthropology of action proposed by Ferret (2014), Teixeira shows the correlated processes of human and animal learning, as well as the relations of force established at the heart of this therapy.

In the final section, it becomes clear that technique should not be understood in and of itself but as a mediation that, in this case, places skills and objects in relation and interaction. Sordi shows how in the environment of the Pampa, in the far south of Brazil, previously characterized as an open landscape, the introduction of fences transformed the modes of relation between humans and animals. Dialoguing with the concept of architecture of domestication (Anderson et al., 2017), the author demonstrates how the introduction of fences represents a balanced mode between direct positive and indirect negative technical actions, maintaining a dialectic of control and reciprocity between humans and animals.

Investing in the productive interface between archaeology and anthropology, Silva centres her attention on ceramic production among the Asurini people of the Xingu Indigenous Park in Central Brazil, employing the idea of technical choice (Lemonnier, 1993) to show how matter and energy are transformed through this activity and how symbolic and aesthetic meanings are produced. As a consequence, as the author asserts, “during all stages of the operational sequence, the notions of utility and beauty combine with the themes of Asurini sociality and cosmology.”

The concept of technical choice is also discussed by Ferreira Filho. Focusing on the Pataxó, an indigenous people of the Brazilian coast (Bahia state), the author seeks to comprehend the introduction, selection and use of computers, smartphones and software in their villages. Thus, Ferreira Filho highlights how the choices made by the indigenous population are guided not only by practical skills, but also by political techniques. This combination allows a rereading of the notion of technical trend (Leroi-Gourhan, 1971), while showing how the study of the concatenation of operational sequences that give life to the technical process becomes more complex.

Júlia Brussi likewise contributes to the debate on the operational sequence, recalling that actions have different levels (Roux & Bril, 2002), thereby underlining the gestures and rhythms that express operational behaviour (Leroi-Gourhan, 1993; Bidet, 2007). The article describes and analyses how women in a settlement on the Northeast coast of Brazil (in the state of Ceará) produce bobbin-lacing in domestic spaces. The action of knocking the wooden bobbins produces a characteristic sound, which is associated with the rhythm responsible for generating tension and thus stabilizing the beautiful forms produced by the lines.

The hospital environment also brings a series of techniques involving sophisticated manual abilities, such as those involved in heart surgery studied by Marini. Interested especially in problematizing the distinction between the functional and the symbolic in the institution of the surgical field, she employs the notion of actant (Latour, 1994) to demonstrate how the desired procedures of depersonalization, or the subject's erasure, are activated in the flux of the surgeon's activities.

Finally, the skilled relation with objects and their potential for mediation are explored through images. In a photographic essay, Pires investigates the different uses of the lasso in cattle breeding through an ethnography based in the floodland regions close to the Amazon estuary. Through this thought-provoking association between photography – one of the methodologies most used in this field of studies⁵ – and rope – perhaps the most malleable and versatile of tools – we invite the reader to get to know better, through these articles, the plurality of concepts, methods and themes of the contemporary Brazilian production on the anthropology of technique.

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⁵ We can also note the intense use of audiovisual records of technical processes (Sautchuk, 2012), resulting in the production of films, something also present among researchers from other countries (e.g. Buob, 2016). The research project *Transformações técnicas* (Technical transformations) resulted in a video of the same name (<https://vimeo.com/canaliris/transformacoestecnicas>) and we can cite also other ethnographic films like *Sangria* (<https://vimeo.com/canaliris/sangria>), *A Cobra* (<https://vimeo.com/canaliris/acobra>), *Outro Fogo* (<https://vimeo.com/canaliris/outrofogo>) and *Ver Peixe* (<https://vimeo.com/252378822>).

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Hunting paths in the Amazon: technics and ontogenesis among the Panará

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Abstract

This paper presents a description of hunting and an analysis of its technical relations among the Panará, an indigenous group which inhabits southern Amazonia. The paper is focused around two genetic processes of hunting: the individuation of the hunter and the constitution of a hunting territory. In this sense, it approaches the constitution of the hunter as person in relation with his weaponry, a technical object that is the mediator between the hunter's action and the prey; afterwards, it approaches the forms of environment that emerges from the movement across the forest and through the production of hunting paths where the prey is encountered. The analysis of these aspects allows us to get insight of the hunting activity from the point of view of its actions, materials and interactions with the environment, from the analysis of technical elements which are socially relevant and construct important modes of relation between Panará and their territory.

Keywords: hunting; technical object; person; environment; Amazonia.

Caminhos de caça na Amazônia: técnica e ontogênese entre os Panará

Resumo

Este trabalho apresenta uma descrição da caça e uma análise das relações técnicas entre os Panará, grupo indígena que vive na Amazônia meridional. O texto tem como foco dois processos genéticos da caça: a individuação do caçador e a constituição de um território de caça. Nesse sentido, aborda a constituição da pessoa do caçador em relação à sua arma, um objeto técnico que é o mediador entre a ação do caçador e a presa; na sequência, aborda as formas do ambiente que emergem do movimento pela floresta e através da produção dos caminhos de caça onde a presa é encontrada. A análise desses aspectos nos permite adentrar a atividade da caça do ponto de vista das suas ações, materiais e interações com o ambiente, a partir da análise dos elementos técnicos que são socialmente relevantes e que constituem modos de relação importantes entre os Panará e seu território.

Palavras-chave: caça; objeto técnico; pessoa; ambiente; Amazônia.

Hunting paths in the Amazon: technics and ontogenesis among the Panará

Fabiano Campelo Bechelany

“good hunting causes good pain”

An old hunter, quoted by Kenneth Kensinger, *On meat and hunting*.

Hunting and technics

A tiring activity, hunting is also a source of pleasure for hunters, of aesthetic and corporeal experiences. When they hunt, the Panará claim that they are going for a walk in the forest (*suasêri*). Walking is a creative movement through which animals and prey occur for a hunter. Tracking and following animals through the forest is one of the many varieties of hunting practiced by the Indigenous and traditional peoples of Amazonia. For the Panará, who live in southern Amazonia, walking through the forest is one of the ways that they come to know and engage with the forest. Despite the contemporary role of other forms of hunting – ambushes from high fruiting trees, nocturnal hunting along the rivers by boat, or hunting at the fringes of the soy plantations that border the Panará Indigenous Territory – a hunter perambulating, bearing his weapon, chasing terrestrial or arboreal prey such as peccaries and spider monkeys, amounts to a specific way of existing for the Panará.

Current anthropological discourse on the practices through which humans, animals and the environment relate to one another provides the groundwork for an analysis of hunting that extrapolates its mere economic and subsistence base toward other processes that stem from hunting activity. Thus, hunting is an activity where multispecies relations (Kirksey and Helmreich 2010; Kohn 2013) are lived, configuring one of these practices that Marisol de la Cadena (2015), along with other authors, calls “worlding”; that is, practices woven in and through the earth, constituting the places by means of which hunting peoples live¹. It is, equally, an event where multiple points of view converge, as formulated by Eduardo Viveiros de Castro (1996), Tânia Stolze Lima (1996), and others. It is the activity wherein the predicates of Amazonian relational ontologies are distributed, and in which perspectivism is anchored in diverse cosmologies (cf. Lagrou 2018; see Kohn 2015).

Attention to Amazonian regimes of sociality leads us to find, in the hunt, forms of relating that are distributed in other fields of Indigenous life, such as warfare and shamanism. But if hunting is central to Amerindian sociality, we have yet to investigate the actions that constitute it, thereby following a set of practices through which these human groups inhabit the world. If hunting is a way of living and doing on earth, we must investigate what are the means by which this experience occurs. Hunting would thus be a part of Indigenous regimes of territoriality. To approach these regimes by way of the hunt, we should enquire into how hunting makes possible an experience of territory while, at the same time, constituting the people and the group who inhabit this space.

To approach this theme, I analyse in greater detail aspects of the hunt which point to the complexity of the relations between hunters, animals and forest. I thus ask: what are the operations of hunting? How does the relation between a hunter, his weapon, the animal prey and the different elements that compose the forest proceed? Which gestures are carried out and what bodily dispositions are activated in carrying out hunting activity? What are the material bases of the hunt which unfold into the set of perceptions and formulations about hunting activity?

¹ According to the author: “practices that create (form of) being with (and without) entities, as well as the entities themselves. Worlding is the practices of creating relations of life in a place and the place itself” (De la Cadena 2015: 291).

In this article, I engage these questions through an ethnography carried out along the hunting paths². Analytically describing the skills, perceptions, gestures and technical objects used, I approach the material and operational elements of the hunt among the Panará. I will deal with two dimensions of the activity: the relation between the hunter and his weapon, the technical object that constitutes the person of the hunter and enables capture; and the ways that hunters walk along and interact with the forest environment, generating a space which assume the form of hunting paths.

Considering the importance of hunting for a range of human groups in Amazonia and elsewhere, there are also different ways of approaching it. In this article I establish an ethnographic dialogue with some of the approaches of the anthropology of techniques, focusing on questions that have only been marginally addressed in other work. I will investigate how the hunter acts through gestures, movements and objects that place him in interaction with animals and the forest environment. The questions I raise thus answer not so much *why* the Panará hunt, but *how* it is like to hunt with them: what happens in the relation between hunter and prey, within the space of the hunt (c.f. Marvin 2010).

One of the main aspects of the anthropology of techniques developed by distinct traditions (Coupaye and Douny 2010), is attention to the transitive actions between the body, artefacts and the material world. Material operations are constitutive of vital processes and of human insertion in the world, as André Leroi-Gourhan illustrates in his work (1984a [1943]; 1984b [1945]; 1990 [1964]; 2002 [1965]). In this way, we can claim that the anthropology of technique, like the anthropology of action (Ferret 2014) – of the ways of operating – allows us not only to understand the specificity of an activity, but also the ways that humans produce and reproduce themselves.

A technical act is a configuration of movements and materials, in which things, environments and subjects participate (cf. Lemmonier 1992). As an analytical category for a relational modality, technique does not approach the activity of the hunt via classifications of the different varieties of the activity – the “hunting techniques” which are common in manuals and descriptions of ecological relations. Rather, apprehending the hunt *as* technique invites us to penetrate the operations and elements of each one of these categories, as in persistence hunting or in hunting with traps, for example, and to thereby observe things and movements in relation, and to follow how hunters, animals and forest are constituted in the process. Hunting emerges as “a mode of being, a system of coordinated actions that emerge concomitantly with the regimes of individuation, including that of humans” (Sautchuck 2019:182).

By “individuation” I refer to the genetic/creative process wherein the human, the animal and the artefact acquire properties of the system in which they participate. To enquire into how they act, how they function, or how they operate, is to observe how they individuate in the process. To not consider them not as given elements, but as effects, or as being in individuation, is an ontogenetic perspective that we encounter in Leroi-Gourhan’s anthropology of techniques, or in Gilbert Simondon’s (2005; 2017) philosophy. Among Simondon’s many contributions, I here make use of the idea that individuals (humans, animals) are derivations of a tense system, unstable realizations, where the ensuing problem is maintaining a unit, the most important characteristic of which is its *functional autonomy*, and not its morphological unity (Simondon 2005; cf. Sautchuk 2015). The ontogenetic process suggested by Simondon allows us to accompany how the hunter, a person with social attributes for the Panará, results from an ontogenetic process the properties of which are generated by the articulated action between a weapon and an animal. The Panará say that this person is a *suaseriantê*, a “walker”, as we will see in this article.

² This text derives from and develops my doctoral thesis (Bechelany 2017a), which results from ethnographic fieldwork carried out with the Panará since 2013. I thank the Panará for their hospitality and for taking me through the hunting paths. I also thank my thesis examining committee for the opportunity to discuss my work, and my colleagues at the LACT and T/terra at the UNB, as well as in other places and events. I also thank the Brazilian agencies that funded my research during different stages, in particular the CNPq and CAPES.

Considerations pertaining to the technical structure of the hunt connect to other aspects of the social life of hunting peoples. Hunting is an activity that articulates with numerous dimensions, such as feeding and the economy, kinship and warfare, ritual and shamanism (cf. Garcia 2016; Shepard 2014), which makes defining it always difficult. Symbolically salient among the Indigenous people of lowland South America, it operates through differentiators between humans and animals (Fausto 2007; Descola 1998), or gender relations (Taylor 2001). By proposing to study hunting as technique, I do not intend to adopt an instrumental or practical determinism, but to recognize the concatenation of operations and multiple causes, observing which agents, materials and events participate in the activity. I believe that this approach aligns with that of other authors (cf. Coupaye 2015; Mura 2011). In a recent article, Ludovic Coupaye and Perig Pitrou (2018) enumerate a set of questions involved in a technical approach, with an emphasis on the relevant effects for the (collective and individual) agent (2018: 07):

(1) It allows to concurrently tackle patterned practices of making and using without grounding our analyses on Modernist economic paradigms of 'production' or 'consumption', which imply a productivist frame; (2) it remains empirically grounded, allowing the attention paid to actions performed and how they are evaluated, imagined, and discussed; (3) it reasserts the ways in which time (temporality, velocity, rhythmicity) and spaces (workshop, gardens, hunting ground, sea) are both created and striated by the ways in which actions are performed and experienced; (4) by shifting scale, it also allows the revealing of the role of many other analytical domains such as kinship, politics, religion, cosmology, exposing how any technical process are profoundly heterogeneous and ontogenetic.

Heedful of these elements, I now turn to an empirical approach that also contributes to conceptual and descriptive opening up of the hunt in varied contexts. This opening up complements already-consolidated descriptions of the "venatic ideology" (Viveiros de Castro 2002), which foregrounded the hunt in ethnographic theories of Amazonian³. In this article I thus investigate the forms of action in the Amerindian universe that add to the theories of its symbolic forms.

The social life of hunting among the Panará

The group that calls itself Panará, made up of some 600 people, currently lives across the Brazilian states of Mato Grosso and Pará, in five villages distributed along the Iriri River and one of its tributaries, the Ipiranga River. Both rivers are formed in the Cachimbo Hills and flow north into the Xingu River, after traversing the Panará Indigenous Territory and other Indigenous Territories and Conservation Units. The region is covered by a vast forest, with an abundance of flora and fauna, making up the rich corridor of sociobiodiversity of the Xingu.

In the early 1970s, after the BR-163 highway tore through the group's lands, causing death and social chaos (Batista de Lima and Bechelany 2017), the Panará were forcibly removed from this region and taken to the Xingu Indigenous Park (Parque Indígena do Xingu, PIX). The Panará arrived in the Xingu barely existing as a group, and were confronted with a new reality, with new social groups, goods and practices, new political relations and a different environment⁴. The plasticity of Panará ecological relations allowed them to develop subsistence activities – albeit with setbacks and despondency (Schwartzman 2010). The desire to return to their original territory remained, and 25 years later, in the mid-1990s, they finally succeeded (Arnt et al. 1998).

³ In an earlier study (Bechelany 2012), I analysed ethnographic discourse alongside anthropological data of Amazonian hunting. The observations of Glenn Shepard (2014) and Uirá Garcia (2016) on the theme provide an important panorama.

⁴ The ecosystem of the PIX is characterized as a transition zone between Amazonian forest and savannah, and is therefore distinct from the open rainforest of the area further north that they formerly occupied, where nut trees, açai palms and small watercourses are predominant.

The return to the “good land” was followed by a significant population increase. The village of Nāsêpotiti, where I carried out most of my fieldwork, is currently bursting with children and young people. Men and women born in the new village divide themselves among activities in the local school, and tasks such as gardening, playing football, chatting in the village centre, hunting and fishing. Among the Panará, hunting is a male activity. Boys soon start to accompany older men from their families in the hunt. As they gain generational independence and domestic autonomy, they begin to hunt with partners. When they reach the mature phase, when they became heads of a household, they hunt alone, or with their small sons. Women, in turn, do not hunt, but can eventually accompany their husbands, although this is increasingly rare.

There is a complementary relation between men and women which is synthesized by the Panará in the phrase: “men hunt, women prepare *kiampó*”. *Kiampó* is a Panará dish, common among other Jê-speaking people⁵, made from maize or manioc roasted in traditional earth ovens, a sophisticated method of cooking for people who rarely had ceramics⁶. Upon leaving their houses for a hunt, or for fishing large fish, the couple begins, separately but complementarily, the preparation of the nocturnal meal. Women start to process available manioc or maize, in a process that will conclude at the end of the day with the heat of the burning logs and the stones that make up the hearth. In general, this meal extrapolates the nuclear family, and the amount of *kiampó* prepared allows for distribution among the domestic units linked to the house⁷.

This varies seasonally, according to the scarcity or abundance of animals. Although they hunt all year round, the best tasting meat is to be found when the animals are fat (*ntuma*), which is when the rains increase (*intaa pori*) and the animals circulate through the forest between flooded land and amidst abundant fruiting trees. During this period, Panará gardens provide little food, and a part of the group camps in the forest in anticipation of the large rituals. During the dry season, game animals are lean and during the height of the season the Panará fish with *timbó* poison in dammed areas of the river, which produces an abundance of fish. The cycles are complemented in different combinations. When the waters of the river fall, the tapirs come to the great Kôtunsi lake to cool off. This area, some two hours on foot from Nāsêpotiti, is a favourite spot for ambushing tapirs and other prey, as well as being abundant in fish.

The Panará diet is not very restrictive in terms of what animals can be eaten. In the past, caimans and capybaras were considered contemptible, while tapirs, deer and peccaries were favoured game meat, consumed along with others, such as armadillos, monkeys and birds, particularly *Cracidae* (guans and curassows). During liminal phases, various conditions of restriction, and illness, people avoid the meat of large mammals and catfishes, for instance, although each has specific shamanic determinations. As in much of Amazonia, the Panará view the consumption of meat as a risky endeavour due to the agentive properties of the corporal material of the animals, which can be a subject in different situations (Costa 2012; Hugh-Jones 1996). Large mammals display these conditions with greater potency.

The hunter refrains from eating the meat of animals that he has hunted, lest he become ill or see his interactions with living prey become affected by the relations that dead prey maintain with other members of the species. Numerous restrictions take place here. Experienced hunters warn younger hunters to only ingest specific parts of the animal or risk acquiring undesirable properties from it. Thus, one avoids eating the paws or body parts of the tortoise (*Chelonoidis denticulata*) so as to not become slow like the animal. This is somewhat similar to the widespread *panema* complex (Almeida 2013, DaMatta 1973; Garcia 2012b), which curses the hunter with his greatest threat: the unfortunate non-encounter with prey. Among the Panará, the improper

5 Called *beraribu* or *paparuto* in other regions (as among the Timbira, for example).

6 See description in Bechelany (2017a).

7 The meat-fish-*kiampó* association is the materialization of the “community of substance” that the domestic units, and those related through affinal ties, constitute. Meat and *kiampó* are the foodstuffs imbued with significant symbolic and social weight, being, in general, the food of kinship, eaten *with* and *as* kinspeople (on this issue, see the vast discussion in Amazonian anthropology: Coelho de Souza 2002; Fausto 2007; Gow 1989; Vilaça 2002).

consumption of the animal can result in a state that affects the hunter, making him a *suanka*. A person who is *suanka*, which the Panará at present translate as “lazy” (*preguiçoso*) is downcast, lacking disposition. Contact with the menstrual blood of his companion can also generate this state in the hunter.

The opposite of the *suanka* condition is the *suakin* state. Hunters who wake up early to go to the forest are *suakin a hê*, well-disposed, and are so viewed by the rest of the village. Elizabeth Ewart (2005, 2013) analyses both notions as “psycho-physical states” that characterize intersubjective availability and sociability. Moreover, *suakin* and *suanka* are dispositions that transmit the capacity to affect and be affected by others. They are relational modes that increase or decrease a person’s capacity to act. It is in the *suanka* state the men organize for the hunt. In the early morning, they get their rifles. With scarce food in their bellies to activate their will and to leave their body light, they walk away from the village, or cross the river in canoes and boats to reach the other shore, where they disappear into hunting paths.

The hunter’s weapon and body

Along with the psycho-physical states of the person, which are constitutive of the conditions for the hunt, entering the forest demands other aptitudes that propitiate the appropriate interactions. One of these is the use of weapons, which confer on the hunter the capacity to capture animals. A short tale, narrated by my Panará friend Sinkú, introduces us to this issue.

One time, Sinkú and two other friends docked their boat on the banks near the forest, and entered the area looking for some fruit to eat. After walking for about ten minutes, they heard a herd of white-lipped peccaries (*Tayassu pecari*) eating inajá fruit. Without weapons, they decided they needed to leave, but before retreating they were surprised by the peccaries. Having no means to defend themselves, they looked for a high point which could not be reached by the animals. Unable to carry out an offensive act, they climbed trees and waited, watching the animals thundering their jaws, cornering the men like prey. They had to wait for a long time before their predators gave up and left, allowing time for the hunters to leave as quickly as they could.

The tale is trivial, and similar incidents can happen in different situations. However, it includes an inescapable fact for the Panará: a man becomes a hunter with a weapon in his hand. The Panará express this in many ways. On another occasion, walking with a group of women toward a garden, I was told to go in front since I was the only one with a rifle (women do not handle rifles), and was therefore the only one capable of defending them from a jaguar, if one were to show up – as the woman who was at the head of the queue told me somewhat ironically.

If a hunter goes hunting, it is assumed that he will carry a weapon. In many situations in which I was present, complaints about the scarcity of meat became more intense in the village. Men would often justify this state of affairs by saying that they were not hunting because they had run out of ammunition, which made their firearms useless in the dense forest. Men would generally take a rifle whenever they left the village, even if, for example, they were only going to the garden, or to look for one resource or another in the forest, or to travel by boat to another village.

The Panará adopted firearms, “things of the whites” (*ipê jô soti*), when they lived in the PIX, acquiring their first rifles through exchange or as gifts from FUNAI⁸. Having returned to the area where they now live, they acquired greater numbers of firearms, much through resources obtained from reparations for damages caused

8 Fundação Nacional do Índio (National Indian Foundation). During the 1970s and 1980s Funai would periodically donate items to Indigenous peoples, in an assistentialist practice that sought to equip them to survive in a post-contact environment. The way that Funai related to the Panará (and various other Indigenous groups) is considered, by the Panará, as a time in which “Funai was strong”, in opposition to the current moment in which a “weak Funai” no longer donates goods. The change in policy is moving towards a phase in which “projects” become more important, and where goods and resources are obtained through articulations not only with Funai, but also with non-governmental organizations.

by the construction of the BR-163 Federal Motorway⁹. Mature hunters, born in the PIX, claim to have learned how to hunt with firearms. Bows and arrows, which were used before rifles, are still produced frequently. They are used for fishing, particularly with *timbó* toxins. Bows and arrows are also sold by the Panará in areas outside of the village. They are also carried during different ceremonies.

Firearms are male property, and they are valuable. One who lends a firearm to a hunter will receive a share of the hunt. A crucial aspect of hunting with firearms is access to ammunition, which can be acquired in town. Their high price places limits on the use of rifles and, consequently, on hunting. Part of the financial resources of men are used to buy ammunition, along with fishing lines and hooks.

The fact that firearms necessarily tie hunting to the world of the whites – via the acquisition of firearms and their upkeep, and because of the need to acquire ammunition – has meaningful effects for the Panará. Analysing a similar phenomenon among the Wajãpi, Pierre Grenand (1995) finds homologies between the control of, negotiation or alliance with spirits considered owners or masters of animals and those established with the whites, owners of hunting firearms. However, this perspective remains anchored in analysis of the effects and meanings of the circulation of the rifle, as well as in the production of these objects, as is the case, in general, for the study of artefacts in Amazonia, whether as material culture or in less “materialist” studies, such as in the volume *The occult life of things*, edited by Santos-Granero (2009). How things actually work remains an analytical black box.

I have elsewhere carefully analysed the properties of the hunting weapon that emerge from its quality as *ipê jô soti*, “thing of the whites” (Bechelany 2017a; 2017b). The circulation and use of firearms is important, but if we want to understand what happens during the hunt we need to ask how they work, what their “functionality” (Sigaut 1991) is, and how they mediate the relation between hunter and prey.

One way of approaching these issues is through Leroi-Gourhan’s (1984a, 1984b) writings on the technical object, particularly the attention he draws to the energetic economy that relates body to artefact, demanding a specific performance. The interaction between the hunter and his weapon cannot be readily understood within the terms of the subject/object opposition, as two impossible realities; rather, it is a systematic relation, like making a body, walking together, or an individuation. The individuation is needed in order to assume a position – that of a hunter rather than prey – and to determine modes of acting during the hunt.

The way that a weapon, as a technical object, acquires properties and affects the engagement of the hunter during the hunt implies specific agencings. One of them occurs in the spatial and perceptive orientation of the hunter as he moves through the forest. As he walks, the hunter considers the position of his weapon to guide him through the forest. Hunters told me not to touch the barrel of the shotgun, to always leave it to one side of our bodies, allowing the shotgun to guide us along the way. They say that the side on which the shotgun rests manoeuvres the hunter to circle the forest, guiding him to always walk towards the same side, taking him back to the point from whence he started off. This compass-condition of the weapon is associated with the hunter’s perception of movement, making the weapon contiguous to his body.

In this interaction between object and person, the two should not be taken as given entities that interact. If we observe the way they operate, we see the constitution of the terms through processes that are articulated. François Sigaut (2008) stresses the transitive character of this use of technical objects in analysing “instrumental” gestures (*geste outillés*), in which it is not only the instrument that prolongs the gesture, but the body itself that needs to be “instrumentalized” upon executing certain movements. In this sense, the hunter-weapon relation is not like a bodily prosthetics, extensions of bodily actions, but, rather, instruments and their functionalities

⁹ The Panará won a court case, in which the Núcleo de Direitos Indígenas (Indigenous Rights Nucleus) were the plaintiffs, in which the Panará held the state responsible and demanded reparations for the material and moral damages caused by Funai and the Brazilian army during the construction of the BR-163. After a lengthy process, the court demanded that the State and Funai pay indemnities, which were deposited in the name of the Panará Iakiô Association, in the first years of the 21st Century (see Batista de Lima e Bechelany 2017).

act on the body and alter gestures and perceptions. An analysis of gestures allows us access to the operational behaviour implied in hunting.

Technogenesis of the infallible gesture

As I have been claiming, the body-weapon conjunction constitutes a dimension of the process of individuation of the hunter as an agent capable of killing. However, a parallel and temporally distinct process is also recognized by the Panará as having efficacy in the hunt: care in the generation of properties of the body that confer effective movements and gestures. More specifically, the Panará seek to generate properties in the arms of the hunter so that his shooting will be precise. These properties result from processes of fabrication and perennial care, which are consonant with the well-known Amazonian emphasis on the social production of bodies and peoples, which comprise the sociocosmological basis of Amerindian societies (Seeger; DaMatta; Viveiros de Castro 1979).

The fact that a hunter is preparing to kill an animal is a presupposed effect of his formation and learning. But if every hunter learns to carry out a set of gestures so as to realize an effective act, there are those who are capacitated to do so in a more precise and efficient manner. These differentiations are part of the competitive relations that hunters weave during their hunt, in a joking manner or as bets¹⁰.

The recognition of a man's skills, dexterities and cunning is part of male social value. These qualities derive from various sources. It is generally understood that experience is an attribute, and the elderly are skilful hunters. Hunting skills are knowledge generated in practice and they are related to the adequate bodily dispositions and the perceptive field of the hunter, which makes them similar to Tim Ingold's (2000) notion of 'skill'. As he has argued, the perceptive field developed *in the forest* is directly tied to a communicative modality between hunter and animal. The capacity to perceive the tracks of animals and to compose a system of information between events that happen in the forest is part of this dexterity. For Panará hunters, this skill is also an effect of processes that occur in other spatio-temporal dimensions, such as in dreams and in shamanic séances.

Among bodily properties, the Panará emphasise skilful gestures; in this case, the organ of the body that carries out the action can undergo treatment so as to carry out its gesture. Until the recent past, the Panará made incisions in the articulations of the arm using harpy eagle (*sypakâkâ*) claws to inscribe in the body the properties of this animal, in particular potency and precision with the bow and arrow. Most men over 35 years of age have these incisions, which were made by experienced hunters. The claws of the harpy eagle (*Harpia harpyja*), an apex predator, were used to perforate wrists and elbows, causing bleeding. These parts of the arm are important for firing arrows, since the wrist performs pulls the string, while the other arm, stretched out, moves the bow forward. The required strength is concentrated in these muscles and articulations, and the incisions, the Panará tell me, were made to strengthen the arm. This operation, linked to propulsive movement, force and energy, was carried out to elicit an infallible gesture, which the call *pámpé*.

The main operational principle of the incision is pain (*sâ*), which transmits the qualities inherent to the claws of the harpy eagle. The notion of *pámpé* designate the real, good, unerring (*impé* = 'true') arm (*pá*). It is opposed to the notion of *pâkian*, which designates the 'mistaken arm', which does not aim true. According to Schwartzman (1988: 199-200), pain-inducing applications transferred strength to an arm (*si tâti a hê* = to make strong). I suspect that they had a wider application, not restricted to the sense of physical pain, but also of

¹⁰ Bets among hunters, the Panará claim, is a recent practice, which they learned from neighbouring peoples and which derives from football competitions held in the village. Bets are common in all sorts of activities that can acquire the characteristics of a game or a dispute between two adversaries. It can feature during fishing, hunting, dominoes, of card games in the village centre. The exchange of goods that results from these competitions is one of the main motivations of these bets.

precision. The infallible gesture is also one which does not falter, that does not sway when it is time to take the shot, but which is precise and thorough, striking prey. This are determining properties if we consider the set of bodily operations at this moment. One's arm and body must be steady and firm when the projectile is fired (from a shotgun or a bow), preventing any involuntary movement that can interfere in the projectile's trajectory.



Kierāsa, balancing in a canoe, aims his shotgun towards prey on the shores of Kôtunsi Lake.
(Photo by the author)

In what pertains to the skill of the *pámpé* gesture, it results from knowledge also obtained by the intervention of magical practices that can interfere with material action. The *pámpé*, as a skill for a precise, unequivocal action, refers to a gesture that is not only the fruit of a knowledge of the mechanical operations that need to be executed, but of establishing relations between heterogeneous elements that generate effects. Hence other actions should also be observed for the gesture to be precise. In order to have a good hand during the hunt, for example, it is necessary to avoid fondling male genitals – though not the genitals of one's sexual partner.

Although incisions are no longer applied for the use of the shotgun, they were instigated by the realization of the appropriate gesture for the use of the bow, which implied an action of the hand, the pulse and the articulations. Perhaps because of the changes in the mechanism of the weapon, incisions on these areas have become obsolete. But the *pámpé* gesture is still seen to be the centre of the skills of the hunter – the relation of the arms with the weapon capable of launching the projectile with precision.

Technical Transformations

The Panará hunt has undergone various changes over time. The one that occurred to its arsenal, however, allows us to investigate how technical transformations cannot be evaluated as mere ruptures or substitutions. Bows and arrows and firearms¹¹ function within a wider technical set and, therefore, their functioning within this set is not determined by materiality, or by their structure, but by the conjunctions created by each weapon. The shift from the use of the bow and arrow to the use of firearms, an incomplete historical process, results in change as much as in significant continuities in the technical system. Transformations also enabled the differences between the weapons to operate in tandem with other elements, and thus to preserve relational modes between animals and the hunter. In any case, the strategic act of launching a projectile at some distance remains central to the mode of existence of Panará hunting weapons.

The differences in hunting techniques and the weapon used for hunting can be treated, by both thought and practice, as distinct relational modes, mediating beings, distance and diverse interactions. In Amazonia the range of weapons used for hunting create differential effects in how the hunter relates to the animal and the type of operational behaviour involved. Laura Rival (2012) defined this with precision. Revisiting her former work (Rival 1996), which pioneered the theme in the region, she writes:

Hunting with a blowpipe and with a spear are two entirely different ways of socializing the environment and domesticating nature. More importantly for the argument developed here, these two forms of hunting embody two different ways of engaging and knowing forest's ecology, and of using the signs that are internal to biological dynamics (Rival 2012: 135).

In the Panará context, the change effected by the shotgun as a technical object for movement and transport is simply the development of something that is already an aspect of the bow and arrow: the launching of a projectile at a distance. That the projectile launched from a shotgun travels faster and farther is not a minor detail, but in terms of what it does to the freedom of the body of the hunter it is quite similar to an arrow. One mechanism, however, makes it differ: the origin of the propulsive force. While the arrow depends on transferring the strength of the body to the mechanism of the bow that will launch it, for the shotgun propulsion is generated by a physio-chemical mechanism that results in an internal explosion which creates a force that fires the projectile. This, for sure, effects changes in the associated gestures. The transferral of strength, I believe, is one of the reasons that the harpy eagle claw-incisions on the hunter's arms have been abandoned. The change makes the practice redundant, but it transfers the memory of the gesture to another domain. The shotgun does not carry out its task by itself. As the Panará claim, one must have a steady and firm arm, a skilful arm.

Distance is a basic element of the hunt. Hunting is always a dynamic of an adequate distance, the ideal relation between two subjects – the distance to kill and not be killed, or the distance to see without being seen, the distance to fire the projectile (arrow or shell, each with its respective distance) without losing sight of it. In terms of distance, the shotgun promotes transformations and creates risks. Firearms connect distant positions within a dynamical field – the potency of movement, the behaviour of the animal, and the obstacles in the environment. The relation between the animal and the type of weapon is fundamental, as is the medium in which it is found (water, air, land).

¹¹ As to the firearms used by the Panará today, it is worth describing their properties so that the reader can gauge what sort of weapons they are. For the most part, these are long weapons with a smooth bore, which fires shells – plastic tubes which contain lead projectiles and explosive material at its base. They are classified as 'shotguns', and this is the name that the Panará use when speaking in Portuguese (*espingarda*). There are also other "shotguns", which in Brazil are known as 'rifle' or *fuzil* (fusil), which are long weapons with rifling, which the Panará call "espingarda 22", or just "22" (22 calibre). These are semi-automatic or automatic weapons that use so-called "bullets", a compact mass of lead, which are generally reloaded through a clip (which the Panará call *sonkiôti*, the same word they use to refer to the 'throat'). Smooth-bore shotguns are also known as *cartucheiras*, and are simple breech-loaders.

Some of the advantages of firearms are their efficacy and lethality, which the Panará understand in terms of the time and energy spent in a hunt, which are transformations of a bodily posture (movement) that is found in other dimensions of life. According to a renown archer, the shotgun is best because it kills faster. It annihilates the animal, which eliminates the need to track it until it dies, and affords more opportunity for killing new animals.

The weapon is always linked to the body of the hunter in such a way as to facilitate walking and shooting. But one thing is important: one must take care when carrying a loaded shotgun. The Panará told me of accidents between friends who were walking through the forest – almost always in a single file, along a straight path – when a shotgun belonging to someone who walked near the back got caught in a branch and fired on the hunter directly in front. This is one of the reasons that Teseia, an old man around 70 years of age, tells me that shotguns are much more dangerous than arrows. Since hunters often set out in company, those who walk towards the back carry an unloaded weapon, holding on to a shell.

There is one further implication concerning the functioning of shotguns that is fundamental: the price of ammunition. During the hunt, ammunition is always a scarce object. It can be claimed that, in a way, shells and arrows are equivalent: the hunter can always find himself with scarce arsenal. The difference is that arrows are produced by the hunter, shells have to be purchased; and purchasing them requires that relations with the whites be established and maintained. Calculations balancing the cost of the shells and the number and quality of prey will vary. There is tendency to privilege larger prey, which implies longer hunts and greater precision with the shotgun. Hunters get frustrated with missed shots. Money's fungibility implies constraints to the activity and thus have a significant impact on the technical system.

Aton! Weapons as sounding devices

The general term for firearms is *aton*. The term was explained to me via a comparison made by the Jotikiã. He said that *aton* designates explosions, like fireworks, which are called *atonakriti*, which means something like "large explosion".

In a study of the weapons used by Amazonian groups, Raymond Hames (1979) noticed that Yekuana hunters understand the differences stemming from the sound of the firearm as a transformation in their relation with prey¹². We find the same understanding among the Panará. The Panará distinguish their firearms by two terms: *sonkré pãjã* and *sonkré insia*, which refer to the universe of sound. The first term designates 12 and 16 gauge firearms; the latter distinguishes those that use bullets, such as a 22 gauge rifle. *Sonkré* is one of the words for 'voice'; *sonkré pãjã* is a thin voice while *sonkré insia* is a gruff voice. Once, when I was speaking to an old woman, I asked her about the terms and she proceeded to classify most of the men of the village in one category or the other. In what pertains to firearms, the classes designate those that emit a loud and high sound and those that emit a low and weak sound. The distinction is basically between shotguns that fire shells and the 22 rifle, which fires bullets and emits a more silent explosion. 12, 16 or 20 gauge weapons produce a blast in the forest. But classifying a weapon as *sonkré insia*, certain attributes follow: the weapon emits a loud and high potent sound; the shells are large, as is the barrel, like a throat that produces a low sound. The opposite is implied by *sonkré pãjã*.

We see that shotguns are connected to one of the central elements of the dynamic of the hunt, which is tied to the properties of its functioning. Sound is crucial to hunting, and it is connected to the actions of the prey. The shotgun generates a medium that is associated with it, much like all technical objects (Simondon 2017; Sautchuk 2019). A sure sign of this medium is auditive, or sonorous. Hunting is an eminently sonorous

¹² According to the author: "The blast of a shotgun will usually scatter most animals within earshot, which is one of the reasons why the Ye'kwana hunt small game only when they have failed to find traces of large game: they do not want to scare large game with the report of their guns" (Hames, 1979: 228).

activity, marked by the generation of silences and by the careful ear of the hunters. One of messages most often sought out is transmitted by sounds coming from the forest's horizon, generated by movement or emitted by the animal itself. Other communications are established, such as that of birds which appear in the presence of certain mammals. Along with odours and aromas, sounds are manifestations of the animal that the hunter is tracking in a space in which sight is compromised by the many layers of light and vegetation.

When I mentioned the absence of women during the hunt, some Panará told me that they used to accompany hunters, but that after the adoption of the shotgun this became more difficult. With the noise of shotguns, animals tend to flee and hunters must chase them, leaving women alone in the forest. Others told me that hunting was always the business of men, “women make *kiampô*”, manioc bread on the *pakova* leaf. Indeed, some reports point to a significant transformation. With arrows, the old men say, killing prey was silent and many individuals of a herd of peccaries or a troop of monkeys could be killed before they dispersed and fled. But when the shotgun sounds, dispersal immediately follows. Running after the animals is hence a regular development of the hunt, which raises other risks, such as stepping in holes, tripping over stumps, encountering snakes during the chase. All of these risks were mentioned to me. They are perhaps one of the reasons that young people claim that hunting is very difficult.

The acoustic dimension of the weapon thus implies the associated medium of the forest, which, we will now see, is also constituted by other processes. The weapon as much as the ways of moving through the forest are important operational behaviours that define the properties of beings in relation to the hunt.

On modes of hunting

Attention to Amazonian bodily regimes has produced considerable ethnographic and theoretical advances in the region (Seeger et al. 1979; Vilaça 2002; Fausto 2007). The importance of fabricating the body, its metamorphosis, instability, or embodied knowledge, are fundamental aspects of the analysis of Amerindian sociologies and cosmologies, characteristics of the person, of groups and humanity. An influential theory has been proposed by Viveiros de Castro (1996), who understands the body as “bundle of affects and capacities”, the character of which is more performative than given, and where differences lie in ways of being rather than in bodily morphology. The body is defined in Amerindian sociocosmologies by its “affects, affections, or capacities that singularize each species as a body: what it eats, how it moves, how it communicates, where it lives, whether it is gregarious or solitary...” (Viveiros de Castro 2002: 380). Nonetheless, a more careful analysis of the attitudinal dynamics of the body, that is, of how it acts in its insertion in the world, remains under-described in Amazonian ethnology.

As we all know, in his classic “Techniques of the body” (2003 [1936]), Marcel Mauss drew attention to the instrumental properties of the body, emphasizing the non-natural character of certain acts that are, precisely, the result of processes of learning. Leroi-Ghouran and A-G. Haudricourt took this perspective forward. With his vitalist perspective, Leroi-Ghouran takes the structure of the body, or, more precisely of human energy, as a way of approaching the activities by means of which humans make themselves in relation to the medium they inhabit (cf. Bidet 2007). In this sense, *rhythm* allows him to approach the dynamic of the insertion of humans in the world as the very genesis of the social.

Bodily rhythms of the hunt point to the fundamental dimension of *technogenesis* of this body in movement. Moreover, it points to the relation of walking during the hunt with the emergence of the forest for the hunter. The Panará hunt is not moved by a single rhythm, but by a set of inter-crossing rhythms. In effect, the rhythm of the hunter is given by the movement of the body in relation to other movements, above all that of prey. In this case, the rhythm emerges as a network of places and movements that afford action. As Leroi-Gourhan (2002, p. 117) says: “Rhythms, for the subject at least, create space and time; space and time only exist as they are

lived while they are materialized in a rhythmic casing. Rhythms also create forms”. The Panará walk through the forest by means of trails that are the emerging form of these very rhythms, a network of places and times that favour the actions of the hunt.

The Panará call the hunt by the term *suasêri*. It indicates walking along a trail, or, as Steve Schwartzman (1988: 69) suggests, to go along a line. The anthropologist provides another expression – *kupapapa* (*sic*) – which the Panará are said to use to designate the activity that he translates as “to walk along the ground” (*kypa*, ground; *pa* to go, to move). The expression *ji ra kuy suasêri mā* (I am going to walk/hunt) is most common. If we analyse *suasêri*, we have: *sua* = ahead, in front; *sê* = to run; *ri* = perfective morpheme. In some circumstances, it can describe someone running toward someone else. In the context of the hunt, it conveys the idea of approximation, of surrounding, of pursuit.

Tracking can define this activity, particularly because of its relation to a prey’s ways of acting (Descola, 1994; Silverwood-Cope, 1990: 59-60). Observing the paths of animals is much of what a hunter does. But tracking does not capture the complexity of walking during the hunt and *suasêri* seems to point to other layers of complexity involved in the activity. Without seeking to constrain the term in a stable translation (the Panará have already done this, translating as ‘to hunt’; but what is to hunt anyway?), I suggest that when hunters say *ji ra kuy suasêri mā* they are saying that they are going to walk in the forest looking for animals. Approximating an imponderable, *suasêri* is movement in relation to/with the animal.

The idea that hunting and walking are similar activities is common to other Amazonian societies (e.g. Aparício 2014; Descola 1994; Rival 2002). Uirá Garcia (2010, 2012a) has carefully developed the idea. Among the Awá, to hunt and to walk are both expressed by the verb *watá*, and the hunter is a “walker” *watá ma’á* (Garcia 2010: 54). There is furthermore a relationship between hunting and knowledge, as expressed in the concept of *harakwá* (“my place”, “my domain”). The Awá notion of *harakwá* does not refer to a territory, but to a territoriality. It is a relational notion of space which does not define a place, but a way of life – a “wayfaring” way of life (as proposed by Ingold, in Garcia 2010: 65). It is a “way of being” related to a territorial support that is not given *a priori*, but constituted by the relations between people, environment and the beings of the world.

This wayfaring way of being can also be said to be a genetic movement, by means of the many variations in how walking is put into effect. It is along the trail that animals and humans cross each other, or in which their movements are juxtaposed. Once, while narrating a hunt in the *inká* (men’s house, or the centre of the village), an old man named Aká said that one has to identify where animals walk, because “peccaries follow their own path...”. He was explaining to younger listeners that, more than simply following a trail, they return from whence they came. They walk along a trail that is only recognizable by the significant damage that a herd of peccaries causes in the forest – the *suasina pjy*. The trail (*pyjy*) of peccaries is registered in the forest by their movement.



Hunter walks along a narrow path in the midst of vegetation.
He identifies it by slight signs in the landscape. (Photo by the author)

There is, needless to say, a technique to walking. André-Georges Haudricourt (2010: 35-48) has drawn attention to the diversity of this almost natural gesture. The Panará pay attention to the singularity of the movements of walking during the hunt when, for example, they reflect on the best clothes for this activity. Until recently, elders condemned the use of pants and sneakers because they created disadvantages in motility and in interacting with the forest. With the increasing and varied use of clothing bought in the city, differences have become more noticeable. They say that the smell of laundry detergent hinders attempts to get close to the animals. I myself noticed that hunting with rubber sandals has many advantages, one of which is that it dries quickly after crossing streams; the other, quite essential, is that they can be easily removed when chasing prey that is in flight.

The ability to move in the forest is learned by young people through successive trips to the forest, as is the resistance required for long walks. Moving through the forest, the gait is silent and agile. When hunters move in groups, they walk in a single file along the path. The man who goes in front carries out the same movements of all hunters: his rhythm is established by all manner of signs. At any sound, odour or sign of movement, the hunter stops and observes in total silence, looking for the origin and characteristics of that sign. This is a constant dynamic. The trail is thus a trajectory interspersed with these movements. A frequency of movement is established in relation to signs of prey.

Sonorous, tactile and aromatic qualities constitute the space of the hunt. Walking is dependent on the texture of the ground, which varies at different times of the year and in different parts of the forest. During my walks with the hunters, I stressed our bodily differences (with a degree of frustration, to be sure). The lightness and agility with which a hunter moves, with a cunning grasp of movement, contrasted with my weight and sluggishness, and with my inadequate proportions along the path. Forest trails are only used sporadically, and they tend to be covered in vegetation, although they remain noticeable to the trained eye. I was surprised every time I tried to follow my hunting partners, walking behind them, and would bang my head, or shoulders or

arms, in vines, stumps or branches along the way. The trail is not limited to the ground; it is tridimensional, a sort of tunnel through the forest that occupies the space of a body, the body of Panará men. Despite having been called the “giant Indians” at the time of first contact (see Arnt et al. 1998), the average height of Panará men is 1.65m¹³. This implies a tridimensional space of more or less that stature along the hunting trails. Nearing 1.85m in height, I did not fit into them.

A walk is made up of constant changes in direction, velocity and bodily position. One must crouch, jump, overcome obstacles, such as anthills that can create a large tract along the way. The hunter’s gait is therefore oriented towards the front and the ground in a correlation of visual and tactile perception, without cutting off the other senses. At the same time, the hunter checks the horizon in search of animals (in the trees, in the visible space between the canopies, or penetrating the sounds of the forest) and takes care with his movement, observing the floor for tracks left by animals. The walk conveys a sense of familiarity with the environment, which involves both the memory of places visited and the effect of this knowledge diffused in places.

An aspect of the relation between knowledge and environment is to be found in the sounds of the forest. One time, talking in front of a house, I overheard a husband say to his wife, “*ĩkjẽ hẽ ka sam pá pee ri*”, “I will go outside to listen”. This interesting expression foregrounds the essential characteristic of the activity. As I claimed above, hunting is a noisy activity and its rhythm and frequency is put into effect by the interplay of movement and rest along the way to listen to the sounds of the forest. This forest biophony that the hunters listen to is the object of great attention and consideration. Older hunters are sophisticated observers of birds, for example, reproducing many of their sounds. I was once walking with Parikiati, an experienced hunter, one of the few who sometimes went to hunt with his dog¹⁴, and he would stop frequently to observe nests and the flight of birds, finding great pleasure in encountering these small animals. Parikiati’s sophisticated ornithology sees birds as fundamental agents in the hunt.

Tim Ingold (2015:208) observes that sound is “that *in which* we hear”, which means that the perception of prey during the activity occurs through the medium of sound, and not in an atmosphere of silence. Panará hearing is sharp during the hunt, where we find a “sonorized” body – that is, a body vibrating by the sounds of the forest. The need to reduce conversations and to act in silence does not remove the sound of the hunt, but transforms the nature of the relation maintained with it. Uirá Garcia (2016) is right to draw attention to an ethnography of “the silence, the calls, the moaning, the imitations, and other non-verbal aspects” in order to understand “complex systems of knowledge, with knowledge practices that can only be studied in action”.

It is worth noting that, when taken as a singular body dynamic, hunting walks are in close relation to other activities of the Panará. Log racing is foremost among them. Although less common at present, log racing used to be carried out daily in villages, making possible highly desirable strong and firm (*si tâti*) bodies, aspects of beautiful (*ikiin*) people. Log racing involves two activities: running and carrying a large and heavy log (usually of the buriti palm), much like a hunter ably carries large prey tied with leaves to their body. At present, soccer sometimes does the work of this practice, particularly in what pertains to speed and agility. Soccer is also an art of velocity among the Panará. Converging the strength of log racing to the speed of hunting, soccer resumes a moment of the production of the body that is very important for various Indigenous groups (cf. Vianna 2008). On most given afternoons, on the side-lines of the pitch, elders sit to watch the game, yelling at the players “Suasê! Suasê!”, a way of encouraging them to run towards the ball or the opponent.

13 As I was able to confirm in the records of the Sanitary District. “Gigantism” is a Panará ideal, and in the past tall men (up to 2.00.) were renown as “beautiful”. At any rate, the label of “giant Indians” became a recurring trope among those working on the contact front. It also circulated in the national and international press and fed into the exotic imagery that pervades perceptions of Amazonia. For a sample of these images, Arnt et al. (1998) is an excellent source. See also the work of Adrian Cowell (1974).

14 Unlike many Indigenous peoples, the Panará do not make intensive use of dogs during the hunt. For an example of the relation between dogs and hunters in Amazonia, see Vander Velden (2012).

Most of the times that I went hunting, I accompanied traditional partners, who were my Panará brothers-in-law or brothers. We left by boat at dawn, traveling either up- or down-river, in groups of three or four hunters. In a known locale we would dock our boat and enter the forest walking quickly along the trail. In general, we would find peccary herds or troops of monkeys. The encounter between these two collectives (a group of hunters and a herd of animals) and the actions that followed always reminded me of a sort of hunting *blitzkrieg*, a scathing melee in which we sought to kill as many individuals as possible. The rapid and fatal action was effusive and intense. It thus contrasts with another hunt, that I saw being carried out by older and more experienced men. These hunts are generally carried out by a lone hunter, in long journeys in search of large prey, with careful tracking, a wide variety of felled prey, and where diverse and abundant knowledge is put into practice. The rhythm is also different, and we may say that the hunt is, in this case, more extensive, in contrast to the intensity of the *blitzkrieg* of younger hunters.

This opposition corresponds to the categories of *kowmokiara* and *topytumara*, that is, the youth, those of “now”, and the elders, or experienced men. The opposition between youth and the elderly is pervasive to various dimensions of Panará social life, and constitutes an important dualism for them (cf. Ewart 2013: 68). Soccer teams are usually distinguished by this opposition in village games, and it is only to be expected that it also be manifested in the differential rhythms of the hunt.

Chasing Fruits in the Forest

Since hunting is an articulation, proposed by the hunter, between his action and that of the animal, the tracks of prey through the forest are key. These are properties of the “proper-worlds” of the animals, or, to use the term proposed by Jakob von Uexkull (1982), their *umwelt*, which is the meaningful environment of an organism. According to Uexkull, an *umwelt* exists for the animal given its morphology, sensibility, and potentiality. The environment is imbued with meanings that exist according to the perceptive apparatus and the acts of animals (cf. Ingold, 2015: 131-132). By penetrating into the sounds (or odours, for example) of prey, hunters access their *umwelt*; by following their trail, their tracks, they do so as well.

Every animal has its trail in the forest and its proper-world has its scales, velocities, distinct vectors. Much of skills for hunting emerges from the relation with the different trails made by the animals. *Suasêri*, therefore, involves approaching, or tracking, the meaningful world of the animal, which provides a means for the hunter to find it. Panará hunters sometimes call the trails of animals *pá kom* (where it goes on its feet). A tortoise drags through the foliage during the rains, when it walks through the forest. Peccaries, walking in large herds, leave tracks on the earth and overturn leaves. Animal stool is also a sign of their behaviour. Arboreal animals such as birds and monkeys leave behind other signs, mostly the remains of fruit.

The trail of the animals is not necessarily the trail of the hunter, and once the tracks are found, the hunter will follow it, depending on his chances for a kill. The fact that animals have their trails and that these cross the trails of hunters conjures a web of movements in the forest, in which the hunter finds himself. Awareness across proper-worlds, however, can only come about through a passage in modes of perception, wherein the hunter seeks to approximate animal perception. The effort resides in overcoming, or generating an approximate relation, between two dynamics (animal and human), in a situation that turns out to be favourable for the hunter. Generating a synthesis that keeps human and animal separate, putting one in a condition to surprise the other. How do they go about this?

Like most, if not all, forest people, the Panará do not walk through the forest willy-nilly. Where there is no trail, one must be made. Trails are the main reference for movement. Bruce Albert and François-Michel Le Tourneau (2007) carried out research on Yanomami forest trails, making use of local cartography and geoprocessing tools. They begin with a critique of the idea of concentric zones that expand from areas of

more intense use to those that are less utilized, which has generally been implicitly assumed in analyses of Indigenous resource use. For the authors, “the Yanomami ethnogeographic organization of space appears to be reticular—structured by a crisscrossing network of sites (points) and routes (lines)— rather than zonal” (ibid: 584-585). The space utilized thus seems to contain lacunae, to be discontinuous, diffuse, and hence different from the zonal model that suggests the total exploitation of the area in each zone. Furthermore, the models contrast between a “timeless topography” and a “topology of changing webs”. Panará hunting trails are similar to this model.

Inkjown kin! say the Panará of the good forest, one with many fruits, where animals gather, where there are monkeys, tapirs, tortoises. The Panará like to hunt in this forest. Trees are not too tall, the underbrush is low, it is not dirty (*intepi*), which is to say, thick. But when hunting, the hunter walks through many landscapes, among which there are those that are suitable for one type of prey or another. One of area which gathers many animals, and which is often sought out by hunters, are the salt licks, which the Panará call *sōkwê*.

Salt licks are depressions in the forest, with little vegetation and humid soils. The Panará identify salt licks as the home of peccaries (*suasina jō kwa*), tapirs and deer; or as *things* of these animals (*- jō soti*), as a Panará told me once, drawing an analogy with those things that are *Panará jō soti* – that is, ‘culture’, according to their translation (cf. Ewart 2013). These places are made up of sandy soils that contain a large quantity of minerals. They are visited by animals who consume the soil (geophagy) for mineral supplements for their diet¹⁵. It is a basic component of the habitat of various species.

In another formulation, salt licks are “familiar places”, as Anna Tsing calls spaces where multispecies interactions occur, and which are recognized by foragers (Tsing 2015). Rather than a specific place, which territorializes a species, it is a landscape of multiple residents and visitors. The fact is that in salt licks, against any human exceptionalism, the hunter uses the configuration of agents for his activity. This interdependency favours predation.

In his study of the Ávila Runa of Ecuador, Eduardo Kohn (2013) investigates the configurations of limits to the possibility for action that emerge in the Amazonian rainforest, and how they come to matter for people. He argues that certain forms that appear in nature – Kohn’s example concerns *Hevea* groves and their distribution in certain patterns in the forest, in relation to water courses, and in terms of how the colonial interest in rubber made use of such patterns – are harnessed by the living, thereby enabling the efficacy of certain activities. The regularity of these emerging forms is, however, nested in other processes (Kohn 2013: 167). Kohn’s analysis applies to the Panará case, particularly because of an example that Kohn uses to illustrate the harnessing of these forms that propagate throughout the forest. This example cuts across, precisely, the relation between hunters and animals. Allow me to quote him at length:

Because of the high species diversity and local rarity of species and the lack of any one fruiting season, the fruits the animals eat are highly dispersed in both space and time. This means that any given time there will exist a different geometrical constellation of fruiting resources that attracts animals. Fruit-eating animals amplify this constellation’s pattern. For they are not only attracted to fruiting trees but often also to the increased safety provided by foraging in a multispecies association. Each member “contributes” its species-specific abilities to detect predator – resulting in a greater overall group awareness of potential danger. The predators, in turn, are attracted to this concentration of animals further amplifies the pattern of distribution of life across the forest landscape. This result in a particular pattern of potential game meat: a clustered, shifting, highly ephemeral and localized concentration of animal interspersed by vast areas of relative emptiness. Ávila hunters, then, don’t hunt animals

¹⁵ Salt lick soils are generally composed of sodium and iron. These mineral elements can also be found in river banks and other chemical compositions, such as clays, which are also sought by animals. Biological studies show that these areas are visited by a vast range of species in Amazonia, among which are primates, ungulates, birds, bats, and certain arthropods (Dudley, Kaspari and Yanoviak 2012). The vertebrates leave behind tracks which indicate intensive and constant movement through these areas.

directly. Rather, they seek to discover and harness the ephemeral form created by the particular spatial distribution or configuration of trees species that are fruiting at any given point in time because this is what attracts animals (Kohn 2013:163-164, references removed).

The Panará also hunt animals by taking into account similar patterns in the distribution of fruiting trees. The effect of this may be called an aesthetic of the hunt, which is visible in the forest, particularly in the network of trails in which hunting takes place. Rather than a form applied to an amorphous forest, the trail is a trajectory that helps to modulate action and perception in relation to the life fluxes that disperse throughout the forest. It propitiates certain properties of the forest, properties of the life fluxes that circulate through it. This can be seen in the Panará's sophisticated differentiation of the forest landscape, distinguishing a combination of light, vegetation and animals. The good forest, as they call it, is easy to walk through and has fruiting trees. Hunters enjoy walking through this forest.

In the ontogenetic system of the hunt, prey is directly implicated in the irradiation of trails, and therefore in the gesture and rhythm of walking during the hunt. The reticulation of the trails fit the gestures, acts and perceptions that circulate through it, constituting the means by which prey presents itself. In another field of the action, prey cross the paths of the Panará, stressing the relation that they create in the hunt.

The Panará have a set of procedures, that we might call effective acts of a shamanic nature, that seek to modulate the actions of hunter and prey. Lack of space prevents me from discussing them here in detail, but it is worth noting that, as argued by Warnier (2009), these technical procedures are effective both on prey and on hunters, making them dream, for example. They involve hunters manipulating elements such as flowers, fingernails, ashes, flies, and so on, that possess either a resemblance or a contiguity of some sort with the animal that is to be hunted, and which aim to act on it from a distance¹⁶. One of their effects on the prey is that it “turns itself in along the trail”, as they say.

This is a paroxysm of the relation between the hunters actions, the trail and the prey. The Panará also hold shamanic negotiations to mobilize the owners of the animals, which are spirits of the dead, so that they can contribute to the hunt. Shamanic songs and rites are ways of mobilizing the kin of the dead so that they open the gates of their farms, releasing their creatures to be killed, as the Panará shaman Sykiã once told me. The domestic animals of the owners of prey is a well-known phenomenon in Amazonia (see Descola 1994; Fausto 2008; Kohn 2013). The important Panará inflection to this widespread feature is that these owners are dead kinspeople, who remain close allies of the hunters. In these situations, the hunter will again find the animal in his path – exactly where his kinsperson left it.

The trail is hence not a mere route through the layers of soil in the forest. The signs and marks that hunters make as they move do, of course, produce a preferential trajectory, through which he can return. But the trail is also a trajectory that propitiates action, and through which an encounter with prey is ensured. Other encounters are possible – one may chase after a fleeing animal and find another which can be killed, for instance. This is only one further variation to the activity of hunting. The trail remains the place where he finds his prey, and where he finds his home. It is along it that the transformation of the hunt occurs, as does the transformation of the hunter; and finally, the transformation of animal into meat.

¹⁶ See Schwartzman (1988) a presentation of many of these procedures, which he calls “hunting magic”.

Conclusion: person and territory among the Panará

The set of operations that I have described in this article constitute a wide field of action during the hunt, which enables us to follow the activity through elements of its technical system. I have focused on what emerges as important to the Panará when carrying out this activity: the relation between the hunter and his technical object and the relation between perceptions and abilities of the hunter, and ways of interacting with the forest. Through an analysis of the technical relations, we have followed how the hunter individuates himself – that is, how he constitutes his *operational bundle*, his technical morphology. Yet the pole in which the activity is concentrated is fundamental to this individuation – that is, the prey chased by the hunter, in the terms in which his individuation occurs, where the predator-prey relation is implicated.

Investigations of this sort can point to an aspect which, it seems to me, is crucial for the relationship between anthropology and Indigenous people: how to describe and accompany their regimes of territoriality, i.e., they means by which these people know and dwell in the territory, or the *land (terra)* as they have come to call it (cf. T/terra 2017). These means occur through sophisticated and original regimes of knowledge, which differ from the ontological framework of naturalist science. But it is not just knowledge, but what we can convey as modes of inhabiting, means of living through their experiences in the land – forms that anthropology of technique allow us to access.

What I have described of the weapons and the person of the hunter – his body and actions – and the forest that emerges in the hunt – the trails that cross fates – are two elements that take us along the path that the Panará make, just as they make their land in the appropriate place, land that they possess and which possesses them (which is very different from saying that they are its proprietors). This takes us to a further conclusion: that hunting is a process of ontogenesis that leads to the constitution of the person (particularly, but not only, the male person) among the Panará. I have shown this ontogenesis through the analysis of a technical system. To conclude, I offer a short comparison, which perhaps will afford us with an explanatory contrast.

For the Panará, the hunter is a person imbued with values that are judged ideal for a marital relation. That is, the hunter is a good husband, and good husband is a hunter. Both positions self-reproduce, that are processes that are constituted mutually. A good husband is also a good father, someone who produces husband-wife and father-son relations at the same time as he is produced by them, that is, made by continuous acts of feeding and care, which necessarily affect his success in the hunt. This dynamic, however, is the object a new inflection, which, to be sure, has been occurring for some time. I am referring to a new individuation, particularly of Panará men, which concerns their relation with the special schools that exist in the village. The teacher is, hence, part of another ontogenesis, part of a different experience, which involves two central elements: the Portuguese language (spoken and written) and money. As younger Panará women often told me, the ideal husband is no longer the hunter, but the teacher.

This comparison takes us into a set of questions that I will have to analyse elsewhere. But it allows us to see the constitution of the person in relation to a set of elements, by means of which a technical relation is instated, if we understood them within the framework I develop here, as transitive ways of acting with the matter of the world. The centrality of the hunt or the school in the Panará universe is connected to a social topology within which animals, whites and their territories, cities and the forest, are all distributed. A technical analysis of this field will allow us to approximate the lived experience of the Panará with those of other Amazonian peoples, no longer seeing hunting as a mere baseline for the reproduction of their material survival; or as the survival of a practice destined to disappear.

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Fire normativities: environmental conservation and quilombola forms of life in the Brazilian savanna

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Abstract

The article seeks to shift away from the centrality attributed to the idea of 'control' in the debate on participatory fire management. To do so, it addresses three modes of existence of the phenomenon in the Brazilian savannah – *queimada* (burned place), *fogos gerais* (fire that spreads or general fires) and *fogo fora do tempo* (fire out of time) – aiming to explore the perceptual disparities between wanted and unwanted fires with quilombolas and environmental managers in the Jalapão region (Tocantins, Brazil). This problem is discussed in light of the concept of normativity formulated by the epistemologist George Canguilhem in dialogue with the anthropology of techniques. The goal is to contribute to a research agenda in which the distinction between 'good fire' and 'bad fire' is thematized in specific ethnographic contexts rather than from pre-given normative criteria. I conclude by arguing that the current fire management policies concern not only the legal protocol of fire authorization, but also the modulation of technical and vital processes.

Keywords: Fire management; techniques; vital normativities; quilombolas; natural parks; cerrado.

Normatividades do fogo: conservação ambiental e formas de vida quilombola na savana brasileira

Resumo

O artigo busca deslocar a centralidade dispensada à ideia de “controle” no debate sobre manejos participativos do fogo. Para isso, aborda três modos de existência do fenômeno na savana brasileira – *queimada*, *fogo que abre* e *fogo fora de tempo* –, visando explorar as disparidades perceptivas entre os fogos desejados e indesejados junto a quilombolas e gestores ambientais na região do Jalapão (TO). Este problema é discutido à luz do conceito de normatividade, formulado pelo epistemólogo George Canguilhem e em diálogo com a antropologia das técnicas. O objetivo é contribuir para uma agenda de pesquisa na qual a distinção entre “fogo bom” e “fogo ruim” seja tematizada em contextos etnográficos específicos e não a partir de critérios normativos dados de antemão. Finalizo argumentando que as atuais políticas de manejo do fogo não incidem apenas no registro jurídico de autorização de queima, mas sobretudo na modulação de processos técnicos e processos vitais.

Palavras-chave: manejo do fogo; técnicas; normatividades vitais; quilombolas; unidades de conservação; cerrado.

Fire normativities: environmental conservation and quilombola forms of life in the Brazilian savanna

Guilherme Moura Fagundes

Introduction¹

“You find it so and yet do not. Everything is and yet is not...”

Riobaldo, *Grande Sertão: Veredas*

In the anthropology of techniques, it has already become a classic approach to treat fire as an elementary means of action over matter. In this literature, the phenomenon is depicted alongside the actions of grasping and striking, extending and completing the effects of the human hand in the techniques of fabrication, acquisition and consumption (Mauss 2007 [1947], Leroi-Gourhan 1984, Sigaut 1975). More recently, ethnographies have foregrounded the technical status of fire in association with environmental management, whether linked to the management of protected areas, or as a tactic to combat wildfires (Ribet 2009, Dumez 2010). Its technicity, however, elicits ambivalences: when ‘controlled,’ it is a tool useful for clearing swiddens, hunting and making craftwork; when not, it is a hostile force, responsible for wildfires.

As Nadine Ribet (2018) astutely argues, inspired by Gaston Bachelard’s psychoanalysis of fire (1964), the ambivalence of fire does not reside in the combustion itself, but in the effect of the affections through which we relate to the phenomenon. It is the affects animating these relations that are responsible for conferring good or bad values to the flames, meaning that fire functions rather as a support for ambivalences exterior to it (Ribet 2018: xiii). Not by chance, this projection of ambivalence onto the phenomenon has been historically stabilized through decrees, codes and legislation in which fire’s technical status is stipulated in legal-normative arguments. Consequently, the criteria for distinguishing between ‘good fire’ or ‘bad fire,’ between tool and contravention, are selected in a decontextualized – or more precisely, as I intend to argue in this text, a de-environmentalized – way.

The fact is that the legal framing of this distinction exploits arguments exterior to the interactions that fire promotes in the environment, and is, therefore, not supported by its modes of existence in singular configurations. Instead it is founded on a typology that is ultimately tautological, appealing to predicates like ‘rational,’ ‘planned’ and, most commonly, ‘controlled.’ In the Brazilian case, Garda and Berlinck (2016) observe that Decree 97.635, issued in 1979, responsible for the regulation of the 1965 Forest Code and that until very recently guided the use of fire in Brazil, was the first national legal text to propose a definition of the category *incêndios*, or wildfires. As well as being the first to prescribe the use of ‘controlled fires,’ the decree also instituted the ‘National System for Preventing and Fighting Forest Fires,’ also known as *Prevfogo*, which gave rise to the organizational apparatus of the wildfire brigades in Brazil. Article 1 of the decree defines an *incêndio*, wildfire, as “an uncontrolled fire in any form of vegetation.” In this definition, the predicative ‘control’

¹ This text is the result of the welcome and sharing of knowledge of the *quilombola* Deni and his family in the town of Mateiros (Tocantins, Brazil). I also thank Perig Pitrou for the opportunity to present an early version of the text in the seminar “Anthropologie de la vie et des représentations du vivant,” in June 2017 at EHESS. At the time I was engaged in a period of doctoral research, financed by CAPES, at the Laboratoire d’Anthropologie Sociale (LAS, Paris). The text also counted on the generous observations of Ana Carolina Barradas and two anonymous reviewers to whom I extend my thanks.

is mobilized without any mention of the diverse forms of expression that fire can assume in correspondence with the phytophysiognomic quality of the vegetation, the season of the year and the associated forms of life.

This typological differentiation between controlled burn and wildfire, founded on the aspect of ‘control,’ is also present in the ‘Firefighter Training Manual for Preventing and Fighting Forest Fires,’ where controlled burns and wildfire are respectively defined as (i) “an agricultural or forestry practice in which fire is used rationally, that is, controlling its intensity and confining it to a predetermined area, acting as a production factor,” and (ii) “any uncontrolled fire that impacts on any form of vegetation, whether provoked by human action (intentional and negligence) or by natural cause (lightning).”

Any attempt to normalize vital processes undoubtedly requires a system of objective measures to delineate their calculative management (Foucault 2010, Rabinow 1999). Even so, in terms of the normalization of the difference between a controlled burn and wildfire, there are important points of mediation. After all, how can the experience of ‘control’ be measured? Here formulations of a purely quantitative kind, based on measuring the physical behaviour of the fire, yield to perceptual engagements that qualitatively depend on perceiving subjects. Pyne (1984, 2012), for example, typically argues that the differentiation between controlled burns and wildfire is not related to the physical properties of fire but rather to the ‘cultural contexts’ in which the phenomenon occurs. This is because the differentiation concerned, based on the presence or absence of ‘control,’ is not situated in the ontological dimension of combustion per se, but in the relations established with fire. While the intensity of fire can be measured through “Byram’s equation,”² the valorative ambivalence of its diverse modes of existence can only be apprehended when contextualized in concrete environments. It is here that the primacy of objectivism makes its own limits explicit, demanding a more relational and inclusive view of expressions of fire in specific contexts.

In this article I invest in an interdisciplinary dialogue between anthropology and the biological philosophy of techniques with the aim of providing an alternative methodological path to the reframing of this problem. To this end, I set out from an ethnography developed in Jalapão over eleven months of research, between 2014 and 2016, with the quilombola *geralistas*,³ firefighters and environmental managers of the Serra Geral do Tocantins Ecological Station (hereafter EESGT). In a context shaped by the territorial overlap between the natural park and the quilombola territory, I seek to demonstrate how the articulation between anthropology and the biological philosophy of techniques enables us to comprehend the divergences between desired and undesired fires in a more relational manner true to its modes of existence in the *gerais* environment.

Overlaps in the *gerais*

The *gerais* is the name given to an extensive savannah area located in central Brazil, composed of areas of denser vegetation (*chapadas*), open areas (*campinas*), forests (*capões*) and wetlands (*vargens*, *veredas* and *varjões*) where water is perennial and abundant even in the dry season. The imagery irrevocably associated with this ‘place of the sertão’ revolves around the signs of freedom, isolation and immensity, so well depicted by João Guimarães Rosa in his monumental novel *Grande Sertão: Veredas* (2001). As the socioanthropological literature has highlighted (Andriolli 2011, Ribeiro 2010, Jacinto 1998, Lindoso 2014, Sobrinho 2012, Nogueira 2009), these predicates are pertinent to a description of both the people inhabiting the region and also to the cattle breeding system *na solta* (loose, without fences).

² Byram (1959) defines the variable intensity as “the rate of energy or heat released per unit of time and length of the fire front.” In formal terms, Byram’s equation ($I = Hwr$) conceives fire intensity (I) as the result of the fuel available (w), multiplied by the heat yield (H) and the speed of fire spread (r).

³ Quilombola refers to the people living in quilombos, settlements historically founded by African slaves who escaped from plantations and others oppressive relations (see Arruti 2006). I use the native expression *geralista* to designate the population whose way of life is developed in the environment called the *gerais*. It should be stressed, however, that this category is used in an everyday fashion in Jalapão, without the strong sense of identification associated with the category *quilombola* or with *geraizeiros*, as described by Nogueira (2009) in the northern region of Minas Gerais state.

Concerning the *gerais* of Jalapão, located between the eastern portion of Tocantins state, the west of Bahia and the south of Piauí and Maranhão, an abundant literature exists surrounding ‘expeditions’ to the region, in which some mention of the *queimadas* is common.⁴ These accounts range from those of foreign naturalists to engineers employed by the Old Republic (Miranda 1936) and, more recently, geographic (Paternostro 1934, Pereira 2014 [1942], Geiger 1942) and conservationist expeditions (Von Behr 2004, Faleiro 2002). Historically, the *gerais* of Jalapão is the place of *refrigério*⁵ of herds bred under the *solta* system, where the cattle wander over large distances in search of pastures renewed by fire. Until the mid-eighteenth century it formed a corridor for indigenous people from the Xerente and Acroá groups (Santo 2013, Apolinário 2005). But from the end of the nineteenth century the *gerais* of Jalapão became inhabited by black cowherds coming from the south of Piauí and the semi-arid region of Bahia who at the time tended, or more precisely, *campeavam* (grazed) the cattle of large ranchers in the *verão* (summer). There are also local accounts of families coming from the semi-arid and western regions of Bahia who came to Jalapão for various reasons, fleeing from slavery, extreme droughts and raids by the *revoltosos* (rebels) of the Prestes Column.⁶ All these migratory vectors helped establish the family groups that today form the quilombola communities in Jalapão.⁷

Overlapping the *gerais* of Jalapão, seven Conservation Units (CU) have been created since 2000, including the EESGT. The latter is a full protection CU located in an area of 716,000 hectares in the southern part of Jalapão. Created in September 2001, initially under the management of the Brazilian Institute for the Environment and Renewable Natural Resources (IBAMA), and since 2008 run by the Chico Mendes Institute for Environmental Conservation (ICMBio), the EESGT is one of the country’s most inflammable protected areas, responsible for some 35% of the area burnt annually in federal CUs (Barradas 2017). The northern portion of the EESGT overlaps with the quilombola territory claimed by the Association of Quilombola Communities of Rio Preto, Rio Novo and Riachão (Ascolombolas-Rios). The latter comprise twenty-one domestic groups that, though inhabiting the area within the CU more of the year round in the past, were forced to cease using these areas following the arrival of environmental agencies in the region. Today, in parallel with the movement to recover their territory, they mostly reside in the town of Mateiros (TO) and utilize the quilombola territory periodically for diverse activities, including to *campear* (graze) cattle, hunt, tend plantations and harvest golden grass, *capim-dourado* (*Syngonanthus nitens*), a species endemic to the region.⁸

This was the first full protection CU to expressly permit the use of fire by quilombola communities with territories overlapping the conservation areas. In the last seven years a series of regional articulations have been undertaken by the managers of the EESGT and other CUs with the intention of agreeing legal certainty mechanisms that guarantee the conservation of biodiversity in association with the rights of the quilombola families who inhabit or utilize the areas within these protected reserves. Among these actions, in 2012 ICMBio and Ascolombolas-Rios signed a ‘Term of Agreement’ (TA) stipulating rules for coexistence between the EESGT and the communities linked to the northern region of the CU. Although the TA is not limited to regulatory fire

4 Hereafter I shall use *queimada* in italics when I am referring to the spatiotemporal sense of burned place as assumed by the category for the *geralistas*.

5 The category *refrigério* encompasses all of the *gerais* of Jalapão (including the landscapes of *veredas*, *campinas*, *chapadas* and *carrascos*) and refers to a very specific type of spatiotemporal relationship with the environment. It is a transhumant zone to which cattle are brought at the beginning of the dry season (or *verão*, summer) in search of year-round water and wild grass whose post-fire shoots provide fodder for cattle during the dry spell. The cattle are led back to the *roças de pasto* (pasture fields) after the first rains.

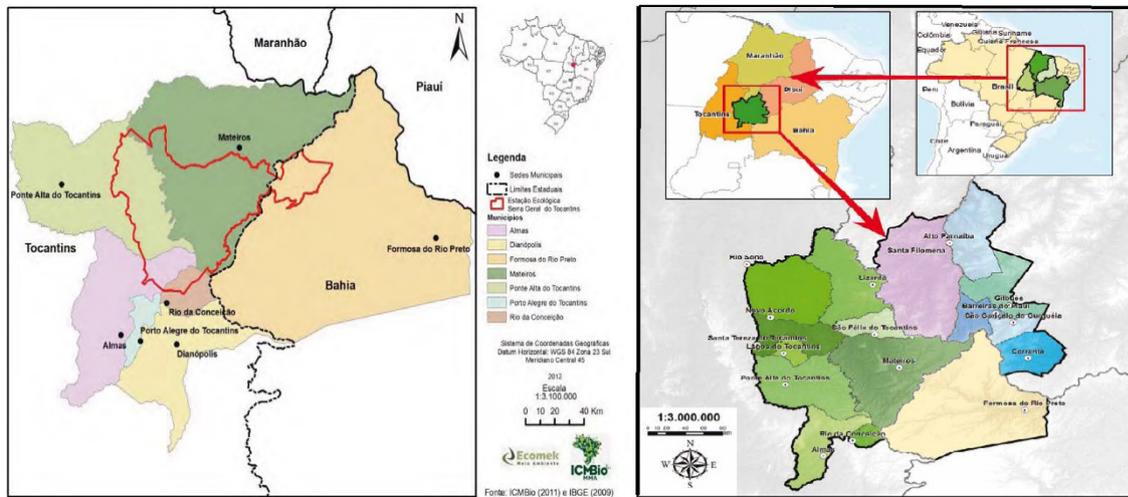
6 The Prestes Column was a controversial political movement (Brum 1994) under the command of the communist military office Luís Carlos Prestes, which rebelled against the Old Republic between 1925 and 1927. Not only because they were insurgents, but also due to the group’s aggressive behaviour, as well as the fear they provoked in the rural communities, they became known as *revoltosos* (rebels, also ‘the enraged ones’). Although the Column passed through the west of Bahia and some of the settlements in the area around Jalapão, it does not seem to have entered the more remote areas.

7 Today there are five quilombola communities in the Jalapão region that have already been recognized by the Brazilian agency responsible for identity certification (Palmares Cultural Foundation), but they are still waiting for land regularization.

8 In terms of plant taxonomy, the species is included in the Eriocaulaceae family, one of the flowering plants among the popular evergreens used to make craftwork and biojewellery. For the Jalapoeiros, however, this coveted plant is seen as a grass. This definition tells us much about its close interaction with cattle herding practices, since burning the *vargens* (savannah) stimulates both the regeneration of golden grass and new shoots of the wild grass used to feed the cattle.

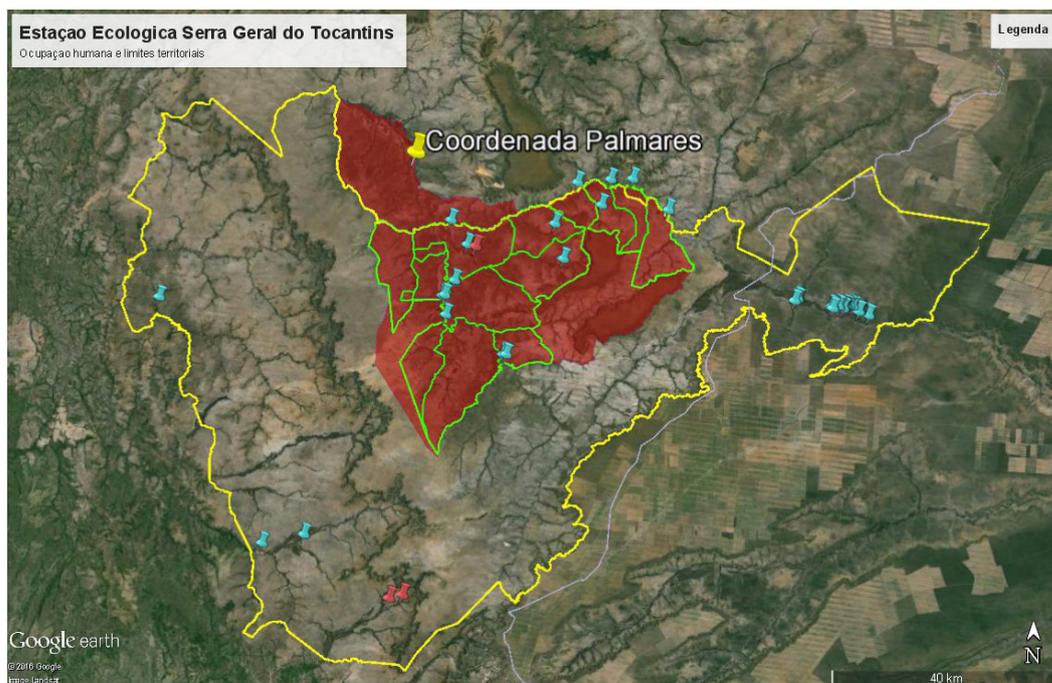
use in this situation of territorial overlap, in the TA review workshops the preponderance of burn practices is demonstrated above all by its constant intersection with other topics.

Figure 1 – Localization of the EESGT with its state and municipal boundaries.



Source: adapted from Barradas et al (2014).

Figure 2 – Territorial overlaps within the EESGT. The yellow line demarcates the territorial boundary of the CU, while the green line delimits the ‘use areas’ of the families signatory to the Term of Agreement. The blue dots indicate the location of the current houses and the red dots the houses that are no longer inhabited. The red patch indicates the quilombola territory of the Ascolombolas-Rios association, in accordance with the coordinates provided by the Brazilian agency responsible for quilombola certification (Palmares Cultural Foundation). Lastly the continuous dots in blue, to the right of the map, show the location of the another community, called Comunidade dos Prazeres.



Source: adapted from the files of the EESGT.

Good fire, bad fire

We're developing a methodology to define the kind of fire we don't want, what good fire is and what bad fire is. The size of the area is not enough alone to say whether a fire is a wildfire [*incêndio*]. It also matters where it occurred, because it's different when it's in a forest. How long this fire spent burning... The time of year when it burnt... Whether it was August, September... We would look at a series of factors in order to say whether it was a wildfire. We need to reach a consensus to understand what we mean by a wildfire. We don't have a completely scientific concept, but we are in agreement here that we don't want a fire with such-and-such characteristics. (Máximo Menezes, environmental analyst for EESGT)

The citation above is taken from a meeting involving environmental managers from the EESGT and quilombola *geralistas*. It was November 2015 and the meeting was the fourth workshop held to develop a new version of the TA. Before entering into detail concerning the various different types of fire, however, in an attempt to encompass quilombola rights and conservations duties, a significant proportion of the workshop had to be spent on 'conceptual definitions.' Among them, especially, the attempt to reach a consensus on what would be a controlled burn, taken as a 'good fire,' and a wildfire, taken as a 'bad fire.' Without this common understanding, no regulation could be created and *pactuada*, agreed or 'pacted,' as local people say.

The TA review process was being developed in Jalapão during the emergence of the proposal for 'Integrated Fire Management (IFM). In 2012 work was begun on the project 'Prevention, Control and Monitoring of irregular burns and forest fires in the Cerrado' (also known as the 'Cerrado-Jalapão' project), seeking to improve prevention of wildfires and control of burns through the implementation of the IFM approach throughout the region. The project aims to conserve the biodiversity of the cerrado and contribute to maintaining this biome as a carbon sink of global importance. It forms part of a global movement towards rehabilitating the use of fire as an 'environmental management tool' where Brazil is just one of the many countries involved.

In natural parks in the Australian savannah (Russell-Smith et al. 2013), the African southwest (Trollope 2011) and Latin America (Bilbao et al. 2010), to pick just a few cases, the paradigm of suppressing fire and fighting forest fires has undergone major transformations over the last half century. This change in perspective concerning fire emerges along with a scenario that combines not only the frustrated attempts of environmental managers to suppress increasingly severe and frequent wildfires, but also transformations in the scientific paradigms themselves. For sure, the ecological debates surrounding the concept of 'pyrodiversity,' which seeks to analyse various effects of the diversity of fire regimes, are still heated and controversial (Martin and Sapsis 1992, Parr and Andersen 2006, Bowman et al. 2016). However, it is increasingly certain that the 'zero fire' paradigm, hegemonic until the start of the twenty-first century, has demonstrated its failure in the face of the increasing recurrence of large forest fires. A symptom of this change in attitude is the proliferation of singular styles of wildfire prevention and combat, already including its own ethnographic literature (Ribet 2009; Dumez 2010; Fowler 2013).

In the Brazilian setting, the IFM is rapidly becoming consolidated as a public policy, its initial objective being to alter the seasonality of burns in the conservation units where this approach is being implemented. It comprises an experiment in relocating most of the areas burnt at the end of the dry season ('late' burn) to the beginning and middle of the burn calendar ('early' and 'modal' burn). To this end, the management initiatives are primarily concentrated on the burns planned for the start of the dry season, aiming to fragment the plant fuel and prevent the emergence of large and intense fires, typical of the end of the fire season.

These initiatives are undertaken in four stages. During planning, satellite images are transformed into maps that enable the quantity of plant fuel to be visualized and priority management zones to be subsequently chosen. During execution, the CUs are supported by pickup trucks, all-terrain vehicles, burning equipment (driptorches), offline digital map applications (Avenza Maps) and local residents (many of them quilombolas)

hired to work as ‘management agents’ in implementing the burns. There are also the monitoring and evaluation phases during which research for the control and surveying of burnt areas through satellite images enable the scale and intensity of the fire to be measured and compared during the ‘early,’ ‘modal’ and ‘late’ periods.

As the name suggests, the IFM also aims to ‘integrate’ scientific, local and management knowledge and practices, looking to reconcile agropastoral and conservationist goals. In this respect, not only in Brazil but in other countries too, the approach is associated with the agendas of ‘managing socioenvironmental conflicts,’ involving traditional populations whose territories coincide with conservation units (Eloy et al. 2018; Barradas 2017; Mistry et al. 2016; Falleiro et al. 2016). An important synthesis of this articulation between scientific ecology, environmental management and community involvement was systemized in the report *Living with Fire*, edited by the US ecologist Ronald Myers (2006). This text is one of the major vectors in the diffusion of the IFM approach in Latin America, promoting a triangulation between the socioeconomic importance of fire for local communities, the monitoring of the burns based on studies in fire ecology, and strategies for suppression and prevention. No less important are the didactic resources that have been deployed to reconcile the pyrophobia of the institutions and the pyrophilia of the local communities. Among them, perhaps the most emblematic, is the slogan around which Ronald Myers bases his scientific primer, “the two faces of fire: good fire versus bad fire” (Myers 2006: 16), differentiating them as controlled burn and wildfires through the criterion of the presence or absence of ‘control.’

Although this rhetorical differentiation has contributed both to the legal relaxation in the use of fire in environmental management activities and to the ‘education’ of traditional populations in avoidance of ‘bad fire,’ it is insufficient in itself to provide consistent criteria for reaching agreement in disputes involving very disparate perceptions and engagements with fire, such as the encounter between quilombolas and environmental managers. Indeed, even within environmental management, the perception of what constitutes a wildfire has transformed significantly following the advent of the IFM. Managers often state that prior to this new approach a fire that burnt for more than 24 hours would already be considered a wildfire, forcing them to mobilize the entire firefighting apparatus. A purely spatial aspect would also once have been an indicator of an ‘out of control’ blaze: in the case of the EESGT, up until 2014, a fire that burnt across an area equivalent to 80 hectares was already considered a wildfire.

The fact is that with more sophisticated processing of satellite imagery, the research in fire ecology that has accompanied the new policy, and, above all, the reapproximation of fire managers to issues beyond firefighting – without mentioning the importance of the experience shared by local residents hired as management agents – it has become much more difficult to maintain any standard definition of wildfire. Nevertheless, the centralization of the national fire management bureaucracy demands ‘data’ and reports that provide comparative proof of the effectiveness of the new policy. Due to the need to compare with other CUs, the notion of wildfire (*incêndio*) has become ever more closely linked to the division of the burn calendar into three periods: ‘early’ (May and June), ‘modal’ (July and August) and ‘late’ (September and October) – with wildfire defined as those fires that fail to extinguish at night during the ‘late’ period, the height of the dry season.

The relationship between environmental management and quilombolas concerning the *pactuação* (pact, agreement) on desired and undesired fires has also altered substantially. Before the arrival of the environmental agencies in Jalapão, there was no expression used by the quilombolas that encompassed all types of undesired fires. While today the word *incêndio* competes for this place along with an antagonistic perception of ‘good fire’ and ‘bad fire,’ it also forms part of a wider range of possibilities. Here I refer to expressions like: *fogo vaporado* (steamed fire), *fogo desonesto* (dishonest fire), *fogo violento* (violent fire), *fogo que vai até Ponte Alta* (fire that spreads as far as Ponte Alta town), *fogo de cru de 3 anos* (three-year old raw grass: dry wild grass), *fogos gerais* (general fires), *fogo embalado* (rapid fire) and *fogo variado* (unpredictable fire), used to designate fires whose origin, temporality or scale are, in some form, contrary to what the quilombolas perceive as a *queima sadia*

(healthy burn). On the side of the managers, meanwhile, rather than fire being treated as a management tool, any burn made by the quilombolas affecting more than 80 hectares was already seen to exceed the ‘ceiling’ of a burn and would be treated, therefore, as a wildfire.⁹ This threshold started to become obsolete from the moment when the managed burns implemented by the environmental management itself began to spread across around 3,000 hectares in a single burn expedition. However, although managers no longer act by only indiscriminately reducing the extent of the burn, the calculations of area and time continue to be important reference points for them to decide what constitutes a wildfire and then work to reduce it.

As I shall attempt to demonstrate through the ethnography, the disparity between burning excessively and burning in a healthy way (*queima sadia*) should not be reduced to a merely conceptual misunderstanding or disagreement. It is clear that, in pragmatic terms, *geralistas* and environmental managers agree on the dangers of wildfires, which become predicated as ‘bad fires,’ made at the height of the dry season, especially between the months of August and September, in an uncontained area. However, the perception of the *geralistas* concerning fires conceived as undesired goes beyond any framing in temporal (early/late) or spatial (much/little) terms. The fact is that there are undesired fires even in situations taken to be safe by environmental management. But the difficulty here is of another kind, less compatible with the quantitative variations in a fire’s scale and intensity, and, as I aim to show, more compatible with the rhythmic (spatiotemporal) qualities of fire in relation to the forms of life (Pitrou 2017) associated with it.¹⁰

It is clear that with the new opening to dialogue and coexistence enabled by the IFM, even environmental managers have begun to perceive the dynamics of fire in the *gerais* in more complex fashion. But the disparity is still maintained, especially due to the reports, operational plans and proofs of efficiency that managers find themselves compelled to produce. Their problem consists of translating a universe of relations in which undesired fires are more dynamic than a normativity understood merely as quantitative variation, whether spatial or temporal. Before entering into the specificities of this *geralista* universe, it is worth briefly discussing how the articulation between anthropology and the biological philosophy of techniques can provide us not only with theoretical insights, but above all a methodological apparatus capable of responding to the problem of normativities.

Beyond ‘control’: the anthropology of techniques and vital normativities

One of the biggest contributions made by the anthropology of techniques is found perhaps not just at the theoretical level – that is, in the way in which technique ceases to be conceived in utilitarian terms – but above all in what we could call a methodological turn. In his manual of ethnography, Marcel Mauss alerts us to the fact that “*absolute precision* is indispensable in the observation of techniques” (Mauss 2007: 24, original emphasis). This ‘precision’ evoked by Mauss is accompanied by a centrifugal force in his anthropological style: in order to match the biopsychosocial totality of technical phenomena, the ethnographer should always inhabit the “frontier of the sciences” (Mauss, 2003: 401), sometimes mobilizing methodological resources alien to conventional humanist training.

Two of Mauss’s leading disciples transited freely, though not without considerable rigour, through disciplinary areas closely affiliated to anthropology. An ethnologist and student of Mauss, André-Georges Haudricourt (1911-1996) was also an agronomist and linguist, possessing a training that provided him with

⁹ Ana Carolina Barradas, environmental analyst for EEGST, personal communication.

¹⁰ I use the concept of ‘form of life’ taking Pitrou (2017) as my main reference, particularly where the anthropologist articulates both ethnobiological reflections on the diverse biological life forms and the anthropological and philosophical propositions concerning human conventions, engagements and forms of life. Without any pretence of exhausting its theoretical profusion in the history of philosophy, the concept of forms of life serves me here as an analytic operator to explore the inseparability between the life forms of the *gerais* (cattle herded *na solta*, golden grass, rheas, deer and so on) and the way of life of the quilombola *geralistas*.

the grounding in the internal characteristics of animal behaviour and plant physiology necessary for him to advance in innovative intuitions concerning domestication processes (Haudricourt 1962, Ferret 2014). The case of André Leroi-Gourhan (1911-1986) was no different: also an ethnologist and heir to the Maussian tradition, but closer to the field of prehistory and palaeontology. It was especially through the use of research procedures taken from archaeology that Leroi-Gourhan was able to arrive at a detailed analysis of technical gestures, emphasizing motricity and rhythms as prior to the human and responsible for instituting the social (Leroi-Gourhan 1993, Bidet 2007). Inspired by Mauss's anthropological style, Haudricourt and Leroi-Gourhan bring us closer, paradoxically, not to a culturalism limited to the symbolic dimensions of actions but to a biological perspective of techniques. Such an affirmation does not imply reducing the human to 'nature,' however but rather highlighting the strong interweaving of the social and the vital, the genesis of both informed by the rhythms that pervade humans and their environments.

The core of this epistemological project resides in exploring technical phenomenon in a pre-eminently concrete fashion, avoiding pre-given modern abstractions such as nature and culture, subject and object, action and words (Barbe and Bert 2009). This relational perspective true to the concrete was of great importance to the biological philosophy of techniques developed by Georges Canguilhem. A direct heir to the anthropology of Mauss and Leroi-Gourhan,¹¹ Canguilhem dedicated the most influential strand of his research to the systematic study of medical doctrines based on their techniques – or more precisely, comprehending medicine itself as a technique. He does this by examining techniques in terms of the relations between organisms and their milieus, by contrast with the 'adaptationist' orientation that marks analyses centred on the relation between organism and environment.

The notion of 'milieu' is a central analytic operator for the anthropology of techniques, especially in its French current, but also has significant resonances in the British school. More recently, both Tim Ingold (2011: 70) and Gisli Palsson (2013: 26) have resorted to this notion as a means to implode an atomistic conception of organism¹². A 'milieu' in this vitalist acceptance differs from an 'environment' as a physical fact since the former is instituted and singularized in the very relation established with the organism, while the environment is a context given a priori, indifferent to the relations established with it. In this sense, Canguilhem writes, "the organism is not thrown into an environment to which he must submit, but he structures his environment at the same time that he develops his capacities as an organism" (Canguilhem 1991: 284).

Canguilhem sets out from this notion of milieu in order to rethink the ontological dynamic of life (including technique) in terms of normativity (*normativité*) or a normative activity, a concept that had a pronounced impact on later French thought on technique (Simondon 2005a and 2005b, Guchet 2010). By normativity, contrasted with 'normalization,' Canguilhem means the creative potency possessed by a healthy organism that enables it to give origin to new forms of life. While normalization draws on an exteriority in relation to life in order to institutionalize, control, exert coercion, resolve conflicts and regulate the haphazard, the notion of normativity translates a kind of creative resistance immanent to life itself. It is through normativity or normative activity that an environment is transformed into a milieu vis-à-vis a determined organism. Or more exactly, it is through the very act of instituting its normative potency, imposing its vital values, that an organism assumes an environment as its *umwelt* or 'own world' (Canguilhem 2008, Uexküll 1982).

11 In his presentation to the text "La philosophie de la science de Georges Canguilhem: Epistémologie et Histoire des Sciences," by Pierre Macherey, later included in the afterword to the Portuguese edition of the book *The Normal and the Pathological*, Louis Althusser recognizes the debt owed by Canguilhem to ethnology: "the new epistemologists appear like ethnologists who do 'fieldwork': they go to see science up close and refuse to discuss what they know nothing about, or what they only know second or third hand" (Canguilhem 2002: 273, free translation). Canguilhem himself also justified this interdisciplinary approximation: "it is ethnographers who are today closest to constituting a philosophy of technique, in which philosophers have lost interest, since they have been attentive, above all, to the philosophy of science" (Canguilhem 2008: 93).

12 After the final version of this text was approved by the editors, I had access to Adriana Petryna's (2018) excellent article on her current research about how scientists are conceptualizing uncertainties and the phenomenon of "runaway nature" concerning wildfires. Although she is dealing with issues not addressed in this text, she also evokes the concept of milieu, even though she expresses her suspicion of what she calls "Canguilhem vital optimism".

So what relevance does Canguilhem's notion of normativity have for the problem of distinguishing between controlled burn and wildfires? From the outset, we could argue that for quilombolas and environmental management alike a constellation of metaphors posits fire as a structuring element of environmental health – albeit based on very disparate conceptions of what 'health' and 'environment' might be. But we can go further, arguing that a new research program is opened up by the very way in which Canguilhem appropriates the anthropology of techniques' reframing of the relationship between organism and milieu – devolving to the clinical (and, why not, the ethnographic) field the problem of distinguishing between normal and pathological. In proposing this approximation, the intent is not to abolish the frontiers between these two existential modes of fire, which would amount to a kind of naive relativism, less still of falling back on the official discourses found in the manuals and legislation centred around control, which would entail resorting to pre-given external values.

Neither is the aim of this interdisciplinary approximation between anthropology and philosophy limited to a theoretical level, which would end up eclipsing the ethnographic investment, turning anthropology into an impoverished version of philosophical canons (Ingold 2017). Here Canguilhem's contribution is situated at a primarily methodological level. Rather than taking controlled burn and wildfires as normal and pathological fire, respectively, it is a question of postulating the clinical anteriority of the ethnographic field. This implies exploring the relations that fire enables between the forms of life in the *gerais* and its milieus, comprehending the vital dynamics in its concrete activities.

What can a *queimada* do?

With considerable expertise in the topic, the environmental historian and manager Stephen J. Pyne (2012), author of more than a dozen books on the history of fire management in the USA, Europe and Australia, has called for a radical change in the way in which we approach the occurrence of fire in forest environments. Unlike floods, typhoons and earthquakes, whose manifestations on the planet preceded the appearance of the first life forms, fires are *biophysical* phenomena that cannot occur without the oxygen, organic matter and heat that make up the biota (Pyne 2012: 15). According to Pyne, this also entails taking seriously the vitalist metaphors concerning fire management that abound in ethnographic materials, where fire is treated as a being that rises, lies down, grows, feeds and dies. In fact, although fire is not itself a living organism, it is a product of life and for this reason can only be properly comprehended when analysed in terms of its vital dynamics.

Such being the case, it is important for an ethnography to comprehend first of all what theory of life we are talking about when we approximate fire to living dynamics. It is precisely this path that Perig Pitrou (2014) maps out in seeking to establish the programmatic foundations for an anthropology of life. This aim in mind, the French anthropologist asserts, the first task for any investigation must comprise a systematic examination of local conceptions of growth, reproduction, degeneration, healing, adaptation, interaction with the environment, sexual differentiation and movement, so as to extract from them ethnographic theories *apropos* the causes behind these phenomena (Pitrou 2014: 161).

Applying these methodological suggestions to the ethnographic case discussed here, we can take the actions assigned to fire in the *gerais* as elements of a *geralista* theory of life.¹³ Thus, an ethnography devoted to examining fire manipulation techniques should also include the living processes from which fire emerges, seeking to understand the seasonal functioning of the *gerais* and the rhythmic or spatiotemporal dynamics of fire within this environment. This can begin with the life cycle in the *gerais*, which divides into two clearly demarcated periods: *inverno* (winter) and *verão* (summer). In *inverno*, abundant rain is expected, while in *verão* it

¹³ Here I concur with Pitrou's definition of the term 'theory,' namely: "the forms of objectification that attest to the existence of this knowledge, as well as its consistency and stability" (Pitrou 2016:9).

is the grass shoots that regrow after the burning of a *vargem* (meadow) that enable *di cumê* (feed) to be provided to living beings. Not only in Jalapão, but perhaps throughout the large area of central Brazil known as the *gerais*, the term *queimada* is a geographic category distinct from the controlled burn or the act of burning itself, such as it usually appears in legislation and in the normative debate on the agricultural use of fire. Instead, the term refers to the paths along which the fire has passed, eliminating the *cru* (dry grass) and stimulating the regrowth of native vegetation. The *geralistas* recognize at least five types of fire evaluated as normal over the course of the year, namely: *aceiros* (firebreaks), *fogo de porta* (door fire), *queimada* (burned place), *fogo de precisão* (precision fire) and *fogo de roça* (plantation fire). Calling these fires ‘normal’ does not mean that they necessarily occur, but that they provide fertility to the *geralista* forms of life and that their occurrences multiply the capacities for relocation in response to modifications in the milieu, especially those brought about by an intense summer or a winter with scant rainfall.

What the fire cycle helps us understand is how the *queimadas* should not be interpreted as disturbances alien to the dynamic of the *gerais*, but as a constitutive part of their forms of life. We could also take a step further and affirm that the fire cycle only makes sense when conceived processually, supplying a kind of historicity to relations constructed during contingencies. After all, there is nothing more alien to the *geralista* universe than a life devoid of events that deprive them of any possibility of action, guided by images stabilized in time and space. This is because, as well as the variations linked to the rain and the dry season, other vectors of force exist that make it non-viable for life to be lived under the imperium of stable laws, rules and commitments. One such vector are the fires that spread in unexpected manner, called *fogos gerais*. We can take as an example a fire that spread up in the area of my main quilombola host, the elderly Deni.

Anomalies and confluences

It was September 2016. Irecema and Berlarmina – Deni’s wife and sister, respectively – had left for the plantation located at Bocaina swamp at daybreak, around 6am. On the way, the women came across a couple who were fishing and close to them rose a small plume of white smoke, which had from a far had looked like a bonfire. Around 10am, Deni gave me a ride as far as the town and continued on towards the Quatis swamp to fetch them. When he arrived there, on the side of the swamp, the sun already hotter, there was a large fire “licking everything” from Quatis to another swamp called Bocaina. Initially, Deni thought that the fire might have been lit by Veinho, his area neighbour. But he “hunted for the tracks” of his *compadre* (partner) and found nothing. As it was already too late to attempt any kind of action to contain the fire, Deni could only return home, perplexed with the situation, where I was waiting for him. On arrival, Deni told me what he had seen:

It [the fire] jumped right there above the *ponte da lata* [a place]. The swamp is narrow and the *cru* [dry grass] was this high! From one side to the other. So it jumped there. Because higher up it was already burnt from the previous year. From this side too it was also burnt. Over here there was a small strip on the *vereda* that had not burnt. There was a little swamp there [...] It jumped via this swamp and descended towards the *varjão* [big meadows] of Bocaina. A *torado* [relentless] fire. (Deni)

The next few days saw considerable speculation over who had been the *mão quente*, the ‘hot hand.’ Another *compadre*, dropping by for a morning coffee at Deni’s house, brought news about the incident. He mentioned rumours he had heard about who had lit the fire: other people had caught sight of the arsonist “dragging the *binga* [lighter]” in Dedo Cortado’s swamp. This was the exact same man who Irecema and Berlarmina had seen fishing that same day. According to the *compadre*, the man concerned had lit the fire just to “clear the

cru [dry grass]” and make it easier to move around where he was fishing. As the day was very hot and the *cru* old, the fire got out of control. He himself had fought hard to put it out, especially to save some cashew trees, but without success.

I asked whether the arsonist was a (cattle) breeder and whether his motive for burning had been to regeminate the grass. Deni said no. It was precisely this fact that had most annoyed Deni and Veinho, the two *geralistas* responsible for the area: it had been a fire made “without precision.” But Deni recognized that there were forces that had magnified the fire beyond the initial human gesture of lighting it (“anyone can drag the lighter!”). The year in question had been extremely dry with little rain in February and the area had various “pockets of old *cru*.” For Deni this configuration explained why the fire had spread. Rather than insist on discovering who was guilty and hold them responsible, the concrete problem at that moment was to find alternatives so that the cattle would not be left without *di cumê* (feed) for the following year.

The fact was that the fire ‘without precision’ that spread up from Bocaina to Estiva left Deni *desagasalhado*, ‘uncovered,’ unable to harvest golden grass that year, since it had burnt the *vargens* (meadows) where he had planned to gather it. Moreover, this fire also presented Deni and Veinho, area neighbours, with a dilemma: how would they feed the cattle the following year? For the current year, the incident meant that Deni’s cattle would graze alongside Veinho’s in this “*queimadona* [large burnt area] made without precision.” But as well as allowing Deni and Veinho’s cattle to feast on the new shoots of the *vargens* over the summer, this unpremeditated fire promised an abundance of golden grass the next year. Here we encounter, then, an *affordance* (Gibson 1979: 141) of the *queimadas*, or burned places, which permits the reincorporation of errors and chance: the relationship between cattle and golden grass.

Certainly, in the *gerais* golden grass fire ‘converges’ (Santos 2015: 89) with cattle fire. Precisely through this confluence – that is, by “coming together without merging” – each living being possesses its own rhythm of *queimada*. As the elder Deni told me in a conversation around the bonfire, while the cattle feed on the shoots of a burn made the same year,¹⁴ golden grass ‘grows strongly’ only in those *vargens* burned the year before. In other words, the cattle will eat its shoots during the same year that the area was burnt, while golden grass has a more extended life cycle. For the latter, the sprouting time or *esverdescimento* (greening) lasts the entire rainy season, usually spanning from the end of October to April. Between May and June sprout the little clusters or shoots from which the plant’s flowers, fruits and seeds will emerge. July and August, in turn, are understood as the months of ripening or *douração* (time of gilding), which ends between the end of September and the beginning of October with the harvest or *tempo da ranca* (time of pulling up).

It is not common practice to burn the same *vargem* over successive years. If this happens, the golden grass *fraqueia* (weakens) and even the sprouts of wild grass for cattle will not sprout abundantly – in other words, it will not be a good burned place or *suquiadeira*. On the other hand, leaving a *vargem* for more than three years without burning is not a diligent attitude in relation to living beings either. As well as “only piling up bad stuff,” the accumulation of *cru* (raw) grass generates a very intense fire that, as it passes, leaves the soil thinner, reducing the number of new shoots of both golden grass (*capim-dourado*) and wild grass for the cattle. This is why both fires, whether made for cattle or for golden grass, should follow a frequency of biennial burning. To harmonize these singularities and confluences, the *geralista* should deploy at least three temporalities of burns in the *veredas* landscape:

- burned place (*queimadas*) made between the months of May and July of the current year in order to feed cattle during the summer (*verão*: July-October) and provide golden grass the following year;

¹⁴ In the *vargens* of the *veredas*, shoots begin to sprout about 8 days after passage of the fire. However, cattle breeders tend to wait around 15 days for the *vargem* to reform and only then take their cattle – that is when the animal has not gone by itself already after sensing the odour of burning grass. In *cerrado* areas (*chapada* and *campina*), the time for *sprouting* and *reforming* may take up to 30 days.

- low burns (*queimadas baixas*) – that is, burns made the previous year – protected from the unpredictable fires (*fogos variados*) that may arise, in order to provide a harvest of golden grass during the current year;
- areas of dry meadow (*vargem cru*), unburnt and protected from any fire during the current year, to be burnt for cattle the following year and also provide golden grass in the subsequent year.

Since cattle only eat shoots in the meadows (*vargens*), cattle and golden grass can live together in the same *queimada*. Moreover, at the level of ‘planning’ or ‘management’ too, if we wish to use these terms, a favourable confluence exists: a *vargem* where golden grass was gathered in the current year (between the end of September and the beginning of the rains) can potentially be burnt to generate grass the following year. Even then, the cattle can still feed on the shoots from the burn during this same year. In any event, although the fire made for golden grass also serves for cattle, Deni typically says that it is the *di cumê* (feed) for the cattle that guides his planning:

My plan is geared more for the cattle. We plan for the cattle and the cattle fire in the summer [*verão*] is the same as the fire for the golden grass. So the management is more for the cattle. Because burning for the cattle burns for the grass too. Because if I burn for the grass, there will be none for the cattle later. [...] That’s why it’s better to burn with the cattle in mind. We think about the cattle a lot. (Deni)

Given the singular but connected rhythms of burns for cattle and golden grass, it might be said, somewhat precipitately, that quilombola management revolves entirely around a temporal rationalization of the uses of the *veredas*, thus conceived as a ‘resource.’ However, although there are temporalities valued as ‘normal’ for the passage of fire vis-à-vis living beings (especially cattle, golden grass and game animals), life in the *gerais* is shaped by events that, for the *geralista*, render impossible any attempt to stabilize time through the rigidity of calendars. This is precisely one of the major forces of interaction between the cattle and golden grass fires. A fire that ‘opened up’ (spread) too much one year, potentially leave the cattle without shoots for the next, will nevertheless provide a large harvest of golden grass.

During the summer of 2016, the relation of kinship (*compadrio*) between Deni and Veinho, mediated through the sharing of burned places (*queimadas*), was also a necessary condition for a fire that “spread up too much” not to be experienced with discontent. After all, the temporal diversity of the burnt areas within the quilombola territory, combined with the reciprocity intrinsic to the *compadrio*, compose a healthy life (*vida sadia*), without old *cru* and cultivated in friendship, making it possible for the *geralista* to recreate through erratic events like the fires that spreads up. In this sense, a healthy life in the *gerais* entails diverse risks, since it involves being open to innumerable contingencies and, through them, to finding creative solutions.

Fire out of time and other pathologies

Canguilhem defines pathology as an anomaly of necessarily negative vital value, that is, “when its effects are assessed in relation to a defined milieu in which certain tasks have become unavoidable for the living being” (Canguilhem 2008: 129). However much they provoke a restructuring of plans, events like the one lived by Deni and Veinho in the summer of 2016 are recurrent in the *gerais*. In fact, although this fire had been an anomaly – in the sense of its unusualness, diverging from the forms desired for a ‘beautiful burn’ – it should not be characterized as pathological. No anomalous fire or fire taken as uncontrolled can be seen as normal or pathological in itself, but only when conceived within the ecological relations that it will establish with associated forms of life. A *fogo que abre* (fire that spreads up), also called a *fogo gerais* (general fire), may even burn in excessively, *sem precisão* (without precision), provoking an aesthetic or quantitative discontinuity vis-à-vis desired fire. Nonetheless, such a discontinuity is not always qualitative to the point of being experienced

as pathological. Put otherwise, to be recognized as necessarily reducing the capacities for action, not only does the fire's extent need to be considered, but above all the forms of life that may atrophy as a result of the burning. In contraposition to the anomalous form of *fogos gerais* (general fires or fire that spreads), we can take as an example the negative valorization attributed by the *geralistas* to what they call *fogo fora do tempo* (fire out of time):

There are two *fogo fora do tempo* that are bad for us: fire from November to March is really bad for cattle breeders. And that fire from August to September, until the first fortnight of October. That's the worst fire for us here. Because it's the driest, hottest season, and all the animals are producing. (Deni)

What is interesting to highlight in Deni's comment on the two *fogo fora do tempo* is the way in which their negative valorization is linked to living beings. The value of fire from November to March is informed by the cattle and the loss that it may cause the breeder, while avoiding the second fire, from August to September, is related to the *bichos* (animals linked to the universe of hunting). Both are valued, therefore, through temporalities associated with the life cycles of living beings, in particular because the *queimadas* (burned places) compose not only the niches of the cattle and golden grass, but also of the rhea (*Rhea americana*) and deer.¹⁵

Approaching the problem in the terms proposed by Ana Tsing (2015: 181), *queimadas* can be seen as 'familiar places' through which we can gain a privileged insight into diverse multispecies interactions. To take one example: a striking presence in the act of burning itself is the savanna hawk (*Heterospizias meridionalis*), called 'gavião-fumaça,' or 'smoke hawk.' Always located high above – either hovering in the air or perched at the top of a tree close to the flames – this bird of prey can perceive smoke rising from kilometres away during the daylight. Because of its singular habit of following the smoke, a common expression is "where there is the smoke hawk, there is fire." For the bird, smoke is a sign of fire and the latter, in turn, signals the chance to capture its prey. Its hunting behaviour involves gliding on the updrafts of hot air caused by convection and then swooping down in shallow dives, searching for insects trying to escape the flames and heat, when located in advance of the fire, or catching those already dying, when hunting in its wake.

The perceptual apparatus of rheas is also attuned to the flight of microfauna, especially bugs and small lizards, which is why they arrive at the *queimada* on the same day that the fire has passed through – making use of their *zoio bom* (good eye) for smoke. After around eight days (when in the *vargem* milieu) to fifteen (when in the *chapada*), the rheas will return, this time to eat the shoots, giving rise to the wild grass grazing phase. They may also encounter some deer, which "sniff the wind and follow the scent," and also approach at this moment to eat the shoots and flowers of the *cerrado*. Deer, however, prefer the leaves and shoots of tree species. But while rheas prefer *queimadas* in *chapada* milieu, especially since this is also where they will later build their nests, the subspecies of deer have distinct preferences: the *veado do campo* (savanna deer, or *campeiro*) is more attracted to the wild grass shoots of the *chapada*, while the *veado do pântano* (marsh deer, or *sussuapara*) is more commonly linked to the *queimadas* of the *vargem*. In search of rhea and deer comes the jaguar, the apex of the food chain. Due to its potential presence, it is never recommendable to spend the night in locations close to a *queimada* more than a month old.

As well as the fire paths inscribed in the landscape, the *queimadas* are milieus from which life forms emerge and develop. If milieus are filled with meaning even for a tick, as Von Uexkull (2010) demonstrated, what to say of the rheas, savanna and forest deer, *sussuaparas* and smoke hawks – to mention just some examples of this *geralista* fauna? All these living beings have their own perceptions of the *queimadas* anchored in actions performed in a manner closely paced with the movements of animals and plants that follow the passage of fire. Based on the singularities of this *geralista* fauna, it would be no exaggeration to affirm that the *queimadas*

¹⁵ The most common varieties are the 'savanna deer' (*Ozotoceros bezoarticus*), 'forest deer' (*Mazama americana*) and 'marsh deer' or *sussuapara* (*Blastocerus dichotomus*).

are traversed by the 'own worlds' (*umwelt*) of these living beings (Uexkull 2010). Worlds that overlap with equally singular temporalities via temporal paths that grow and age. While the *queimadas novas* (new burnt areas) are inhabited by rheas, deer and all kinds of foraging animals, the *queimada velha* (old burnt area) is the place of *cru velho* (old dry grass), poisonous snakes and "everything that is bad!" By rhythm, I understand "a communication of milieus, coordination between heterogeneous space-times" (Deleuze and Guattari 1987: 313), we could say that each of these milieus is vibratory and expresses a rhythmicity since it articulates blocks of spacetime between the coming and going of fauna. In the ethological intuition of Deleuze and Guattari (1987: 314), the territory of these *animals of the queimada* is "the product of a territorialization of milieus and rhythms."

The *geralistas* base their evaluation of what a 'good fire' is primarily on what the *queimadas* provide to living beings. However, the potential reduction in the capacities of vital action caused by fires also grounds their negative evaluations. The *fogo fora do tempo* (fire out of time) of *summer* mentioned by Deni, spanning between the months of August and September, takes the *bichos* (game animals) as a normative reference point. This period of the year, the height of the *quentura* (heat) and the *sequidão* (drought), coincides with what is called the "period of rhea production." For this reason, not only is the *fogo fora do tempo* of August and September avoided, it is also necessary to preserve the *queimadas baixas* (low burns, newly regenerated).¹⁶ The best period for lighting this fire, which will later constitute the *queimadas baixas*, are the months of April and May when the fire tends not to spread too rapidly. Without the *queimadas baixas*, the life cycle of the rheas is put at risk. After all, the *fogo fora do tempo* in August and September may not only destroy the nests but also kill the new-born fledglings. This is why only the *fogo de precisão* (precision fire) is tolerated in August and September – that is, used only in extreme cases in order for cattle not to go hungry – as long as it is done in a *vargem* (meadow) already with a cleared firebreak.

When it comes to the *fogo fora do tempo* of the winter, the cattle breeders are unanimous concerning its harmful effects on their livestock. These involve the *queimadas* made in hot spells during the rainy season, especially between the months of December and April, in the *vargens*. The explanation given for this practice is what the *geralistas* call *mal-de-toque* ('toque' malady), a bovine disease characteristic of the sandy soil of the *gerais*. Although few zootechnical studies mention *mal-de-toque*, this disease takes up much speculative space in the *geralista* imagination, particularly in relation to the concerns of cattle breeders. This is why the *fogo fora do tempo* that provokes the disease has to be avoided:

Vargens cannot be burnt in the winter. It's because of the wet *vargens*. Because these *vargens* will sprout in the rains. They sprout in the water and the cattle will eat in those *vargens* filled with water. It's when the soil sticks to the grass. Then we have to bring them to the plantation, because the plantations will already be good; there's already pasture. It's the time to take them to the plantations. Because if we leave them in the *gerais* all year round, summer and winter, we end up with all the cattle *tocado* [affected by *mal-de-toque*]. (Deni)

The sickness unfolds as follows: during the winter, amid the rains, the fine sand of *gerais* tends to stick to the *bucha* (lower stem) of the wild grass. When they eat it, the cattle also ingest a lot of this sand, which accumulates in an internal section of the animal's digestive tract that *geralista* anatomy denominates *livro* – 'the *livro* of the cattle.' The first symptoms become perceptible when the animal begins to expel catarrh or pus through its *venta* (snout), its hair becomes split and bristly, it walks with its head low, becomes blind or *variado* (insane) or even develops a hollow horn to the point of air escaping when perforated. Some check the diagnosis by giving the animal Coca-Cola to drink, using it as a purgative, and then assessing the amount of sand in the faeces.

¹⁶ These are areas burnt the previous year, especially in the *chapada* and *campina* environments, where the rheas are known to build their nests, taking advantage of the gaps in the grass that function as *aceiros*, firebreaks, protecting their nests from *embalado* (rapid) fires.

After verifying the *mal-de-toque*, the *geralista* will use his *roça de pasto* (pasture) to *destocar* (action to counter the malady) the affected cattle. In it there are exotic varieties of grass, which are taken as stronger and less vulnerable to the sand that sticks to the base of wild grass. The fact is that if there is no pasture planted in the *vedadas* (protected) plantations to cure the cattle, the animals may even die. Since the majority of cattle breeders lack large areas of planted pasture, the therapeutic action involves a rotation between the *roça de pasto* (pasture) and a *queimada* in the *chapada* milieu made close to the breeder's house. A *roça de pasto* of 2 hectares, for examples, enables around 10 cattle to be cured over the course of a month. After this period, the herd is led back to feed on the shoots in the *chapada* until the planted pasture sprouts again:

Let's suppose I bring the cattle in November. I spend November there and a part of December. Even if it is raining, the wild grass is sprouting. Then the cattle is *destocado* [cured] and returns there, spending ten, fifteen, twenty or thirty days until the plantation sprouts again. When the plantation germinates, I bring the cattle back to it. Here I make them fast. I give them salt with minerals... Even there in *gerais*, during this period I round them up in the enclosure, they spend a day without eating. I give them salt with minerals and they lick it. After a month, thirty days spent there in *gerais*, I bring them back and place them here again. I spend ten, fifteen days with them and return again. And they're cured. (Deni)

Here a point should be emphasized: this metastable relation between *toque* and *destoque*, a sick life and a healthy life, which accompanies the *geralista* and his herd throughout the rainy season, constitutes something specific to the regime of breeding cattle *na solta* (free range). In effect, rather than opposing normal life, in the *gerais* the *mal-de-toque* should be contrasted with a *vida sadia* (healthy life). This is because the *tocada* life does not lack norms but is situated within other norms. Although the *toque* is perceived by the breeder as an affliction or a symptom of something we might call 'disease' – in the sense of a fixation or "fidelity of the organism to a single norm" (Safatle 2015: 436) – it is still also the seed from which new behaviours develop. The imminence of the *toque* is one of the vectors of force that drive the transhumant rotation of the cowherds and their cattle between the *roças de pasto* (planted pastures) and the *queimadas de porta* (burned areas near the home). As a disease to be avoided, it produces new norms of adaptation between the cattle and their milieus in a reconciliation lived through the restriction in the bovine capacity for action. Although the affected cattle remain under the care of the breeder, expressing a qualitatively more vulnerable form of life since intolerant of deviations in conduct, the *toque* is not seen as something to be overcome. Rather, it is recognized as something intrinsic to breeding *na solta*. In this sense, it composes a form of life (Pitrou 2017), generating concrete effects on the normativities of fire and on the modes of dwelling in the *gerais*.

Final considerations

To singularize the disparities between desired and undesired fires in the *gerais*, the first challenge of my research was to avoid adhering to legal and administrative normativities, enabling instead the emergence of existential modes of fire in the ethnography that otherwise escape official grammars based on an abstract notion of 'control.' As a consequence, running counter to the instrumental narratives that conceive fire (and perhaps technique in general) as a utilitarian tool of production, acquisition or even environmental management, the technicity of fire in the *gerais* could only be analysed within living dynamics in direct relationship with the 'own worlds' (*umwelt*) that traverse the *queimadas* and with the rhythms that ensure that burns are not made *out of time*. Such being the case, as well as action on matter, here techniques of fire acquire the status of means of perception through which multispecies interactions are comprehended. In this sense, more than a 'tool,' the diverse types of fire, particularly the *queimadas*, are means to perceive bovine transhumance, the life cycles of

animals and the growth of golden grass. We could go even further, arguing that quilombola *geralista* thought offers a theory of life (Pitrou 2014 and 2017) in which the harmonic and rhythmized existence between fire and forms of life ensures the possibility of a *vida sadia* (healthy life).

In conclusion, I wish to remark on some points for future reflection. I began this text by showing how the need to redefine and reach conceptual agreement on the wildfires or ‘bad fire’ was a necessary condition for reconciling conservationism in Jalapão. This way of envisaging perceptual disparities as ‘misunderstandings’ centres on the belief that disagreements are situated in the sphere of verbal communication, resolvable through use of a general grammar capable of comparing points of view. Nonetheless, if we take seriously *geralista* thought, the normalization of the dualism ‘good fire’ versus ‘bad fire’ based on quantitative criteria of time (early/late) and space (area size) is only sustainable at a pragmatic level. After all, the generic notion of wildfire, which would be better compared to the notion of abnormality, understood as a quantitative variation of the normal, reveals a perception that has very little to do with the pathological qualities of *fogo fora do tempo* and the anomalies of *fogos gerais*. Likewise, the translation of the universe of multispecies interactions of the *queimadas* in terms of ‘good fire’ or ‘controlled fire’ ends up decontextualizing and isolating them from their relations with associated forms of life.

Beyond the translation and sharing of concepts, the transition from fire combat to fire management involves the circulation of other affections that gravitate around fire. Prior to the advent of Integrated Fire Management (IFM), the phobia of environmental management in relation to fire encapsulated the socioenvironmental conflicts over the legal protocol of ‘being able to burn’ and ‘not being able to burn,’ based on the allocation (permissions) and nullification (fines) of rights. After the IFM, the quilombolas were permitted and even encouraged to burn, so long as their fires met what was defined and agreed as a ‘good fire.’ In effect, this shift from a disciplinary power over fire to what we could call a new ‘pyropolitics’ begins to centre on the modulation of the relationships between organisms and milieus – that is, precisely on what has been understood over the course of this text as technique. However, it needs to be stressed that the effects of this encounter are not unidirectional: while the quilombolas begin to share the negative affects surrounding wildfires, for the managers too a *queimada* becomes perceived in a much more dynamic way than a mere lifeless space.

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Household ecology, environments and technical processes among the Potiguara of Jaraguá village (Paraíba, Brazil)

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Abstract

This article focuses on the technical activities carried out by members of Potiguara households within the diverse environments that constitute the territory inhabited by these indigenous people. Such activities are the result of choices and strategies organized to meet the needs of these households (family groups of at least three generations), properly conforming a household ecology. The technical processes that result from this ecology are centred on individual and collective experiences in mangroves, floodplains and the patchy remnants of the Atlantic Forest, as well as in urban contexts, enabling the development of diversified skills and the acquisition of knowledge about techniques and materials. In this way, the Potiguara at present engage in fishing, agricultural, grazing and extractive activities, building on a local traditional knowledge that allows them to effectively associate materials of diverse origins, both those found locally and those of industrial provenance.

Keywords: Potiguara; environments; household ecology; technical process.

Ecologia doméstica, ambientes e processos técnicos entre os Potiguara da aldeia Jaraguá (Paraíba, Brasil)

Resumo

O presente artigo focaliza as atividades técnicas desenvolvidas por membros de grupos domésticos potiguara no interior de ambientes diversificados, sendo estes partes constitutivas do território habitado por estes indígenas. Tais atividades são o resultado de escolhas e estratégias organizadas para atender às necessidades desses grupos domésticos (grupos familiares de pelo menos três gerações), conformando propriamente uma ecologia doméstica. Os processos técnicos que resultam dessa ecologia estão centrados nas experiências individuais e coletivas em manguezais, várzeas e resquícios de Mata Atlântica, bem como em contextos urbanos, permitindo o desenvolvimento de habilidades e a aquisição de saberes sobre técnicas e materiais bastante diversificados. Desta forma, hoje os Potiguara desenvolvem atividades pesqueiras, agrícolas, de pastoreio e extrativistas, a partir do aprimoramento de um conhecimento tradicional local que lhes permite associar de modo eficaz materiais de origens diversas, isto é, os encontráveis localmente e aqueles de procedência industrial.

Palavras-chave: Potiguara; ecologia doméstica; ambientes; processos técnicos.

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Introduction

This article studies the technical activities of members of Potiguara households¹ inhabiting Jaraguá village in the Monte Mor Indigenous Land, situated in the municipality of Rio Tinto on the North Coast of the State of Paraíba, Brazil. The Indigenous Land is flanked by extensive mangroves, floodplains and patches of Atlantic Forest, lying some five kilometres from the city of the same name as the municipality. My aim is to understand these activities as constituting a *household ecology*², defined by Wilk (1997) as the study of the relations of appropriation and management of resources. As the management of these resources are carried out in specific geographical spaces over which subjects intend to maintain a degree of control, a household ecology is concerned with the construction of areas of domain through what Barbosa da Silva and Mura (2018) have referred to as processes of *domainization*. It is through these processes that each human and nonhuman subject gives shape to domanial spaces, defining mobilities and trying to impose, through direct and indirect acts, their will and power over other subjects or collectivities – thereby, in turn, imposing limits of access to a given good, technique or knowledge.

The modes of accessing, interacting with and using the resources present in these spaces by the Potiguara enable the development of agricultural activities and the husbandry of small and large animals. They also fish in the mangroves, hunt and gather fruits and medicinal plants. In this sense, controlling a geographical space and seeking to order access to it is basic to household organization. The experiential trajectories of Potiguara subjects, as well as the household ecology that they develop, must thus be seen to be constitutive of the creation, conservation or transformation of the environments configured in these spaces.

Having or not having access to the resources of a territory differentially affects the day-to-day of households. Indeed, individuals are integral to the environments where they live and where they develop a household ecology that allows them to deal with their daily needs – whether as a guarantee during times of unforeseen necessities, or as a surplus that can be brought to the market in exchange for complementary resources. These activities are concatenated in the same time and space, through individual and collective strategies. These are directed to configuring itineraries that conform specific movements and temporalities.

Aiming to reveal these dynamics, my argument will be developed in three parts. First, I present theoretical considerations that shed light on the household ecology of Jaraguá village. Second, I describe the activities carried out by the member of the households through the knowledge that they transact, fruit of the experiences of using the resources available in the territory and socializing diverse knowledge, material and techniques,

¹ Households are typically made up of individuals of three or four generations, making up a local group that, through specific forms of cooperation, connects a range of habitational units constituting *aggregate households* (Wilk 1984). In organizational terms, the basic social unit of the Potiguara are the *households* or “focal houses” (Vieira 2012).

² The social organization of work defines the logic of cooperation and, eventually, the differentiation of tasks carried out by participants, breathing life into a household ecology (Wilk 1997).

of local and industrial provenance. Finally, I investigate the temporal rhythms, as well as the knowledge and local conceptualizations that they give rise to, revealing movements that define cycles and alternations, delineating composite mobilities.

Environments, Technical Processes and Household Ecology

During my time with the households I was researching, I perceived that there are specific relations and understandings regarding the resources available in a territory, which include social, economic and political factors. This experience thus exceeds a symbolic dimension, embodying the know-how of the people involved. This relation between environmental elements is constructed out of a range of experiential resources which stem from the daily activities of the members of households.

The notion of the *environment* does not only include the ecological characteristics that distinguish one *environment* from another. Rather, this category, which is central to my argument, is to be understood in a more encompassing sense. I therefore use it as defined by Barbosa da Silva, in:

“[a] socioecological sense, comprising a specific material infrastructure (physical installations: constructions, paths, fencing, tress, pastures, streets, squares, etc), placing certain resources at the disposal of subjects and enabling the development of particular activities which, although characteristic, may not be exclusive. The environment is thus a physical space of relations, the constitutive unit of a territory” (Barbosa da Silva 2009: 88).

The environment is not only a physical space, including also a territorial component, which means a political dimension of control over the space where social groups live and relate to one another.

It follows that the relations that develop in day-to-day interactions are not based on a separation of what is “natural” from what is “artificial”. Members of households build their relations at the territorial level, through the use of *environments*, where they establish itineraries out of choices and limitations that are imposed on them, allowing for the classification of materials, techniques and information that could not have been understood via a dichotomic approach. With a view toward overcoming dichotomies, Ingold and Kurttila (2000), in their studies of the Finnish Sami, observe that the acquisition of knowledge is inseparable from experiences and practices in the environment in which they live. Time is here a fundamental agent in “*traditional knowledge as generated in the practices of locality*”- LTK (Local Traditional Knowledge), a situated understanding that is dynamic, and which is formed and transformed by the experiences of people in interaction in this environment.

As peoples’ experiences and learning is always related to the environment, it is useful to refer to F. Barth’s reflections on the structure of social action through a differentiation of the notions of “event” and “act”:

The former refers to the external aspect of behaviour, to objective date and measurable positivism. The latter, to the intentional and interpreted meaning of behaviour, to its sense for conscience persons with specific sets of beliefs and experiences. An event is an act by virtue of being intentional and interpretable. (...) The precipitate (in the chemical sense of the word) of interpretation of the acts in the person is his or her experience and, synthetically, in a more distanced plane, his or her knowledge and values, which, in turn, can retroact on future plans and goals, as well as on future interpretations of acts (Barth 2000: 173- 174).

Following the author, we can understand how people pursue a certain culturally moulded logic, which is continually updated by the effective daily experiences of subjects in different social positions – and who, for this reason, maintain different explanations for the events, in accordance with their experiences.

In this vein, Ingold (2015) proposes that the notions of *person*, *technique* and *environment* are not stable and distinct categories, but categories concatenated in lived experiences. He thus starts from the notion of *skill*, indicating that culture is not constituted by symbols, but rather by actions and interactions in environments,

through engagement in practical processes. He argues that people cannot be conceived independently from the skills they acquire and the technical processes that they promote.

Anthropological discussions of the relation between the human and technique include Leroi-Gourhan's pivotal elaboration of the analytical notions concerning technical processes: *technical tendency* – understanding the effects of human action on matter; *technical environment* – which propitiates changes at the technical level through the experience of a given place, bringing together creativity and borrowings from the technical knowledge of various regions; and *technical fact* – the elaboration of a specific technical trace, giving life to what is effectively apprehended by the researcher (Leroi-Gourhan 1984).

We can see here that the techno-economic activities carried out by the members of Potiguara *households* are made possible by the environmental characteristics of a floodplain area and a vast mangrove, with occasional patchy remnants of Atlantic forest, and that they are put into effect from knowledges, tools and practice which, articulated with each other, make up specific *technical sets* (Leroi-Gourhan *ibid.*). These make possible the production of diverse objects and activities within a circumscribed space. Thus, as they carry out their activities, the members of the groups interact intensely within environments, which also include urban clusters, displaying a mobility that ensures access to different technical and material knowledge, which are then incorporated into the social organization of work through the distribution of competences. The local and experiential dimensions emerge as significantly relevant for defining territorial dynamics and technical processes, to which we may here add the pre-eminence of domestic strategies and technical transformations. In the next section, I will explore these connections and their empirical and technical implications.

Domestic Strategies and Technical Transformations

The Potiguara Indigenous people have long occupied territorial spaces in the northern coast of the state of Paraíba, encased between the mouth of the Camaratuba River and the Mamanguape River, in the northern limits of the Mataraca municipality and the southern stretch of Rio Tinto. They are distributed throughout 32 villages, belonging to three contiguous Indigenous Lands³, located in the municipalities of Baía da Traição, Marcação and Rio Tinto.

I will not be able to dwell on the history of the Potiguara in this area in the 18th and 19th centuries, but it is important to note that historical sources register that they were settled in two villages, assisted by missionaries of the Carmo da Reforma de São Miguel da Baía da Traição, situated on the coast of Paraíba, and by those of the Preguiça, some 24 km inland (see Palitot 2005).

In the second half of the 18th Century, the villages of São Miguel and Baía da Traição was modified by Pombaline laws which expelled the missionary orders and changed the status of the villages, which became “Indian Hamlets”. After the Law of Lands was passed in 1850, the authorities’ neglect of the precarious condition of the Indigenous people allowed for the constant usurpation and sale of Indigenous lands (Palitot *ibid.*). In the first decades of the 20th Century, two agencies began to operate in the region: the Indian Protection Service (Serviço de Proteção aos Índios – SPI), in the Baía da Traição, which established a tutelary regime of control over the Indigenous territory, and the Rio Tinto Textile Company (Companhia de Tecidos do Rio Tinto), belonging to the landowning Lundgren family. On the one hand, the official agency for Indigenous affairs was based on the idea of incorporating Indigenous people into national society. On the other, pressure on traditional Potiguara territories intensified through the activities of the Lundgren family.

³ The Potiguara Indigenous Land (TI Potiguara), with 8,109 inhabitants and 21,238 hectares; the TI Jacaré de São Domingos, with 449 inhabitants and 5,032 hectares; and the TI Potiguara de Monte Mór, with 4,447 people and 7,467n hectares (see Cardoso et al 2012: 15).

These agents and agencies promoted what Oliveira (2004) defines as a *process of territorialization*.⁴ In the 1980s, with the advent of the National Alcohol Programme (Proálcool), many of the lands of the Company were sold to sugar mills. The mills invested in the areas formerly explored by the Company, buying and/or letting them, which brought further hardships to the social reproduction of the *inhabitants*, with increasing limits on access to resources.

Deforestation for sugar cane plantation transformed the physical scenery of social and technical relations. The expropriation of lands and the expansion of sugar cane cultivation led to widespread discontent, requiring the Potiguara to seek the demarcation of their lands as early as the 1980s.⁵ Most of the so-called *retomadas* (“re-takings”) involved substituting sugar cane plantations for manioc gardens. The re-takers would plant *gardens* which were later destroyed on the orders of the mill-owners. Strategies for resisting domination, including initiatives for recovering and defending territory, ensured that productive activities were carried out, and were marked by a change in the relations of power that had underlined spatial relations. Through the acts of re-taking, Potiguara lands gradually resumed the horticultural and husbandry activities that had previously been banned by the Company and the mill-owners. However, these changes did not alter the situation imposed by the State.

The act of territorializing, here understood as a form of *domaining*, that is, as the production of domains (Barbosa da Silva; Mura 2018), is not a one-way process: on the contrary, Indigenous subjects respond, participating in the effects of this *domaining* through the household ecology that they put into practice.

According to Wilk and Netting (1984), the *household* is often a privileged unit of description and analysis for understanding relations between production and consumption. In my view, however, production and consumption are not only related to material goods, but also include the production and transmission of knowledge, the education of the children of the *household*, and a range of other activities. In this study, I will reveal some of the activities of individuals belonging to households in the village of Jaraguá, in specific *environments*, among them the patio, the mangroves, the garden and the city. It is thus necessary to understand how these groups are organized and, consequently, how they relate to the other elements and beings present in this *environment*, as well as trying to understand how domestic strategies and technical transformations are generated from these relations.

It is important not to lose sight of the fact that the occupation and use of space is always a dynamic process, involving various agents. Before the establishment of a dynamic proper to Capitalist development, with the exploitation of a workforce and the extraction of resources from their territories, the Potiguara could engage in their activities in an *environment* (Barbosa da Silva 2009) that fulfilled all of their needs. In time, biodiversity in the territorial spaces of the households was drastically reduced, resulting in a specific *ecological configuration*. The “Company” and the mills played a major part in this, through the extraction of timber from the native Atlantic forest and sugar cane plantations (Barbosa da Silva et al. 2017).

Intense deforestation did not simply result in the drastic reduction of animal and vegetal populations (both in individual numbers and in variety); the phenomenon also caused significant modifications in hydrography. With the mills, sugarcane stretched into the productive space of the Potiguara, ravaging existing areas of vegetation and restricting agricultural and fishing activities. The best land (the *chãs*⁶) was used for sugarcane plantation, leaving hillside outcrops for food cultivation. In this new context, the members of Potiguara households nonetheless continued to carry out their activities through their traditional knowledge,

4 Oliveira understands *territorialization* as a process of social reorganization that implies: (i) the creation of a new sociocultural unit through the establishment of a differentiating ethnic identity; (ii) the constitution of specialized political mechanisms; (iii) the redefinition of social control over natural resources; (iv) the re-elaboration of culture and of relations with the past (Oliveira 2004: 22). He defines “territorialization” as “an intervention of the political sphere that associates (in prescriptive and unquestionable terms) a well-defined territory to a set of individuals and social groups” (ibid: 23).

5 I am unable here to explore how the households came to be articulated as political communities (Weber 1999) in order to make the “re-takings” possible.

6 A type of sand soil suitable for cultivation.

stemming from experiences of using the resources available in their territory, developing adaptive strategies in *socio-ecological-territorial contexts* that have been defined historically (Mura 2011). The lack of productive space for horticulture has led some *households* to adapt reduced spaces, such as backyards⁷, as well as flood-prone deforested mangrove lands, which are filled with earth. Likewise, industrialized good, articulated with those of vegetal origin, started to play an important role in the construction and acquisition of artefacts (Araújo 2015, 2017).

What therefore matters to subjects when they make technical choices is that they be able to count on possibilities, regardless of whether the materials are “natural” or “artificial”. The territorial aspect is here relevant, for it allows us to understand subjects’ levels of spatial mobility and the reach of desired objects. Domain areas are thereby defined “to enable a better organization of access to these flows and control over them, as well as to sediment knowledge and skill acquired through experiential trajectories to which the subjects gave internal life, starting from and moving beyond these spaces” (Barbosa da Silva; Mura 2018:4).

Through the description of certain types of practice it is possible to distinguish and understand the technical knowledge manifested by members of the households, through skills tuned to actions and interactions in the environment and engagement in experiential processes (Ingold 2015). The range of tasks that Potiguara households can engage in through use of both “natural” and “artificial” materials is indeed wide. For instance, the mangrove wood known regionally as *sapateiro* (*Rhizophora mangle*) is used not only for covering houses and building fences, it also extends the durability of fishing nets made from a synthetic material known as ‘silk’. First, wood needs to be gathered in the mangroves. It then undergoes a chemical process where it is chipped and kept in water for a week, after which the nets are put into the tank to absorb the paint and thicken the fibres of the “silk”. This process relies on a local knowledge that associates the chemical properties of the wood to those of the net’s fibres.

Photo: Silvinha with his nets for capturing fish, crustaceans, etc., made from “silk” threads acquired from the local commerce



Photo by the author, 2014.

⁷ Yards are situated outside the habitations. They are characterized as a social and symbolic space of many uses which manifest and make possible the organization of groups, being a space constructed according to member’s needs. This environment of domestic spatiality is frequently used, sometimes serving as a tool deposit, animal pen, and a place for culinary activities and planting.

Tank with the *mangue sapateiro* paint, used to extend the durability of the fishing nets made from “silk” fibres



Photo by the author, 2014.

The images above refer to some of the activities of Silvinha, who spends most of his time fishing with nets. He is married to Sônia and two of his sons (Cristiano and Rafael) sometimes help him in this activity. Leonardo, the middle child, is working in the city of Piracicaba, in the state of São Paulo, and a part of his wages helps with the family’s stipend. Silvinha goes to the mangroves almost every day, and most of the fish he catches is sold by his wife in the village or, when the catch is bigger, in the Rio Tinto market on Saturdays.

The broom is another sort of local knowledge which effectively conjugates diverse materials. It is made from the leaf stalks of the coconut tree, which are grouped in a fan shape. Industrialized products such as string and rubber are used for finishing. To fix the handle, empty plastic deodorant cannisters are used, which are acquired in local commerce. These materials are easily *accessible*, and are not expensive.

Broom



Photo by the author, 2014.

As well as those implements mentioned above, traps and fishing instruments can be made from cans, plastic, PET bottles, PVC, rubber, and other materials. These are essential elements for understanding the composition of the material baggage of households and the technical knowledge related to them.

The “rat trap” (*ratoeira*) is used to capture the blue land crab (*Cardisoma guanhumi*). It is generally produced with discarded materials, such as PET bottles, PVC tubing, rubber and scraps of wood. On average, people place ten to twenty “rat traps” per day near crab burrows. Bait, which can be pieces of pineapple, onion, or anything with a strong odour, is placed inside the trap. When a crab, attracted by the bait, goes into the rat trap, the trigger is set off and traps it. This process can take hours, so rat traps are usually left overnight. The Potiguara use old tractor tires cemented to the ground to breed and fatten crabs.

“Rat trap”



Blue land crab breeder made from tractor tire



Inside the blue land crab breeder



Photos by the author, 2017.

The *covos* are portable fishing traps with one or more openings for fish to go in, and they are very useful for capturing shrimp and fat sleeper fish (*Dormitatur maculatus*). *Covos* can be cylindrical, semi-cylindrical or rectangular. The mouth through which the fish enter is funnel-shaped. They may be made from bamboo and tied with “fire vine” (see photo below), but more recently they have been made with plastic fibres, wire, screens, among other materials. In the top or lateral side there is an opening, from which captured animals are retrieved.

To store fish and crustaceans, a sort of receptacle basket with a spherical rim and a plane base known regionally as a *samburá* is used. It is an arched weave, made of “cinnamon vine”, “stick vine” or “blood vine”, with a simple selvage as a finish. It also has a round lid. Today, flexible or semi-rigid vegetal elements are frequently replaced or complemented by other materials which can be easily accessed, and which prolong the durability of objects. Vines have of late been replaced by pieces of PVC tubing, joined by nylon strings, with a *sapateiro* wood handle obtained from the mangroves (see photos below).

Covo made of bamboo and “fire vine”



Photo by the author, 2014.

Samburá made with PVC tubing, nylon string, and *sapateiro* wood from the mangroves



Photos by the author, 2016.

The variety of knowledge, techniques and activities developed by the Potiguara of Jaraguá village is quite extensive. The objects and instruments that have been described do not exhaust them. My aim has simply been to provide a few examples so that the reader might have an idea of the preponderance of these goods in Indigenous domestic life.

These objects are characterized by the association of material of diverse origins. The aluminium cylinder of a deodorant canister, for instance, becomes a material that can fix the handle of a broom to its tip (see photo). The 90-100° angle formed by the branches of mangrove *sapateiro*, joined by their physical properties, ensure that these are privileged materials to construct the canbo caves (see photos). The technical choices of the Potiguara of Jaraguá thus take into account not only the physical and/or chemical properties of the materials, but also the forms that they acquired in previous processes, regardless of whether they are of industrial or local origin.

Caves made from mangrove *sapateiro*



Photo by Darllan Neves da Rocha, 2018.

According to Lemonnier (1993), *technical choice* is the analysis of the process of selecting a technical resource, locally elaborated or acquired elsewhere, by focusing on its action on matter. During these processes of selection, new technical objects are included as technical processes in a wide sense. In my approach, the examples described above were exposed as *technical choices* that reverberate changes in the ways the Potiguara deal with materials and develop *technical competences*, transforming them toward a certain goal. *Technical choices* thus express the experiences of individuals in the environments where they dwell. These experiences depend on a vast territorial situation, which requires a consideration of the *availability* of materials that an environment offers, as well as their *accessibility*. (Mura 2000). According to Mura:

We must consider the conditions that are given for the formation of conjunctures that enable an availability/accessibility dialectic and the decision of those interested in the technological process. These decisions depend greatly on the values that social actors attribute to dwelling, to the material world and to time. (...) The availability of materials and their accessibility in the territory influence both the conditions of the same territory and the possibilities of decision-making of the social actor, who can participate in this process at different levels. Hence the interactions of the scenery – as ends, plans, and expectations – with the availability/accessibility dyad, will determine what we define as a repertoire of possibilities. (Mura, op.cit.: 66)

The acquisition of technical knowledge hence depends on the presence of a favourable *technical environment*, wherein elements are determined by human and nonhuman acts, with the requisite combination of *availability* and *accessibility*. Some form of jurisdiction is therefore necessary to access the territory, which brings us into a geographical and political level. An example of outside influence on the territorial management of the Potiguara is the Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (Ibama, Brazilian Institute of the Environment and Renewable Natural Resources). The village of Jaraguá sits within an Área de Proteção Ambiental (APA, Environmental Protection Area). Employees of the Ibama therefore place certain restrictions, such as, for instance, limiting the wood gathered from mangroves. This practice was prohibited for a time, though it is very important for the domestic economy of the Indigenous people. Gathered wood and leaves are used for fencing, covering houses, constructing work tools, fire, and so forth. As to the interventions of the environmental agency, Silvinha reported the following:

They want to stop us from getting some wood there, but that wood on the floor it's no use anymore, up there it's more important, if you deforest here, there the water will dry up, that's it, and the tide will hit us. They have to look at this there. Look over there; it's all burnt. They don't see that the main thing are the sources of water, they only see the mangrove. Because sometimes the wood is overturned and we make charcoal. I don't agree when they remove saplings, I live in here, I have to preserve that there. The mangrove alone, it finds a way, but just because there are people it doesn't mean it's going to die right? No, it doesn't die (Silvinha. Interview in December 2016).

Fishermen periodically clean fishing areas, removing tree stubs and mangrove *porpopoté* roots, so that they remain free for boats to reach the main channel of the rivers, or to leave the mangrove, thereby avoiding landfill areas. According to Silvinha:

It's God's work, but without man's hands to help, it will also destroy itself. There is a place that we fixed in the mangrove; the wood was all overturned. We cut it: it was beautiful! Today the wood is big, we have to go again, because the wood is already inside the mangrove; it starts flowing down and it dams the river, the garbage (leaves, branches) goes down; then it fills it up (Silvinha. Interview in December 2016).

From the narratives, it is possible to see that there are conflicts, particularly in what concerns the extraction of wood from the mangrove. However, the inspection agency imposes restrictions on the inhabitants of the area, and the latter question and often disrespect these rules, because the space has been occupied by Indigenous people since long before the APA was created, and Indigenous usages and customs have been reproduced in this space for centuries. There is here a political dimension of limited *accessibility* to the territory and its resources, which conditions the development of the *household ecology*. This configuration results from practices of territorial and ecological control and domination. Faced with limitations on their activities, the Potiguara react by establishing strategies and participating in political movements to recover the administration and use of the territories that they have traditionally occupied, as is made clear in the words of Aníbal, the village headman⁸:

When they say "it's this" we say, "no, it's this way". When they forbid, we hold a meeting and say "our custom is this one here, you can't now forbid us from using our nature". They, who arrived here, wanted to forbid Indians from gathering dry wood in the mangrove. This dry wood is already dead, it's no use, you have to remove it. They said we couldn't do it, and we said "yes we can". Now, cutting down the mangrove to plant - no. So when they decided to remove stakes to make fencing, we forbade them; let's call IBAMA to arrest them. Because with stakes, the trunks are bigger. Then they take, let's say, they take one thousand stakes, that's too much. So anyone who wants stakes is going to have to buy them, because they ain't getting them from the mangroves. Now, to build a house, we allow it, because we see that there is a need; then you've just got to (Aníbal. Interview in January 2016).

Faced with certain situations, the inspection agency holds the inhabitants of the area responsible for what they see as damage to the environment, which further restricts their subsistence options. A dispute thus arises between distinct modalities of management or access to and use of resources, and by the socially unequal display of the environmental damages and risks caused by industrial endeavours during the historical process. It is precisely against the conditions imposed by dominant policies that the Potiguara seek to impose their own power, to access and control the resources present in their territory – through the *household ecology*, where they build domanial spaces and define mobilities, as we will see in the following section.

⁸ Aníbal is married to Cássia. Relations within their household are configured by the couple and their three children. Grandparents, parents-in-laws and brothers-in-law which live nearby cooperate with each other with certain tasks, such as fishing, hunting, gathering wood and planting gardens.

Temporalities and movements

From what we have seen thus far, it can be said that activities carried out in the *environments* enable the refinement of different technical knowledge that results from the practical experiences of members of households. These experiences are directed at configuring inclusive and exclusive spaces in which domain is affirmed over a certain geographical space (Mura e Barbosa da Silva 2018).

In the present case, the habitational unit is the space of *exclusive* use by members of households. This exclusivity allows for control over the areas aggregated to the house. In contrast, the mangroves, the floodplains and the forest are *inclusive* spaces, the resources of which are jointly accessed and used by the members of different households.

The temporalities and movements that construct these domanical spaces, much like the criteria that determine *accessibility* to them, configure an ecology of Potiguara households that creates the conditions for establishing itineraries, contemplating mobilities, fostering interaction in the environments, with the resources present therein. The success of the activities is directly related to specific temporalities. As there is a time for fishing and a time for planting, these understandings are formulated in experience, informing the process of accumulating knowledge of climate, fauna, flora tidal regimes, which are part of the dynamic of the groups within the territory. The seasons, for instance, are characterized as follows: the first rains occur when it is still Summer, in the months of January and February; between the winter months of March and August the rains are intense. Summer starts between September and October; November and December, the months of Summer proper, are considered to be the hottest months of the year. The best time for gardening corresponds to what Evans-Pritchard (2005) calls *ecological time*, a time defined by the cycles of the *environment* to which the social groups adapt and which they mould through regular activities. For the Potiguara, the dimension of time is established by work in the gardens, which is divided into two periods: a time of waiting and a time of harvesting. The first rains of January signal the start of planting, when the members of households gather with the aim of cultivating gardens, which are “cleaned” so that seeds can be planted and germinate.

People cultivate in the Sandy soils called *arisco* during the rains, and in the dry season they make their gardens in the waterlogged *pau* soils. Soil is an indispensable element in agriculture. It is a renewable mineral resource that is essential for plants which develop from within it, taking nutrients and water for germination, growth and later production.

Yams, manioc and beans are cultivated in January. The time of planting extends into May, in which beans are planted. Manioc is usually planted by itself, or interspersed with beans and maize, with planting beginning at the start of the rainy season. The “garden” (sweet manioc) can be planted throughout the year. As the Potiguara often say: “Everything that’s planted will depend on the ‘wateriness’ (*aguação*)”, that is, on the amount and availability of water. The wait for different food varieties thus depends on distinct temporalities. Products cultivated during January are harvested in August, those planted in March are harvested in June, and those planted in May are harvested in August. The dynamics of planting, cultivating and harvesting is part of a constant cycle for members of the households.

Alongside the climate regime, those Potiguara who fish – which are most of them – also guide themselves by the tidal cycles. For any type of fishing, one needs to know the movement of the tides; the perception that fishermen have of the cyclical regularities of tides is this crucial for success in fishing.

Tidal cycles, however, are more important ecological factors, since they influence the way of life of animals and how fishing techniques are defined. They are directly affected by lunar cycles; during a waxing moon the tide “launches” itself, that is, it grows until reaching a “full tide”.

When the moon is waning, the tide reverts to “breaking tide”, until it reached a “dead tide”. Mr Zé Boto⁹, an older fisherman in the region, explained to me that the tide “works” according to the moon, noting that there is a “last quarter tide” and a “full moon tide”:

There, the last quarter will be a small tide, it doesn't put out much water, because it's the last quarter, right? Now, when it's the other, the full moon, it heaps from day to night, it's dry today, when it's tomorrow it goes away... Because the tide is big (Mr Zé Boto. Interviewed in July 2013).

The tidal phases are thus observed during the day, particularly by the fishermen, consisting of the following denominations: “full”, when it reaches its maximum point; “waning”, when it is decreasing; “empty”, when it is at its driest; and “waxing”, when it is filling up. The movement of the tides corresponds to two processes. The first is longer, and refers to weekly cyclical alternations, while the second refers to alternations that occur over one day and one night. During the “big tide” the volume of water rises and decreases in all of its capacity. During a “dead tide”, there is little variation, the tide neither waxes nor wanes, never coming to fully flood the mangroves.

Individuals notice the variation in the tides along a monthly and daily cycle, and they understand that this variation occurs in relation to the strength of the moon. The moons are called new, waxing, full and waning. These phases of the moon are associated with monthly tidal cycles, called “big tide” when the moon is new or full; and “dead tide” when the moon is waxing or waning.

The mangrove is an economically profitable environment for the Potiguara. To live off the mangrove/tide is to establish daily behaviours and routines interlinked with this environment. The mangrove is a “way of life”, it is the environment in which the main local productive activities are carried out. It is where fish, crustaceans and molluscs are obtained, and a space upon which many of the inhabitants of the area depend for a living. Fishermen and women have very keen knowledge of the mangrove, and are hence able to locate aquatic animals and develop efficient techniques for capturing them. They carry out their activities individually or in partnerships, usually among close kinspeople, such as a father, a son or brother. Produce is divided into equal portions. Part of the fish is consumed or given to kinspeople and neighbours with whom one is on friendly terms, and part is sold in the village or in the local market when the catch is bigger.

Even those (male) individuals who work harvesting sugar cane for the mills stop work after the milling period and return to the mangrove. Mill work is seasonal, usually beginning in July and extending until late March, so that people have from April to June free to fish and gather crustaceans, or else to engage in informal waged work. Many women also gather oysters in the mangroves.

However, it must be stressed that the activities carried out in this environment are not exclusively motivated by financial gains. As I have mentioned, animals obtained from fishing and gathering are not only sold out; they can also be given to neighbours, friends and kinspeople, establishing and consolidating networks of reciprocity. Fishing is thus more a way of life characterized by rich and complex relations between people and the aquatic environment. Processes of production and transaction of knowledge and the spatial organization of technical activities occur within this meshwork.

The main plant species found in the mangroves are the “tame” mangrove tree (*Laguncularia racemosa*), which is mainly used to make fire. This mangrove tree has a darker trunk, and smaller roots. The “sapateiro mangrove” (*Rhizophora mangle*) has higher roots and, because of its resilience, it is mainly used to cover habitations. Rafters, clapboards and staffs are also made from “sapateiro” mangrove.

⁹ Mr Zé Boto was born in Jaraguá and married Fátima, with whom he had eight children. Three of them live in the village, while the other five have moved to the Southeast of Brazil. Mrs. Fátima and Mr Zé Boto are the supporting axis of the *household*, not least because they raise six grandchildren while their parents are working in the Southeast. Cooperation among the members also turns to food preparation, animal and garden care. Older grandchildren help their grandparents cutting grass for goats, collecting wood for coal, and take animals to pasture and back to the corral.

Wood is also used to make henhouses, corrals and goat pens. “Canoé” mangroves (*Avicennia germinans*) are large trees. Their deep roots rarely give, and most are situated in the areas of the swamp in which mud is mixed with sand (Araújo, 2015: 35).

“Tame” mangrove



“Sapateiro” mangrove



“Canoé”. Mangrove



Photos by the author, 2013.

The mangrove is made up of “places” or “sectors”, designated according to their physical characteristics. There is the “soft manioc mangrove”, “the cut foot mangrove”, the “fallen hill mangrove”, among others, which fishermen name to facilitate work and orientation. In these places, fishermen create *exclusive* spaces within shared areas, naming them and often delimiting them through spatial markers, constituted by strips of tape and plastic bags tied to sticks plunged into the mud of the swamp. These markers indicate to other fisherman that the area is temporarily occupied, and that they should search elsewhere. There is this an alternation of these areas which fishermen call “sectors”.

According to Silvinha, it is not advised for one to fish twice in the same “sector”:

Let’s suppose that we removed a net from this sector, only one month from now do we put it again in that sector, because of the pisunhando (footstep in the mud) right? Which raises the bad smell, so if fifteen days later you go back there you get the pisunhando, and the fish broods right? Only one month later then, because of the pisunhando which the fish knows, each fist of net I give four spins on it, we step a lot on the mud, that sour smell rises up (Silvinha, interviewed in December 2016).

In Silvinha's report, the fish communicate; they "brood" with the *pisunhado* of other beings and move away. Fish thus act, as they interact with fishermen. This perception is constituted from the fact that the individual is in an environment in which he relates to other beings. To paraphrase Ingold (2012), the relations established are founded on the adaptation of cognitive skills to the environment; that is, the world is only lived with and around it, which is linked to the capacities to act, think and establish relations with each other and the world of which they are a part. This dynamic conforms to the knowledge based on the experiences of Silvinha, for example, and the recognition that, like men, marine beings are acting subjects.

Another fact, tied to same sort of knowledge which corresponds to the experiences of Silvinha in the mangrove, is his *skill* at seeing in the dark:

When I began to fish, I couldn't look to the side because everything was dark, when we walk in the dark for a long time our eyes adapt. Today I can see things that I couldn't before. (Silvinha, interviewed in December 2016).

This *skill* was acquired with time, during interactions in the environment, and can be described as a dynamic synergy between the organism and the environment, as proposed by Ingold. According to Ingold (2002), human beings – during their interactions with the world – are not confined to their bodies, but entwined in an environment-organism system. Referring specifically to fishing, Cordell (1974) claims that it is an activity that functions as a man-environment system. In this connection, the adaptive process during fishing furnishes an intricate knowledge for finding fish.

As far as locating fish is concerned, there is a tendency on the part of economists to discount important intuitive aspects of environmental decision-making; the assumption is that fish must be sought blindly (Christy and Scott 1965: 88). In general, there is little appreciation of how, and to what extent, fishermen make use of environmental clues to predict the behavior and movement of different species. It would be quite misleading to assume that canoe fishermen face a kind of "separate" reality when they are dealing with their fishing environment. On the contrary, fishermen do consistently know where the fish are, and it is this widely shared knowledge, not simply the fact that they are using a common property resource (Cordell 1974: p.379).

Mangroves also include the *camboas*, which are paths that enable the passage of canoes and also serve as fishing areas. Fishermen tend to say that they "work a *camboa*". Fishing is also possible in the so-called *croas*, areas of the swamp with a concentration of sand.

There is a temporal change in views of the mangrove. Older residents say that the mangrove used to be very different from what it is today, with an abundance of resources. They attribute the loss of resources to deforestation and to landfilling of the rivers because of the sugar cane monoculture. There was more fish in the past. However, they recognize that today they can make a greater profit. The mangrove used to be closer to their villages, which made the work of fishermen easier. Today the mangroves are far away:

The mangrove is ending because of deforestation (...) The sand has come down, damned the river, that "hole of the priest"¹⁰ that they talk about, all that sand comes down to the mangroves during the rains (...) This part here on top, it was all forest, the mill cut it down to plant sugar cane, and the sand then got soft, since that's up high and we're here down low, of course it's all going to come this way! Then they deforested it, and so here where we used to get the black shrimp, it's all damned, there is no more (Silvinha. Interviewed in December 2016).

Among the main fishing techniques is the "taking net" (also known as the "waiting net"). It is directly tied to the rhythm of the tides, since it is set when the tide is waning. When the tide is waxing, the net is raised, creating a barrier in the *camboa*. It is "unfished" (gathered) when the tide wanes again. Sticks are spread through

¹⁰ A long and deep ditch in Jaraguá, caused by erosion.

the bed in the perimeter where the nets will be attached with the *gaitas*¹¹. Silvinha, for example, sets up 300 meters of nets in sequence, attached one to the other, surrounding all of the *camboa*. The fish enter the *camboa* as the tide dries up; when the tide rises, the net is raised and the fish are gathered:

In the breaking Sunday, from mid-day to twelve o'clock we're arriving with fish, then Saturday at 3 o'clock we put it, then we go back home and then when it's 10 I go down to raise it, unfish on Sunday morning. We don't like to throw it, because we take two days and the breaking, with three days you've got two tides, because you work today and gather at night, and next day you start again. (Silvinha. Interviewed in March 2017).

To paraphrase Cordell (1974), we may say that fishermen take note of miniscule details, related to how the tides condition the choice of technique, but also to an understanding of how a trip to the mangrove is to be planned. The position of the moon, along with an observation of its phases, indicate whether fishing is feasible. Fishermen must furthermore know which specific sequence of tidal changes will occur during the part of the day that they have set aside for fishing. It is this aspect of knowledge of the tides that is most useful for ensuring large catches.

The most common fish in the mangrove are: Brazilian mullets (*Mugil brasiliensis*), mojarra (*Eucinostomus gula*), the common snook (*Centropomus undecimalis*), catfishes (*Siluriformes*), goldfish (*Carassius auratus*) and the flathead grey mullet (*Mugil cephalus*), classified as follows:

Classification of fish according to water zones

Floating Fish	Deep Fish
Brazilian Mullet	Amoré
Flathead grey mullet	Mero
Goldfish	Catfish
	Common snook
	Mojarra

Table elaborated by the author.

There is furthermore a fishing technique with drag nets, in which the fisherman throws the net in a perimeter that he knows to contain fish, so that the mesh opens up as much as possible before hitting the water. He then pulls it to capture the fish that became caught in it.

Oyster (*Crassostrea rhizophorae*) gathering is also important for the diet and income of the Potiguara. This mollusc gets caught in the roots of the mangrove, and the fisherman dives to remove them with a machete. It is also possible to gather oysters when the tide dries up, or by cultivation, a technique involving "cages" (woven baskets) attached to trunks and fixed to bed of the mangrove swamp.

The swamp ghost crab (*Ucides cordatus*) (uçá or "salt", as it is usually called), as well as the blue land crab (*Cardisoma guanhumi*) are captured in the mangroves all year round. However, during the "walking" season (January-March), the reproductive period in which male and female crabs leave their burrows and wander through the swamp, they become more frequent (particularly the swamp ghost crab).

The crab fishers (*caranguejeiros*)¹² stick their hands into the burrows, searching for the roots. They know that the crab usually positions itself there, on its side, and they feel their way until they find its back,

¹¹ *Gaitas* are mangrove plants called *salambaia*. Their stalks are used for attaching nets. Once they are removed, they are called *gaitas*.

¹² Those who call themselves 'gatherers', with knowledge of how to grab crabs (v. Araújo 2017)

pulling it by its hind legs. When it is in its burrow the crab's movements are compromised, which makes it more difficult for it to defend itself.

There is also the "lid" technique, which involves covering the burrow with mud. After some time, the crustaceans start to come up and they can be pulled out by crab fishers:

That mud goes down there, then it blocks, steps on the burrow, and then it loses its breath and comes burrowing through the mud. When it reaches the top that's when you wrestle the crab, the arm goes to get him. But in the big tide you put the net, in the dead tide which dries up the mangrove that's when you use the lid (Silvinha. Interviewed in December 2016).

Among the traps used is the "little net", which is forbidden by the Brazilian Environmental Agency (IBAMA), since it impacts on the crab population. The technique works in the following way: a small discardable net is placed in the burrow, and as the crab exits it is trapped. Once it has been caught, the net fragments are generally left behind, which is not only polluting, but also puts other crabs at risk, as they get tangled to them. Speaking of this technique, Silvinha affirms he is against it, mainly because it pollutes the mangroves. He says that whenever he finds net residues, he burns them, using the wood stove fathom (called "fire mouth") he keeps in his canoe. To catch the blue land crab, which is most admired, and which is most valuable commercially, he prefers the "rat trap", described in the previous section.

Using Silvinha as a privileged interlocutor, I took note of a final temporality, with a weekly cyclicity, that joins those that have already been described. These are Silvinha's weekly cycle of activities. I intend to show how he organizes and deals with time and with his activities, which are tied to various aspects of mobility and to specific competences. Below I present a table¹³, featuring the days of the weeks and their respective tasks. This tool depends on the analysis of empirical data, which are not employed in a rigid manner: the processes described are dynamic. The movements and flows reflect aspects of daily life and of the organization of tasks.

The peculiar manner that Silvinha organizes his time and activities, displayed schematically, is crucial for understanding not only the itineraries, but also the organization of work, itself influenced by ecology, since most activities are carried out in different environments. From this point of view, the activities described in the table are defined by a set of times which include limits, contingencies and scales, that tie them to specific technical skills. This process of diversifying activities is what enables access to equally diversified knowledge, which jointly contribute to the organization of households.

Carrying out the activities involve material and immaterial principles, in which ecological elements also figure, such as the rhythms of the tides and the seasons. The technical dimension that conducts these relations is refined through physical and chemical knowledge, that turn on skills that derive from diverse flows, constructed out of a range of experiential resources.

The activities are not carried out in a static manner, since they are related to other acts at political and commercial levels, and to exchanges that depend on alliances and physical, political and administrative constraints, the articulation of which draws a map of the conditions of access to resources. They contribute to determine the *repertoire of possibilities* (Mura 2000) of the household, as well as the itinerary of activities that its members will follow.

It should be taken into account that the activities articulate with each other, defining cycles. When the tide is not right for fishing, for example, Silvinha takes care of the cattle¹⁴ of his household. These animals are tethered to fenced areas of a house's yard. However, cattle are released every day and taken to pastures (see photos). Manure is also used as fertilizer for Silvinha's households gardens.

¹³ It should be stressed that the activities described in the table should not be interpreted statically, since they correspond to the social organization of work, involving various members of the households that I researched.

¹⁴ Cattle are a sort of provision. When the household faces a financial crisis, its members tend to sell a few heads of cattle.

These activities depend on the radius of activity, of Silvinha's comings and goings to the mangroves and the pastures, of fish obtained and consumed or sold. These flows produce processes of *domaining* that contemplate different strategies of relating and interacting of people and elements of the environments. To reach the mangroves I need to move across spaces that are not exclusively mine, including the yards of my neighbours and acquaintances. For this to occur, one needs to be on good terms with the owners of these spaces, or else other itineraries have to be devised. The owners of the forests and the mangroves also need to be pleased¹⁵. Strategies for building and maintaining good relations, centred on moral obligations and practical experiences, allow one to precisely extend control over the spaces that are to be utilized. Yet these relations must be always renewed and ratified, particularly following accidents or misunderstandings, when ensuing tensions and conflicts may threaten access to spaces and their desired resources. An example of this occurred to Silvinha. One time, his cattle invaded the gardens of his brother-in-law's ranch, causing extensive damage, which led to a conflict within the household. As a consequence of this oversight, Silvinha was barred from accessing the spaces over which his brother-in-law held domain, consequently altering his trajectories, mobility and the rhythms of his activities, particularly in relation to livestock husbandry.

The rhythmic dimension also results in the development and use of techniques. This integration is converted in different forms, but particularly at the level of a perception of the individual in space, in her movements produced by her practices, such as in trips to the garden, to mangroves, to pastures, to other environments. According to Leroi-Gourhan:

"...perception of the surrounding world occurs in two ways, one, dynamic, consisting of travelling through space and thereby taking conscience of it, and another static, allowing, by its immobility, to reconstitute successive circles around us, which progressively blur into the limits of the unknown" (1965, p. 134).

We can thus say that the movements produced by individuals enable activities to be carried out, through individual and collective strategies, directed at configuring calendars, itineraries, rhythms, so as to create an efficacious technical medium.

In this same perspective, Mura and Barbosa da Silva (2018, p. 12) analyse the movements produced by the *jeheka* ("to go look for") practice of the Guarani Kaiowa:

The very mode of movement and use of space derived from the *jeheka* experience, through *oguata* (wandering) – which, as we have seen, encounters its cosmological sublimation in the time-space of origins, in the formation of tracks by the gods – occurs by strongly valuing centres of irradiation, with the Earth itself having developed from a disk, which later became the Earth's own navel. In this context, therefore, we speak of a modality of construction of territories from centres of wandering irradiation. In other words, the Kaiowa people construct spaces of use and occupation through an "irradiated itineration". In fact, *jeheka* activities and those arising and/or correlated with them have an axis, that is, the point of departure and arrival, in the residential spaces of the various Kaiowa households.

This explains rhythms in their many centres of *irradiation* and *itineration*, conferring amplitude to the spatial activities of the Kaiowa. This dynamic of rhythms is also conformed in the practical experiences of the Potiguara, at the level of a perception of the territory, who, through movement, gain access to it and transform it in the rhythm of their activities, in the dynamic of the tides and the seasons.

¹⁵ Comadre Florzinha is the owner of the forest and the Father of the Mangrove owns the mangrove. These beings are respected, thanked and feared. The moral dimension which conducts this relation is evident in the punishments they mete out to those who fail to observe their demands, which range from respecting game animals during hunting and fish during fishing, to providing offerings, such as *cachaça*, tobacco, and honey. It is thus important to maintain a relation of proximity and exchange with these beings. This requires affinity and respect to ensure good fishing, hunting and protection so that one does not lose one's way in the mangroves and the forests.

It is also noteworthy that the members of a domestic unit carry out various types of activities, resulting in a complex and diversified temporal concatenation. Calendars deriving from the bureaucratic time of the Brazilian State, from agricultural and fishing activities, from the sugar mills, the tidal regimes, climatic and seasonal factors, all provide a backdrop for the Potiguara of Jaraguá village, out of which they construct temporalities that establish an alternation of activities and the mobilities that derive from them, marking contextual spatialities. These cycles orient the lives and routines of people and result from practical experiences and decision-making processes that enable the articulation of different activities, ensuring the reproduction of local groups in time and space.

Weekly calendar of Silvinha's activities

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
SILVINHA	1:00, "unfish", bathes and waits for the tide to rise back. Gets home at 4:00, rests, and at 9:00 goes to the mangrove to set up his net.	4:0 returns home. Pause to rest. 8:00 cleans the fish along with his wife, son and mother-in-law. Afternoon: goes to his brother Zé Boto's house.	(Dead tide). 6:00 takes cattle to pasture 14:00 brings cattle to the fence in the yard.	(Dead tide) 9:00 fixes faulty nets. Afternoon: goes to the mangrove to gather the <i>gaitas</i> , which attach the net to the mud.	(Dead tide) 8:00 cuts grass for cattle. 16:00 cleans his garden (removes underbrush).	(Dead tide) Leaves 8:00. gathers "tame" mangrove for coal and rafters to make a henhouse.	(Breaking tide) Leaves 13:00, arrives 14:00, sets up his net and returns home. Leaves 18:00 to raise the net. "Unfishes" at 22:00, and sets up the net again.

Elaborated by the author, 2017.

Spatial range of some of the activities carried out by Silvinha in Jaraguá village



Elaborated by the author, using the Google Earth programme, 2017.

Cattle tethered to the yard.



Cattle grazing



Photos by the author, 2017.

Final Thoughts

This article has presented technical concatenations and transformations that occur in specific *socio-ecological-territorial* contexts. These contexts are constructed through relations and interactions between knowledges, materials and social and cultural factors, in specific environments, which allows Potiguara households to carry out diverse activities through individual and collective strategies. In the process, individuals elaborate a complex association of materials of different provenance, such as plastic, metal, rubber, vegetal and animal fibres, among others, which are articulated according to needs that arise within households at the local level, defining temporalities and movements of people and things. This article has thus sought to understand how technical systems are generated and transformed by multiple causes, apprehending the complexity and importance that these technical transformations manifest.

This situation results in experiences that accumulate through the refinement of skills and orientations that turn on what we call a household ecology, understood as a product of the activities that members of households carry out, exploring environments and defining control over spaces through specific processes of *domaining*. These processes create the conditions for the establishment of itineraries, contemplating mobilities and rhythms that are motivated in terms of local knowledge and political relations, technically necessary for regulating the *accessibility* and *availability* of material in the territory. Household ecology is thus in continuous transformation, producing complexity and heterogeneity of technical acts through long experience of life in the environments. These experiences furthermore reveal how the emergence of competences and skills is dynamic, allowing us to apprehend traditional knowledge not as the result of the simple inheritance of past knowledge, but as a specific, present, modality of accessing, organizing and concatenating diversified materials, taking into account their physical, chemical and technical properties rather than the nature of their provenance.

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Thinking About (and with) Maps: A Reflection on Artistic-Activist Interventions in Contemporary Metropolises

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Abstract

Hegemonic maps that are guided by political, cultural, and economic interests, name and create visibility schemes that establish representations of goods and natural resources while simultaneously fixing and making invisible the social and spatial dynamics that characterize mapped regions and populations as unique. Many associations and artistic-activist collectives are concerned about this situation and its effects and have started to use *open source software* in order to make visible a set of political issues that are hidden by “official” maps, geared towards control. With regard to this symbolic confrontation, the present article’s main objective is to systematically reflect upon political and associative arrangements related to the contemporary dissemination of technological resources aimed at cartographic practices.

Key words: mapping techniques; artistic activism; visibility; territory; urban space.

Pensando sobre (e com) mapas: uma reflexão sobre intervenções artístico- ativistas nas metrópoles contemporâneas

Resumo

Orientados por interesses políticos, culturais e econômicos específicos, os mapas hegemônicos nomeiam e, com isso, produzem regimes de visibilidade que fixam representações sobre bens e recursos da terra, ao mesmo tempo em que congelam e invisibilizam as dinâmicas sociais e espaciais que caracterizam as regiões e populações cartografadas. Atentas a essa realidade e aos seus efeitos de poder, distintas associações e coletivos artístico-ativistas têm feito uso de tecnologias digitais e certificados de direitos intelectuais de código aberto com a finalidade de atribuírem visibilidade a uma série de processos políticos, os quais tendem a ser ocultados pelos mapeamentos “oficiais” e de controle. Tendo como referência esses enfrentamentos simbólicos, a proposta deste artigo será refletir, de forma detida e sistemática, a respeito dos desdobramentos políticos e associativos relacionados à disseminação contemporânea do acesso a uma diversidade de recursos técnicos voltados à prática do mapeamento.

Palavras Chave: técnicas de mapeamento; ativismo artístico; visualidade; território; espaço urbano.

Thinking About (and with) Maps: A Reflection on Artistic-Activist Interventions in Contemporary Metropolises¹

Guilhermo Aderaldo

Introduction

That which a map demarcates, an account crosses (Certeau, 1994 [1980]: 215).

Maps are slices of the world that are based on particular perspectives and specific interests (political, cultural, military, economic) related to the territories they portray. In a strategically oriented fashion, hegemonic cartographies name and produce regimes of visibility that fix representations of the Earth's goods and resources in place, while freezing and making invisible the dynamics that characterize the mapped regions in their daily relations. They disregard popular forms and unorthodox socio-spatial representations².

Artistic-activist groups around the world are aware of this reality and its effects in terms of power on associations, collectives, and traditional communities. In response, these artist-activists have taken advantage of digital technologies, employing free software and open source intellectual property (such as the *Creative Commons*³) in order to produce and to circulate critical insights that are capable of exerting counterhegemonic effects by making certain processes visible. These processes are often political and not necessarily geographical and, when they become visible, systems of control and domination that are often obscured by official maps become perceptible. These new cartographers and the cartographies they produce are aware of the fact that all forms of knowledge that deal with space do not only “portray” but “construct” their object⁴.

¹ I want to thank, first of all, the evaluators for their opinions about this article, especially their rigorous and attentive analysis, which has allowed me to improve it in many fundamental respects. I would also like to thank to FAPESP for my postdoctoral fellowship in Brazil (Processo No. 14 / 04243-8), as well as for funding my research internship abroad (Processo No. 17 / 04416-8), which was essential for writing this text. Finally, I'd like to thank CAPES, for my current post-doctoral scholarship (Processo Nº 88887.372324/2019-00). I also remind readers that the opinions, hypotheses, and conclusions or recommendations presented here are solely my responsibility and do not necessarily reflect the views of FAPESP or CAPES.

² What I designate here as “hegemonic” or “official” cartographies are, in short, mappings based on territorial and identity classifications produced by state-linked institutions or private corporations through censuses and registrations, among other things, with a view towards standardizing identities and defining spatial boundaries under the logic of primordialist criteria, supported by notions that disregard the self-definitions of mapped populations and which then become indicators for policies.

³ For more details see: <https://www.creativecommons.org> (Accessed 13/06/2018).

⁴ New elements have been brought into the public and academic debates, with regards to this criticism of the boundaries of traditional “geographical” cartography. These include successful “ethnomapping” experiments. One of these experiences worth noting is the “New Social Cartography of the Amazon”, created by a diverse group of researchers linked to different university institutions and local populations, who have been working together to confront the positivist and arbitrary logic that underpins the way hegemonic powers produce cartographic data about the region and the populations within it. For more information, see Almeida (2013).

For these new⁵ cartographers, the cartographic technique ceases to be understood simply as the application of neutral and scientific knowledge to the reality of a given location. Instead, mapping is understood as a set of practices and interactions that cannot be reduced to the materiality of the objects it produces. Understood from this point of view, the map becomes much more than a mere artifact, resulting from the application of an abstract scientific rationality: instead, it is configured as one piece (among others) of a “socio-technical system” (Akrich 1989; 2014 [2010]) whose evidence disappears to the degree that we conceive of it as the embodiment of an irrefutable objective reality.

The purpose of the present article is to think of maps as “technical objects” (Akrich 2014 [2010]), enmeshed in a set of symbolic and political confrontations linked to different (and competing) ways of conceiving contemporary relationship between visibility, power, and tactics of territorial representation and occupation. In this endeavor, we foreground the fact that:

Through their configurations, technical objects define a certain partition of the physical and social world; assign roles to certain types of actors -- human and non-human -- while excluding others; authorize certain modes of relationships between these different actors (...) such that they can fully participate in building a culture in the anthropological sense of the term. At the same time, [these objects] become mandatory mediators of all relationships that we maintain with the “real” (Akrich 2014 [2010]:161).

In view of the above, I will seek to highlight the set of relationships made by the confection of different sorts of maps and, to this end, the article below will be divided into four parts.

Initially I engage in an interdisciplinary dialogue with different bibliographic sources in order to problematize understandings of territory that are either too abstract or too rigid, drawing attention to the importance of a relational perspective of current spatial-temporal dynamics. Analyzing some case studies involving the cities of Rio de Janeiro and São Paulo, I then present examples that illustrate how the hegemonic cartographic imagination is not a faithful portrait of reality, but always a translation of partial perspectives that are related to disputes regarding the legitimate interpretation of mapped territories and the populations that occupy (or should occupy) them. In the article’s third section, I relate the experiences of a pair of Argentine communicators, educators, and social activists called the *Iconoclastas*, in order to show the ways in which they have developed a set of collaborative mapping techniques, which they have disseminated through transnational activist, artistic, and academic circuits. In the final section of the article, I will use my experiences as a member of a workshop aimed at teaching collective mapping techniques (a workshop organized by the pair discussed above) in order to think in more detail about the pedagogical and critical roles that this type of practice plays. I will then conclude the article with some final considerations.

Places, spaces and mobilities: Towards a relational perspective of territories

In the first volume of his classic work, *The Invention of Everyday Life*, Michel de Certeau differentiates “place” from what he defines as “space”. According to de Certeau, “place” is an “order in which elements are distributed according to relationships of coexistence” (Certeau 1994 [1980]: 201). A “place” is thus the result of a normative perception of the territory, guided by the “one’s own laws”: i.e. by a coherence that presupposes a stable structure with fixed boundaries and which, by necessity, excludes the possibility that two things might

⁵ In this case, the expression “new” seeks to draw attention to the difference between the type of mapping that the subjects I researched produce in relation to that produced by official cartographies. My subjects are not committed to a closed system of methods based on censuses, measurements, and etc. Instead, they draw upon a diverse set of experimental methods and sources based, above all, on in-depth knowledge of localized realities. They thus seek (as Almeida remarks (2013:155), to cause “(...) a rupture with the monopoly of identity and territorial classifications historically produced by colonial society(...)”, as they record an increasingly noticeable tension between groups’ self-consciousness, expressed by collective actions and self-definitions, and census categories of identity supported by primordialist criteria.

simultaneously occupy said place. “Space”, on the other hand, is the result of itinerant practices that can symbolically appropriate places, breaking down the rigidities that maintain fantasies of unity and cohesion. In the author’s own words, “(...) Space is place as practiced. In this way, a street geometrically defined by urbanism, is transformed into space by pedestrians” (Certeau 1994 [1980]: 202).

When understood in these relational terms, “space” refers to the effect generated by the encounters of the diverse and conflicting mobilities that are present within territories. In light of this view of things, “space” is the stage upon which “places” are conceived of and enacted by different human groups via rules, hierarchies, codes and private boundaries. These co-exist and/or enter into conflict with a greater or lesser degrees of confrontation, as authors such as Gilberto Velho (1999) and Antônio Arantes (2000) have demonstrated through metaphors such as “the worlds of Copacabana” and “the war of places”⁶.

Similar to Certeau (1994 [1980]), but without his concern of employing a strict differentiation between “space” and “place”, is the work of French archaeologist and anthropologist André Leroi-Gourhan (2002 [1965]) and his use of the notions of “traveling space” and “radiating space”. According to this author:

Perception of the surrounding world takes place in two ways: one dynamic, consisting of traveling through space and thus becoming aware of it; the other static, its stillness allowing us to reconstruct around us successive circles, which become progressively more vague until they reach the limits of the unknown. One way gives us the image of the world based on an itinerary, while the other integrates the same image on two opposite surfaces -- heaven and earth -- which come together on the horizon. These two modes of perception and understanding exist, together or separately, in all animals, the itinerant mode being especially characteristic of terrestrial animals, while the radiant mode is above all the bird’s point of view (...). In the case of man, the two modes coexist and are primarily related to vision, having originated a double representation of the world, in simultaneous modalities that, according to all indications, are inversely proportionally represented before and after sedentarization (Leroi-Gourhan 2002 [1965]: 134-135).

Leroi-Gourhan (2002 [1965]: 136) thus believes that forms of spatial representation produced by the nomadic hunter-gatherers during the period prior to sedentary agriculture were images that referred to “traveling space”. For Leroi-Gourhan, there was nothing “in cave art” that demonstrated the radiant perspective that later came to dominate human experience -- particularly through processes of urbanization, when a whole system of geometric references in the world imposed itself upon our ways spatial and temporal thinking.

The underlying idea that interests me here, however, is that the act of walking about (traveling) is to the radiant representation of territory (the “map”, for example) what speech is for language. In other words, the act of walking about the world is capable of producing unexpected effects, as it does not necessarily fit the scheme proposed by those who create the idealizations of places.

6 Both authors analyze places, having as their principal references the symbolic dimensions of these places. Their studies show how the same environment can be meaningful in very different ways, depending on the actors or social nuclei with interact with it (and with mappers). They thus create an approach that enables understanding of the way space tends to be constructed differently by different subjects, with the researcher concentrating on not reproducing airtight descriptions that, as they lose sight of this dynamic, tend to naturalize normative interpretations. For more details, see Arantes (2000) and Velho (1999).

By moving oneself, by letting oneself be taken over by the experience of the rough and noisy metropolis, the city dweller is encouraged to create links between apparently discontinuous environments which are connected through the layout of the city's routes. Thus, where one sees borders on a map, the act of travelling constructs "bridges". Likewise, where cartography indicates a continuity, one might actually encounter a physical or symbolic barrier in one's travels⁷.

Put another way, there are individual experiences that form around these routes, created by the steps pedestrians take and which are imperceptible in traditional mappings. As Tim Cresswell, notes, "a line on a map linking A and B may be experienced completely differently by a man and a woman, or a businessman and a maid, or a tourist and a refugee" (Cresswell 2009: 26). Roaming about thus becomes an act that can produce and reveal other mappings: it challenges the topographical logic that gives meaning to traditional maps.

Indeed, authors like Certeau (1994 [1980]) and Cresswell (2006; 2009) understand as counterproductive, readings that reduce the spatial dimensions organizing practices in a town to rigid geographical lines. They believe that spaces only can be effectively understood in their complexity when we account for the mobility of the agents that circulate through them.

Another important contribution that conceives of space from a relational and mobile perspective can be found in the work of British feminist geographer Doreen Massey (2012 [1991]). In one of her best known articles, Massey seeks to counter certain "conceptual exaggerations" that arose at the end of the twentieth century, when the remarkable transformations in the field of geopolitics, economics, communications, and transport led to the creation of a problematic duality in the public debates of the period. This duality was characterized by opposition between those who linked urban fragmentation and "disorder" to the supposed loss of "places" inhabited by cohesive and homogeneous communities, and those who, in reaction to this conservative reading, began to understand the concept of "place" as linked to a certain negative and reactionary logic of romantic operation that eschewed the functionality of the real world.

For Massey, the problem with these two positions is that they both insist on neglecting the opportunity to think of places as based on social relationships and bonds that extend across space and time. In this sense, she proposes an alternative interpretation of place, saying that:

(...) what gives a place its specificity is not a long internalized history but a history that has been constructed based upon a given constellation of social relations, encountering and intertwining in a particular space (...). So instead of thinking of places as areas contained within certain limits, we can imagine them as articulated moments in networks of social relations and interpretations, in which a large proportion of these relationships, experiences, and interpretations are constructed on a much larger scale than that which defines that space in that particular moment - whether this space be a street, a region, or even a continent. This, in turn, allows for a sense of extroverted place, which includes an awareness of a given place's links with the world and which integrates the global and the local in a positive way (Massey 2012 [1991]: 126).

To illustrate her more comprehensive and porous understanding of "place" with a concrete situation, Massey employs the case of Kilburn High Road, the region where she lived in northwestern London, which she also considered to be her favorite commercial area.

⁷ This kind of reflection is what makes some authors, such as Ingold (2015 [2011]: 215-229), position themselves against the very idea of "space", given that the category imposes a flat, fixed, and two-dimensional concept of the world in terms of stable representations. These authors disagree with other theorists like Doreen Massey (whom we will discuss below 2008 [2005]), preferring to assume that space is a great void, even as they agree with many of the English author's ideas. Ingold prefers to call the "world of life" that which Massey calls "space-time", for example. However, it is worth pointing out that I, like Massey - and unlike Ingold - believe in the importance of maintaining "space" as a category, especially when we talk about societies marked by peripheral and subordinate experiences. For these societies, space acquires a fundamental character in the conflicting relationship established with the state or with other hegemonic forms of knowledge.

As a narrative strategy, Massey describes the sensations resulting from her experience of crossing the streets of the neighborhood while attentively and analytically looking at the relationships established there. She highlights, for example, a newsstand that sells periodicals from counties identified by some of her neighbors as belonging to the “Irish Free State”, as well as in which one can make out the letters “IRA”⁸. She also makes note of the life-sized mannequins of Hindu women, dressed with several layers of clothing. She pays attention to ads for a show in the famous Wembley Stadium, as well as a random chat she has with a Muslim laborer, who is depressed about the consequences of the Gulf War and who is “silently annoyed” by feeling obligated to sell the British newspaper *The Sun*. These and other cases serve to illustrate the fact that:

On the one hand, communities can exist without being in the same place: they can be founded on networks of friends with common interests or upon religious, ethnic, or political communities. On the other hand, cases of places inhabited by unique “communities”, in the sense of coherent social groups, are probably very rare (and I would say that this has been the case for quite some time now). Moreover, even when they exist, they do not imply in any way a single sense of place. People always occupy different positions within the community (...). It is (it should be) impossible to even think of Kilburn High Road without thinking about half of the world and a considerable part of British imperialist history (and, of course, this is also true of the miners). Imagining things in this way provokes (at least in me) a global sense of place (Massey 2012 [1991]: 124-125).

Although there is no exact correspondence between what Massey (2012 [1991]) and Certeau (1994 [1980]) conceptualize as “place” and “space”⁹, there thus appears to be a relative proximity in terms of how both interpret the spatial extent of mobile, global socio-cultural phenomena. Both authors consider “space” and “place” to be much more dispersed and complex than is commonly thought of in geography and both authors therefore eschew reduce them, either with traditional and static boundaries, or as abstract environments that exist without concrete territorial bases.

Following the same example, more contemporary authors from multiple disciplinary fields (Aderaldo 2017a; 2017b; 2019; Agier 1999; 2011 [2009]; 2013; Butler 2017 [2015]; Carmo 2009; Cresswell 2006; 2009; Sheller and Urry 2006; Haesbaert 2010; 2014; Reguillo 2017 a; 2017 b; Simões 2009) have also encountered the challenge of “rehabilitating the importance of places in theories of globalization” (Simões 2009: 73) by questioning the ethnocentric imperatives that underly current imaginations of space and place and which supports the idea is that current flows make space a minor consideration that is, in some cases, even dispensable. In the words of Simões:

Although the intensification of globalization, the mediated experiences that it triggers and -- above all -- the effective possibility of geographical mobility have made our relationships with various territorial (and identity) referents distinct from those experienced centuries or even decades ago, territories continue to maintain prominence for us at different scales. From the country in which we were born to the neighborhood in which we live, territorial referents have not completely dissolved. They continue to shape our experience of mobility, as well as our imagination (...). If we can say that flows are tangible, it is because they are effectively somewhere. They do not remain in endless traffic, oblivious to what is happening in places and space. They are in some fashion anchored in territories from which they emanate and to which they move (Simões 2009: 74).

8 This is a reference to the Irish Republican Army Catholic separatist group (IRA), whose terrorist methods provoked much public fear until 2005, when its members decided to announce the end of their “armed struggle.”

9 Such a discussion is beyond the scope of the present article. To learn more about Massey’s (2008 [2005]) critical reading of Certeau’s concept of “space”, see in particular the third part of her book, cited here.

Simões' thoughts can be complemented by those of Judith Butler (2017 [2015]: 97), when she criticizes current concepts that assume that social networks and other media forms promote a "disembodiment of the public sphere". Butler argues that for an "event" to occur, the media (streams) need bodies, gathered in the streets, which are subject to very specific risks. These bodies also need the means to convert their local practices into global phenomena. Butler claims that this conjunction between the street and the media constitutes a very contemporary version of that phenomenon that we traditionally understand as "public space", in which (through broad and simultaneous circulation of images and messages through social networks and *hashtags*) space-time links gain the ability to produce wider relationships. According to the Mexican anthropologist Rossana Reguillo (2017 a, 2017 b), these relationships are then capable of generating new communities of interaction and interpretation, arising in previously unexpected alliances.

Further evidence that the flows are always anchored in the territories (as Massey (2012 [1991]: 119) and Simões (2009: 74) purport) can be seen in the fact that mobility exerted by dominant social sectors dominant ends up interfering, one way or another, in the possibilities of other, more politically fragile, sectors to move or stay put. According to Massey, the ability of capital to move around the world is further enhanced by the relative immobility of working populations¹⁰. Likewise, in order for residents of exclusive neighborhoods to fully enjoy their "freedom" to move about the city, it is often necessary that the mobility of poorer populations be restricted and kept under control by the police or military. In the same way:

(...) each time someone uses a car and therefore increases their personal mobility, the social justification and the financial viability of the public transport system is reduced and, therefore, the mobility of those who depend upon the system is also potentially reduced (Massey 2012: 119).

As Campos (2011), Butler (2017 [2015]), Graham (2016 [2011]), and Reguillo (2017 a; 2017 b) point out, the fact that these inequalities in possibilities of use and representation are naturalized is also often converted into a symbolic economy of visibility¹¹, which Stephen Graham (2016 [2011]) claims is responsible for legitimizing and reproducing Manichean imagery that demonizes cities as essentially threatening environments and transforms difference into the mark of an "Other" who is the constant target of suspicion and violence. This, in turn, feeds dreams of permanent and omnipresent frontiers.

It is this condition that makes visibility fundamentally important for subaltern groups. After all, as Butler (2017 [2015]) points out, the viability of the lives of subjects linked to these groups depends on the legitimation of their presence in public spaces. In other words, access to spheres where one can appear is what makes recognizable claims concerning one's right to be and one's ability to lead a life that can be lived.

For these reasons, the cartographic representations produced by institutions, media outlets, and other organizations controlled by socially dominant groups tend to emphasize these sectors' "necropolitics" (Mbembe 2018 [2003]). They hide the workings of power and convey the idea that the data contained in these interpretations coincides with a faithful reading of reality itself. This is something that does not occur without resistance, however, as I will try to show in the next topic, which deals with cases involving disputes over the ways of reading and representing aspects of the urban geography of Brazil's two largest metropolises, the cities of Rio de Janeiro and São Paulo.

¹⁰ Regarding this, see also Sheller and Urry (2006) and Cresswell (2006).

¹¹ By "visuality", I mean a broad and complex process which, as Marques and Campos (2017: 6) point out, involves not only the visual perception of the world, but also the "creative competencies" through which reality itself becomes the subject of disputes between social groups separated by recognizably asymmetrical positions.

Map wars: Some cases from Rio de Janeiro and São Paulo

According to recent literature (Haesbaert 2014; Tommasi and Velazco 2011; Vainer 2011), the city of Rio de Janeiro has recently been used as a true “laboratory” for the implementation of all kinds of experiments involving urban policies, military actions, and the development of systems of control and monitoring. The greater part of the investments in these fields has been aimed at the systematic containment of population flows that are characterized, in official discourse (and popular perception) as “at risk” and “risky” (Rocha 2015). These factors were significantly empowered by two global mega-events (the FIFA World Cup and the Olympics) that adopted Rio as their main venues¹².

In this sense, the landscape of Rio has been marked by the presence of a series of containment mechanisms that take more or less visible forms. One can think of the walls hiding or surrounding entire slums, for example¹³, but there is also the interruption of certain bus lines that connect outlying areas of the city to its richest regions¹⁴, and the electronic systems of surveillance and monitoring, which can now be seen everywhere in town¹⁵.

As geographer Rogério Haesbaert (2014: 262) points out, however, such forms of geographical containment do not have maximum “effectiveness” without being complemented by what the author calls “symbolic containment” -- that is, territorial representations defined by hegemonic media vehicles.

In his study of the dynamics responsible for the configuration and legitimation of the “biopolitical” form (Foucault 2010 [1997]) of the current landscape of the city of Rio de Janeiro, the Haesbaert performs an interesting diagnosis of the role played by media elaborations of this metropolis and its populations. Haesbaert evaluated a year’s worth of reports involving favelas in the two of Rio’s main daily newspapers. One of these, *O Globo*, is considered to be the most important paper among the city’s elite and ruling sectors while the other, *O Dia*, is most popular among less influential groups¹⁶.

Haesbaert’s investigation found that the “geographic coverage” varied considerably in both newspapers, representing the public and interests of each paper. While *O Globo* prioritized the news and conflicts that occurred in the slums of the city’s south zone and center (Rio’s most privileged areas), home to most of its public, *O Dia* had a more comprehensive coverage of the actions that took place in Rio’s favelas.

The papers thus tended to focus on different regions of the metropolis according to the interests of their different reading publics, while also creating different cartographic representations of urban space¹⁷. Haesbaert concludes that:

(...) by hiding a significant part of metropolitan life, the hegemonic media ends up stimulating a segmented view of the city, privileging certain spaces and neglecting others, as if promoting a containment that symbolically invisibilizes and contributes to the depreciation of the city’s poorest areas (...). By making invisible or minimizing occurrences in much of Rio’s urban space, *O Globo* can also have serious impacts on the direction of public policies. Given that it is the leading newspaper in Rio de Janeiro -- especially well regarded by the most favored and influential classes -- *O Globo* ends up directing the State’s to what is produced and published as information and thus to [what will be considered as] the most relevant problems and/or spaces of the city. If the representation of basic issues appears linked to only a few areas, it is “natural” that these will be given priority for State action (Haesbaert 2014: 265).

12 In addition to being chosen to host the 2016 Olympics, Rio de Janeiro was also the city of choice for the grand finale of the 2014 Football World Cup.

13 Further details on these cases can be found in Haesbaert, 2014.

14 See, for example, this UOL portal article on the subject: <https://noticias.uol.com.br/ultimas-noticias/agencia-estado/2015/09/18/corte-on-bus-lines-and-criticized-by-river-suburbs.htm> (Accessed 6/13/2018).

15 For a comprehensive reflection on these systems, see Haesbaert (2014).

16 As the researcher demonstrates, this difference is even manifest in the price of the diaries, with (at the present moment) the first costing twice as much as the second.

17 In the paper, Haesbaert even produces two maps where this issue is made even more evident. For more details, see Haesbaert (2014: 263).

The act of neglecting and making Rio's vulnerable spaces and populations invisible also gains other problematic developments, such as the recent case involving the printing and distribution of tourist pamphlets by the Rio de Janeiro-based company Riotur, in which the city's favelas were simply erased from its geography¹⁸. This meant that about 1.4 million residents of Rio had their presence literally wiped from the maps made by the company, although Riotur's magazine also highlighted the favelas as places to be visited by so-called "special tours"¹⁹.

Such cases are significant in revealing how our everyday perceptions are often defined by cartographic representations associated with the interests of certain social sectors, without us even realizing that this is taking place. Similarly, they demonstrate how maps are far from being faithful records of the territories they seek to represent.

In recent years, however, artist-activist collectives, popular movements, and a series of agents organized via networks have been using different technical, visual, political, and epistemological mechanisms in order to resist the perverse effects generated by mainstream representations of territories and the subsequent security policies they reinforce. In this endeavor, counterhegemonic cartographies have found a place to thrive.

As Graham states (2016 [2011]), "countermappings" are a reverse appropriation of cartographic production techniques, using a series of graphical and georeferencing tools, which seek to disrupt the logic of what the author calls "military urbanism". This is a way of thinking that colonizes urban spaces and places by imposing securitization and market fundamentalist paradigms, projecting a vision of life as a constant war of "us" versus "them", and legitimizing mechanisms of exclusion and exception as a common forms of everyday urban political management.

In 2016, for example, a collective action called "The Exclusion Games", supported by the studies and discussions carried out by the "Rio de Janeiro World Cup and Olympics People's Committee"²⁰, produced a map entitled "The Rio de Janeiro of the Exclusion Games". On this map, the high political, economic, urban, and social costs involved in the creation of the "Olympic city" project were transformed into structures that could be cartographically visualized.

On the map²¹ one can see, for example, all the removals that were responsible for the the displacement of about 77,000 people beginning in 2009, when the city was elected to host the 2016 Olympics. One can also visualize the various labor law violations that had been denounced and proven: labor conditions analogous to slavery, for example, in some of the construction projects linked to the games, or the resurgence of State persecution of small street traders. In addition, an attentive look at the map allows one to identify environmental impacts and the perverse effects of extensive military occupation, responsible for the creation of a "belt" that was characterized by the repression of Rio's less privileged areas and the "protection" of its highly valued tourist districts.; The map clearly shows that the militarization which took over the city in the name of preparing for and hosting the games never focused on the safety of Rio's inhabitants, as had been announced in official speeches by the city's and the games' political representatives.

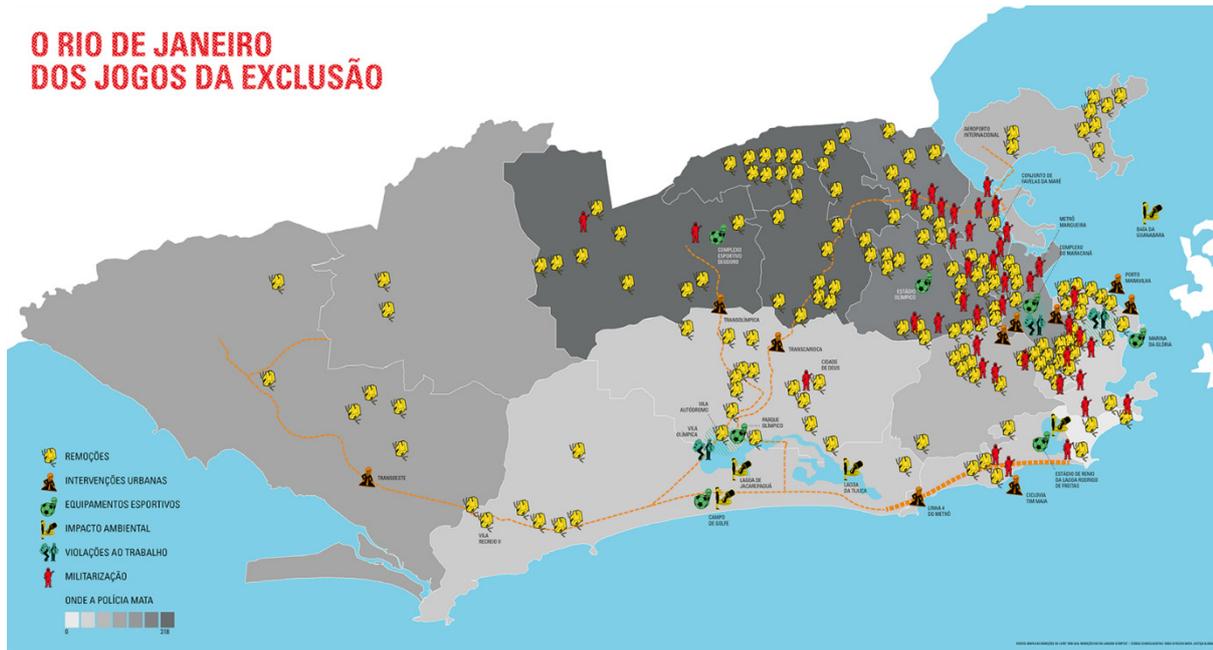
18 With regards to this, see: <https://oglobo.globo.com/rio/folheto-da-riotur-distribuido-turistas-tira-favelas-da-geography-of-city-21806418> (Accessed 7/11 / 2018).

19 I refer more specifically to a mode of favela-oriented tourism whose undeniable complexity is carefully examined in the work of Freire-Medeiros (2007), as well as in Freire Medeiros, Vilarouca and Menezes (2016).

20 For more information about the committee, see its official website at: <https://comitepopulario.wordpress.com/apresentacao/> (Accessed 14/06/2018).

21 An interactive and detailed version of this map can be found at: https://issuu.com/justicaglobal/docs/mapa-gogos-da-exclusa__o (Accessed 14/06/2018).

Figure 1 - The “Rio de Janeiro of the Exclusion Games” Map



A few years before the publication of the “Exclusion Games” map, another collective well known for its artistic activism in contemporary Brazil, the February 3rd Front²², produced a map which questioned the “security” project carried out by different municipal governments in Rio de Janeiro. The cartographic piece, entitled “Mundo Brasil, Brasil Mundo”, emerged as a result of a broader research project that gave rise to a documentary entitled “The Architecture of Exclusion”²³. Here, the group sought to reveal a set of hidden relationships involved in the confection of the city’s so - called “Peacekeeping Police Units” (UPP), as well as the construction of a wall surrounding Santa Marta favela, which was the first of the city’s slums to receive one of the UPPs.

22 This is an activist artist collective specifically dedicated to interventions aimed at problematizing themes related to race relations in Brazil. For more details see: <http://www.frente3defbruary.com.br> (Accessed on 10/07/2018).

23 The full version of the documentary produced by the collective can be viewed at: <https://www.youtube.com/watch?v=SoIdKITfK6A> (Accessed 14/06/2018).

Figure 2 - Mundo Brasil, Brasil Mundo map, February 3rd Front



The February 3rd Front aimed at revealing the interests behind this urban and “securocratic” project within the context of an entire history of interventions in the field of race relations in Rio de Janeiro. They showed, for example, the militarization of Rio as part of a broader process that involved the conservation of racist and classist imaginaries. They also illustrated other actions, developed not only in Brazil but around the world, which followed a logic defined by the members of the collective. As “colonialist”. These included the operations carried out by the Brazilian army in its so-called “peace mission” in Haiti, where several experiments tested in this small Caribbean nation were later carried out in Rio de Janeiro’s favelas.

The map created by the collective also allows one to perceive other intersections, linking the characteristic exclusionary effects of city architecture to certain hegemonic representations in the Brazilian media and cultural industry²⁴.

24 A detailed overview of this cartography can be found at: https://issuu.com/invisiveisproducoes/docs/mundo_brasil_brasil_mundo (Accessed 14/06/2018).

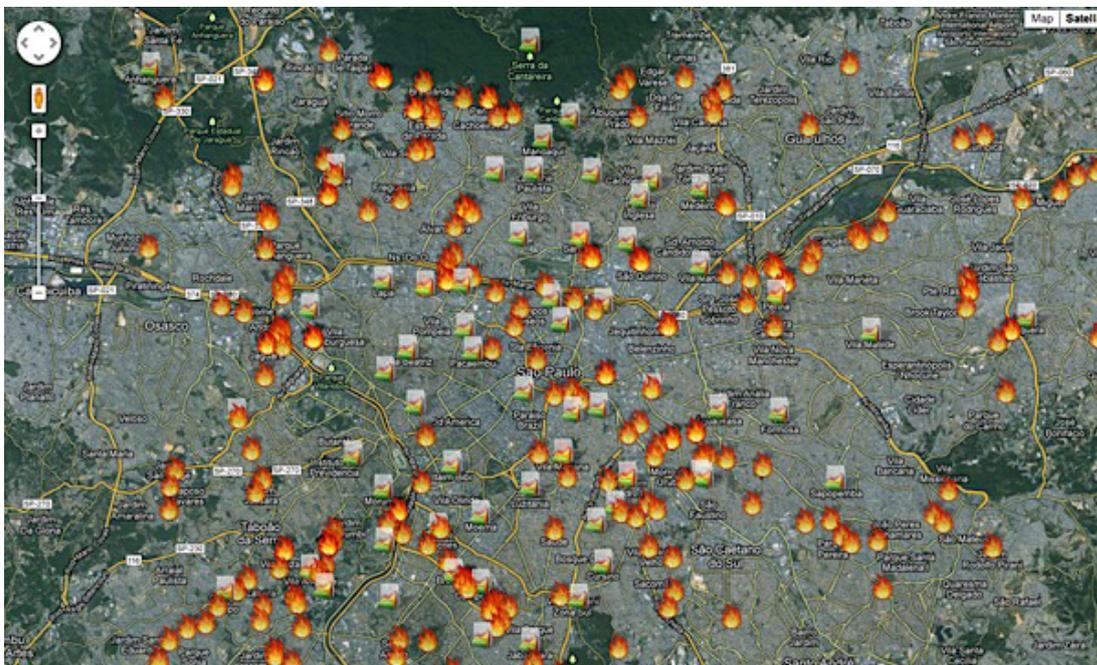
As André Mesquita (2011: 125) points out, by comparing the “empty spots” in media discourse or in “official” maps and comunicués with alternative cartographies such as those described above, one can move beyond the extensive set of really existing actions mapped out around certain problems and begin to question “the motives of those who conceal certain types of information”.

In São Paulo, for example, also in the context preceding the 2014 World Cup (and at a time when many changes in the urban structure of the metropolis were being made with the support of public agents clearly involved with economic and real estate interests). a series of favela fires caught the attention of journalist and activist Patricia Cornils, who wondered about possible relationships between these events and real estate speculation in the city²⁵.

After conducting an initial survey and proving that there was substance to her question, Cornils created a spreadsheet containing data related to changes in land prices in those regions where there had been fires. She launched an open platform on the internet inviting people to collaborate in transforming the data from her private investigations into something more comprehensive and systematic that could be easily consulted and understood by the general population. Several people began working with Cornils’ project, including programmer Pedro Moraes, who helped the journalist develop a map and a mobile application entitled “Fire in the Shanty”, which people could use to contribute and information that, once checked for veracity, would be incorporated into the collective cartography project.

The resulting map, fed in real time by community volunteers, showed all the fires in the city’s slums since 2005. By clicking on the icons referring to the fires, one could bring up informational screen balloons containing data related to the real estate valuation of the region corresponding to the selected event. This enabled interested citizens to access an entire web of dark relations that linked apparently discontinuous cases understood in official reports as mere “environmental accidents” or “fatalities”.

Figure 3 - Fire in the Shanty map



25 These cases drew the attention of many activists, reporters and human rights groups and inspired the documentary “Clean with Fire” (“Limpam com Fogo”), which tells the story of the political processes involved in these fires. The documentary’s trailer can be viewed at: <https://www.youtube.com/watch?v=n8RfUPPXl5M> (Accessed 14/06/2018).

Collaborative cartographic experiments such as these are not exactly a novelty in the field of contemporary political activism, as Mesquita has demonstrated (2011; 2013). They are gaining space today, however, given significant technological improvements and simplified access open source mapping software and services, available on virtual online platforms such as Qgis²⁶, *OpenStreetMap*²⁷ and *Mapas Coletivos*²⁸. The improvement of flexible legal licensing has also aided this process, allowing individuals and groups to produce and distribute maps, iconography, booklets, and manuals containing production methods and techniques and advice regarding the use of free content for consultation and sharing by wider audiences, without authors losing the right to be recognized for their work.

The emergence of these laws and technologies are also responsible for stimulating the emergence of many mapper communities throughout the world, a good part of which are tied to movements, activists, and popular struggles in rural and urban environments. As we have seen above, these are generally people and groups who are interested attacking the hegemonic cartographic imagination, expanding counterhegemonic cartographies their niches in academic, political, institutional, or artistic spheres. It is this aspect that has drawn the attention of Heitor Frúgoli Jr. (2018) in a recent article, where this author mentions the challenge of paying special attention,

(...) to the way the activists themselves (...) theorize about their practices, whose lexicons (although apparently close to those of researchers) reveal potential differences which must be demonstrated and analyzed (Frúgoli Jr. 2018: 76).

Aware of this need, from here on in I will focus my analysis on the performance of the duo of popular Argentine activists, communicators and Iconoclastas²⁹ who have become widely known in Brazil and in several other countries precisely because of the theoretical and educational model they have developed. This is based on teaching the techniques of collective map production to different populations and institutions (student groups, neighborhood associations, social movements, NGOs, autonomous collectives, museums, schools and etc.).

Through a brief description focused on the performance of these interlocutors as I witnessed it during an internship research experience abroad³⁰, I will demonstrate how the exercises developed by the duo are able to provide ways of thinking about maps not as simple graphics artifacts imbued with accurate and objective information about the world, but as collaborative technical objects produced by situated knowledges, which also produce interpretations, forms of subjectivation, and relationships that can profoundly affect the daily lives of mapped populations, who are often unaware of the cartographic activity which seeks to in/exclude them.

Maps are thus far more than political and/or artistic instruments representing given geographical scenarios. In this interpretation, they must be considered as cognitive support tools, responsible for specific ways of understanding the world and the alterities that characterize it.

26 More details at: <https://qgis.org/en/site/> (Accessed 11/06/2018).

27 More details at: <https://www.openstreetmap.org/about> (Accessed 11/06/2018).

28 Further details at: <http://www.mapascoletivos.com.br/> (Accessed 11/06/2018).

29 Detailed information on the duo's performance in different collaborative processes can be found at: <http://www.iconoclastas.net> (Accessed 12/06/2018).

30 I refer here to my research internship in the city of Buenos Aires, which was funded by FAPESP (Case No. 17 / 04416-8).

Iconoclastas: (Carto)graphic communication as a pedagogical resource for political empowerment

The duo referred to above is composed of social communicator and university lecturer Julia Risler and her companion, activist and graphic designer Pablo Aires. Their project was formally established in 2006, shortly after Pablo left the Callejero Art Group (GAC), in which he served for over ten years and where he played a key role in various public actions, becoming widely known in the contemporary artistic activism scene³¹.

From the moment the couple began to create their first joint actions, they began to self-identify (albeit informally) with the nickname “*Iconoclastas*”. The beginning of their joint activities coincided with a period in which Argentina began to recover from the economic, political, and social chaos that overtook the country in 2001³². The election of President Néstor Kirchner in 2003 seemed to create ideal conditions for a historic rapprochement between impoverished middle-class sectors and less privileged social groups.

The duo believed that traditional movement in Argentina employed a language that did not communicate with the everyday realities of ordinary people who did not frequent movement circles militants. As their first challenge, they therefore decided to employ their knowledge in the field of communications in order of broaden the reach of the messages being created by grassroots social organizations. According to Julia Risler:

I am a communications specialist. Pablo understood communications and graphic arts. What we saw in the social movements was a certain bankruptcy in terms of their graphic, visual, and pedagogical communication styles, an inheritance of much older anarchist leftist groups. This was great, but it didn't communicate beyond the incestuous circle of leftist militancy. Because of the poverty of the type of images these groups were using, the resources they employed, there was always this thing of “we are always speaking to ourselves, to those who are already convinced and who know what is going on” and they could never get out of that circle. And in reality, it was a moment in which a certain empathy between the middle classes, the impoverished and precarious middle classes, and the rest of the country because we were going through a huge economic crisis. So we thought, well, let's think about this: how do we generate a language that can break out of the endogamy of politics, of the social movements, of the collective. So we offered up a pedagogical tool that could be appropriated by the movements, which they could use in daily life (Julia Risler, interview with author).

This was thus the initial context that pushed the duo towards a series of militant intellectual experiments and practices focused on the development of a communicative language, for by social movements, that sounded more attractive and contemporary. They also developed innovative pedagogic methods that could stimulate the sharing of lived experiences and theoretical reflections related to the ways in which the different populations equally affected by the crisis thought about and represented their collective territories, identities, and actions.

The first reference work, released in 2006, was the *Anuário Volante (Flying Yearbook)* series³³. This was a set of small flyers bound together in a booklet, which were distributed at protests and events organized by different activists collectives. The *Iconoclastas* sought to create a kind of reverse appropriation of statistical language. They availed themselves of the same sort of mathematical logic normally employed by technocrats tied to the corporate world and official government agencies to communicate controversial political decisions. The *Iconoclastas* however, sought to throw light on the interests and effects that are often silenced by the adoption of this sort of rationalist language.

31 Regarding the Callejero Art Group Collective, see Carras (2009).

32 2001 is regarded as a true landmark in the history of Argentine political activism. After the very serious economic and political crisis experienced by the country and the terrible consequences of successive waves of police repressions, which left a huge number of people dead and injured, various initiatives and associations created and developed aesthetic and political actions. For more details on the political and economic processes responsible for the generation of this crisis, see: <http://g1.globo.com/mundo/noticia/2014/01/entenda-crise-economica-e-politica-na-argentina.html> (Accessed 6/22/2018).

33 This document may be consulted freely at: https://issuu.com/iconoclastas/docs/anoario_volanteissuu (Accessed 01/07/2018).

It was only in 2008, however, after doing some exercises involving maps with different communities with which they interacted, that the *Iconoclastas* started to adopt the collective production of critical cartographies criticism as their main form of intervention. In 2013, they systematized a set of mapping methods and techniques³⁴ to be employed in pedagogical activities by publishing a manual under a *Creative Commons* license in Spanish and English. This was then freely distributed as a PDF that could be downloaded on the duo's website³⁵.

Figure 4 - Spanish and English versions of the Manual de Mapeo, produced by the Iconoclastas



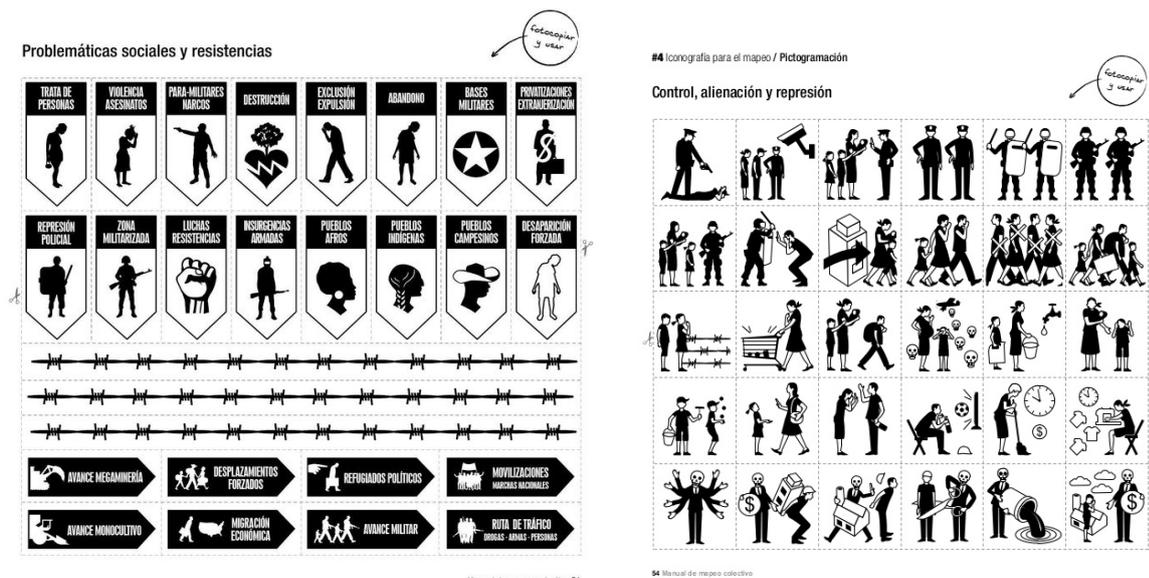
The *Iconoclastas* developed series of pictograms and graphical tools geared towards the critical illustration of various topics ranging from real estate speculation in metropolitan areas, gender violence, the militarization of urban space, and the pollution and poisoning of nature reserves by mega-corporations, among many other issues characteristic of the daily confrontations experienced by diverse populations marked by political, economic, and identity subordination .

These resources were also made available for download on the internet and this enabled them to be used by other communities of mappers who were interested in acquiring tools able to amplify the political reach of the causes different activist nuclei around the world.

³⁴ I will address these techniques and their ways of mediating social relations below.

³⁵ More information about the Manual, as well as the two versions' files (in Spanish and English) can be found on the duo's page at: <http://www.iconoclastas.net/map-collective/> (Accessed 21/06/2018).

Figure 5 :- Series of pictograms developed by the Iconoclasts for use by different causes



Gradually, these graphical tools, the pedagogical methods outlined in the manual, and the many maps resulting from the practices developed by the *Iconoclastas* among different communities, came to be widely viewed, published, and shared. This, in turn, made the duo’s work in creating collective, critical cartographies more and more recognized throughout the world. The very process of mapping the “exclusion games” in Rio, discussed in the previous section, took advantage of some of the iconographic resources created and distributed by the Argentinean duo and their network of partners.

As the *Iconoclastas*, Julia and Pablo were also invited by different institutions and associations (political, student, artistic, and neighborhood, groups etc.), to give lectures and map production workshops. This allowed them to participate in several important events and exhibitions related to the theme of political art in countries such as the United States, Spain, Portugal, France, Poland, Mexico, Chile, Brazil, and Uruguay, among others. Recently, some of duo’s maps have been put on display at the famous French museum the *Pompidou Centre*³⁶.

The growing recognition of the *Iconoclastas*, along with the remarkable influence exerted by the teaching model the duo developed in different cartographic experiments experiences that I had been following in Brazil, led me to observe their work, both inside and outside of Argentina. This process intensified in 2017, when - as I have said above - I had the opportunity to spend a year in Buenos Aires participating in various activities either organized by the duo or in which they participated.

Some questions I sought to answer with my research were the following:

1. What exactly are the maps produced in the pedagogical exercises coordinated by the *Iconoclastas*?
2. What is the profile of people who participate in these activities, and of the communities who request that the *Iconoclastas* come to their spaces?
3. What kind of information and exchanges are these techniques able to generate?
4. How do the exchanges and reflections related to collective mapping actually occur in practice?

³⁶ The full list, containing all the duo’s participations in shows and exhibitions around the world, can be found at: <http://www.iconoclastas.net/exposiciones/> (Accessed 11/06/2018).

5. How does the production of these maps allow us to read issues related to territories marked by disputes over forms and meanings?
6. What pedagogical techniques are these, exactly, and what specific characteristics do they have in terms of developing new models of interpretation and expression of knowledge regarding politically and economically subordinated populations and territorialities?

Within the limits of the present article, it is impossible for me to present dense and detailed a description of all the activities that I followed alongside the *Iconoclastas* in the Argentine capital. I would like, however, to briefly reflect upon aspects of the pedagogical techniques the duo has prepared and practices, based on participant observation research I conducted during a workshop offered by the duo at the Ricardo Rojas Cultural Center in Buenos Aires.

Collective mapping as a pedagogical proposal

The workshop was entitled “Collective Mapping: Resources-Investigation for Territories”. Its main purpose was to present to a wider public part of the collective mapping techniques developed by the *Iconoclastas*, showing off the techniques’ potential as tools for activist research that could increase public understanding of and the conditions of dialogue and intervention regarding various issues (political, social, economic, subjective, and cultural) .

The first meeting began with a very brief explanation of the work done by Pablo and Julia and also of the workshop’s general objectives. As occurred in other occasions I witnessed, these objectives were described as seeking to demystify the idea of the “map” by pointing out that such representations are interpretations of the world based on specific interests that are often hidden, created by those who generally monopolize cartographic knowledge.

The *Iconoclastas* explained to the approximately 20 people present at the workshop that they believed that a “map” is any graphic presentation seeks to create diagrams that are capable of aiding the visualization and understanding of the forces acting on a particular spatiality or problematic.

In general terms, the presentation served to emphasize the idea that we could work with various conceptions of a “map”, both throughout the course and in our daily activities, using, for example, drawings or records of itineraries of the mobile experiences of the usage of space, instead place of traditional geographic models, with their homogenous structures and fixed boundaries.

Following this introduction, we engaged in a group dynamic that consisted of using a sheet of paper divided into three parts to draw a timeline in which we were to chronicle our individual trajectories. This would allow us to display the paths that had us directed to the mapping workshop we were attending. On the back of the sheet, we were to write down our personal data (name, email address, social networks, etc.) and also the main issues that we would like to reflect on during the workshop. Finally, we used an inflatable globe that we would toss at random people in the group to introduce ourselves to each other, based on the timelines we had built. This went on until the last person had introduced themselves.

The following week, we found that the information we had provided at the previous meeting through our timelines and as our individual presentations had served to enable the *Iconoclastas* to group us into four different sections of mappers, organized around open and general themes. These groups were then made into teams that would define different issues that we’d map during the course of the rest of the workshop. The workshop coordinators also used the information to build a restricted-access page on Facebook, which served as a kind of virtual base where the teams could exchange information and talk about their impressions regarding the activities that would be developed over the next two months of the workshop.

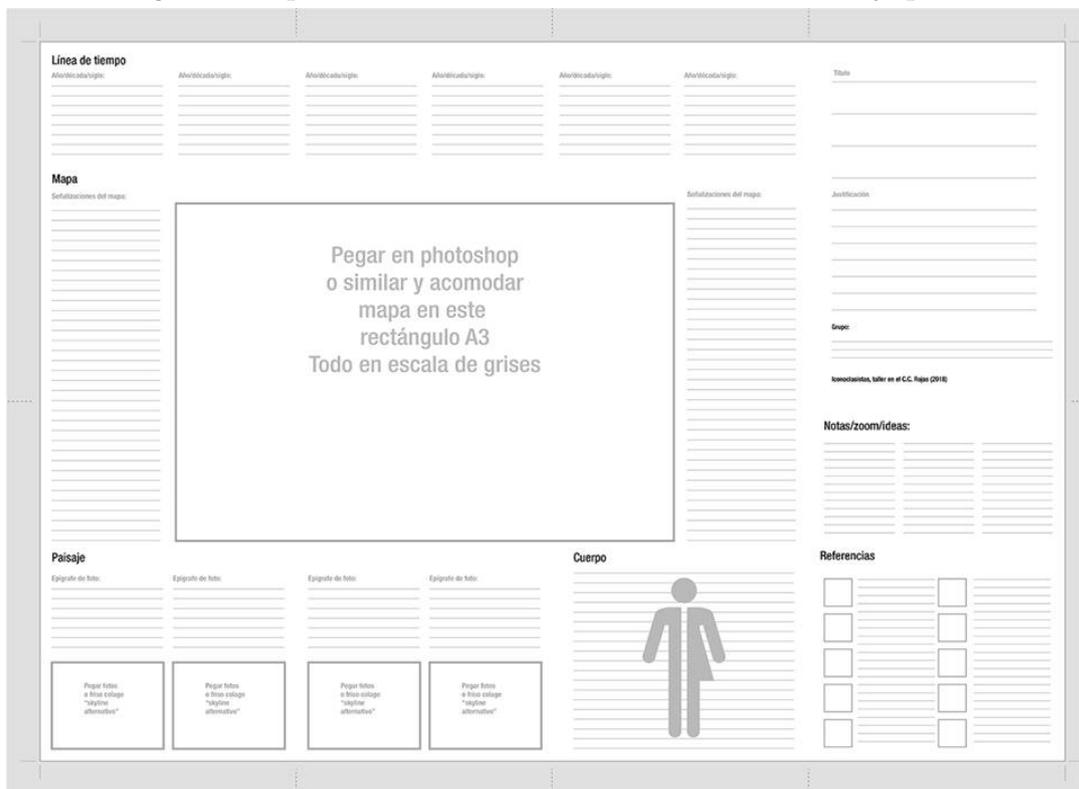
My group's theme was "Culture and Identity". In addition to myself, the included a Costa Rican graphic designer and urban planner, a U.S. American geography student who, like me, was spending an academic year in Buenos Aires, two Argentine secondary school teachers and an art student, also from Argentina.

None of us knew each other, nor did we know each others' interests or life trajectories. Moreover, the fact that a significant part of the group was made up of people from different countries, with varied life trajectories and levels of education, made our first a challenge. We needed to find common interests and build a collective language through which we could understand ourselves as an interpretive community.

Gradually, as the meetings were passed, we were presented with a series of graphical tools via educational practices that were made up of both classroom exercises and information provided by the groups on Facebook. In this way, we began develop categories of analysis as well as to create icons related to those categories. We were also introduced to virtual mapping platforms such as the aforementioned *OpenStreetMap*, among other resources. As we were taught to use more complicated resources, our understanding of the problem we sought to map also matured (I will discuss this in greater detail below).

In order to create the maps, each team began with the same graphic structure, provided by the *Iconoclastas*. This contained a central space, where we would fill in the map's territory, and edges containing several fields that were to be filled with information such as :1) a title; 2) a timeline, where we could describe the historical processes related to the theme being mapped; 3) a frame of reference, where we could insert icons related to the subject, along with descriptions of the meaning of each; 4) a space reserved for the "landscape", where we could paste images of the visual composition of the scenery linked to the chosen theme; and 5) a "body", which we could use as we wished in order to develop a character that could symbolize the main conflicts and issues the map collective was working on.

Figure 6 - Graphic structure for the elaboration of collective cartographies



Based on internal discussions that took place during the meetings, each of the four groups of mappers elected a different problem and territory -- as well as certain resources presented during the course of the workshop – which they would map together .

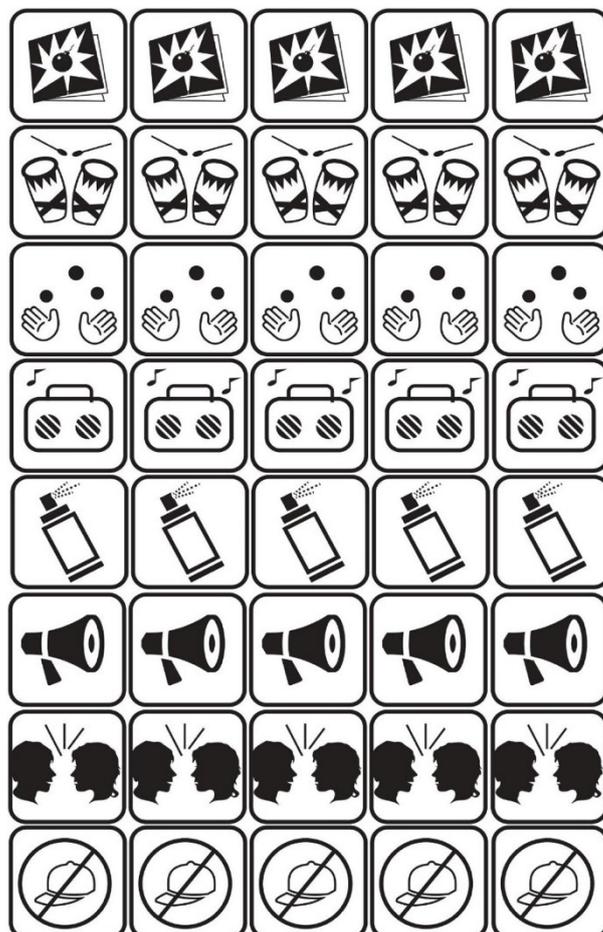
After many conversations and exercises, my group decided to take advantage of the fact that we had members from all over the Americas (North, Central and South) in order to develop a reflection related to a problem that touched on all of our personal trajectories: the relationship between youth and social insurgencies.

We thus wanted to use the mapping techniques in a collaborative and dialogical way to reflect about the changes in the meaning of the notion of “youth” over different historical periods, as well as the challenges that mark youth experience in today’s context.

We agreed upon what set of categories and icons we would collectively create and decided that we would each individually map out a territory characterized by youth occupations in our cities. We would then overlay these maps, looking to highlight certain patterns that, in turn, would allow us to talk about and understand some of the cross-cutting issues that could be used to form a common narrative. We called the theme “Dissident youth territorialities in the Americas.”

As we worked and talked, we discovered a need to develop icons that could symbolize the issues we wanted to address. We thus created an entire iconography to mark such themes as areas of dissident political demonstrations, public areas of youth repression, places for youth cultural encounters and discussions, street art areas, environments where alternative publications could be exchanged, and etc., as can be seen in the template below:

Figure 7 - Collectively developed icons for use in mapping



For this first stage of the process, I chose to map the region of Praça Roosevelt in São Paulo, since it is an area that has historically served as a privileged reference point, occupied by many different groups of young people (skaters, rappers, university students, etc.). This also makes it a zone for countless conflicts and acts of political resistance³⁷. My colleagues in the group mapped regions with similar characteristics in San Jose, Costa Rica; Houston, Texas; and Buenos Aires, Argentina. In the end, the overlapping of the questions raised by our individual maps allowed us to see common landscapes, which served as elements of continuity that we could use to collectively build a single map. This map then highlighted pointed a number of issues related to the theme of dissident youth mobilizations.

In other words, we used the structure that had been provided by *Iconoclastas*, not exactly to map a territory with an eye to scientific precision, but rather to construct a cartographic reference that would allow us to visualize the very movements upon which we were jointly reflecting. We thus created a timeline in which we marked the problematic characteristics of distinct generations of young people. This began with the “rebel” decades of the 1960s and 1970s, with their defiance of customs and their struggles against the military, military dictatorships, and “imperialist” wars. We also noted the period of the late 1970s, when youth consolidated itself as a value for cultural markets. We then passed through the generation hit by the great advance of neoliberal policies in the 1990s and arrived at the most recent period, in which a generation of hyper-connected young people exist in an environment marked by a deep crisis in democratic paradigms and the development of different experiences of active citizenship.

We also built small mosaics with photographs taken from the territories we had individually mapped. These were then combined in the “landscape” field, grouped according to the following subjects: 1) territorial occupations and expressive forms of dissidence, 2) repression and resistance, 3) forms of street culture and entertainment, and 4) symbols of identity affirmation and struggle. Finally, in order to create the “body” on our map, we drew on a conversation we had, where we had talked about a text produced by Catalan sociologist and youth expert, Carles Feixa³⁸. In this article, Feixa discusses the transformtaion of youth over time, making use of metaphors inspired by characters like Tarzan, Peter Pan and those of the film *Blade Runner*.

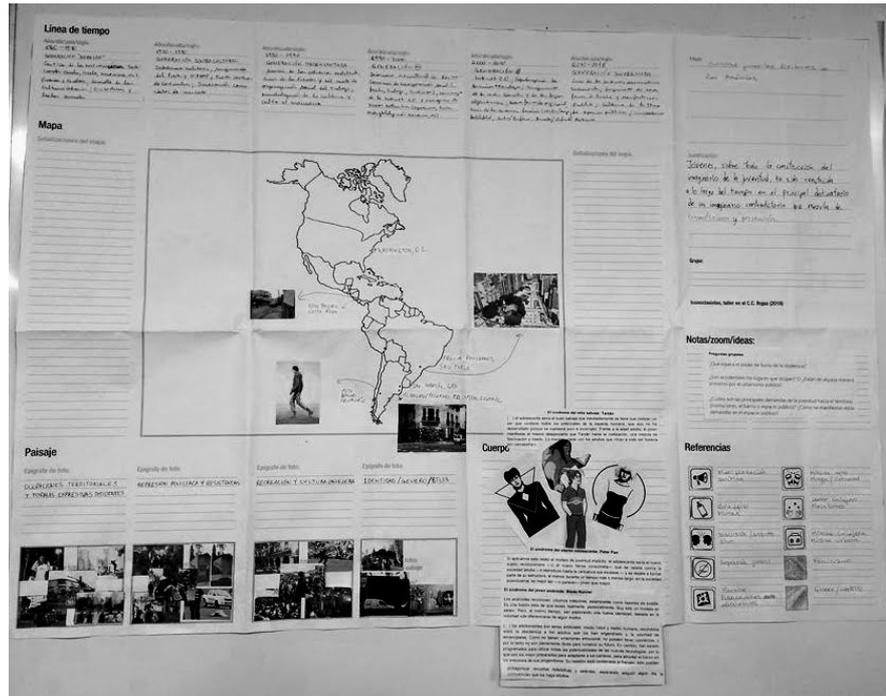
According to Feixa (2014), Tarzan symbolizes youth marked by an adult perspective, where it is seen simply a stage of life. Here, young people -- unable to be fully understood in their own terms -- were interpreted as “good savages”, occupying an inferior position within a linear evolutionary scale. The character of Peter Pan, however, corresponds to a period in which youth was becoming something that had market value. Peter – and his opponents -- wanted to consume youth, remaining forever “young”. Finally, *Blade Runner* is related to the current moment when young people – like the replicants created by Ridley Scott, inspired by Philip K. Dick’s book³⁹ -- are characterized as being endowed with many more skills than those of prior generations, but nevertheless find it enormously difficult to enjoy and cherish these abilities in a full and satisfactory way, as they are not lucky enough to live in a social environment marked by stability with regards to a series of rights.

37 Due to space constraints, I chose not to describe the individual mapping work in detail. It should be noted, however, that each of my group’s members used different techniques to produce their maps during this first stage of the work. In my case, I used 5 A4 sheets, with a layout of Roosevelt Square in the center. I marked each sheet as corresponding to a different decade and, through them, I sought to tell the story of the square and the different forms of youth occupation of it during these different periods.

38 I refer here to the book *De la generación @ a la generación #: la juventud en la era digital*, Barcelona, NED Ediciones, 2014.

39 I refer here to the book by writer Philip K. Dick, originally published in 1968, entitled *Do Androids Dream of Electric Sheep?*, which was translated in the Brazilian version as *Andróides sonham com ovelhas elétricas?* The book was the basis for the film adaptation produced in 1982 by director Ridley Scott and entitled *Blade Runner*.

Figure 8 - Map of “Dissident Youth Territorialities in the Americas” (Credit: Guilherme Aderaldo)



We were thus able to construct our map in a playful and collective way through the use of various different graphic resources. Our final product was a common account that emphasized the fact that “youth” was not a simple age category, but a symbol that could make social change legible. Youth, we discovered, was a condition which causes young people to commonly be seen as borderline subjects. It is precisely because they occupy this imagined space, which is in a process of constant re-elaboration, that they are capable of stimulating fantasies that both romanticize and condemns them.

During the course we also exchanged information and impressions with the other groups of mappers. At each session, we all shared the advances we had made as well as the dilemmas we encountered, creating fruitful exchanges and a fertile learning environment.

In addition to our map on “dissident youth territorialities in the Americas,” the course’s groups created maps on 1) real estate speculation in the upper class Palermo region of Buenos Aires, 2) the practices of repression and conflict in the Retiro area, where Buenos Aires largest train and subway stations are located, along with the bus terminal and a pedestrian-oriented commercial are, and 3) the “educational struggles” that took place between 2015 and 2018. The team responsible for this last mapping project sought to illustrate the processes related to the destruction of Argentine public education, as well as the forms of popular resistance that emerged to confront this problem.

In short, at the end of the two month course, we all learned to think “about” and especially “with” maps, understanding them as artifacts that went well beyond the condition mere illustrations of objective realities. By the course’s end, we had discovered that maps can (and should) be understood as powerful pedagogical and cognitive tools .

The collaborative construction of cartographies allowed us, in this sense, to see our own role as members of a broader interpretive political community, thus enabling us to understand the fact that while, on the one hand, we produce maps, on the other, maps also play a role in producing ourselves, given that they mediate the relationships we establish with the world by giving its diversity a common narrative and materiality.

Figure 09 - Mapping Workshop / Iconoclasts (Credit: Guilherme Aderaldo)



Figure 10 - Mapping Workshop / Iconoclasts (Credit: Guilherme Aderaldo)



Towards some conclusions

I hope that the set of examples I have described throughout this article regarding the collective production of critical, analytical maps, has succeeded in highlighting the following things:

1. How a series of subjects linked to assorted heterogeneous social nuclei have come to employ the cartographic imagination as a cognitive resource that can illustrate the ways in which regimes of (in) visibility and (im)mobility are produced and naturalized through dominant political and cultural logics;
2. The need to perceive maps not as neutral artifacts, passively subject to human action, but – as Akrich puts it (2014 [2010]) – as “technical objects” that operate as vital supports for human agency, responsible for mediating our relationship with the world and the alterities that compose it.

Maps must therefore not be taken as things that are valid in and of themselves, the simple result of a subject's work with a graphic platform. In fact, they are elements of mediation. This leads us, as Sautchuk remarks (2017: 16), to a discussion of the anthropological approach to mapping techniques, towards “some central issues and dilemmas in the contemporary scenario, such as the distinction between nature and culture (...)”.

As Doreen Massey (2008 [2005]) emphasizes, the ways in which we usually imagine space produce political, cultural, economic, and subjective effects. When we consider “space”, for example, to be only “the earth extending around us” (Massey 2008 [2005]: 23), imagining it as a simple continuous surface which is taken as given, we tend (even if we are unaware of this fact) to reproduce political silences. After all, “(...) this way of conceiving of space can (...) easily lead us to conceive of other places, peoples, cultures, as simply phenomena ‘on’ this surface” (Massey 2008 [2005]: 23).

In this sense, the denaturalization of dominant geographic representations through the collective elaboration of critical cartographies can be understood as an attempt to make readable other ways of conceiving of and occupying territories readable, paving the way for new coordinate and reference systems to be inserted into this process.

For example, during one of the conversations we had during the workshop offered by the *Iconoclastas*, one of my co-students commented on a stretch of the region they were mapping out, mentioning the fact that women avoided moving about in a particular area after dark because its users were predominantly male and the women felt at risk. This colleague was thus encouraged to include this point in their cartography, creating an icon that indicated the problem and placing it on their map. In this way, their experience and knowledge about the characteristics of a certain kind of territory became legitimate references in building collective understanding about that region.

Situations like this usually provoke something very similar to the effect labeled “interruption” by Mexican anthropologist Rossana Reguillo (2017 b), as they consist of a type of action responsible for altering the “meaning anchors” of the world, providing “the distancing from what is assumed normal or unalterable” (Reguillo 2017 b: 111). Interruptions would thus have the role of inviting us to “think and feel beyond what is taken for granted, natural” (Reguillo 2017b: 111), opening the way for other possibilities of interpretation, through the construction of collective reports, our own experiences within a world where many worlds coexist.

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Fish news: perceptual skills, technique and distributed cognition in mullet fishing

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Abstract

This paper presents an investigation about perception of the environment, technique and distributed cognition, with fishermen and schools of mullets, on beaches in southern Brazil. We discuss the relationship of audiovisual research techniques with the techniques of the body and operational sequences involved in the lookout for schools of mullets, paddling of non-motorized canoes and net casting, revealing knowledge embedded in these practices. The examination of the exchange of pictures and videos of fish among fishermen on their *smartphones* reveals a distributed cognition system that includes radio communication and other traditional ways of obtaining and confirming “fish news”. This is a collective form of monitoring the ways that fish appear on the coast. The objective of the study is to understand the use of “new technologies” without disassociating them from the technicity of collective practices and knowledge systems of artisanal fishing.

Keywords: perception of the environment; distributed cognition; technique; artisanal fishing.

Notícias de peixes: habilidades perceptuais, técnica e cognição distribuída na pesca da tainha

Resumo

Apresenta-se uma investigação sobre percepção, técnica, e cognição distribuída envolvendo coletivos de pescadores e peixes durante temporadas de pesca da tainha, no litoral de Santa Catarina, sul do Brasil. Discute-se o engajamento das técnicas de pesquisa, envolvendo a produção de imagens e sons, com as técnicas corporais e cadeias operatórias das práticas de vigia de cardumes, navegação de canoas não motorizadas e arrasto de rede no cerco dos peixes, para revelação dos conhecimentos implicados nesta modalidade de pesca. Aborda-se as trocas, entre os pescadores, de imagens feitas com *smartphones* da presença dos cardumes no mar, revelando um sistema de cognição distribuída envolvendo comunicação por rádio e outras formas tradicionais de obter e confirmar “notícias de peixe”, um monitoramento coletivo dos modos dos cardumes “se mostrarem” na paisagem costeira. Propõe-se entender o uso de “novas tecnologias” sem dissociá-las da tecnicidade de práticas coletivas e sistemas de conhecimento da pesca artesanal.

Palavras-chave: percepção do ambiente; cognição distribuída; técnica; pesca artesanal.

Fish news: perceptual skills, technique and distributed cognition in mullet fishing¹

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The mullet catch in 2016 was the best in the past 40 years for artisanal fishing on the Santa Catarina state coast. The three thousand tons of gray mullet caught² by artisanal fishermen contradict theses that both artisanal fishing and schools of fish are disappearing from the beaches of Southern Brazil, substituted by industrial deep-sea fishing, modernization of tradition or tourism. The success of artisanal fishing is the result of the effort of fishing collectives that work along the beaches and the conquest of specific policies for the sector, such as the liberation of the fishing season for this modality before others³ as well as heritage policies. The effectiveness of the small boats to “matar peixe” [kill fish] sparked greater attention from environmental protection agencies to the potential of artisanal fishing. While fishing with small motorized boats, which is known as “caça de malha” [literally “net hunting”], depends on the issue of licenses, special zoning along the coast and control of the equipment used (the size of the boat, the types of nets, the mesh size, etc.), the use of beach seine nets, has been given special consideration as “traditional”, or even “cultural fishing”. Nevertheless, although heritage policies often characterize the use of beach seines in the so-called “rhetoric of loss” (Gonçalves, 1996), as a practice that is condemned to disappear and remain celebrated in museums and eulogies, the effectiveness of this modality has been surprising in recent mullet fishing seasons in Santa Catarina.

Even if its artisanal character is also considered in terms of continuity of the forms of the social division of labor and use of traditional equipment, such as dugout paddle canoes, in this study we propose another approach, expanding the notion of technical effectiveness that is involved. We reflect on the artisanal component of mullet fishing with beach seine nets through studies of perceptual skills in the environment and of the *chaînes opératoires* [operational sequences] involved in the techniques used by the *parelha* [crew], as the collective of fishermen and their fishing equipment is known in the region. To do so, we consider these operational sequences through audiovisual description of the sequences of gestures that are important to the encounter between fishermen and schools of fish on the beaches of Florianópolis, Santa Catarina Island.⁴

1 A preliminary version of this study was presented at the 30th Brazilian Anthropology Meeting, held from 3-6 August, 2016, João Pessoa in the working group “Anthropology of Technique” and partially at the Round Table “Visual Anthropology and Hypermedia”. In previous versions, the images and part of these arguments were debated at the Visual Anthropology International Meeting (EIAV USP), November 2014, São Paulo, and at the I Environment, Perception and Practice Seminar, October 2014, Florianópolis. We would like to thank our colleagues who debated the issue with us at various times, in particular: Brisa Catão Totti, Fábio Mura, Stelio Marras, Jeremy Jean Paul Loup Deturche, Carlos Sautchuk, Thiago Motta Cardoso, Julio César Stabelini, Marcos Alexandre Albuquerque, Fernanda Rechenberg, Sylvania Caiuby Novaes, Rose Satiko Hikiji e Paula Morgado.

2 Data from an article in G1 SC, de 29/06/2016: <http://g1.globo.com/sc/santa-catarina/noticia/2016/06/dia-do-pescador-em-sc-e-marcado-pelo-ultimos-dias-de-safra-da-tainha.html> last accessed on 20/07/2016.

3 Since 2015, mullet fishing on the Santa Catarina coast has adopted a differentiated calendar for permission to fish. While artisanal fishing with beach seine nets is permitted from May 1 to July 31, artisanal fishing on boats can only begin on May 15 and industrial fishing is permitted from June 1 to July 31.

4 Similar forms of social organization of fishing collectives as we describe in this text are presented in important ethnographies in studies of fishing in Brazil (Kant de Lima and Pereira, 1997; Mussolini, 1945; Diegues, 1983) in which are present the *vigias* lookouts (*olheiros*, *espias*) [watchers, spies], owners, nets and paddle canoes in the so-called *pequena pesca* [small fishing]. But unlike these studies, which usually emphasize the traditional component of this practice and its modernization or disappearance amid conflicts over use of the coast, in Santa Catarina an important revival of artisanal fishing has been perceived in recent years, and particularly of beach seine fishing, in the daily life of these fishing communities and in the public policies that articulate environment, heritage and fishing.

Since we began the study⁵ in 2014, we visited some of the beaches of Florianópolis, recording in audio and video and photographing fishermen in their daily activities. They constantly challenged us to capture with the camera what they were really interested in: fish on the beach. This challenge resulted in the documentary “Ver Peixe” [Seeing Fish] (2017), which we produced by accompanying the work of a fishing crew, on a beach in the city of Florianópolis, Barra da Lagoa, for 4 seasons. In this sense, this article also reflects the construction of an audiovisual anthropology whose technique is considered in correspondence with the fishing techniques: images and sounds that are the materialization of this encounter of the collectives of fishermen with the collectives of fish, together with the atmospheric and oceanic elements of the fishing season. In place of metaphoric representation, we proposed the challenge of an ecological realism. To be able to record the encounter of fishermen with fish implied inscribing in the images the effects of these efforts that come together on the beach, in an effort to synchronize the rhythm of the audiovisual narrative with the rhythmic interlinking of the fishing crew with the schools of fish. It also involved, as we discuss here, inserting the narratives themselves in a sequence of technical operations that encompass an ecology of practices and instruments of broad perception of the movement of schools of fish on the Southern coast of Brazil.



Image 1: image from the trailer for the film *Ver Peixe* (2017) available on the research site <http://verpeixe.tumblr.com/post/169733068948/verpeixe-seeing-fish-2017-46-min>. Last accessed on 10/07/2018.

Beach seine fishing crews: artisanal as a political category

On the Southern coast of Brazil, particularly in Santa Catarina, in the months from May to July, the mullet fishing season is intensely lived. This is a seasonal phenomenon that inserts new rhythms in the coastal landscape, with the arrival of cold winds, currents of icy waters, and schools of thousands of mullets that are followed by dolphins, penguins, whales, sea lions, seagulls and vultures, which are all found along with collectives of fishermen, nets and boats. The mullet are the standouts, appearing on the beaches, in the waves, in fish stores, restaurants, on the internet, in videos and in photos that circulate on cellphone apps, on TV reports and in newspapers.

⁵ This article is the result of studies conducted within the project “Lugares Acontecem: mapeamento em hipermídia de itinerários, práticas cotidianas e percepções ambientais na produção da paisagem urbana”, financed by CNPQ – Edital MCTI/CNPQ/Universal 14/2014. We would like to thank CNPq for the support in realization of the work.

Fishing takes over the spaces that had been occupied by bathers, surfers and tourists in the hot months. The weather forecasts focus on the winds that bring cold and rain, instead of sun and warmth. The daily reports on wave conditions make way for reports on fishing. This is what the fishermen want to know: on what beach will the schools of mullet “show themselves”, in which direction are they heading, where may they appear next, where will it “dar peixe” [give fish], today.



Image 2: post by fishermen from Barra da Lagoa during the 2016 season. “We started the season well with two thousand of mullet. Great”. Source: <http://www.facebook.com>. Last accessed 20/06/2016.

Organized collectively, in the past decade the fishermen in these artisanal fishing modalities have conquered regulations to insure better working conditions from public agencies associated to uses of the coast, in the form of laws or norms that govern fishing practices and the use of the beach during the fishing season. Each year the artisanal fishermen must renegotiate access to the right to begin their work one month before the industrial fishing boats, as well as the exclusive right to use the beach for fishing, prohibiting uses such as surfing, and other nautical sports. They also use laws related to cultural heritage to gain permission for the temporary installation of fishing shacks and lookout posts in the sand dunes, rocky coasts and other areas in the city where environmental preservation laws do not permit construction.

The fishermen who work in beach seine fishing in Santa Catarina have diverse backgrounds ranging from experienced professionals in the sector, who also fish in other months of the year, to retirees, young beginners, informal and formal workers in restaurants, public or private sector employees and others who take their

vacations during the mullet season to fish. Although tradition, heritage and culture are categories used to refer to the continuity of this practice in relation to the social memory of their communities and families, it is the artisanal category that is now politically waged, as their distinction.

The artisanal component is raised as a condition (with an environmental component), a mode of action and an objective of this practice. The fish need to come to the beach, and for this reason, the beach should be prepared to attract fish by avoiding the intense activity found in the summer. On the other hand, it is necessary to be prepared to make the catch, by performing a series of actions that constitute the *lanço*, [the Portuguese word used for the launching of the canoe and the casting of the net]. The success of the launch simultaneously confirms its condition and effectiveness through the presence of mullet on the beach.

The capture of the mullet from the beach depends on the perceptive ability of the fishing crew to see the fish, that is, to anticipate their passage through the space of capture with the net at the edge of the beach. The presence of fish in the sea occurs between changes in wind direction and ocean currents, combined with the movement of other elements on the landscape in a complexity that we will soon see in greater detail. The movement of the crew, its passage from a state of waiting to the intense moment of circling and capturing the fish, depends on its ability to sense the movement, which is also inconstant, of the schools of mullet in the sea.

Marcel Mauss redefined techniques of the body as an anthropological question: modes of acting that are traditional, because they are socially learned, and effective that have the body as the primary object and technical medium (Mauss, 2003: 407). In the case of artisanal fishing, technical effectiveness does not immediately signify economic efficiency, as an optimization of means. This technical effectiveness involves reaching the objectives of the practice in question, as we see, “killing fish”, capturing schools of large mullet, overcoming their escape tactics, dragging them to the beach, inserting them in exchanges and socialities of the local collectives, articulating predation, abundance, gift and reciprocity. The continuity of these shared collective modes of conducting the practice determines the traditional component of the fishing. The effectiveness of this fishing depends on a synchronized chain of gestures of the fishing crew that are used to find the fish from distinct places. It also involves a knowledge of the environment, which is experienced with the entire body and dispersed in different places on the beach.

A beach seine fishing crew is the collective in action of different *camaradas* [companions or comrades] and apparatuses. The comrades include the *vigias* [lookouts], the *remeiros* [rowers], the *patrão* [owner] of the net, the *chumbaleiro* (who casts the net in the sea), the *cozinheiro* [cook], the *livreteiro* [treasurer], the *homem do cabo* (who swims with the point of the net from the canoe to the beach), the *companions* on the beach, who combine with the other neighbors, friends and relatives who help drag in the net to the sand. The apparatuses include the nets that are hundreds of *braças* [fathoms] long,⁶ canoes, paddles, buoys, radios, lookout stands, fishing shacks, cellphones, as well as other equipment and structures that reappear on the coastal landscape during the season.

The operative sequence that moves the fishing crew, the relationship between instruments and gestures (Leroi-Gourhan, 1987: 52), can be summarized as those between the gestures of the lookout (observing the sea, identifying schools of mullet, estimating their size and direction) and the canoe (entering the sea and overcoming the surf, paddling and surrounding the school, releasing the net, returning to land, closing the circle) with the net (circling the school in the ocean, pulling the two points of the net to land while keeping it extended, concentrating the fish in the central part of the net, removing the fish from the net, storing the net) and in the *rancho* [shack] (dividing the *quinhões* [shares] of fish, selling or trading fish, cooking and preparing for a new launch). As we saw, when the crew is in action, it displays many combinations and variations of this sequence that reveals subtleties of the perceptual skills involved in artisanal fishing.

6 The nets of the Saragaço crew, at Barra da Lagoa, have 400 *braças* [fathoms] (880 meters) and another with 600 *braças* (1,720 meters).



Image 3: Image of a sequence in video of a launch, available at the site of the project <http://verpeixe.tumblr.com/post/148378332988/canoa-saragaço-lanço-no-dia-12062016-magote-de>
Last access on 20/06/2018.

It is this operational sequence and the environmental conditions that it requires that distinguish fishing with a beach seine from other modalities of mullet fishing in the season, which are also considered artisanal fishing by the fishermen because they are practiced in similar forms of social organization, by the same networks of kinship and neighbors (partnerships, comradeships) and with similar knowledge of the behavior of fish and the sea, but which are not always understood as such by the public policies.⁷ We refer to fishing in small boats that are distinguished from industrial fishing because they do not use mechanized winches or professional crews, but that, depending on the technical adaptations employed,⁸ can increase by many tons the capacity for capturing fish. Due to indications of decreasing fish stocks, the number of licenses for mullet fishing issued by public agencies to so-called artisanal fishing by boat has declined in recent years due to the calculation that the method has had a considerable impact on mullet fishing in general. The same took place with industrial fishing. While the artisanal fishing with beach seine nets conquered a differentiated place among the public policies, at least in the city of Florianópolis. One of the main reasons is its consonance with other public policies linked to the right to public access to the shore in opposition to the privatization of coastal areas caused by the construction of large developments. Another reason is that artisanal fishing requires the maintenance of local environmental conditions to be able to attract the schools to the beach. This engages these fishermen in the defense of forms of regulation of the fishing activity and of rights to access to the beach that, as we affirm here, is a political dimension of the category artisanal fishing, because of the connection that it establishes between the sea, the fish and the local communities that are found on the beach.

⁷ The commercial artisanal fishing “is that practiced by a professional fisherman, in an autonomous manner, or in a regime of family economy, with its own means of production or through a partnership contract, from land or with the use of boats with Gross Tonnage (GT) smaller or equal to 20”. Meanwhile, industrial commercial fishing “is that practiced by a physical or legal person, with the involvement of professional fishermen employed or in a partnership regime, using small, medium or large boats (of any GT), for a commercial purpose (art. 8o, inciso I, “b”, da Lei no 11.959, known as the Fishing Law).” (Brasil, 2017).

⁸ Fishermen who use small boats in Santa Catarina are known throughout Brazil for their inventions and for adapting technical systems from large trawlers (such as components of the mechanical winches for the nets), the use of sonar and modifications to the hull of the boats to improve movement and increase their capacity for capture. This is an issue for another discussion, which we do not have space to conduct here.

While the use of sonar, GPS devices, more powerful motors and mechanical adaptations in the drag net can improve the capacity and speed of capture of the motorized boats, the adoption of new equipment in beach seine fishing does not change the decisive character that the behavior of the fish, the sea and winds has in this fishing modality. For the fishermen, the artisanal character of beach seine net fishing is not contradictory to the use of equipment such as binoculars, radio communications, cell phones, internet, cameras or to the materials used in the net or canoe, because their use depends on the development of the corporal abilities and techniques needed to perceive and “kill fish”. Therefore, to understand this political character of this artisanal fishing it is necessary to understand this relationship between the techniques and abilities with the perceived environment. One of these abilities is central to the effectiveness of fishing: that which is known as the *vigia* [lookout] or *ver peixe* [seeing fish].

Seeing fish: perception and the biosemiotics of mullet

The practice of the lookout is the foundation of this knowledge of the coastal environment. In artisanal fishing, with paddle canoes and drag nets from the beach, the lookout is the beginning of the entire fishing endeavor in the season. Along the coastline, observation posts are re-erected in places suitable for watching the sea for the eventual presence of fish, taking advantage of the local relief and locations in relation to the sea and to the presence of marine currents. Destined to shelter lookouts from sunrise to sunset, throughout the season, these posts are composed of benches, platforms and even small huts located either along the beach in the sand or in sand dunes, on rocks or on hillsides. In addition to observation from these special locations, the lookouts can walk along the beach on foot, or use a bicycle or motorcycle to follow the passage of schools along the beach.

Positioned a few meters from the sea, the lookouts are the fishing comrades who spot fleeting manifestations of the fast fish, who *show* themselves very briefly in the ocean. Through this perceptual ability, the good lookouts know how to evaluate the approximate number of fish in the school, distinguishing between *magotes* (literally a crowd, used to refer to dozens or hundreds of fish) or *mantas* (literally a blanket, used to refer to thousands of fish), to differentiate the species of the school (between what are probably mullets,⁹ bluefish,¹⁰ bonitos¹¹ or short-fingered anchovy¹²) and estimate their speed and direction. In their interactions on the beach with the speed and intensity of the wind, the transparency of the seawater, the strength and direction of waves, the luminosity of the day, the lookouts unveil the environment and perceive its variations, rhythms and movements that indicate the presence of mullet and the means to circle them.

In addition to giving the signal for the launch (the act of surrounding the school with the net), the lookouts have an important role in the synchronization of the movements of the canoes and nets with the movements of water and schools, and it is up to them to guide the other fishermen in the canoe and on the beach about how to cast the net: the moment to go out, the direction and speed to take with the canoe, the opening of the curve to be made and the return to the beach, the line taken by the net in the water and the positioning of the *copo*, which is the central part of the net and the last part removed from the water and which has most of the fish that were circled. The ability to see fish can be a significant difference between killing a few dozen or thousands of mullet in a single launch with the net. The operational sequence of fishing on the beach begins, therefore, with the practice of the lookout, and depends on it.

9 *Mugil brasiliensis*, *Mugil liza*, or *Mugil platanus*

10 Anchovas (*Pomatomus saltatrix*) begin to appear in the middle of the mullet season and with greater abundance at the end of the mullet season. They also have commercial value, but often break the net used for circling mullet.

11 *Sarda sarda*. Have little commercial value because of the small size in which they appear on the beach.

12 Manjuvas, or manjubas (*Anchoa lyolepis*). They are very small, used mostly for bait.

In the company of the lookouts, from whom we learned the subtleties of environmental perception involved in this practice, we were challenged to look in another manner: to “look around” (Gibson, 1986: 203) and sweep the panoramic coast of the sea with the eyes and ears, to feel on our skin the changes in climate and locate ourselves in relation to everything that moves and is reshaped on the coastal landscape, which we have analyzed in detail in other works, problematizing our choice for the use of panoramic photographs (Devos, Vedana e Barbosa, 2016).



Image 4: panoramic photo of the lookout, available on the site of the project <http://verpeixe.tumblr.com/image/128593790398>. Last accessed on 20/06/2018.

It is not by chance that binoculars or other optical instruments for expanding the vision are not used by the lookouts to see the schools. It is not a question of observing a specific point far out at sea, but of perceiving the coastal landscape according to what Ingold (2011: 131-132) defined as “wheater-world”, an environment in constant formation by the inscription of atmospheric and material forces and actions of many beings that are found on the beach. It is subtle changes in certain patterns of movement and transformation of the landscape that can indicate the passage of schools.

Perceptual skill is how James Gibson (1966: 51), who proposes an ecological approach to perception, formulates the inseparable character of perception and action. To perceive the environment is not limited to receiving (internalizing) stimuli by passive and specialized sensory organs and then constructing a mental image. Perception requires the development of modes of attention in the operation of one or more perceptual systems, through the adjustment of gestures, postures and exploratory movements and signs of ecological events that require an environmental arrangement. In the case of the lookouts, the visual system is associated to the haptic and auditory systems, dedicated to these signs distributed in the landscape. To perceive is to move in relation to an environment that is revealed between permanences and changes in the arrangement in its elements (Gibson, 1986: 170).

Edward Reed (1988: 122), upon approximating Gibson’s ecological psychology to the biosemiotics of the ethologist Uexküll, proposes understanding the environment precisely as that which can be shared through perception.¹³ Meanings are not only mental elaborations of an observer, but signs of presence expressed in the movements of beings and agents in the landscape, changes of state in the textures, surfaces and dispositions of various elements. Reed approximates James Gibson’s (1986: 130) concept of “affordance”, which is that which the environment propitiates to the organism, meanings recognized directly in perceptive actions, to Uexküll’s (1992: 320) concept of *Umwelt*, which refers to the perceptual worlds of each animal species according to its perceptive capacity. The affordance breaks the apparent isolation of beings in their respective “own worlds”, allowing that mutual perceptions-actions be shared as ecological events, opening the perception of meanings to multispecies relations. This is one interesting proposal for understanding the lookouts’ descriptions about the ways of perceiving the appearance of the mullets that the lookouts say “*show themselves*” in a relational form to the lookout post and the environmental conditions. The most common descriptions are:

¹³ A similar reflection is presented by Carlos Sautchuk (2007; 2012), both from the perspective of investigation, relating technique, perception and biosemiotics, and by a reflection on the importance of the production of images based on technical gestures in the hunting for Pirarucu in Vila Sucuriju, Amapá.

- *correndo na onda* [running in the wave]: just before the moment a wave breaks, mullets can be seen passing through a more transparent part of the wave, which also depends on the direction of the rays of sunlight, the luminosity of the day and the clarity of the water;

- *no vermelhão* or *no amarelão* [in the deep red, or the deep yellow]: when they are concentrated, the mullet can form dark blotches (*vermelhão*), that indicate thousands of mullet (*mantas*) or smaller more dispersed blotches (*amarelão*), that indicate hundreds of fish (*magotes*);

- *na aguada*, *ressolho* or *arrepio* when they stir the surface of the ocean to form a different pattern of interaction between waves and wind;

- *no pulo* [jumping]: when one or more mullet are seen jumping out of the water, which is important for knowing the direction of the school;

- *na barrigada*: when they produce silvery reflections on the surface of the water as they move.

The direction of the tide, the texture of the surface and the color of the water are related to the direction and speed of the wind, and indicate the direction of movement of the mullet. To know the depth and constant formation of sandbanks on the sea bottom, to know if there are deep spots, rises or seaweed is also part of this revelation of the schools of mullet, given that these other elements also form blotches and textures that can confuse someone who does not know the place. There are times of day when the mullet can *show themselves* more, when they group in the morning, mid-day and late afternoon, or even *no reponto da maré*, which is the transition of the outgoing and incoming tides.

Although the lookout is known as the authority for assuring correct information about the presence and behavior of schools on the beach, his knowledge is shaped in relation to the manifestations of many agents that can be considered in a technical system. In it, even the shared images and news of fish combine with information about the environment. Other animals, such as dolphins¹⁴ that chase the schools of mullet, confirm their presence and form, which may be *espalhados* (dispersed). Meanwhile, birds such as terns¹⁵ or gulls,¹⁶ which dive to capture small fish, indicate the presence of schools of other species, such as bluefish, which feed on small *manjuvas*. Boats that cast their nets far from the beach indicate, in addition to the presence of a school, the probable direction that the fish that escape the net will take, depending on the wind and the currents. The same is true for the fish that are seen or circled on other beaches, because those that escape can head to the space of capture of another crew. More than seeing the fish, the lookouts estimate changes in the formation and movement of various schools along the coast.

The ecological knowledge about these patterns of relations depends more on revelation than representation (Bateson, 1972). Each new manifestation in the environment adds distinctions to these patterns of relations, which the lookout considers when deciding the right moment to announce the *launch*, given that the noise of the entrance of the canoe in the water, the bustle of the comrades on the beach and the placement of the net in relation to the depth of the beach indicate to the school how to escape. The mullet also watch the environment and the fishermen, that is, the patterns of movement of the schools are rearranged according to how the same environmental agents (wind, tides, marine animals etc.) act in the landscape, even the fishermen, boats, surfers, and noisy restaurants. Hearing by the mullet, which is conducted by the fishes' perceptual system, is emphasized by the fishermen as the means by which the fish perceive presences in their path. It is the reason for which the mullet is considered the most intelligent among the species captured by the fishermen.

¹⁴ They are bottle-nosed dolphins (*Tursiops truncatus*).

¹⁵ *Sterna hirundinacea* e *Thalasseus maximus*

¹⁶ *Larus dominicanus*

The schools that approach the beach are disputed by the crews that circle the schools at the edge of the beach and by small motorized boats, authorized to capture from a distance of 150 meters from the shore. On the beaches in which there is more than one crew operating, an agreement determines the preference for a certain crew to launch. These agreements may be established according to location (by allocating parts of the beach) or by day (by determining a preference according to days of the week), allowing the other crews to place their net in the sea after the first crew has made its circle. The school must enter the space of capture, to cast the net in the sea and be able to close it with the school inside, pulling the two points of the net on the beach. But the launch with a paddle canoe, and even more so one made with a motorized boat, can scare the school, because the mullet, which are smart, observe the fishermen, the boats and the beach. The fish shift their route as soon as they sense a presence. The news of fish, combined with the lookout practice, allows updating the monitoring of these movements of the schools.

News of fish: ecology of instruments and distributed cognition

This complex system of communication is similar to what Hutchins (1995; 2001) calls “distributed cognition”, given that the information about the presence and behavior of the schools, and about the conditions of the sea and the atmosphere are found distributed among and are propagated by members of a single and different crews and boats, by individuals of other animal species (dolphins and marine birds) and by various devices (fishing nets, canoes, cell phones, walkie-talkies, webcams, social network pages, and others). Even if one or more lookouts coordinates the propagation of information and makes the final decision about the launching of the canoe and the casting of the net, he or they never command all the activities, delegating tasks and operations to others, and to devices.

In general, upon seeing a possible sign of the presence of a school, the lookout communicates to one or more lookouts to share and confirm his perception. It is not rare that long debates begin about the presence or not of fish, their quantity and behavior, the conditions for and the best way to catch them. These conversations necessarily involve the owner of the canoe and eventually other comrades in the crew. In any case, the launching of the canoe in the sea, the casting of the net and circling the school will only be realized with the authorization of a reputable lookout and or the owner of the canoe. This division of tasks, not only among the lookouts, owners and other comrades, but also among lookouts with more or less prestige, is reflected in the difference in the size of the “quinhões”, that is each one’s share in the division of the fish captured in each launch.¹⁷

The information that arrive in face to face interactions, or by radio, telephone, and even through images that circulate on the social networks of mullet captured in other beaches are appreciated as new signs of possible revisions in patterns of relations, and have a part in the operational sequence that results in a new catch.

There is no opposition between new technologies and the techniques of artisanal fishing, in this case. The fishing is still artisanal, counting on the effectiveness of the practice that begins with the perception of the school by the lookout and that continues in the correspondence between the movements of the school and the movements of the collective body of fishermen, the canoe and the drag net on the beach. We present some brief accounts and images that show how this system of information is shared:

¹⁷ For an analysis of a similar aspect among the members of small herring fishing fleets, during the Norwegian winter, see Barth (1981: 40-47). The author analyzes the relative and complementary (transactional) behavior that is established between the captain, the owner of the net and the fishermen themselves. These behaviors are, according to the author, guided not only by contractually defined status and differentiated in authority, abilities and shares, as by technical and environmental limitations that establish a need for cooperation.



Image 5: photo of a launch that landed 37 thousand mullet, in Bombinhas, SC, shared during the 2016 season. Author: Santiago Asef. Source: <http://www.facebook.com>. Last accessed on 20/06/2016.

“At the lookout point on the Bay, amid the dunes, some neighborhood residents pass by, wanting to exchange *Fish news*. One lookout, *Baía*, says that he only saw a few fish jumping in the waves. His neighbor passes information from a cousin from the beach at Santinho, which is north of Barra da Lagoa: that morning they caught 2,000 mullet, from a *manta* of fish that indicated an even larger number. *Baía* thought that with the weak north wind, the fish that escaped the net at Santinho could come down to Barra da Lagoa. This is what he told the lookout Leandro by radio: to keep watch for the possibility of a run of a *magote*. Another neighbor was interested in the news. He ran to get his throw net at home, because fish could appear on the beach, which is good for fishing with the large net of a canoe, but also for a small *throw net*.¹⁸”



Image 6: Lookout *Baía*. Photo by Rafael Devos.

¹⁸ The *tarrafa* [a cast net or throw net] is a net for individual use that is thrown by spinning the body so that the net opens in a circular shape. It is cast when standing on rocks, in the water, or in the waves. When the *tarrafa* drops in the water, the fisherman pulls a cord that he closes quickly, capturing up to dozens of fish with this gesture, in a good cast. In addition to the technique of this circular gesture, using this net also depends on the practice of watching the movement of the school, and anticipating its movement.

“While we head to the beach, we follow the tip of some fishermen who are also surfers. We consult by *smartphone* two *webcams* strategically positioned at the beach of Barra da Lagoa. Provided by websites linked to tourism and surfing, they show a live image of the movement in the early hours of the day, at two points of the beach. The images show what we accompanied at various moments of the field work: the atmospheric conditions of the first light of day, the arrival of the comrades in front of the fishing shack, the positioning of the canoe at the edge of the sea. We consulted the same site and others about the weather and especially the wind – its direction, speed and the time it was expected to change. The weak wind from the north indicated calm, little intensity, as the images of just a few fishermen on the beach indicated the absence of schools for the launch. If many fishermen were around the canoe, or were pointing to the sea, this is a sign of lots of fish. This was not the case on this day, but the image could indicate some *movement of fish*”.

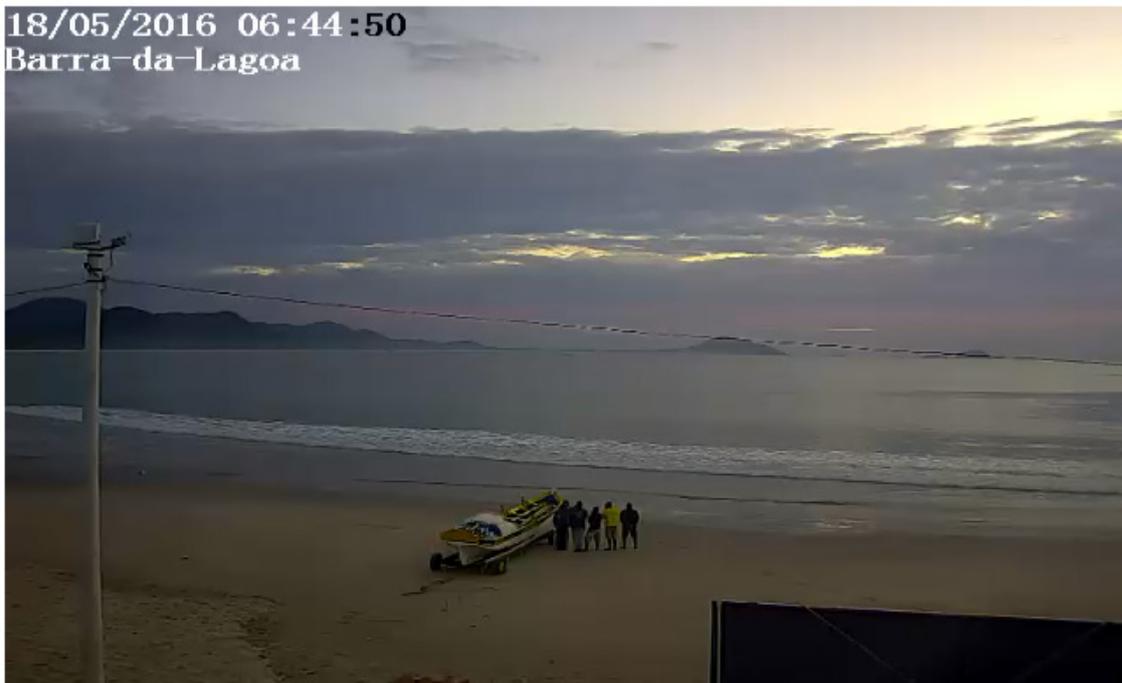


Image 7: photo from a webcam of the “Boletim das ondas” [Wave bulletin] website for surfers.

Source: <http://inparadise.com.br/boletim-das-ondas/barra-da-lagoa-ao-vivo>. Last accessed on 18/05/2016.

“Over the walkie-talkie, information arrived from the crew boss. That morning 2,000 mullet were caught at the beach of Santinho; 600 in Ingleses; and 1,800 at the beach of Lagoinha. All to the north of Barra da Lagoa, in Florianópolis. The sources of information are also mentioned: a lookout, a fisherman, the owner of the net. One boat is seen far off, leaving the canal that connects the Lagoa da Conceição [a lagoon] to the sea. By the color and size of the boat, the lookouts recognize the fishermen on board, and know they are experienced. They comment on the direction that the boat took: north. But other boats on the horizon go to the south, placing new suspicions about where there may be fish. The lookout Marquinhos shows photos on his phone that he received from his fishing group on *Whatsapp*, from the largest launch until then in that year, it was a few days ago at the beach of Farol [lighthouse] de Santa Marta, in Laguna, to the south of Florianópolis: 40 tons of fish! They lament the absence of a south wind, which could bring the schools seen in Laguna, 100km away, to the coast at Florianópolis.”



Image 8: post from the crews from the north of Santa Catarina Island, during the 2016 season. “According to some information, there are 3500 mullet at Brava Beach... the numbers can change...”. Source: <http://www.facebook.com>. Last accessed on 20/06/2016.

“With giant binoculars, Miguel observes a boat in the distance, heading north – “they are laying the net, they saw fish there!” The binoculars are used to watch the boats and the fishermen, not the fish. Meanwhile, in the fishing shack, the amateur radio that is turned on captures messages from boats that have gone to sea. The mullet began to *show themselves* in small quantities along the beach. In front of the fishing shack, the fishermen gather slowly and discretely around the canoe. We approach, with our equipment in place, hoping to record the launching of the boat and the casting of the net on video. Chinho shows on his phone the *whatsapp* fishing groups that he participates in, all are rigorously restricted to fishermen: *Turma da tainha SC*, [The Mullet Group SC] a group of fishermen of all the modalities such as canoes, small and large motorized canoes, amateurs; *Bota a canoa* [Launch the canoe], an exclusive group of owners of non-motorized canoes and lookouts of artisanal fishing on the beaches in the city of Florianópolis and the surrounding regions. Another fisherman, Eiro, shows the group in which he participates: *Informações de pesca* [Fishing information], a group organized by some beach lookouts, fishermen on boats and friends. But even the group *Boletim das ondas* [Wave Bulletin] becomes a source of news about the sea’s conditions for fishing, more than for surfing, which is prohibited on many beaches on the island during the mullet season. The members of the groups exchange jokes, *memes*, teasing among friends, but mainly daily information about the weather conditions, the sea, and the success with the fishing of each crew, circulating news about fish in Santa Catarina, Paraná, Rio Grande do Sul, both of fishermen on the beach, and those on boats.”

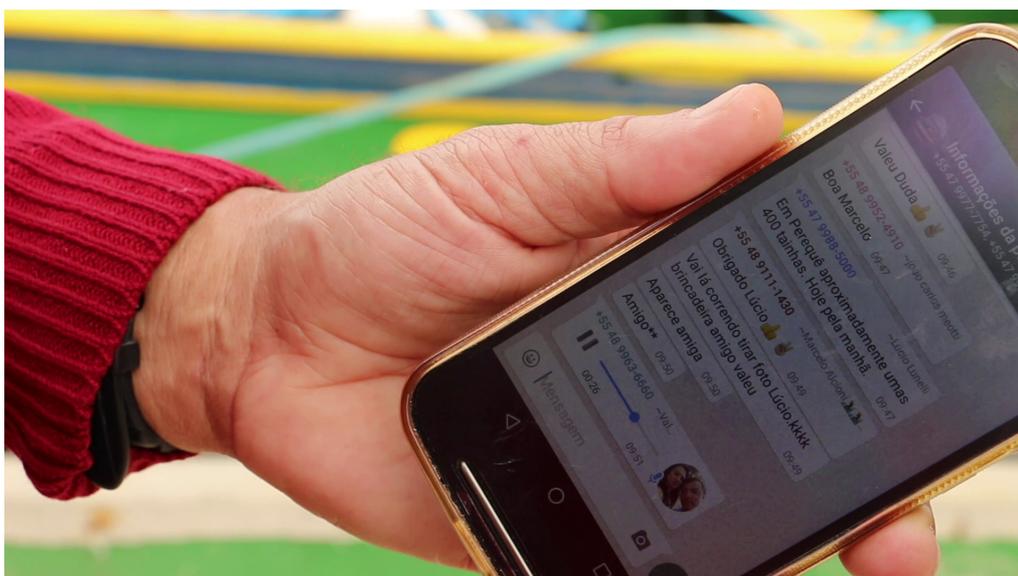


Image 9: frame of a sequence from the documentary film *Ver Peixe* (2017).
“At Perequê, there were approximately 400 mullet, this morning.”

The movement of the mullet crossing the coast from Argentina, Uruguay, Rio Grande do Sul, Santa Catarina and Paraná is constantly evaluated by the fishermen during the lookout. Generally, the *fish news* is shared during or after the capture, not before. If there are fish in the sea, as indicated by the lookouts, the fishermen disguise the tension until the right moment. They avoid pointing to the sea or becoming agitated. As in the way they lookout for fish, they lookout for other fishermen and are observed by other fishermen, by the movement in the sea at a distance, by the internet, on the phone, by radio. The confirmation of the quantity comes later, in the separation of the shares of fish that each fisherman earns, or in the weight in tons when it passes thousands of fish.

The lookout for schools is the beginning of the fishing effort, but to *See Fish* is what all the fishing comrades practice, because although the mullet *show themselves*, they only reveal themselves in fleeting moments, to those who know how to see them. When the schools of fish perceive the fishermen, who reveal themselves by affecting the waves with the canoe or through movement on the beach, the schools change their course, they try to escape. To see the mullet from inside the canoe while rowing also guides the *boss* in the operation of the *remo de governo*, which serves as the rudder, in the acceleration of the *remos de voga* which paddle the canoe, or in the way that the *chumbeiro* casts the net in the water, using it as a counterweight to synchronize the movement of the canoe with the waves and be able to surround the school with the canoe and the net. At the edge of the beach, during the dragging of the net, the fish show themselves trying to escape at loose points in the net, which is a sign that the fishermen should secure the lead weights on the bottom of the net with their feet or expand the opening of the net, to avoid their escape. The schools run from one point to another of the net in search of a gap for escape, which requires a synchronized dragging of the two points of the net until the school is gathered in the *copo*, the central part of the net in which the fish are concentrated and can be pulled to the sand. Only at this moment is when all the comrades in the crew and the other people who join the effort of the dragging confirm the estimate of the lookouts. The school comes to be seen, now covered with sand, and is divided into shares in the amounts to which each one who participated in the launching has a right, finally confirming the success of the fishing on that beach, with special value given to exchanges among the neighbors, relatives and clients. The launch also culminates with an evaluation of the number of wise fish that escaped the net, the canoe and the ability of the lookout, the boss or the comrades to effectively circle the school, which was always discussed again while they watched our images.

At this time, we discovered that we also became a source of *Fish News*, like any other person who participates in the sociality of fishing, as we perceive the more frequent presence of video cameras and photography among the fishing collectives themselves. The images that we made in our study, like the images made by the fishermen themselves, were made through an engagement in this same operational sequence of fishing. They are submitted to the same temporality between the moments of waiting and watching and the vigor of the moment of the launching, adopting the same forms as the fishermen reaching the school, through the circling with the net. They accompany a flow of images that are exchanged, in the challenge of being able to photograph or record the highest number of fish on the beach, and their effects on the communities where the mullet circulate. The images feed the cycle of these practices, informing new possibilities for the next launch, by the geographic position of the beach where the capture was made and the direction of the winds and ocean currents.

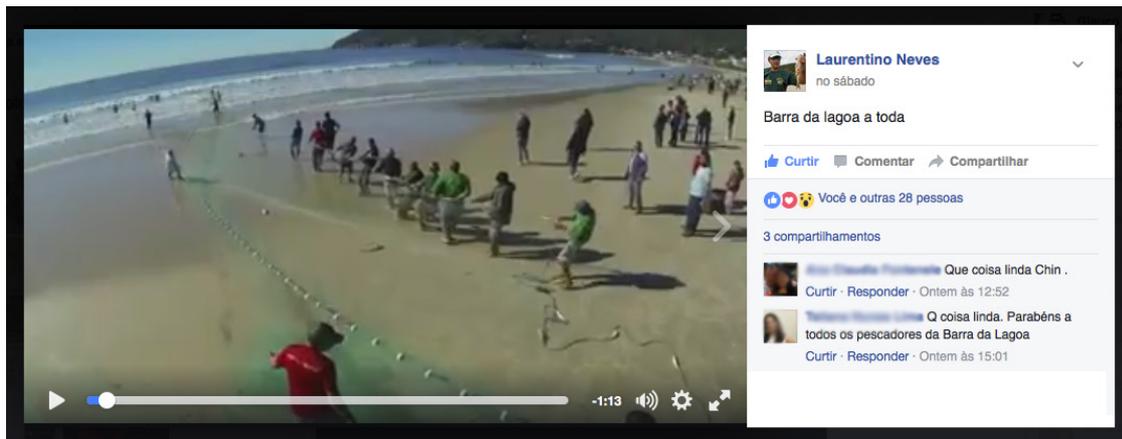


Image 10: video produced by the study, shared with the fishermen of Barra da Lagoa in the 2016 season.
Source: <http://www.facebook.com>. Last accessed on 20/06/2016.

It is in this sense that we understand the insertion of smartphones, cameras and radio communication systems in the practices of artisanal fishing as a continuity and not a rupture with traditional and efficient artisanal techniques. The traditional component of the practice is manifest in its realization and transmission in a collective manner, amid the sociality and exchanges between the fishermen in their networks of work, kinship and neighborhood. This modality particularly stands out as artisanal and effective in the way that it maintains certain ecological relations between the collectives of fishermen and the environment of the beach and the fish. If the modalities of industrial fishing are more efficient in capturing tons of fish far from shore, artisanal fishing is more effective in bringing the schools to the beach as well as residents of the city. The reciprocity with those who participate in the launch aggregates value and a different flavor to the extremely fresh fish that circulates in a different way in the exchanges among neighbors and clients. The quality of the fish from the beach is the result of this process of individuation that transforms the fish into food for the community involved, taking with it information about its origin, which confirms its difference from frozen industrial fish.¹⁹

¹⁹ The fish from the beaches of Santa Catarina is more highly regarded locally because it is understood that in their travel to the north from the lagoons, like the Lagoa dos Patos or Laguna, the fish modify their feeding, from the substrate at the bottom of the lagoons, which gives them an “earthy taste”, to the substrate at the bottom of the ocean, which changes their flavor. In addition to the substrate material in the mullets’ food, the knowledge revealed by the artisanal fishing with a beach seine allows understanding another distinctive quality of the fish caught from the beach, expressed in this substrate that is aggregated to relations that are materialized in the fish from Barra da Lagoa, Campeche, Lagoinha and other coastal villages, which are sought during the mullet season. It is a fact that is different from that presented by recent monitoring policies, which has occurred since 2017, aimed at the establishment of a system of fishing quotas to limit the mullet catch on the Santa Catarina coast. This system does not distinguish the fish caught by artisanal fishing from that of industrial fishing, and within the artisanal category, or the fish from the beach and that caught in boats. Although this monitoring includes participation of fishing collectives in the data collection, it does not recognize their contributions to knowledge about the life of the mullet between the sea and land. About this monitoring, see the site *tainhometro*: <http://tainhometro.com.br/> (last accessed on 20/11/2018).



Image 11: photo shared during the 2016 season.

[It reads, “The rule is clear, those who help pull the net, get a mullet”]. Source: *Whatsapp*. 17/05/2016.

Following the effects of the school

To record these operational sequences in images and sound also involved perceiving another component of these skills: the rhythmic adaptation of the gestures of the collective of the crew to the changes in movement of the schools, the sea and the winds, in relation to the beach. That is, the launches are never the same, and vary according to countless environmental factors. Therefore, there is no ideal operational sequence to register, or a single traditional form of casting the beach seine to be transmitted from generation to generation. After all, the artisanal character of this fishing resides precisely in the fishermen’s ability to re-encounter, through a process of “guided rediscovery” (Ingold, 2000: 353-356; 2011: 162), these variable combinations of elements that guide their own changes in state on the beach, from rest and contemplation during the lookout until the intense moment of the launching.

The variations in the operational sequences correspond to the rhythmic adjustments in the technical gestures, as Leroi-Gourhan (1987: 86) observed, in relation to the forces with which they relate. Tim Ingold (2011: 60) observes that these modulations in technical flows are the condition of the artisanal practice of corresponding to the materials, through the artifacts, the way that the material acts on the artisan and vice-versa.

These rhythmic adjustments can also be considered in the industrial fishing by boat, because it also includes fishermen remaking gestures and regulations in the operation of the boats and winches for the nets in relation to the schools and the sea. But there is an important difference, to the degree that the technicity is developed in a different way in each case in relation to the environment. Based on the studies of technique by Gilbert Simondon (2008), we affirm that the quality of this relationship would be a large difference between beach fishing and industrial fishing. The mechanized boats, which use winches and sonar, operate to reduce the unpredictability of the environment, with nets with small mesh that are dragged on the bottom of the ocean for long periods, transforming into catch any body that touches the net, with an internal coherence and autonomy in the concretization of a technical object (Simondon 2008: 77) invested in the maximization of its objectives.

Artisanal fishing, meanwhile, with the beach seine, because it is realized with nets with larger mesh and is based on the abilities to perceive the environment, is a system more open to environmental variations. But for this reason, it is more effective in the selection of fish to circle and in the capture of the schools of large mullet. The mullet caught by artisanal fishing with beach seine nets in fact become the fish of the location, because the process does not involve nature becoming an economic resource, but fish that individuate themselves as mullets on the Santa Catarina coast, at Barra da Lagoa or Campeche, which become unique and have a different flavor, aggregating parts of relations.

The same logic can be considered in the production of the documentary. It did not involve investing in sophisticated equipment like telephoto lenses or underwater equipment to produce images of fish. To the contrary, it involved finding equipment that could withstand the environmental conditions of the recording, like the constant contact with sand, wind and water. We opted to use small action-cameras for the images along the ocean and in the canoe, a portable audio recorder and a DSLR camera²⁰ for the moments of lookout and the final dragging of the net. The operation of the equipment was shared among the researchers. Moreover, when operating the cameras and microphones we chose to adjust our technical gestures to the collective gestures undertaken by the crew and the agents with whom it related. We turn here to the concept of operational sequence (*chaîne opératoire*), to guide our discussion.

The description of the operational sequence, sequentially following (but not necessarily linearly) these processes that mutually affect each other and that involve rhythmic adjustments between humans and non-humans, is a special form of perceiving this complexity of relations, as Coupaye (2015: 73-74) commented well, as a sole manifestation of possibilities of relations in a technical process, in which certain conditions of relationship are necessary. For example, there is not a single type of wind associated to the presence of the mullet, as a more classificatory approach would determine. It is necessary to have a south wind of a certain intensity for a few days to bring the schools from the south, but it must be interrupted by a north, east or northeast wind, depending on the position of each beach, for the fish to come to the beach and with luck a subsequent calm would facilitate the sea conditions to navigate the canoe. Even so, the schools can pass the beach to other areas on the coast, or come close at a place where it is difficult to operate the net or canoe, because of rocky bottoms or an irregular coastline. Moreover, at any moment, the passage of a dolphin or a boat can scatter and alter the course of the school.

Our initial proposal was to visit various beaches and record the work of crews during the mullet fishing season in the city of Florianópolis. Although accompanying the work of the lookouts in various places on different days was relatively easy, it was not at all easy to coincide our presence with the time of the launch or the presence of the fish on a specific beach. A number of times we were with lookouts at a beach who received news by radio or a cell phone that a crew at another beach, where we had been a few days earlier, had just caught hundreds of thousands of fish.

In addition to being unique, each launch, as the complete system of capturing the fish is known, becomes part of the beginning of a new launch, because it allows the crew that executed it and the crews on other beaches to reevaluate the movement of the schools, the direction they were seen heading, on which part of the beach, and in combination with what atmospheric and oceanic conditions were they seen and surrounded. The previous launch, as well as the action of the fishing boats that also exchange information with the lookouts, can scatter the schools, and direct them to the space of capture of another crew. Thus, the images that we recorded also become part of this system of *fish news*, and were incorporated like other narratives, to the operational sequence, a relationship that is recurring in studies of *chaînes opératoires*.²¹

20 Camera: GoPro Hero 3 Black; Camera: Canon DSLR EOS 70D, 18-135mm lens; and audio recorder Zoom H6.

21 If “operational sequence” (*chaîne opératoire*) is initially a concept that defines human actions in the construction of an object, aggregating tools and corporal techniques, it progressively comes to be better understood as a methodological tool, encompassing information that indirectly influence the operational sequences, beyond the narrow description of techniques, as factors that influence the ethnographic work itself (Lemmonier, 1992: 26)

To understand the expansion of the lookout practice from the beach, as a system of monitoring of schools of fish on the Santa Catarina coast, implies understanding that it involves knowledge that is less about the species of mullets and their nature, and more about the relations of the fish with each one of the beaches known by the fishermen according to their specificities: the way that they face the north, east or south and are thus exposed to winds and currents from different directions, and have either a large stretch of sand or are formatted into small bays, or are perhaps surrounded by dunes or rocky coasts close to the entrance of lagoons or rivers. Each curve and each rock has a name related to fishing and fishermen: “Pedra do Vigia” [Lookout Rock], “Ponta do Marisco” [Mussel Point], “Vigia do Paço” [Paço’s Lookout], “Pedra da Baleia” [Whale Stone], “Vigia da Cruz” [Cross Lookout], “Ponta do Silveira” [Silveira’s Point], and many others. In this case, the coastal landscape named in the toponyms acts as an important artifact in the ecology of the fishing instruments and practices, so that this system of information is shared in the way it is described.

In contact with other fishermen positioned at these lookout points or in boats traveling along the southern coast of Brazil, the perception is expanded of large *mantas* of mullets seen on the coast of Rio Grande do Sul, which escaped boats in Rio Grande, and had come from the cold waters of Uruguay, or that even reached the municipalities in the north of Santa Catarina. The lookout is expanded to far beyond the local beach, observing the movement of the mullet in the ocean for many kilometers, awaiting their passage in front of one’s lookout point, hoping that the schools escape other nets.

According to Lemonnier’s (2013) reflection about narrative and technique, it is possible to understand that conversations during the lookout about the news of fish, the evaluations by the fishermen, the exchanges of images and narratives of the previous days, are the fishing occurring once again. They are part of a new operational sequence of artisanal fishing in action, less perceptible than the sequence of gestures on the beach and the dragging of the net. It is these daily conversations, expanded on the social networks through smartphone applications that allow the lookout to confer other meanings to what takes place to the south or north of the beach where he is found. The news is also important in the evaluation of the “harvest”, which is how they refer to the number of total fish from all the modalities in the fishing along the coast, considering the studies about the decrease in fish stock at the Lagoa dos Patos and polemics related to the lack of control of industrial fishing. These issues also lead the artisanal fishing collectives to take a particular political action during the preparation for each fishing season.

Ecological Mise-en-scène

How is it possible to film the school that just passed by? How is it possible to capture with the camera the mullet that the lookout just pointed out? This was an initial concern of the study, which led us to try to learn and develop the ability to *see fish*, as a principle of the *mise-en-scène* of the documentary – that is, the way it places actions, presences, expressions in scene to express their meaning through the treatment of the image.

When we presented the first research images to the fishermen, in the form of panoramic photographs, a recurring comment was the absence of fish in the images and the fishermen’s desire that we be able to register in video a large quantity of mullet on the beach. It was soon clear that it was not an image of the fishermen’s practice of *seeing fish* that would show their effectiveness, but its effects on the operational sequences of fishing and its recursiveness in the confirmation of the ecological information that is shared in each gesture. Thus, the engagement in this practice allowed us to transform our practices of production of images, by experimenting with other modes of seeing and showing the fish, together with the fishermen and their technical objects (such as the net and the canoe).

The knowledge involved in the ability to *see fish* has a precise relationship to the environment. It is not an imaginary representation, an allegory in relation to fish, but a bit of news, an image, or narrative that provides information about the presence of schools in relation to a system of references on the landscape. It is not so much what is a fish, but what it does, its form of existence is important in the sense that is essential to understand what the fish are doing and how to reach them. Thus, the meaning of the images that we were producing was anchored in this indicial sequence that linked one sign to another on the landscape and that initiated the various movements in response. It was not necessary to ask the fishermen about the meanings, but to follow them, discovering these signs in their reactions to what we showed them. To learn to *see fish*, it is necessary to understand this practice as a revelation to the attention of the fishermen, and not as a transmission of knowledge, as Ingold (2011: 162) presents to us, based on the ideas of Bateson (1972) and Gibson (1986). This revelation stems from a sensitive ecology in which the world *shows itself* to the engagement of the lookout with what is moving in the landscape.

The recording of images follows the effects of environmental transformations that show the fish in the gestures, postures and expressions of the lookouts. Given that it was improbable to anticipate where the fish would appear, we followed the reactions of the fishermen as indications of the biosemiotics of the mullet, taking advantage of the progressive approximation of the crew with the fish as a way to also approximate the camera to the mullet, which were easier to frame when found in larger quantity. By shifting the camera from the position of the lookout to the canoe, or to the net in the water, the environmental indications in the landscape had their effects on the lenses and the microphone. Other abilities could be narrated if we focused on the corporal engagement with the paddles and the canoe for example. But the lookout is certainly the ability most possible to be shared among all the fishermen. Even if some are more skilled and recognized for their precision, to *see fish*, it is necessary to initiate all those involved with the crew, like the sons of the fishermen, or even the researchers.

The knowledge needed for artisanal fishing does not reside in the head or in the body of one individual, as Hutchins (2001) commented about distributed cognition. The different ways of participating in the practice of fishing (either in the lookout, paddling the canoe, pulling the net on the beach etc.) imply different ways of developing correspondences (Ingold, 2013: 107) with the movement of the school and the sea, through the net, the canoe, at the edge of the beach, or even of the news exchanged daily.

Different from Coupaye (2015) and other studies that describe operational sequences as transects or visual schemes, we opted to use audiovisual narratives to describe these re-encounters of the fishermen with the schools on the beach, which approximated us to the ways they systematized this knowledge, in *fish news*. To also see and sense the fish, through images, it was necessary to do as the fishermen do, observe the various movements on the landscape, whether at sea, or on the beach, of the fishing comrades. The challenge of capturing with the camera the encounter of the fishermen with the schools, approximates the audiovisual image with a corporeal image, as suggested by David MacDougall (2006: 7). In this case, it involves the body of the lookout, as well as the body of the net being stretched by the tide and by hands and legs, and the body of the heavy canoe and its crew hitting the wave, or of the fish fleeing in the water.

To be able to record the fish, it was necessary to adopt various camera angles and approximations involved in the physical relationship in which some of these elements can be recognized, that is, in order to perceive their affordances (Gibson, 1986). We accompanied the corporeal relations of the lookouts as they horizontally scanned the coastline, highlighting horizontal movements that indicate directions of movement. We encountered the continuation of these gestures in the actions of both the canoe approaching from an opposing direction (and for this reason we placed the camera on the bow), and of the net being pulled perpendicularly, alternating between the surfaces of land and water. Following the movement of the net, it was also possible to approximate the camera to the fish in the sea, whether observing their attempts to escape by jumping through the waves at

one of the points of the net, or, with the camera in the water, awaiting the contact of the fish with the netting. Meanwhile, the capture of sound followed the principle of leaving the microphone to be struck by bodies in contact – the sand carried by the strong wind, the water splashed by the flailing mullet, the tension of the stretched net between the opposing forces of the sea and the comrades in the dragging, the slap of the body of the fish hitting against each other. We also used a drone at some special moments, to allow embracing in a single framing the encounter of the entire crew in action with the fish, during the dragging, showing the two arms of the net being dragged, as well as the fish being enclosed within it.

The montage of the audiovisual is not the moment in which a discourse about the fishing is elaborated, after fieldwork. It constitutes another technical gesture in which this rhythmic interweaving can be continued, transposed to another sequential form, which is not linear, but rhythmic, subject to the movements, interruptions and detours that can entangle the spectator among fundamental gestures: waiting, acceleration, traction and distension. The duration of the images for the montage is given by the rhythm of the oars hitting the sea, waves, the racing mullet and fishermen, transposed to the verbal blows issued by the lookouts and the owner of the net, as they coordinate the movements of the canoe, the arms and legs as they drag the net, keeping it open and taut in the sea, until culminating with the agitation of the fish as they take their last breathes in the sand. After all, we did not capture the fish with the camera, we were captured by the rhythmic engagement of the fish, the beach, the lookout and the launch, which, during the mullet season, record their marks on the coastal landscape of Southern Brazil.



Image 12: image from the trailer of the film *Ver Peixe* (2017) found on the research site <http://verpeixe.tumblr.com/post/169733068948/verpeixe-seeing-fish-2017-46-min>.
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Audiovisual

VER PEIXE. Documentário. 46 min. 2017. Florianópolis, Brasil. Realização: DEVOS, R.; VEDANA, V.; BARBOSA, G. C.

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The tree that responds: taming the rubber tree

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Abstract

The starting point of this article is the assertion, common among tappers (or *seringueiros*) in plantations in the interior of São Paulo, that it is necessary to *tame* rubber trees (*Hevea brasiliensis*) at the beginning of each harvest. They use this phrase to indicate the need to accustom the trees, from the first cuts, to establish an optimal flow of latex. The process of taming the tree is also discussed here based on historical ethnographic materials regarding relationships established with rubber trees in the last decades of the nineteenth and early twentieth centuries, both in the Amazon and in the nascent plantations in Southeast Asia. British naturalists from different colonies came to dispute who “discovered” the fact that the rubber tree possesses a mechanism that they called the “wound response”. Based on this diversity of references to the modes of relationship with the peculiar characteristics of the rubber tree, I seek to elucidate, by viewing the genesis articulated between technical and vital rhythms, what it means to affirm that a tree *responds* or is *tamed*.

Key words: technique; rubber tappers; human-plant relationship.

A árvore que responde: amansando a seringueira

Resumo

Este artigo tem como ponto de partida a afirmação, comum entre sangradores (ou seringueiros) em plantações no interior de São Paulo, de que é preciso *amansar* as seringueiras (*Hevea brasiliensis*) no início de cada safra. Com isso eles indicam a necessidade de acostuma-las, nos primeiros cortes, para que estabeleçam um fluxo ótimo de látex. O processo de amansar a árvore será aqui discutido também a partir de materiais etnográficos históricos a respeito de relações estabelecidas com as seringueiras nas últimas décadas do século XIX e início do XX, tanto na Amazônia quanto nas nascentes plantações no sudeste asiático. Naturalistas britânicos de diferentes colônias chegaram a disputar quem teria “descoberto” o fato de a seringueira possuir um mecanismo por eles chamado de “resposta à ferida”. A partir desta diversidade de referências aos modos de relação com características peculiares da seringueira, busca-se entender, com um olhar para a gênese articulada entre ritmos técnicos e vitais, o que significa dizer que uma árvore *responde* ou é *amansada*.

Palavras-chave: técnica; sangradores de seringueira; relação humano-vegetal.

The tree that responds: taming the rubber tree

Eduardo Di Deus

In the initial contacts established in ethnographic research with the rubber tappers (or *seringueiros*), workers who extract latex from the rubber tree (*Hevea brasiliensis*) in the plantations under expansion in the interior of the state of São Paulo¹, Brazil, a term used by them drew my attention. They said that it was necessary to *amansar* [lit. *tame*] the rubber tree. By this they meant that at the beginning of each harvest, the first tappings are made with the purpose of accustoming the trees to increase and stabilise the amount of liquid that runs from the bark excisions. The curious thing about this reference to a relationship with a tree is that the word *tame*, the formal definition of which approximates calm, appease or settle, has a strong connection with animal relationships. Some Portuguese language dictionaries include expressions like “to make something meek or docile”, in reference to a “beast”, among the first few meanings of the term. Taming the rubber tree, in this sense, seems to refer to stabilising the relationship. I followed this throughout the research, while always attentive to this process, referred to by some as *dar frequência* [lit. establish frequency]. Interest in these facts gained momentum when I came across numerous similar references in historical material concerning the diaspora of this native Amazon tree throughout the tropical world, including a controversy among British naturalists in the eastern colonies in the early decades of rubber tree use outside the Americas over disputes regarding the *discovery* of a certain pattern of *wound response*, during the transition from the nineteenth to the twentieth centuries. While contemporary São Paulo rubber tappers (and agronomists) talk about taming the tree, a little over a century ago, British colonial naturalists said that rubber trees presented a peculiar way of *responding* to human actions, unlike other rubber producing plants. It would not be an exaggeration to say that this characteristic of the rubber tree constitutes an important affordance (Gibson 1979) wherever someone has engaged in the extraction of its latex.

In the doctoral research in anthropology that originates these reflections (Di Deus 2017), the focus on techniques and abilities emerges as a comprehensive starting point of processes at different scales, both ethnographically and historically. In this research, I began a historical discussion concerning the way that humans relate to these trees, proposing an interpretation of the long-term technical transformations (Sautchuk 2017) in the forms of extraction. I sought to recover the earliest records on ways of extracting rubber from South American rubber-producing species, through developments at the height of the rubber economy, transferral of the rubber tree to Asia, and the repercussions of Asian crop development on the forms of extracting in the Amazon. To a certain extent, I followed the technical relationships that made the rubber tree viable in different historical moments, regions and relationship systems, considering how the forms of latex extraction, their dynamics, are fundamental to understanding this history. I developed an approach focused on the transference of technology in the plant world that seeks to address the developments of “technical systems” (Gille 1978), understanding that the movement of plants and animals is accompanied by movements in the forms of relationships with them. In this sense, I mobilised the anthropology and history of the techniques to consider

¹ In the Amazon region, the term used to refer to workers who extract latex from the rubber tree is *seringueiro*, in reference to the Portuguese name of the tree, *seringueira* or *seringa*, whereas on plantations in the interior of São Paulo, the term for those who perform this activity is either *seringueiro* or *sangrador* [lit. bleeder]. The latter term emphasises the activity performed rather than the plant. In this text, we will use only the current term in the English language, rubber tapper.

the skilful and effective meeting of workers with the plant world from a perspective of the transformations of technical systems, oriented by the different ways in which the different rubber extractors were related to the trees' characteristics².

This article is an attempt to correlate the historical and ethnographic materials of this research. The skilful relationship of the rubber tappers (or *seringueiros*) with the trees is of fundamental importance in the agricultural sector called rubber culture, situated in the region known as the western plateau, in the interior of São Paulo. The core of this complex human-plant relationship is the ability to make cuts deep enough to open as many latex conducting vessels as possible, without harming the inner layers of the tree, the wood or, as the locals say, *madeira* [lit. *timber*]. All this at a good *ritmo* [lit. *pace*], with intense speed. In this article I try to elucidate how certain rhythms of this very special plant make us reflect on the human-plant relationship as a dialogue, based on actions and reactions. The article is founded on the growing field of anthropological studies on the techniques associated with the plant world, presenting, as is characteristic of the core field authors (Sigaut 1975; Haudricourt 1987), a historical view on certain relationships between humans and plants. Thus, converging with that proposed in a recent and very rich work on the history of the rubber industry, herein I defend the importance of strengthening the historical gaze in anthropology beyond a vision of “contextual background” (Nugent 2018: 17). Looking at the emergence and connection of technical systems in a plan of global diaspora of a plant species, in this article, I seek to draw attention to how the anthropology of forms of relationships with the plant world can benefit from a historical view of technical transformations in the relationships with certain species.

Who “discovered” that the trees respond?

In the first decade of the twentieth century, rubber tree cultivation began to spread in the form of linear plantations in Southeast Asia, following the efforts of the British Empire to overcome the Amazonian hegemony in the production of natural rubber, a product in demand by numerous industrial branches. It was the onset of the era of tires and automobiles. Less than three decades earlier, this native tree had been taken by British to its tropical colonies in the East (Dean 1987; Weinstein 1983). However, it was only after the crisis that the growth of coffee in the State of São Paulo caused in coffee-growing in the Malay peninsula in the 1890s that the idea of planting a rubber-producing tree was seen as feasible for Asian producers. The historiography of the rubber tree attributes Henry N. Ridley, a British naturalist based in Singapore, with the deed of having spread this culture in the region. It is said that ‘Mad Ridley’ walked with seeds in his pockets, promoting its advantages. Yet Ridley was praised, mainly for being considered the “inventor” of modern rubber tapping, establishing and disseminating a way of extracting that enabled linear plantations, according to agronomic precepts, a new mode of existence for this plant (Cook 1928; Fairchild 1928a and 1928b; Dean 1987).

² The research from which this work originates is based primarily on the ethnography of the labour practices of the rubber tappers, rubber plantation workers in northwest São Paulo. It consisted of the observation and description of the work of the tappers in their routines, with the tasks of tapping as its starting point. However, I went beyond the indirect observation of their work. I immersed myself, becoming an apprentice of the craft of tapping, a resource that, according to Wacquant (2002) and Sautchuk & Sautchuk (2014), extends the potential of accessing the reflections of practitioners on their activities. Using this field strategy, I initially participated as a student of training courses regularly provided in the interior of São Paulo. Subsequently, I settled in different farms as a neophyte at work and engaged in the tasks of tapping under the supervision of experienced tappers. In addition, in order to develop the historical aspects of this study, I conducted research on archives and in libraries important to rubber tree cultivation, among which I should highlight: the IBAMA library in Brasília, where the collection of the extinct *Superintendência da Borracha* (SUDHEVEA) [Superintendence of Rubber]; the library and the archive of the Agronomic Institute of Campinas (IAC); the library of the Botanical Garden of Rio de Janeiro; the National Library of Rio de Janeiro; two libraries of the *Centre de coopération internationale en recherche agronomique pour le développement* (CIRAD) in Montpellier and in the region of Paris, France; and the historical archives of the Royal Botanical Gardens, Kew, England.

This new mode of existence provided the emergence of a new mode in the technical relationship with the plant. In this sense, it would be no exaggeration to say that the transformation in the mode of latex extraction was fundamental to the consolidation of rubber plantations. In the nineteenth-century Amazon, the tree was exploited along rubber trails, at a density of one or two individual trees per hectare of native forest. In Asia, it was planted in large concentrations of 400-500 trees per hectare. In the Amazon, at that time, hatchets were used to make incisions in the tree bark and the latex was collected with small bowls. After a period of extensive experimentation with various tools and procedures, in several British, Dutch and French colonies, Ridley was attributed with having discovered the knife extraction method. The essence of his “discovery” was replacing the incisions made in the bark using the Amazonian hatchet, by continuous excisions of the bark with knives. Careful excisions minimised injuries to the woody tissue of the trees, unavoidable with hatchet blows, extending the useful life of the trees now planted in line.

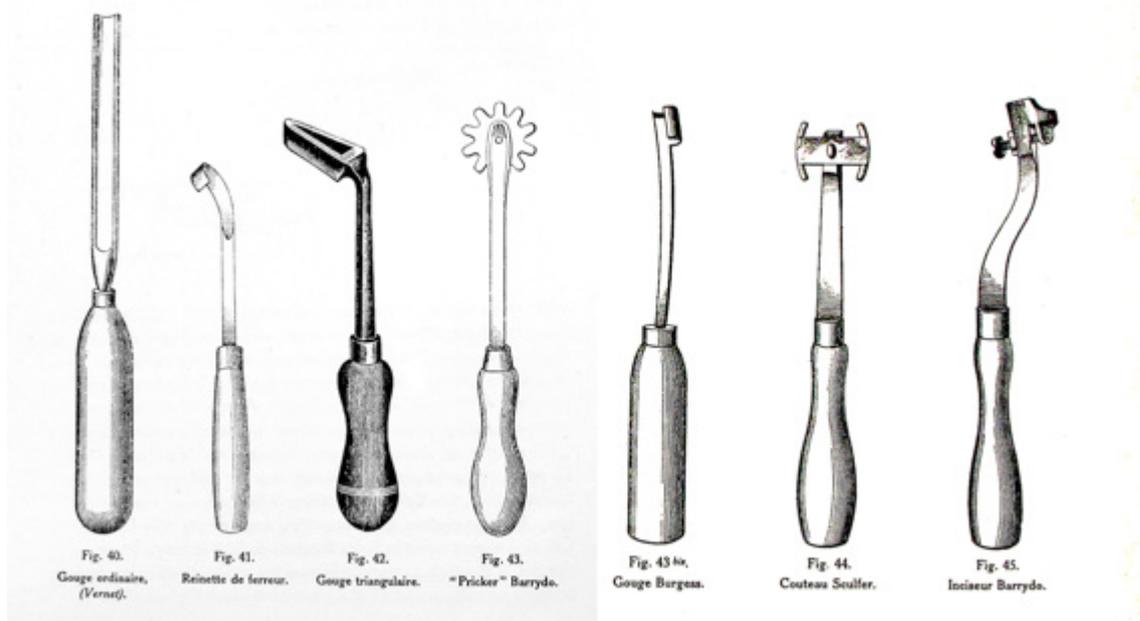
However, it was not a direct path, fruit of the genius of an “inventor” of modern tapping, H. N. Ridley, as seems possible to infer from the narrative of the leading historian on rubber tree cultivation:

By the end of the decade of the 1890s, the combined, even though uncoordinated, efforts of Ridley and his collaborators, botanists at Peradeniya, and numerous planters and tappers had resolved most of the uncertainties surrounding *Hevea brasiliensis* [...] Tapping methods were much improved over those employed in the Amazon. To take the place of the small hatchet, knives were designed that excised thin slices of the bark. Repeated excision of the same portion of bark was found to increase, rather than reduce, the flow of latex (Dean 1987: 30).

As Dean himself reports, the rubber tree had a difficult start in those lands because there was not much confidence that cultivation could be viable. Local species such as *Ficus elastica*, or even other South American rubber-producing species, such as *manicoba* or Ceará rubber (*Manihot glaziovii*) and *caucho* (*Castilla elastica*) were preferred. Tapping with knives was disseminated throughout the world where rubber trees were planted, and became the most used method, including in the non-Amazonian South American plantations, for example, where it is the rule in contemporary plantations in the State of São Paulo. In some places in Asia, a type of gouge is also used, but the way in which the panel of the tree was handled is very similar to the way it is done with the tapping knife.

However, to arrive at the Asian tapping system stabilised by this type of knife, a series of attempts and experiments were made with different tools and methods of extraction. Much more than a simple, straightforward passage from the use of small axes to the simple, effective *jebong* knives, this period was marked by a large profusion of tool models, stimulated not only by the creative drive of the first cultivators and agents of the botanical gardens, but also by contests held by the colonial administration (Willis 1906: 121-126).

Figure 1 - The diversity of tools used to extract latex



(Labroy & Cayla 1913: 96-97)

A key differentiation here, a subject of debate at the time, is between bark *incision* methods and bark *excision* methods. The Amazon hatchet used a mode of action based on localised incisions. The knives and gouges that came to be tested in Asia were based on the excision of parts of the bark. Even so, incision methods were tested in Asia, among which extraction with rotative pricking tools seem to have acquired approval for a period of time (Willis 1906: 125-6). Until the 1970s and 1980s, puncture tapping methods, which consist of puncture incisions, continued to be tested in different parts of the world.

During this transition, removing or not removing parts of the bark seems to have been less important than control of the tool in relation to the tree. Passing from the hatchet to the tapping knives provided greater control of the action on the bark. According to Leroi-Gourhan's discussion of "elementary means of action on matter" (1971 [1943]: 43-64), this was a transition from a perpendicularly thrown *percussion* [lit. percussive blow or strike] using the hatchet, to an oblique supported *percussion*, using the tapping knife. The author thus compares:

The oblique *percussion* is precise and its results limited, the perpendicular *percussion* is violent and unusable in a precise task. The supported oblique *percussion* corresponds to the maximum of softness and control of the tool, the perpendicular *percussion* launched with the maximum of force and with the relative absence of measurement of the results (1971: 55)³.

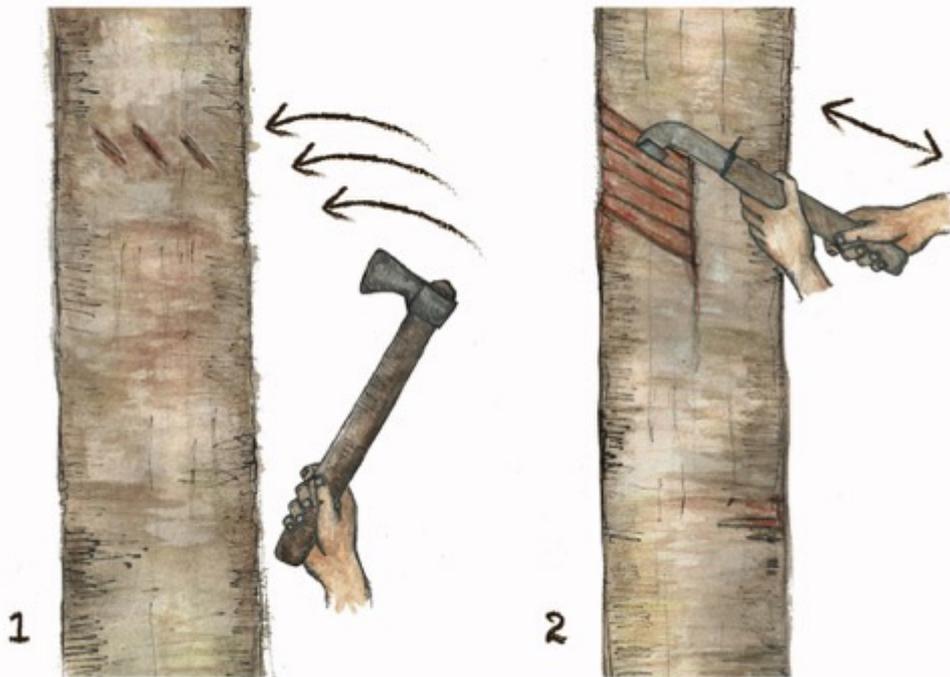
Thus, the adoption of the tapping knives corresponded to a significant gain in controlling the depth of the cut, a fundamental feature to avoid injury to the woody tissue, prolonging the productive life of the trees. Not by chance, this tool would spread widely⁴. This diffusion, however, did not take place without intense debate.

³ The original: "La *percussion* oblique est précise et ses résultats limités, la *percussion* perpendiculaire est violent et peu utilisable dans un travail précis, la *percussion* oblique posée correspond au maximum de douceur et de contrôle de l'outil, la *percussion* perpendiculaire lancée au maximum de force et à l'absence relative de mesure dans les résultats".

⁴ It is important to take into account Sigaut's (2011: 106-107) reflection on Leroi-Gourhan's classification of the means of action on matter, in the sense that the very idea of *percussion* is not the most adequate to define actions like supported strikes, *percussions posées*, which are closer to a form of *pressure*. On the other hand, even though the amplitude of the concept of a *percussion* is questionable, I believe that the typology still serves its purpose when analysing the differences between modes of action found in practical situations.

Carl de la Rue, an official with the US Department of Agriculture, published a study in the 1920s on the rubber industry in the Amazon, citing the controversy between incision (hatchet and other tools) versus excision (gouge/knife) at the onset of the Asian plantations (La Rue 1926: 15-6). Some believed, the author says, that the new Asian excision techniques would be harmful to trees. One of these was the man who introduced *Hevea* to Asia, Wickham, who until the first decade of the twentieth century sought to establish himself as a reference for rubber culture, having published a practical manual of its cultivation in London (Wickham 1908: 24-28, 37-38). He defended the incision-based methods, even though a modified version, which no longer involved hatchets, rather chisels hammered by a wooden stick⁵, which Leroi-Gourhan would call a supported *percussion* using a striking tool, a method that provides a little more precision in comparison with the thrown *percussion* of a hatchet.

Figure 2 - Comparison of the principles of knife and hatchets actions



(drawing: Marina Mendes da Rocha)

Wickham criticised the excision methods being tested at the time (spirals, herring-bone and V cuts), believing that the removal of bark that occurred in these methods consumed the bark very quickly, in addition to increasing the risk of pest attack and diseases. De La Rue defended the opposite, that incisions were always bad for the trees, because the axes or other thrown *percussion* instruments generated little control with respect to the depth of the cut, making it almost impossible to handle them without producing the almost omnipresent swellings and knots that were ascertained in rubber trees worked and injured this way:

⁵ “The three oblique *incised* cuts one above the other should be clean-cut with a smart tap made by an ordinary carpenter’s (one-inch) chisel held with a firm, straight wrist, to be made by a quick percussion blow with a wooden mallet” (Wickham 1908: 25). The Englishman warned of the need to quickly remove the blade from the cut, so as to avoid injury to the cambium.

If there ever were *seringueiros* who were careful in using the *machadinho* the tribe has vanished from the soil – and the waters – of Amazon area! It is hard to imagine what the incisionists thought the ever-present knots and swellings around the base of the tree might be (La Rue 1926: 15-16).

This author goes so far as to suggest that the wounds generated by these techniques even influenced the first botanical descriptions made by the French naturalist François Fresneau in the eighteenth century, who had drawn the trunks of the rubber trees with a type of scale, as if it were as a natural feature, comparing them with some types of palm trees that have this characteristic. Thus, it is possible to imagine that even the “naturalist” descriptions historically dealt with plants grown together with humans, familiarised, managed, in short, in the process of domestication.

Reinforcing the hypothesis that there had been a cumulative process in this transition, Ridley, the inventor-hero himself, mentions an old report by Englishman James Collins as an influence on his research in Singapore in the 1890s (Ridley 1928: 5). Based on investigations conducted at the Port of London, Collins (1872: 36-37) had compiled state of the art knowledge on rubber-producing plants even before the rubber tree crossed the Atlantic Ocean. He suggested the use of horseshoe-like knives, warning of the need to reduce injuries to the “cambium layer”. In addition to Collins, other naturalists, such as Robert Cross (1876) and H. Wickham (1876), sought not only seeds and seedlings in the Amazon, but also investigated a complex of information and techniques on how to make rubber trees produce latex.

The interesting thing is that, even though he was later celebrated as a great hero of rubber culture, while in Singapore, Ridley rivalled his British colleagues of a colony with greater agronomic tradition, Ceylon (now Sri Lanka). A controversy was established between Ridley and the directors of the Botanic Gardens in Ceylon, Willis and Parkin. In 1899, they disclosed the “discovery” of a physiological effect of tapping, which they named “the effect of wounding on the flow of latex”, later summarised by the term “wound response”⁶ (Royal Botanic Gardens⁷, Ceylon: 1899).

They referred to the fact that, unlike other rubber-producing species, such as the South American *caucho* (*Castilla elastica*) or the African *Funtumia elastica*, characteristically the rubber tree does not generate a large volume of latex from the first cut made, it is necessary to perform new taps on subsequent days to obtain a larger volume of latex:

In Circular No. 4 of this Series, January, 1898, on Rubber Cultivation, it is shown in a series of experiments made by the Director [Willis] on a number of Hevea trees that the second tapping gives a much larger yield of rubber than the first - the numbers indicate just about double the quantity. This is a very remarkable and important fact, and one which hitherto has not been scientifically observed. The natives of the Amazon Valley seem, however, to be aware of it, although no reference is made to it in such a comprehensive work as Seeligmann’s “Le Caoutchouc et la Gutta-percha.” The Director in conversation with Mr. Gwynne-Vaughan, a botanist who has visited the Amazon Valley, was told that the rubber tappers, when a freshly-tapped tree does not yield a large amount of latex, say that *it has not got used to milking yet* (RBG, Ceylon 1899: 133; emphasis added).

For the people of Ceylon, therefore, it was a discovery, since it consisted of the first “scientific observation” of a fact that Amazon Indians “seemed” to know. In addition, they said that there was no mention of the fact in works considered references on rubber, there were only reports of the same by Europeans who had visited the region of origin of the rubber tree.

6 Labroy and Cayla (1913: 26-7) proposed translating the term as “resposta à ferida” [lit. response to the wound]. Wound here is understood not as a harmful injury that generates calluses and other inconveniences to the bark, but merely the idea of opening up part of the bark so that the latex flows out. The agronomist Marcos Bernardes (1995: 20-21) uses the Portuguese term “resposta à sangria” [lit. response to the tapping].

7 Hereafter RBG.

Ridley's response to this "discovery" is revealing regarding the complex process of the comings and goings of the rubber tree and a certain hierarchisation of technical knowledge on how to relate to this plant. Initially, Ridley (1910: 201-3) minimised the importance of the announcement of the Ceylon researchers, publishing in a local newsletter at the time of the controversy, saying that as soon as he arrived in Singapore and began his experiments at the end of the 1880s, ten years before competitors stepped up their research, he himself had "discovered" this physiological effect, a procedure he named "calling the rubber". Moreover, Ridley said that this effect was fairly banal, observable to anyone who had performed successive tappings on rubber trees. Finally, he stated that he had been visited by *seringueiros* from the Amazon⁸, who confirmed that they already knew of this effect, and for this reason he had not recorded this fact as an important discovery. Ridley thus criticises some articles published by Willis and Parkin of Ceylon in the journals *India Rubber Journal* and *India Rubber World*⁹:

In these papers the incompleteness and inaccuracy lies in the account of the so-called re-discovery of wound-response, which it was first claimed was an original discovery by Messrs. Willis and Parkin, in 1899, but later as a re-discovery of a phenomenon known to the Amazons *seringueiros* and some other points. The discovery that the second and later tappings of a rubber tree produce a greater flow of latex than the first is one that no one can possibly overlook who taps a tree consecutively for a few days running and notes the result [...] Needless to state we discovered what is now called "wound response" shortly after we commenced tapping in 1889, but from some Brazilian *seringueiros* who visited the Gardens later, I found that it was well-known to them, so did not record it as an important discovery on my part (Ridley 1910: 201-203).

Sources that indicate the wide diffusion of knowledge concerning this physiological dynamic of the rubber tree are abundant. Lock, who worked at the Henarathgoda Botanical Garden in Ceylon, stated that the wound response was long known to "collectors of wild rubber" (1913: 60). In addition, Lock emphasises that this physiological characteristic is particular to *Hevea* and to another plant from the same botanical family (euphorbiaceae), *maniçoba*, compared with other rubber-producing species¹⁰. Concerning the variation in exudation in the same tree between morning and afternoon, Labroy and Cayla say that this was

a fact well known to all rubber tappers; it is also more abundant after a certain number of tappings: and is a phenomenon particular to Hevea, the always verified, but as yet unexplained, resposta á ferida', the 'wound response' of the English (Labroy and Cayla 1913: 26 -27)¹¹.

A Frenchman named Cibot (1903: 4), who visited Bolivian rubber plantations, mentioned in a report something he called the "phenomenon of habituation" (phénomène de l'accoutumance). This was a fact reported by extractors from the Beni River, according to which the amount of latex in the first three or four taps is very small, and it is necessary to accustom or habituate the tree. Colonel Labre (1873: 9), a rubber worker who founded the town of Labrea, State of Amazonas, on the Purus River, had already mentioned in 1873 the need to "prepare the rubber tree" with initial low production cuts.

8 In one of his writings, Ridley cites a visit by the *seringueiros* to the Singapore Botanic Gardens to say that their methods were not efficient: "We had once two professional *Seringueiros* (rubber makers) from Brazil to try their hand with our rubber, but they made no success of it" (1928: 6).

9 For example, Parkin (1910).

10 "If a tree of *Castilloa* or *Funtumia* is tapped, and the wounds are reopened after an interval of a few days, or if the bark is again tapped after a short interval in the neighbourhood of the original cuts, little or no latex is obtained at the second tapping. The bark is milked almost dry at a single operation, and the latex tubes are not completely refilled for several months. The case of *Hevea* and *Manihot*, on the other hand, a good yield is again obtained after an interval of only a single day. *These facts have long been known to the collectors of wild rubber.* The *Hevea* trees in the forests of Brazil are tapped repeatedly during a single season, whereas in Central America it has frequently been the custom to cut down the *Castilloa* trees in order that the whole of the available rubber may be obtained at one time" (Lock 1913: 59-60; emphasis added).

11 The original: "*um facto bem conhecido por todos os seringueiros; ella é também mais abundante depois de um certo numero de sangrias: é também um phenomeno particular á Hevea, sempre verificado, mas ainda não explicado, a 'resposta á ferida', o 'wound response' dos ingleses*".

However, when he wrote about the subject at the end of his life in a text on the “evolution of cultivated rubber industry”, Ridley removed any mention of the Amazon rubber tappers, claiming only that the people of Ceylon had rediscovered something that he himself had previously discovered.

In this tapping we discovered that it was necessary to open the cuts the day before we required the latex, as the trees did not yield the first day. This we called ‘calling the rubber’. I mention this because about 15 years later it was rediscovered by the Ceylon agriculturists and hailed as an important discovery under the name ‘wound response’ (Ridley 1955 [1930]: 117).

At the beginning of the twentieth century, Ridley was in contention for hegemony in the emerging rubber industry with the people in Ceylon. Unlike Singapore and the Malaysian peninsula, where Ridley says it took ten years to start publishing due to the lack of availability of printers or the resources for printing, Ceylon was considered a benchmark in tropical agriculture, concentrating resources and prestige. So much so that the announcement of the “discovery” of the wound response had great repercussion in the world of the rubber tree. Ridley had the merit of contributing to the enormous diffusion of the rubber tree in the Malaysian peninsula, a region that became the largest rubber producing centre at that time. If it is true that it was not a process of invention by an isolated genius, nor a process that started from scratch, there was a significant transformation based on the experience coordinated by Ridley. It was from this point onwards that continuous layers of bark were removed from the same region of the trunk of the tree, with the help of specific knives, a technique denominated paring.

In fact, what this peculiar characteristic of the rubber tree reveals is that there was a cumulative process of knowledge in the transformations of the mode of rubber extraction. Different from that defended by some versions of the history of rubber trees, reproduced by historians and even by ethnologists studying in Southeast Asia (Wolf & Wolf 2009 [1936]: 128-129; Dove 2000: 231), knowledge of the mode of the relationship with the species was not “created from scratch” after its arrival in Asia, rather transposition occurred with transformations in the ways of relating to the plant. The relation with this physiological dynamic of the rubber tree is one of the most striking examples of these technical systems in diaspora.

The ethnographic experience in the rubber plantations of the western plateau of the State of São Paulo allows us to interlace some considerations about how this physiological feature, which was already known and used by the old Amazonian *seringueiros*, is crucial in the routine work of the current São Paulo rubber tappers.

Taming or establishing frequency

In São Paulo, the rubber tree is tapped for ten or eleven months a year, with a pause during the period that the leaves fall, between August and September. Whenever the rubber harvest begins, usually in September, it is necessary to *tame* the tree or panel, as Amazon rubber tappers have known and practiced since at least the nineteenth century. The panel is a region of the bark previously delimited by scraping on which successive tappings are performed. The first cuts are important for the tree to be accustomed to producing a constant gush of latex. The São Paulo tappers call this process taming, while workers who migrated from large plantations in Mato Grosso often speak of *dar frequência* [lit. establishing frequency]. Frequency is an agronomic jargon that has been incorporated by many workers, making reference to the interval between one tapping and another. It is curious that some agronomists from São Paulo have, in turn, incorporated the term *amansar* [taming], current among tappers and other agents in the field. An important aspect here is that once tamed, that is, once in frequency, it is important to maintain relatively regular intervals between tappings on the same tree to sustain this physiological effect of exuding a good amount of latex. The stimulation of production is maintained by doing this. The most common system currently used in São Paulo is called D/4, in which a task or lot of

trees is tapped every four days. A few years ago, the system used on the São Paulo plateau was D/3 (three lots per tapper, visited every three days)¹². If the tapping interval is prolonged too much, for reasons like a period of heavy rains, the tree ends up “losing frequency”, the stimulation that this rhythm provides is lost and production decreases.

Over decades of dealing with the rubber tree, it was perceived that in addition to tapping at regular intervals until the tree increased and stabilised the latex flow, it was necessary to find the ideal interval between one tapping and another, the ideal frequency. For years, agronomic science has pursued what the “ideal” tapping or exploitation system is for each clone in a given region, intersecting with other factors, such as chemical stimulation, in order to obtain greater productivity (e.g., Silva et al., 2007). Bernardes, one of the agronomists specialising in rubber, has thus proposed:

Wound response, or panel taming, is the reaction of the rubber tree to increasing the production of latex after successive tappings. When a tree is tapped for the first time, or after a long cessation of tapping, the latex flowing from the laticiferous vessels is viscous and has a high rubber content, and its flow is short in duration. Subsequent tapping at regular intervals results in an increase in production due to the prolongation of the flow period of a more dilute latex. The tapping interval that provokes this type of response varies from one to several days, and with larger intervals the effect decreases (Bernardes 1995: 20; emphasis added).

It is interesting that in his thesis, Bernardes uses both a derivation of the term coined by the Ceylon researchers “*resposta à sangria*” (the translation for *wound response*), and the current term in the interior of São Paulo, *amansar o painel* [lit. tame the panel] (or the tree). This phenomenon reveals a central fact in rubber culture and in so many other types of relationships with the plant world. The tapper acts on the plant, but not only to excise its components. It concerns a process of action and reaction, involving rhythms and, what is evident here, the responses of the plants.

In addition, it indicates the fact that it is necessary to maintain regularity in the interval of days between cuts (frequency), imposing on the rubber tree a certain discipline for those who work with it. It is necessary to tame and maintain discipline, frequency. It is known that, from the physiological point of view, this interval revolves around two to five days, or up to seven days, and an interval of longer than a week in tapping already decreases the flow. For most clones and in most regions, the frequency considered ideal for generating the highest rubber production is D/3 or D/4. However, other factors are taken into account, such as the relationship with what is defined as labour. While in São Paulo, the ideal working frequency is currently D/4, in other regions where rubber culture has expanded to on somewhat different sociotechnical bases, the frequency used has been D/5 or even up to the limit, D/6 or D/7. In regions of the State of Goiás, for example, where there are farms with larger plantations than in São Paulo and where tappers are paid wages – different from the sharecropping system, which is the most common in São Paulo –, the decrease in productivity per tree due to the reduction in frequency is compensated by lower costs for tappers’ wages, a fact that makes it an attractive choice for employers in this region. As it turns out, the choices of so-called systems of exploitation involve a tangle of correlated factors of different orders (Di Deus 2017).

It is important to understand how to *tame* the tree (or *establish frequency*). Whenever an area of rubber trees has not been tapped for some time, this process must be carried out. The first step to this is *quebrar a casca* [lit. breaking the bark], according to tappers from São Paulo, or to *avivar a sangria* [lit. reviving the flow],

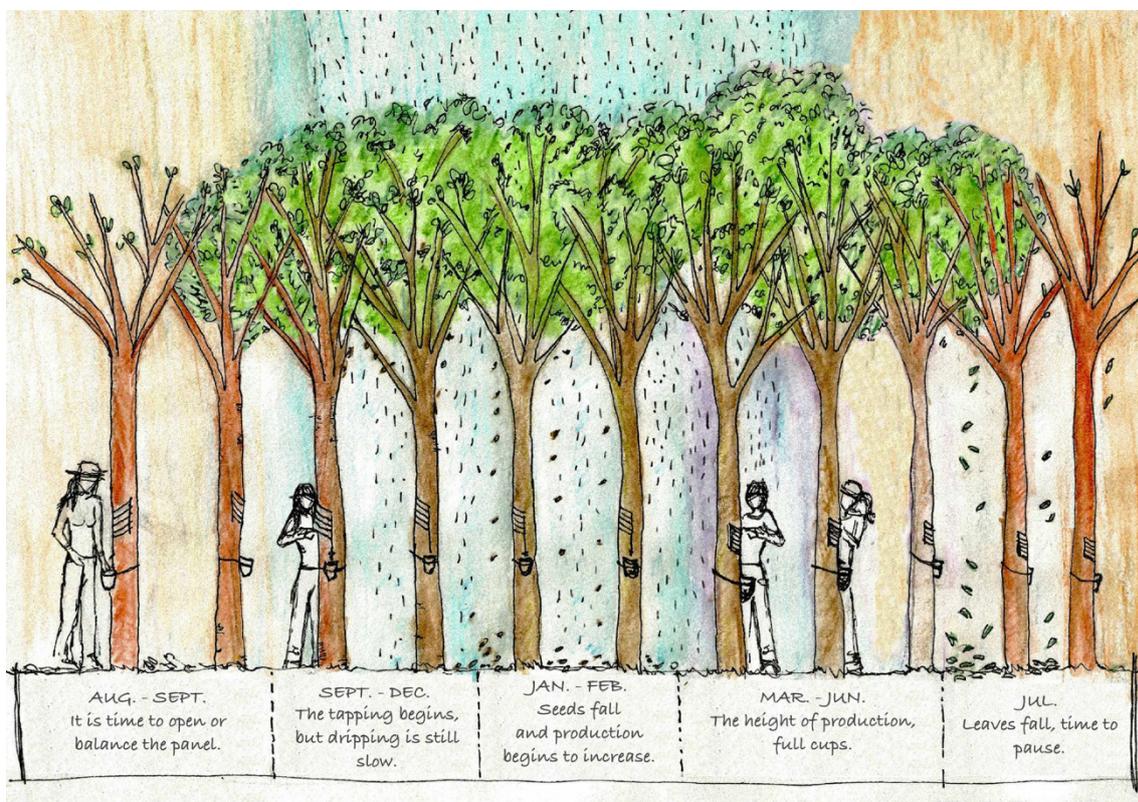
¹² When rubber culture began in this region, according to reports, the most common system was D/2. A tapper from São Paulo who has been working for more than twenty years with the same boss informed me that he had a *tabela* [chart/schedule] from D/2 to D/4. D/2 produces a lot, but it causes a lot of panel drying, when the tree stops producing latex. *Tabela* is a term used by São Paulo tappers that is situated between the lot (territory) and the frequency (interval). The *tabela* is the division of *tarefas* [tasks] (as some tappers call the lot). I have heard tappers using the term *tabela* as a synonym for lot, i.e. the territorial division, but also in reference to frequency.

according to the migrants. This is the first cut after a period long enough for the bark to regenerate and change the flow dynamics of the latex to the panel. *Taming* or *establishing frequency* corresponds to the sequence of two or three cuts, until the latex flow increases and stabilises.

This is necessary at least once per crop, after the *parada* [lit. *pause*], the time during which the rubber tree is not tapped, which lasts two months on average. Jair, a São Paulo tapper with ample experience, once told me that “the rubber tree is the same as the milk cow, you have to stop for her to rest”. This comparison between rubber and cow, latex and milk, and even between the rubber cup lumps and cheese, is widespread, especially among those from São Paulo. Not only because the products have similar physical characteristics (white liquids), but also because of similar physiological processes (when comparing cow and rubber), or even because of the physicochemical transformations of the extracted materials (comparing latex coagulation and cheese curing). In this sentence by Jair, the physiological dynamics are compared, the need for a pause in the extraction process of latex from the rubber tree and in drawing cow’s milk. In short, an analogy between their organic rhythms. It is interesting to note that analogies between organic and technical processes between species do not always coincide with the boundaries of biological classification: this is yet another example, in which an animal species is compared with a plant.

This *pause* usually occurs in the region between the months of August and September, when the most common clones, such as RRIM 600 and PB 235, lose their leaves and it is necessary to interrupt the tapping. At this time, the tree uses the nutrients, water and proteins contained in the latex to renew its leaves. In parallel, the bark on the panel begins to thicken.

Figure 3 - Cycles of the rubber tree



(drawing: Marina Mendes da Rocha)

The *pause* usually ends when the leaves are renewed and the rains begin, between September and October¹³. Then it is time to resume tapping, making the first cuts to *tame* or *establish frequency*. The panel can be opened just below the one that was tapped the previous year, or on the other side of the tree. In this latter case, this is known as *virada do painel* [lit. turning the panel], one of the procedures used to *balance* the panel. The most common practice today, according to that established in rubber culture manuals and applied in the field by a large portion of producers, is a routine of opening the first three panels on the same side of the tree, where each panel corresponds to half the circumference of the tree, with cuts made in a downward spiral (the so-called half-spiral, described in technical manuals as *S/2*). At the start of the fourth year, *turning the panel* is carried out for the first time, and the panel is opened on the opposite side to the previous year. From then on, the panel is alternated every year. There are, however, numerous variations in these sequences. Regardless of whether or not the panel is turned, the *taming* procedure is the same, since the two-month pause is enough that the previous panel no longer remains *tamed*.

It may be necessary to *tame* or *establish frequency* again if an area is not tapped during the harvest, for any number of motives. One of these is the unexpected loss of a tapper in the middle of the harvest, without being able to find a substitute quickly. The turnover of tappers between farms is high, for several reasons. I helped a tapper to *revive* (*break the bark*) a lot when the previous tapper and his wife had decided, in the middle of the harvest, to return to their region of origin, outside São Paulo. After more than a month on pause, the cut line had already formed a thicker, deeper bark. The *sernambi*, which is the small rubber strip that sticks to the last cut line, was already black in colour, while the rubber was a sticky, gooey texture, and difficult to remove. When you make the first cut, you notice the bark is a different colour, such that one of the outermost layers is green and the colour is more intense; a sign, the tapper told me, that these trees were regenerating that area. In these first tappings, it is again necessary to seek the ideal depth of cut, which was lost during the pause. A secondary impact of the pause, which makes this service somewhat uncomfortable, is the accumulation of water in the latex collection cups and the consequent proliferation of mosquitoes.

However, it is not necessary to go one or two months without tapping for the effects to be felt. Even after a pause of just one or two weeks, a lot already begins to show a reduction in its latex flow. On a farm where I accompanied the tapping, I witnessed as one of the lots was left for nine days without tapping because of a succession of rainy days. Even for a beginner like me, it was evident that it was “dripping less” compared with previous taps in the same area. In addition, according to what the tapper told me, “the lot was already losing depth”.

Maintaining the frequency relatively stable is therefore one of the ways of *stimulating* production, or maintaining the tree stimulated. In this sense, a tamed tree is a tree that is stimulated to produce latex. The plant is stimulated to produce by maintaining cuts at relatively regular intervals. Jair once told me, “the agronomist said that I was a sorcerer, because my cups were full while the others had little. It’s the way you cut the tree, deep and continuously, to stimulate it to produce”.

The other way of achieving stimulation is by application of the chemical stimulant, ethephon, almost always called by the brand name, ethrel, but also by the nickname of *groselha* (red currant), in reference to the strong pink colour. The use of ethrel is of great importance in the rubber plantation, as it can significantly increase production. Therefore, sharecropper tappers, who earn by production, value its application. However,

¹³ There is, however, controversy concerning the period of the pause, directly related to the tapper’s line of work. In his talks, the agronomist Marcos Bernardes has defended that the pause should be prolonged, such that the tapping is resumed during the period of greatest productivity, in January, and that the harvest should be shorter. He argues that it is economically more interesting to concentrate tapping during the more productive months. With a shorter harvest of about six months, the tapper would lose their speciality and engage in a host of other agricultural activities. Janilson, a tapper who devotes himself exclusively to this profession, disagrees. He argues that this is detrimental to the tapper’s line of work, as the worker loses their focus on tapping activities while having to perform numerous other tasks on the farm. On the other hand, Jair, a tapper who has a second job, generally prefers to lengthen the pause so he can build houses in the period of the pause.

in the history of the rubber tree, chemical stimulation is related to the search for increased production, causing a reduction in tapping frequency and, consequently, in the number of tappers per area. A course book on tapping elaborated by the National Rural Apprenticeship Service in São Paulo (SENAR-SP), contextualises the chemical stimulation as follows:

In order to obtain latex flow (outflow) for a longer period, aimed at increasing the interval between two taps, and thus reducing bark consumption and the quantity of labour, without harming production, the application of chemicals on the tree was adopted (Benesi and Oliveira 2005: 21).

Numerous products have been tested throughout history to stimulate rubber tree production¹⁴, but etephon has been disseminated as the most adequate and with fewer negative implications¹⁵. Ethrel releases a vegetable hormone in the plant, ethylene, which is natural and promotes multiple effects: it prolongs the flow of latex by reducing the presence of lutoids, the particles responsible for coagulation; it widens the diameter of the lactiferous vessels, potentiating the flow; and it increases the pH of latex, favouring the biosynthesis of rubber particles (Bernardes 1992: 6-11). In 1974, its possible inclusion as one of the “new technologies” to be introduced to increase productivity in native rubber plantations (Barros and Aitken 1974: 293) was already being discussed. Bernardes recommended the adoption of ethrel in São Paulo, in the early 1990s, but it required extending the interval between taps, since the D/2 system, the most commonly used at the time, is not the most favourable for stimulation with ethrel (Bernardes 1992).

Ethrel is directly linked to the physiological cycles of rubber trees and to environmental variations, such as rainfall. It is a production stimulant, but it must be applied at favourable times, generating a rhythm that must be followed. The application of ethrel promotes something similar to that which Lemonnier (1992: 21-24), when speaking of “strategic operations”, discusses concerning operations that cannot be interrupted once they have been initiated. First of all, in order to apply it, certain conditions must be met, notably a minimum moisture accumulation in the soil (recommendations in manuals vary, but something like at least 100 mm of accumulated rainfall). In addition, after it is applied, the imperative of maintaining frequency is heightened. Chemically stimulated, the tree must be tapped at the right time, otherwise there may be damage to the tree, such as the panel drying. In this sense, it can be said that the extra stimulation provided by the chemical agents of ethrel does not superimpose the process of maintaining the tree tame or in frequency, rather it is integrated into this process.

I saw tappers applying ethrel on the panel, with brushes, right above the last cut, but also on the last cut, on the *sernambi* (a small rubber strip that coagulates at the point of the last cut). The product is carried in small pots diluted in solutions ranging from “three to one” to “five to one”, that is, three to five parts water to one part product, since the recommendations vary from one clone to another, and on the orientation that each farm follows. Some employers are more cautious, and prefer lower concentrations and fewer applications per year. The operation of applying ethrel alludes to many relationships, at other levels, as an important mediator of the relationship between tappers and bosses. A good employer and a good rubber estate are evaluated, among other things, by “how often ethrel” is applied over a harvest. Some farmers and agronomists place restrictions

14 “The increase in production with the use of a stimulant for latex flow is not new. Since 1912, when Kamerun filed a British patent to increase latex production through the simple system of scarification of the bark below the cut, several forms of stimulation have been used” (Barros & Aitken 1974: 293). The authors cite tests with clay, cattle manure, vegetable oils (palm oil, flax and coconut), copper sulphate, 2,4-D and 2,4,5-T growth regulators; the last two induce the plant to produce ethylene, a plant hormone that stimulates growth. In the late 1960s, the first tests were performed with etephon, which were widely publicised at a rubber conference in Malaysia in 1970. Bouychou (1962: 35-45), writing from the experience of French colonial plantations in Vietnam and Cambodia and a few years prior to the dissemination of the use of etephon, devotes special attention in his manual on tapping to methods of stimulation, recommending the use of the aforementioned 2,4-D and 2,4,5-T. This chronology of chemical stimulants was reflected in the recommendations of the public agents of rubber culture in the State of São Paulo: Hoelz (1958: 151) recommended 2,4,5-T and 2,4 D; while in the 1970s, a CATI assistance project (1975: 9-10) oversaw the diffusion of the stimulation technique with Ethrel.

15 Etephon was originally used in fruit growing to stimulate the ripening of fruits. Pineapple is one of the crops that benefits from this resource.

on this stimulant, which is a factor that can even make a tapper turn down an invitation to work on a farm or perhaps contribute to making the decision to move. Perhaps because the limits of its application are disputed its colour is an intense rose, so that the panel is clearly marked after its application.

Ethrel even reveals the contrast between Mato Grosso and São Paulo. An agronomist from São Paulo said this about the product:

If I had a rubber plantation, I wouldn't use ethrel, I'd ban it! It disturbs the plant, dries the vessels. It's the biggest villain on the rubber plantation. I'd do anything at all, fertiliser, but I wouldn't use it. It was in the early 1990s that the ethrel fever started. The plant becomes dependent, the more you use it, the more dependent you become, it's a drug. I only talk about it because it's become routine, it's used on 95% of the rubber plantations. But it has to be used at the right dose and frequency.

This same agronomist told me about the migrant tappers: "they like an ethrel!", defending a position of the use of few applications, different from what he considered excessive among the migrants. But even the São Paulo tappers have developed a predilection for the product, which enables them to make a greater profit.

Ethrel can be considered one more tool in the set of elements that can be worked rhythmically in relation with the rubber tree. It is a potentiator of the physiological processes already managed by the tappers. It is an additional way of stimulating the rubber tree, if we consider that tapping itself, in succession, is just a stimulating element. Thus, this product should be understood in conjunction with the stimulation that the tapping itself provides, when done rhythmically, at the right frequency.

The dimension of maintaining frequency as an important factor in stimulating the tree to produce causes us to reflect on how the action of tapping, an apparently direct and positive action, could simultaneously be an indirect action. This in the terms of Haudricourt (1962), and later taken up by Ferret (2012). Haudricourt compares sheep farming in Europe with the cultivation of yams in Melanesia. He concludes from this that the treatment of nature and the treatment of alterity tend to show similar modes of action in each society. According to Ferret, for Haudricourt:

action is direct when there is a close and/or permanent contact between man and the domesticated being, with the latter acting upon the body of the former; it is indirect in the contrary case, that is, when humans act not upon the domesticated entity, but upon the milieu that surrounds it and influences it. Action is positive when it imposes a certain path upon the domesticated entity according to an a priori schema, and negative when it does no more than bar it from moving in certain ways, judging the result only a posteriori. (Ferret 2012: 115)¹⁶.

An interesting step to be taken at this time is to draw inspiration from the grammar of these authors to consider actions, not as a strict classification of tapping, but rather to seek inspiration to deepen certain significant traits of the activity under study. The relationship between the tapper and the trees reveals a complex dialogue with the rhythm of the plant itself. In this sense, in what appears to be a single act, tapping seems to comprise two modes of action. In addition to a technical gesture that can apparently be read as a mechanical positive direct action – making cuts in the bark to extract latex – within the management of the very rhythms of the tree's physiology there is a dimension of "making them do" (Ferret 2012), of managing and responding to these rhythms. The tapper taps by performing a direct and positive action on the tree, but by tapping successively, managing and maintaining the *frequency* so as prevent the tree from losing the ideal latex flow, he

16 From the original: "l'action est directe quand il existe un contact étroit et/ou permanent entre l'homme et l'être domestiqué, celui-là agissant sur le corps même de celui-ci; elle est indirecte dans le cas contraire, lorsque l'homme agit, non sur l'être domestiqué, mais sur le milieu qui l'entoure et influence. L'action est positive quand il lui impose un cheminement selon un schéma a priori, négative quand il se contente de lui barrer certaines voies, ne jugeant du résultat qu'a posteriori". An English translation of the article is available at: https://www.cairn-int.info/article-E_LHOM_202_013--toward-an-anthropology-of-action.htm

makes the tree (continue) to do so. By constructing his practice based on this discipline of relatively constant return, he causes the tree to continue its flow of latex. And by disciplining his frequency of returning to the lots, he disciplines his life with a certain rhythm.

I spoke above of frequency as a level of rhythm in the rubber tree culture, corresponding to the intervals of return to the same lots. However, it should be noted that this ideal frequency is never observed in practice. The tapper sometimes anticipates his return to a lot so he can avoid working on Sunday, on a holiday, or even on a day when he needs to be absent for other motives. It may also be necessary to *repor o lote* [lit. compensate the lot] after not having tapped on a day, the most common reason being rain. Paradoxically, the period of greatest production potential for a rubber tree plantation is the rainy season, when there is good water availability in the soil for the trees to produce latex. The higher the frequency of rainfall, however, the greater the risk of losing tapping days, since you cannot tap during or immediately after rain. You need to wait until the panel is relatively dry. Otherwise, when the panel is still wet, the latex disperses, it drips outside the cutline and channel, causing large losses.

The following table shows the frequency verified over 16 days in the experience of a tapper, during a period of numerous rains. The marked days represent those on which a tapping was performed. In an ideal scenario, a complete lot per day is tapped, with an interval of four days between each tapping. However, sometimes rain prevents tapping for one or more days in a row, causing most of them to show decreased frequency. Because of the rains, no tapping occurred on 7 of the 16 days. During this period, the interval of days between one tapping and another, which should have been four days, was at least eight. Lot C, for example, went ten days without a tapping (between days 2 and 13).

Table 1 - Tapping frequency during a rainy period

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Lot A						✓									✓	
Lot B	✓										✓					✓
Lot C		✓											✓			
Lot D			✓											✓		

Some tappers venture to tap before the panel is completely dry. In this situation, Jair told me, “you can’t be in a hurry to tap on a wet panel”. At this moment, it becomes imperative that the horizontal channel that conducts the latex to the spout and the cup is of good depth, otherwise the latex *disperses* more easily. There are tappers who *reavivam o canal* [lit. revive the channel again] regularly, while others do so only on rainy days, when there is a greater risk of losing production. This is because this activity causes a relative increase in working time. Environmental factors, such as solar incidence and ambient temperature, but particularly the wind, actuate to cause the panel to dry faster. Depending on the intensity of the rain, tappers soon give up on that day’s work. Others wait until the afternoon when, even though there are higher temperatures that slow the latex flow, they prefer to tap and not lose the frequency. I heard the following phrase from a tapper and an agronomist, “better to tap in the afternoon than not to tap”.

I previously noted that the frequency of a four-day interval (D/4) was stabilised as ideal for optimum productivity in this region nowadays. However, in the perceptions of tappers, variations are possible and desirable, and some form part of their productive strategies. A tapper who has worked with knives for 20 years and who manages a very productive field of the PB 235 clone, says that at the height of the harvest,

these trees need to rest for at least five days to allow time to *fill the cup* from a single cut. He also said that he “does not believe in a table”, that is, even though he is aware of the requirement not space out tappings too much, so as not to lose production, he does so more freely without a “table”, which is an obligation to sequence the lots as previously programmed.

Indeed, I observed in his routine a malleability in this sequence, sometimes prioritising a tapping after a shorter interval in a more productive area, with the aim of delivering rubber that he had intended for a given day, while allowing a little more time in areas with lower productivity (for example, with *young* trees, in the first years of tapping, when they still produce less). Having worked with the same employer for about 20 years, he has broad autonomy to act on his own technical choices and said that once “an agronomist came here hands full of papers, but really I do it my way”. I observed that “his way” does not neglect the frequency, he tries to replace the days lost due to the rains. He only makes the sequence of each group of trees malleable to the different characteristics of the various lots that he works. Working with lots of younger and older trees, he ends up tapping the new ones less frequently (more days per interval) than the older ones. The frequency is just another example of norms that are managed locally based on the work and life experience of each tapper.

There is, therefore, the imperative to maintain the tapping in the lot planned for that day, even if this tapping is performed the next day, when you try to tap two lots, the lot of that day and the one lost the day before. This is about *lot compensation*. Rainfall dynamics, therefore, directly interfere with frequency maintenance, so the tapper sometimes does not work on a rainy day in the middle of the week, but feels compelled to tap two lots on a holiday or weekend, assuming there is no rain and it is necessary to anticipate or compensate a lot. This imperative to maintain the frequency and to do so by adapting to rainfall conditions is directly related to the regional preference for forms of hiring that do not determine precise working hours, such as sharecropping.

The use of ethrel, about which I spoke about above, heightens the imperative to pay attention to the rhythms of the rains. According to what I was able to understand from the practice of the tappers, ethrel should preferably be passed two days after a tapping, and the first cut must be made two days after this application. There is no problem if it rains a few hours after passing ethrel, and the more it rains after this the better, as there will be more water available in the soil. However, rainfall a few hours before a tapping is also not good, because the ideal is that the panel is dry. In addition to preventing tapping because the panel is wet, rain can cause the loss of latex that has not yet coagulated in the cups. The hormone acts for about four tappings, but the first one after ethrel application is very productive, and losing it is very prejudicial. If the first cut after applying ethrel is delayed, there can also be serious negative consequences for the trees.

Final considerations

In short, the tapping of rubber trees is constructed as a working rhythm in relation to certain physiological dynamics of the rubber tree, which are also connected to the environmental dynamics, especially the rains. In this article, I intended to discuss how a certain rhythmic level of the tapper-rubber tree interaction reveals a complex interactive human-plant dynamic. The process of taming the tree and maintaining it tame within a work discipline over days, coupled with environmental dynamics, is very revealing regarding how it is fundamental to understand the minutiae of these fundamental interactions in rural work, which instil rhythms on other scales. As a living being that acts, *responds*, the rubber tree needs these characteristics to be taken seriously, and even to broaden the understanding of other levels of relationship, such as the relationship between tappers and employers.

We have seen how these characteristics of the rubber tree have marked the history of the different relationships that have been established with these plants since the Amazon of the nineteenth century, through the development of plantations in Southeast Asia in the early twentieth century, and up to the contemporary

plantations in the interior of São Paulo. I believe that this article strengthens the argument recently raised by Nugent (2018) for preferring the term “rubber industry” to describe what happened in the Amazon in the period known as the “rubber boom”. Nugent argues that the term “boom” ends up reinforcing hyper-naturalist ideas about the Amazon, reducing the complexity of the process that exists there, as well as its connections with global networks. Analysing here what I called rubber tree diaspora from a peculiar physiological characteristic of “responding” to certain actions in the tapping process, I believe reinforces the idea that, if it is possible to speak of a long-term “rubber industry”, it did not “start from scratch” with the arrival of seeds and the densified planting by European settlers in Southeast Asia, rather there was a connection with the knowledge and practices of the peak of Amazonian rubber analysed by Nugent.

I also believe that this ethnographic and historical view of the transformations in relationships with a cultivated plant species indicates the possibility of answering questions raised in a recent dossier, whose central theme is the possibility of attributing the status of ethnographic subjects to plants (Hartigan Jr., 2019). My answer to the question as to whether it is possible to do “plant ethnography” is positive, indicating a view towards the interactive rhythms between humans and plants. The imperative of taming the rubber tree, together with response dynamic, causes us reflect on the potentiality of a plant anthropology based on the ethnography of relationships established with them, their rhythms in transformations and drifts on a global scale, surpassing a purely metaphorical dimension of the idea that plants have “agency”.

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Manioc-stem transects: vital flows, technical processes and transformations

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Abstract

This article studies human-plant relations as technical phenomena in the context of the pluriethnic communities of the border between Brazil and Guyana. It proposes that we consider a technogenesis of the social at the intersection of technical processes and vital flows of manioc stems – the overground part of the plant that produces manioc (*Manihot esculenta*). Its starting point is a Wapichana agriculturalist's collection of stem segments. The onomastics of this set provides an idea of the diversity of these plants in the region. However, the article argues that, rather than being referents in a closed classificatory system, names are histories, indexes of ways of knowing and processes of individuation of people and varieties. By emphasising processes of stem manipulation, the article discusses some of the methodological challenges of the ethnography of technique and reflects on contemporary social transformations in dialogue with Indigenous analyses.

Key words: Human-plant relations; technogenesis; manioc stem networks; techniques; vital flows.

Transecto maniva: fluxos vitais, processos técnicos e transformações

Resumo

O artigo aborda as relações humano-planta como fenômeno técnico no contexto de comunidades pluriétnicas que vivem na região entre o Brasil e a Guiana. Propõe considerar uma tecnogênese do social na interseção entre processos técnicos e fluxos vitais de manivas - a parte aérea da planta que produz a mandioca (*Manihot esculenta*). O ponto de partida é a coleção de hastes de uma agricultora wapichana. A onomástica desse conjunto oferece uma ideia acerca da diversidade destas plantas nessa região. Contudo, o argumento é que os nomes, menos que referentes de um sistema classificatório fechado, são histórias, índices de modos de conhecer e de processos de individuação de pessoas e variedades. Ao enfatizar os processos de manipulação de manivas discute alguns desafios metodológicos da etnografia da técnica e reflete sobre as transformações sociais contemporâneas em diálogo com análises indígenas.

Palavras-chave: Humanos-plantas; tecnogênese; redes manivas; técnicas; fluxos vitais.

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Introduction

Different theoretical tendencies in anthropology are rethinking the main assumptions and conceptual categories in use in the discipline. Analysis based on dualities or oppositions, such as nature/culture, subject/object, individual/society, have been criticized and reviewed. In one direction, we have questioned the attribution of the “social” to a specific parcel of reality, that which pertains to the human, built out of material, biological, psychological and economic raw materials. In place of this exclusively human ontological province, actor-network theory redefines the “social” as the name of a movement, a displacement or transformation that links or associates humans and non-humans within the course of actions (Latour 1994, 2005). In an ecological paradigm, Tim Ingold (2000) has argued that humans are immersed in a world of life within an environment, countering the idea of the environment as the cultural construction of nature. He shows that life occurs through flows within a relational atmosphere, following the precept that things are in life, rather than vice versa (Ingold 2011).

Since the work of Marcel Mauss, ‘technique’ has been a privileged category for understanding these movements or flows that appear to be central to contemporary theoretical proposals. The intrinsically social character of technique allows us to envisage a society’s ways of acting without having recourse to representations or symbolism, since techniques are specific modes of practical engagement in the concrete procedures of living that amount to, in Mauss’ definition, traditional and efficacious acts with physical, chemical and mechanical effects. In a development of the Maussian project, André-Georges Haudricourt (2013) analysed human ways of acting toward animals and plants as a means to uncover patterns of relations that are independent of the nature of the beings involved, whether human or otherwise. Haudricourt argued for the existence of homologies between human behaviour toward sheep and buffalo, cereal and yams, and the relations established with other humans. He was not attempting to project technical relations onto social relations, but to draw attention to the challenge involved in apprehending the propagation of the ways of relating that are constitutive of the social. Haudricourt even formalized a typology of technical action, recently updated by Carole Ferret (2012), concerned with human ways of acting that include the potential of other beings, such as animals and plants, to act as well.

This article is concerned with ways of relating that are constitutive of the “social” through the intersection of technical processes and vital flows in human-plant relations in the agricultural practices of pluriethnic Indigenous communities that inhabit the Serra da Lua region, on the border between Brazil and Guyana¹. It explores the theoretical and methodological possibilities of ‘technique’ as an analytical category in order to apprehend the “social” from an ontogenetic perspective. The ethnographic focus is on the *maniva* – the overground part of the manioc plant. The circulation of these cuttings is an important aspect of the

¹ Human-plant relation were a recurring theme during my fieldwork. Initially, I sought to understand the daily, contentious use of poisonous plants as a fishing technique (Oliveira 2015). More recently, I studied ways of acting related to a category of plants in aggressive shamanic practice (Oliveira 2018).

networks of relations in these communities. As I will show, the stem segments also condense ways of knowing (Barth 1995), relations and social values, as they move between human groups and garden environments, production and consumption, throughout this region.

The work of Haudricourt invites us to consider a technogenesis of the social, in that technical processes are themselves generative of societies insofar as they mobilize a multiplicity of beings, materials, people, plants, rhythms and forces of the cosmos that give shape to communities and configure ways of life. In dialogue with the ethnography of the Guianas, I develop the idea that Indigenous practices involving manioc stems materialize ways of constituting collectivities and express values and dispositions of a way of life and a “sense of community” (Overing 1991).

The classic ethnological model for explaining the social organization of the Indigenous people of the Guianas (Rivière 2006 [1984]) projected an image of fluid, unstable, simple, atomized and minimalist native societies which were based on a political economy of the scarcity of resources and, above all, of people (Viveiros de Castro 1986). However, as Overing observed, egalitarianism and an aversion to relations of subordination, a degree of disdain for local processes of collective decision-making, attitudes to property, work, and personal autonomy, all constitute a political creed, a social and aesthetic value that can only be understood through a specific sense of the “social” and of the role of “productive knowledge” in the incessant process of constructing a political and moral community.² Recently, studies included in Gallois (2005) have also questioned a model based on socio-spatial atomism and scarcity, mustering the concept of the “network” to displace a localist and “ethnic” lens toward relations, including relations with nonhumans.

Taking this discussion forward, articulating the Latourian notion of the network as a way of understanding movements and relations with the value of “life” in Ingold’s ecological paradigm, this article emphasises technical processes “understood as the ordered assembly of a plurality of acts [that] can be treated as the privileged object for understanding the complexity of vital processes” (Pitrou 2016: 7). Through an anthropology of technique, I will explore the technogenesis of this specific sense of the “social” by registering what the intersections of vital flows and technical processes reveal about human-plant relations on a regional scale. Assuming that “knowledge” is not a unitary, abstract and generalized concept, since any human group shares divergent bodies of knowledge and different ways of knowing, we are moved to pay close attention to the processes that generate variations in knowledge and on those knowledgeable of their acts, through their activities and networks (Barth 1987, 2000).

The ethnography will delineate three circuits of activities that are generative of networks of collecting, of techniques for transforming these plants into diverse products, and of relational transformations intrinsic to these movements. In the first circuit I present the collection of cuttings belonging to a Wapichana woman who lives in the Jacamim community, in the Serra da Lua region. This fragment of a collection raises certain correlations between a person’s biography and her cuttings and allows us to approximate them to proper ways of knowing these plants.

In the second circuit, I foreground an ethnographic slice of the tangle of material flows, establishing two definite points in the technical process that, in my view, yield important insights into human-plant interactions. From cutting the stem, through planting, to the consumption of the manioc beer (*caxiri*) with the work parties (*ajuris*) that gather to create a new garden, after which the cycle starts anew with the cutting/selection of new stems for replanting. My aim here is to focus on the ethnography of ways of acting as they are put into practice in human-plant interactions, and to demonstrate the “social” that these processes render visible during different phases of the manioc stem’s being. The production and consumption of the beer conveys values that are materialized in this process.

² The category of “productive knowledge” does not only refer to capacities that enable the use of land resources, but also to those that enable tact, skills for living peacefully and sociably, in daily interactions with others (Overing 1991).

These values are also present in the third circuit, the flow of industrial merchandise and the consumption of products acquired in the city. The concatenation of these three circuits highlights Indigenous analyses of (practical, moral, political, economic) aspects that are indivisible from the production and consumption of food in a context of socioeconomic pressures from the market and from public policies that tend to reduce daily engagements in activities of cultivation.

Human-Plant relations in the Brazil-Guyana border

The Serra da Lua region is situated in the ethnographic area of the western Guianese shield (Melatti 2010), which stretches from the highlands of southern Venezuela to the border between Brazil and Guyana. It is characterized by a heterogeneous environment (dense forest, mountain ranges, savannah and open fields known regionally as *lavrado*) and a significant sociocultural diversity. What unites the region as an “ethnographic area” are the networks of commercial exchange and circulation of knowledge (Colson 1985) that connect different Indigenous people to each other, and to different segments of the non-Indigenous population, in some cases over a long period of time. Ethnonyms express relative degree of social distance in an identity system that has long been articulated by inter-marriages and the existence of mixed villages and by the proximity of village from different ethnic groups (Santilli 1994).

In this landscape, composed of networks of exchange between different Indigenous people and the non-Indigenous population, characterized by the fluid character of ethnic borders, any approach that separates societies or “ethnic groups” into discrete cultural or linguistic units hinders an understanding of the complex of relations that configure this area, where the transnational, the national, and the ethnic coexist in a dynamic, ambiguous and paradoxical way (Baines 2005).

In the Serra da Lua region, Indigenous communities are mostly made up of Macuxi and Wapichana. These collectivities have lived through a violent history of territorial expropriation and the imposition of an international border which tore through the traditional lands of their ancestors. Throughout this region, we find the intense movement of groups and people. These dynamic movements occur for several reasons, including the: ecological (rotation of cultivated areas, availability of hydrological resources), economic and political (state institutions of healthcare and education, formation and fission of groups), and/or cosmological (sorcery, disease, death).

Anthropology has had to develop new conceptual and methodological tools to investigate these multi-community and multi-ethnic contexts.³ An emphasis on the networks of relations allows us to amplify the analytical meaning of the notion of the “border” beyond its territorial and/or moral attributes, and to reposition it as a space of mediation, a mechanism of communication and exchange that relates different ethnic communities or local groups, as well as forces of the cosmos (Gallois 2005).

However, through the daily engagements of specific people in specific landscapes, relational networks are always seen to be segmented in local experiences and particular localizations. In this sense, a technical approach can be a fruitful way for ethnographically understanding how these networks are woven in their movement and flows, privileging technical processes as an ordered group of actions developed by a specific human group out of their knowledge of living beings, such as, for example, plants and their vital processes.

³ Ever since Radcliffe-Brown, the term “network” has been used by social anthropology to refer to the set of concrete relations between individuals and groups that constitute the social structure, or the society. Despite critiques of the social theory that underscores this view (Leach 1996 [1954]), the concept of the “network” continued to be used as a descriptive metaphor, and as a means for apprehending and analyzing social relations and political processes (Barnes 1987). In the last decades, the concept has been redefined by Bruno Latour (1994, 2005) as a path to revising the very theory or model of the “social”. The Latourian network is a heterogeneous assembly, gathering within it humans and a host of other aggregates (genes, microbes, plants, soil samples). As he claims, the network is a tool that “helps us to describe something, and not something that is being described” (Latour 2005: 192).

Through this ethnographic literature, and particularly through fieldwork, I realized that plants participate in different modalities of human knowledge, creating and mediating relations. Human-plant relations provide a privileged means for understanding Wapichana territoriality, moving from the house floor, through places of cultivation, and into the forest.⁴

Wapichana knowledge of the living beings that we generally call “plants” is highly refined. Nádia Farage (1997) identified three botanical categories, structured through modes of human-plant relations: *karam makao* – wild plants that grow in the forest; *wapao ribao* – domesticated and cultivated plants in the garden; and *wapananinao* – plants that are neither cultivated, nor wild. The *wapananinao* grow and live in environments that they choose, for they possess the same principles of intentionality as humans do, and are distinguished from the remaining categories for possessing and generating magic. In this system, the criterion of cultivation defines the differences between the classes.

The plants with which I am concerned in this article belong to the second category. Narrative knowledge situates their origin in the felling of a large tree from which everything grew, leading to a rupture of the originary order, which had been characterized by a lack of differentiation between species. After being felled, the tree spread out its multiplicities, instating not only differentiation, but also another way of reproducing plants through the human work of cultivation. This registers a founding characteristic of the human condition: the need to cultivate plants to live, and cultivated plants as a metaphor for the state of society (Farage 2002: 518).

During my research I sought out how these cosmological, structural and classificatory references could be encountered in contexts of practical engagement of people in different environments, where the passage from one domain to the other can be achieved without transposing limits. I therefore considered the possibility that these delimitations did not exist, thus avoiding the dichotomy between cosmology and practice, or even that between society and nature.

This approach to the *karam'makao* category drew me to the growing literature on agrobiodiversity, particularly on research and political discussion stemming from the objectification of a “traditional agricultural system” in the Rio Negro region (Emperaire 2001, 2002, 2010; Eloy and Emperaire, 2008; Emperaire, Velthem & Oliveira 2008, Santilli 2012, Fagundes 2014). In what follows I develop these approximations through the critique of systemic approaches in the field of the anthropology of technique (Mura 2011).

Traditional agricultural systems as technical phenomena

Manioc is considered a central element in the dynamic of the “agricultural systems” of various traditional people and communities in Brazil, both for its resistance to different climate and soil conditions, and for its diversity, the variety of products that can be made from it and the sociocultural value attributed to its cultivation. In recent years, relations between humans and manioc has been the focus of policies of heritagization of immaterial culture codified as traditional agricultural systems (Fagundes 2014).

The literature on manioc cultivars is particularly dense for Northwest Amazonia. A number of studies have highlighted the relation between the intraspecific diversity of manioc and the means used by Indigenous groups to maintain and enrich this diversity, demonstrating the relevance of human relations for manioc

4 The Wapichana are the only Arawak-speaking people in the fields of the interfluvial zone between the Branco and Rupununi rivers, a region that is politically divided between Brazil and Guyana. At present they number some 14,000 people, 7,832 in Brazil and 6,000 in Guyana, along with some families in Venezuela (Oliveira, 2012). In Brazil, the largest Wapichana population is in the Serra da Lua. On the Guyanese side, their villages occupy the savannahs of the Rupununi, Tacuto and Kwitaro rivers, with the Kanuku mountains as a northern limit, separating them from Macuxi territory. To the south, their territory approximates Waiwai lands. Many Wapichana who live on the Brazilian side of the border consider the lives of their kinspeople in Guyana to be more traditional, since they still use *timbó* poison for fishing and live amidst the most powerful sorcerers (Ávila 2006).

propagation (Chernela 1987). In the last few years, this research has been reinvigorated by a set of studies in anthropology, biology and forestry on the importance of the biological diversity of the alimentary species that are cultivated by traditional populations (Eloy and Empeaire 2008, Empeaire, Velthem & Oliveira 2008).⁵

This research has stressed the importance of these agricultural practices not only from a strictly productive point of view, but also because of their specific cultural dimensions and the universal-heritage aspects that are involved, thereby emphasizing how knowledge constitutive of agricultural systems are fundamental guarantees for *in situ* evolution and genetic improvement.

According to Empeaire, Van Velthem and Gita de Oliveira (2008), the expression “agricultural system” is used in a restricted sense. Two main levels of analysis are distinguished in this field: (a) the system of production investigated at the scale of the unit of production (generally the domestic unit) which comprises different subsystems according to activity (agriculture, animal husbandry, extractivism); (b) the level of the agrarian system, a theoretical modelling of the regional scale based on the combination of the different production systems in existence. The expression “agricultural system” in this latter sense avoids a pre-defined analytical model centred on aspects linked to the productive capacity which are embedded in the former sense, and enables multiple readings of the object under study. In the context of studies of Indigenous agriculture in the Rio Negro, the authors provide a wider operational definition:

we understand agricultural systems to be the set of knowledge, myths and reports, productive practices, techniques, artefacts and other associated manifestations that involve managed spaces and cultivated plants, ways of transforming agricultural products and local alimentary systems. In other words, it refers to the complex of knowledge, practice and social relations that are enacted in the garden, or even in the forest, and covers food and the many ways it is consumed in diverse contexts of social life (Empeaire, Velthem & Oliveira 2008: 03)

This definition is interesting since it allows us to envisage these “systems” not only in terms of their productive base and nutritional function, but, in a wider sense, to consider the correlations between the different cultural and social aspects that make traditional agricultural activities into a system that articulates families and communities through the flow of persons, stories, plants, techniques and their products.

My first observation is that this definition implies action, flows and movements that are stabilized by approaches that privilege classification, structure and the cultural meanings attributed to the system. Lucia van Velthem (2012), for instance, analysed the material expression of the agricultural system of the Rio Negro with an ethnographic focus on the artefacts that enable the cultivation and processing of manioc. In dialogue with studies of material culture, she turns to debates on the notion of the object and explores the meanings and functions of tipitis, baskets, sieves and graters in the relations they establish among themselves and with those who make and use them in the hearth house. Within the material repertoire of the agricultural system of the Baré, van Velthem notes the importance of the carrying basket as a “witness object” of a way of life. She steers the discussion into the field of heritage and cultural identity represented by these artefacts and the questions raised by the rupture of the processes of knowledge transmission related to their fabrication and use in practices of transforming manioc.

The analytical procedure I develop in this article goes in a different direction. Instead of emphasizing artefacts or tools as witnesses to the “system”, I explore the material flow and plurality of technical acts through which manioc stems participate in vital flows and cycles, and how, in their different phases, they

⁵ The Indigenous Council of Roraima (Conselho Indígena de Roraima) surveyed the traditional seeds produced in the Hill Regions (CIR/PDPI/MMA, 2006). Another important initiative in recent years was the Wazaka'ye guyaagroflor (2008-2010) project, which aimed to develop sustainable strategies for the agricultural systems and to strengthen the economy and organization of Indigenous and Maroon communities in Suriname, Brazil and Venezuela. For the results of the project, see Pinho (2008).

are transformed into different products, among which is the manioc beer that enlivens collective work parties in spaces of cultivation, which is also when the vital cycle is renewed.

This requires rejecting, from the start, some of the ontological divisions implicit in the systematic approaches characteristic of studies of “material culture”. It also implies a critical review of certain anthropological studies of technique, so as to eschew comprehending it only as action upon matter. It is necessary to realize that “technique is not what happens between the human subject and the environment, mediated by artefacts, but a given relation between movements and things, which comprises tools, bodies and environments” (Sautchuk 2015: 129).

This understanding of technique derives from Mauss’ work where technique is defined as a sort of physio-psycho-sociological montage deemed to be traditional and effective (Mauss 2003). The human body itself is thus considered an object or a technical medium, mobilized in an organized and traditional set of movements and acts, most of which are manual, and which converge to achieve a physical, chemical or organic aim (Mauss 2009).

Following Mauss, different authors have approached technique as a system. Lemonnier (1986, 1992), for instance, argues that to understand technique in all of its aspects of action upon matter, it is necessary to understand it through a systemic perspective; that is, as a technical system articulated at different levels. In a first level, every technique, arbitrarily defined, is the *locus* of multiple interactions and constant adjustments among a set of elements such as materials, energy, gestures, artefacts and knowledge. In a second level, for a specific society, various techniques refer to each other through principles, resources and/or common products configuring technical systems proper. Finally, the set of cultural representations and, particularly, the classifications of techniques by a specific group, act to strengthen its systemic character. Technical systems can thus be discussed in these three planes: through the dynamics of interaction between the components of technique; through the interrelations between diverse techniques; and through the relations between technique and other social phenomena. Lemonnier, for example, focuses his analysis on the social representations and the determination of technical choices by symbolic systems.

In a review of this paradigm of the anthropology of technique, Mura (2011) notes the resilience of an “ontological contraposition” in the ideas of set, collectivity and system, between the domains of “Nature” and the “Human”. On the one hand, the composition of physical and chemical elements related to each other via biophysical factors compose the material world; on the other, there is the expression of a sociocultural world or a specific symbolic system. These two orders of reality are then connected by the procedure of analysing them as a “system”.

To overcome this ontological partitioning of reality, Mura sketches an alternative approximation to the systemic approach by adopting an ecological paradigm and a processual view of technical phenomena. It involves paying ethnographic attention to the concrete processes of the concatenation of diverse elements, configurations where the division between “natural” and “sociocultural” is not all that useful for understanding technical phenomena. This approximation also recognizes that techniques are organized in “systems”, in the sense that every technical process maintains an internal coherence that can be registered by ethnography. The difference of a processual approach consists in abandoning the artifice of a “systemic” composition deriving from presumed or predetermined orders. The author proposes that technical processes not be understood as systems made up of combinations of closed or predefined totalities, but rather as open configurations in permanent transformation, formed by the continuous flow of elements, forces, materials, energies and knowledge mobilized in specific forms of concatenation. Taking technical acts as processes implies apprehending a group of movements that enables the formation of operational sequences and concatenations of these sociotechnical systems (Mura 2011).

As I see it, this approach opens up new possibilities for an understanding of technical and vital processes according to conceptual universes that differ from a Western framework. However, this processualist approach retains an interactionalist character that can be refined. By directing the anthropological gaze to the concatenation of elements, we must query the very unity of these elements – or, in other words, ask how materials, subjects and objects of action occur in the flows that constitute them. What I am proposing here is that, with technical processes, relations do not quite occur between elements, but rather than such elements emerge from concatenations.

This emphasis on relations draws inspiration from Gilbert Simondon (2005). This philosopher of techniques developed a set of notions that are interesting theoretical resources for an ethnographic approach to technical phenomena, particularly those that bring humans and plants into association. One of these is the idea of individuation. Starting from a critique of “the ontological privilege of the constituted individual” which is common to atomist substantialism and hylomorphism, Simondon calls attention to the occurrence of “obscure zones” in the physical, biological and social constitution of the operations of individuation, through which the individual comes to exist. These operations reveal living beings and technical objects, as partial resolutions of themselves, as tense systems, nodes of communication. The technologist must foreground the technical ontogenesis of beings, apprehending the “unfolding of his reality, and knowing the individual through individuation rather than individuation through the individual” (Simondon 2005 [1958]:24).

I find this an instigating proposal for thinking of “traditional agricultural systems” as a technical phenomenon, and the manioc stem as a phase of its own being, which incessantly flows, transforms, and individuates as partial solutions to its very integrity. As I will show, this resonates with how the people I lived with order their collections in an always provisional and contextual manner, where named differences are defined and redefined without apparently upsetting a supposed classificatory system that persists in a language. This proposition also has implications for the ethnography of technical processes, particularly for the lacunae that emerge in any description.

Naming as histories of individuation

Manioc can be reproduced from seeds dispersed by the wind or by insects such as ants. The seeds have their “dormancy” interrupted by fire, generally set by humans while opening up spaces for cultivation. Another important means for propagating manioc is through stem cuttings that are planted and enable vegetative reproduction. These stems are selected, classified, experimented with, and, at least in the area of the Guianas under study, circulate in networks of relations that range from family groups and neighbouring gardens to more distant communities and cultivated areas, weaving a web that connects collectivities within a wide regional system.

In these communities, every family unit possesses its gardens and houses, men and women make up conjugal pairings that produce practically all of the foodstuffs needed for a rich diet (banana, maize, rice, papaya, sugar cane, beans, peppers, potato, pineapple, pumpkins, yams and watermelon). Together, they own all of the artefacts and material goods needed for maintaining the family, thus constituting largely autonomous domestic units, founded and reproduced through the work of its members.

The first agricultural tasks required for new cultivated areas – felling and clearing felled ground – are the preserve of men, with the participation of women. With planting and subsequent activities, the garden becomes a predominantly female space. It is women who keep gardens clean, clearing underbrush and monitoring for pests and other threats to cultivated plants. They also manage harvesting and oversee the preparation of food and fermented drinks that attract kinspeople, enabling the constant renovation of cultivated spaces and of the relations between people themselves.

Knowledge of cultivation, intraspecific diversity and the best use of each varietal in the production of food is a part of daily life. A first approach to understanding these ways of knowing is through the names of the manioc stem varieties used regionally. This nomenclature is the means for revealing the assumptions involved in the processes of identification, selection, experimentation and circulation that are used, most of all, by women.

During work developed by Indigenous Territorial and Environmental Agents (*Agentes Territoriais e Ambientais Indígenas (ATAIS)*), we surveyed the variety of manioc stems that existed in the Jacamim community. The results were surprising: during a brief activity with the agriculturist Mrs Celestina, we were able to identify 25 varieties that, at the time, she cultivated in her garden! Mrs Celestina has relatives “scattered” (*esparramado*) through the Serra da Lua region and into the Rupununi Valley – which she visits, mostly during the end of year festivities and other dates considered important in the region.

In Jacamim, we gathered information on 25 manioc stems, distinguished by the colour of the manioc (the root), the casing (brown, white, red and reddish), stature (tall, short, medium) and the colour of the stem (the overground part of the plant), the format of the leaves (thin or thick), the presence or absence of branches, and, in some cases, the products that could be derived from them. Practically all varieties are planted at the start of winter in clay soils. But there are also varieties planted in the middle or even the end of the rainy season, and some varieties more suited to “red” soils and “hill forest”.

The value attributed to yellow manioc, mostly linked to their quality for producing farina, is an interesting aspect of the sample. Some inhabitants claim that, until recently, there had been a significant quantity of white manioc, which was gradually discarded in favour of the higher quality farina produced from yellow varieties. These observations indicate that, alongside the value attributed to diversity itself, there are pragmatic criteria based on the quality of the final product.

Manioc, stems and their products

Manioc	Name of the stems	Good for
Yellow	Bakyray (Collared peccary)	Only for bread
	Baip (Duck)	Farina and beer
	Irudadap (Leptotila)	Farina, bread and beer
	Kamynaryp (Aracu fish)	Farina and beer
	Kadadap	Farina and beer
	Amazona	Farina and beer
	Mekuryn	Farina
	Zinip	Farina and bread
	Kuray Kuray	Farina, bread and beer
	Wixap	Farina
	Pireira	Farina
	Mucumucup	Farina, beer and starch
	Karaudazyp	Farina, beer and starch
Buzuwap	Farina, beer and starch	
Azip	Farina, beer and bread	
Kuxarap	Farina and beer	
Tybary awyn	Farina and beer	
White	Manarip	Bread and beer
	Kiz pii	Only bread
	Sabin	Bread and beer
	Charip	Bread
	Sweet manioc	Bread, starch and cooked
	Seed	Bread and starch
	Butter sweet manioc	Beer and bread
Red	Kyryk danip	Farina

As Emperarie (2002) has observed, the notion of ‘variety’ is not a general and self-same referent with a logical definition. Classification varies according to region, context, interested person, degrees of knowledge, and the emphasis of certain criteria in a classification event. The cultivated varieties and species are biological objects that conform to cultural criteria of production, denomination and circulation, constantly readapted to ecological, economic, and sociocultural contexts. Hence the local conceptualizations of “variety” are themselves different and may not necessarily correspond to a scientific conceptualization of variety or clone.

Instead of discussing Indigenous taxonomies by way of a small sample, what interests me here are the names and their flows. I will highlight how this small set contains clues about *ways of knowing* – forms of identifying and selecting developed in the region. These names bolster an understanding of the importance of vital flows, since they indicate certain aspects of the movement of stems between communities, providing evidence of the life-trajectories of plants (Emperarie 2010) and people.

Linguistic difference is important. Often, the stems have names in Portuguese which are shared by the Wapichana; that is, they identify the same variety by the same category in the Portuguese language. In some cases, for other varieties, there is a specific nomenclature in the Wapichana language that differs from the one in Portuguese. There is a third set of stems which do not have a name in Portuguese, only in Wapichana.

Regarding this later set, non-Indigenous agriculturalists may conceivably know these varieties by different names, or perhaps these varieties have been exchanged between Indigenous and non-Indigenous agriculturalists, and thus exist independently in parallel systems of classification. Alternatively, it is possible that some varieties which are designated only in Wapichana do not circulate among non-Indigenous agriculturalists, and are thus known only to Indigenous agriculturalists and managed exclusively by them. This hypothesis leads us to imagine the importance of work in the maintenance and improvement of these varieties, in that we must recognize the work of Indigenous agriculturalists in the maintenance of *in situ* biological diversity, a fundamental activity in the framework of western concerns about the future of food availability worldwide (Santilli 2012).

Contrasting Mrs Celestina's collection with those of other women in the region, what most drew my attention was the flexibility of the names. In the onomastics of manioc stems, some varieties are named by analogy with other elements of biodiversity, such as animals, *Bakyray* (collared peccary), *Baip* (duck) and birds, such as the *Irudadap* (Leptotila). Some varieties with names only in Portuguese are seen to result from exchanges with non-Indigenous people, and/or were acquired in the city. Speaking with other people in the region, such as in Malacacheta, we found varieties with names such as *Amazonas* and *Maranhão* (names of Brazilian States). There are also varieties known as *amarelão* (big yellow), *jaca* (jackfruit), *folha fina* (this leaf), *seis meses* (six months), *acode fome* (hunger aid, a faster growing variety), *jacaré* (caiman, its casing looks like caiman skin), *seringueira* (*Hevea* tree), *Maracanã* (mini-macaw), *tucumã* (a palm species), *brabinha* (little aggressive variety, good for making beer) and *sabiá* (from *Sabiá's* longhouse). Concerning this latter stem, an inhabitant of Malacacheta said it was the same as "Amazonas", but since she acquired it at *Sabiá's* longhouse, she thought it best to identify it with a name that was meaningful to her, assuming that whoever had named it "Amazonas" had followed the same principle.

In Mrs Celestina's collection, three varieties draw attention for their geographical references, which point to places in Guyana: *manarip*, *charip* and *karaudazyp*. The suffixes *rip* and *zip* in these varieties is derived from the word for 'manioc', which is written *Kanyz*. What precedes or succeeds this affix can be understood to be a reference to the general quality of the species. *Karaudazyp*, for example, is a direct reference to the Wapichana community of *Karaudarnau*, in the Rupununi Valley. *Charip* is a reference to Wichabai, another community situated to the northwest of *Karaudarnau*. *Manarip* alludes to another, yet more distant, community, *Maroranao*, in the Essequibo River Valley. This small fragment reveals the extent of Indigenous networks of exchange, experimentation and maintenance of intraspecific biological diversity that the collection of a single agriculturalist can reveal, projecting an image of the radius in which these cultivars circulate,

These naming practices can be understood through the difference between classificatory and narrative knowledge proposed by Tim Ingold (2015). While the former groups things based on their intrinsic characteristics, regardless of their localities, the latter singularizes people and things, in the sense that to know a thing, an animal, a place or a plant, is to know its history. Not unlike the Koyukon of Alaska, who name their clans after animals based on histories and characteristics of behaviour, I would venture that the practices of naming manioc stems follows a similar trail, so that, in contrast to a closed classificatory system that is shared collectively, each person, by virtue of their biography, is free to name their collections without concern for fixing a stable label. Instead, they describe the relations that the stem materializes, singularizing people within this web of knowledge.

In the following section, I turn to the second circuit, which consists of an ethnographic experiment with the technical process of transforming tubers that have been harvested and separated from the overground part of the plant. While delineating this flow, I discuss some of the ethnographic limits and potentials of ‘technique’ through use of the notion of ‘transect’.

Manioc stem transect

The studies of technique initiated by Mauss were developed by a succession of researchers in archaeology, ethnology and in material culture studies. Defining technology as the study of techniques involved in human action upon matter, including on the human body itself (Cresswell 1973, Lemonnier 1993), one of the tools elaborated by these studies has been the notion of “operational sequences”, originally used to circumscribe interlinked acts in a process of transforming matter. The notion has been discussed by numerous authors focused on describing and reflecting upon technique (Lemonnier 1992, Sigaut (2002 [1994]), Coupaye 2009, 2016).

Defining “operational sequences” can be a useful resource for rendering “technique” visible through the exposition of the enchainment of practices for analysis and comparison. By bringing to the fore certain properties, this procedure helps us reflect on “technical acts”, and above all to investigate the activities of humans and “plants” in concrete engagements, such as in agricultural practices. However, the inscription of what we observe as technique is no trivial task, since it involves capturing multidimensional phenomena, that occur across diverse spatial and temporal scales, and that include a host of intervening materials, tools and forces, as is the case with the management of manioc stems. A further difficulty is that, from the point of view of the people who carry them out, technical acts cannot be clearly separated from daily life. Rather, they are immersed in the flow of a range of other activities.

In the last decade, Tim Ingold (2000, 2011, 2012, 2015) has challenged the approach to technical processes based on the analysis of operational sequences as successive orders that can be defined from start to finish. Since establishing the concept of “technical skill” (Ingold 2000: 291) to designate a qualified practice of relating with a “world of materials”, the British anthropologist has been elaborating a series of critical interventions to studies of technique. First, he argues that skills cannot simply be considered techniques of the body, in the Maussian sense. Intentionality and functionality should not be considered to pre-exist in the subject or the object, but instead are immanent to the activity itself. Thus instead of isolating the body as a technical object we must contextualize its engagement with a practical environment. Furthermore, skilful practice cannot be reduced to a formula that can be transmitted intergenerationally, and hence it is not amenable to a definitive description.

Similarly, Ingold develops a critique of the studies of material culture. He observes that various studies in this field start from a world of objects removed from the flow of their transformations, so as to attribute agency to them. In a different direction, Ingold proposes that we reintegrate “objects” to the generative flows of the “world of materials”, from whence they come and within which they continue to exist, according to the precept that things are in life and not the other way around (Ingold 2011: 29). Ingold (2012) challenges the very notion of the “object” by way of a critique of the ontological primacy of the division between the “material world” and the agency of the human beings which give it form. In lieu of the hylomorphic model that has dominated western thought, Ingold would have another ontology that places emphasis on the flows and transformations of material rather than on the states of matter (Ingold 2012: 26). He thus proposes to think of these processes through the concept of “vital flows”, considering that, in his view, the essential relation is not that between matter and form in which the latter is imposed on the former, but, following Deleuze and Guatarri, between *materials* and *forces*. He places emphasis on the movement of life and how it constantly recombines,

redirects the flow of living matter, opening up spaces for creativity in place of a utilitarian perspective. He relies on the writings of Simondon, for whom living matter, far from being passive, is a vehicle of “informed energy” (Simondon apud Ingold 2015:61)

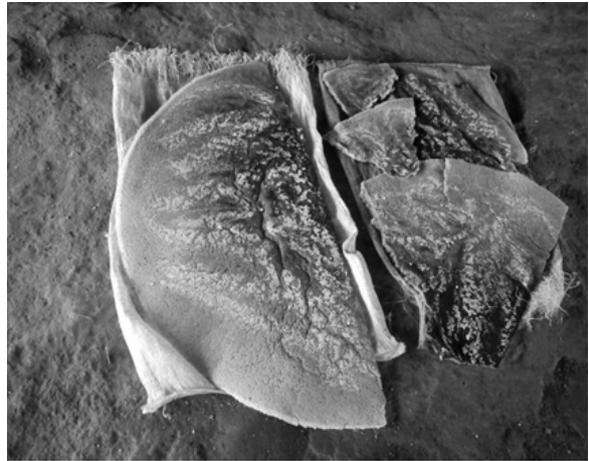
If, on the one hand, the “operational sequence” is a methodological tool that has limitations that can result in deterministic and utilitarian descriptions, and which centre on acts of fabricating things, Ingold’s proposals lack clearer indications of how, precisely, they are to be operationalized – or, in other words, we must ask: what must we circumscribe in order to do an ethnography of life? As Pitrou (2016) observes, the universalizing definition of ‘life’ proposed by Ingold contains an ambiguity, or even a contradiction, in relation to ethnographic interest in other ways of knowing and the possibility of other theories of life. Before we provide a universal definition, it is more productive, and prudent, to resituate the problem before different theories of life through the plurality of vital processes. There is no dearth of orders upon which one can build an ethnographic investigation, from mythologies to ethnoclassifications, through the treatment of animals and plants.

Through his ethnographic work on giant yams among the Nyamikum of New Guinea, Ludovic Coupaye (2009) has sought to update the “operational sequence” as a methodological support for intersecting “technical processes” and “vital flows” (Coupaye 2016). Finding it difficult to study the yams through the methods of the anthropology of technique, Coupaye proposes the use of transects. This concept, which derives from ecology, draws a line between two pre-defined points in a given ecosystem in order to register the species found along the line, taking into account the irregularities of the terrain and topography. When the operational sequence is conceived as a transect, it emerges as a useful resource for cutting through the vital flows so as to make the technical process visible, within the meshwork of life, as a sequence of acts in the different contexts and places where it occurs. Like a line which we can make tense by stretching at different times and in different places, the transect makes visible the heterogeneous elements that are mobilized by people during practice. In this way, the operational sequences of technique can be used as a methodological resource, not so much to produce schematic and utilitarian representations of the execution of mechanical forces *on* matter, based on predefined logical schemas, but rather to make evident how a nexus of relations is constituted in the flow within which a specific material is transformed, delineating the biography of the different phases of a being.

Each researcher finds his or her own way of making processes visible (graphs, schemes, films, photographic series), to present the sequence of acts, events and places that the technical process reveals. I have opted for a series of photographs that synthesize human-plant interactions through the flow of transformations of the manioc stems into plants, in manioc ground by motors to be roasted into dough, and then broken up again, left to rest so as to ferment, and finally squeezed to become the drink that enlivens people during the planting season. Below, I present this circuit as a sequence of images:

Figure 1 - Flow of transformations of manioc stems into beer





In this circuit, the flow of manioc stems starts and restarts in cultivated spaces. The role of kinspeople in making a garden is fundamental. Parents provide their sons with their first seeds when they open their first garden, lending them their chainsaw and providing gasoline. As they construct their own personal archive, a new couple start to exchange varieties within their kindred. The work parties are organized mostly during weekends, and the couple who owns the garden must always provide beer for kinspeople who are invited to help with work. In these contexts, the beer is generally held in large canisters, and all who participate can take their shares as they work.

During my fieldwork, I participated in some *ajuris*. In one of them I accompanied Nivaldo, a resident of Jacamim, as he chose manioc stems for planting (first image). On that day, he was gathering his kinspeople and other guests to collaborate with the work of clearing the area for a new garden (second image) and I went with him to the neighbouring garden, which belonged to his brother, where he picked up some varieties. He explained to me some of the criteria he used for selecting which ones he would take: “*First you cut it to see if it has milk. If it doesn’t have milk it’s useless because it won’t grow. It is this milk that makes manioc. This milk has starch. To start planting you cut them in the middle for the roots to come out*”.

The next images show the growth of the plant from the manioc stem. In this movement, the colour of the stem confirms the selection and other experimentations. The growth of a garden planted with stems is collective. People are always mindful of the height-patterns of the garden as the plants grow together (fifth image). When they are mature, they start to be harvested. When they are removed from the earth, the manioc is usually taken to the place where the grater and the oven are kept (sixth image). Once there, the shells are peeled with knives and then the manioc is put through a motorized grater that is operated by combustible fuel.

In the next stage, the starch is squeezed by the *tipiti* (eighth image). The straw weave is attached to a beam in the roof and packed with starch. The compression of the starch is made possible by the weight of a person who sits successively on a perpendicular crossbar. This movement allows the yellow juice to be eliminated, and with it part of the cyanide (HCN) that is deadly if eaten by humans and animals (including large animals, like cattle), blocking the circulation of blood and causing suffocation. Basílio, owner of the first garden depicted in the images, explains the sequence of movements:

Why roast it? Because it’s raw. Manioc is strong. So roast it well. Wait for it to cool down, when you take it out of the fire. And it’s going to take it to the creek, to the well, for it to soften, but not too much, or you can’t put it like this [in the shape of large flatbreads].

[Pointing to the stored bread] There it’s already lying down. Put it there, tomorrow or later its going to rise. It goes to the bucket. When it ripens everything is well. This one, when you lie it down, it ripens. If it doesn’t ripen it stays just like the bread (*beiju*). It’s pretty good. It doesn’t become beer, but, perhaps, if you have some sugar cane juice, you take it anyway (Basílio, Ponto Cinco, 2011).

After it is placed in the bucket, it is sieved while water is added proportionally, until the beer is ready to be consumed (eleventh and twelfth images). In this vital cycle, beer is one of the manioc stem’s phases of being, and it has an important role and value, since it makes the cycle start anew. During the *ajuri* it *enlivens* (*anima*) people for work. It condenses values: through the drink, people who do not work in the garden, who do not produce, are reprehended, while those who have the courage for work, who have many beautiful gardens, who produce plenty of high-quality beer, are singled out for praise. Those who have no garden have no beer. Community politics is critical of those who speak often when they drink beer, but who, when sober, keep silent – for example, when the mayor visits the community. People who drink until they fall over, have no knowledge of drink and no control over its effects on their body. During parties and birthdays, beer welcomes guests. In inter-community politics, it establishes important alliances. The act of offering beer can have many meanings,

from courtesies to provocations. Beer can also be a vehicle for poisoning or for “ruining” a person. “Ruined” drink is an ever-present risk. Although politeness demands that a bowl of beer always be accepted, drinking in villages or houses that are distant from the realm of kinship, or participating in beer drinking session in the dead of night with people one is not on good terms with, is always a risky affair, since the environment in which beer is consumed is also one in which disagreements can be aired, and vengeance can be enacted.

The series of photographs above offer a visualization of the manioc stem’s flow of transformations and of the forms of human-plant interactions revealed in different relational spaces and scales. In the flow of the transect, technique moves people, plants, earth, materials, energies, gestures, and knowledge, creating a properly social meshwork. These images register the same flow. They were produced in different places (gardens, yards, farina houses, ranches) and moments (work, leisure, celebrations). It is not, therefore, a sequential montage or a linear exposition. In a different way, it reveals the processual character of acts which, even if always open to the unpredictability of life, tend to consolidate a pattern, a circuit, which allows the conductors of information to accumulate and to put into circulation knowledge of alterations in soil, climate, motors, sieves, plant qualities, hearths, bowls, gatherings, birthdays – in brief, a set of knowledge that enables acts to effect changes in the course of their actions, adjust and improvise, so as to ensure that the flow keeps on the desired path, that this amplified social world be constantly generated. It is important that we are able to visualize this technical process to highlight how it can be “broken” or obliterated when people prefer to acquire things that are *already made*. This brings us to the third circuit, the circulation of things produced by the “whites” within communities and the contemporary social transformations that they imply.

Transformations

Throughout the Serra da Lua region there is an intense flow of people and products between communities and cities, particularly Boa Vista, the state capital. In Jacamim, the movement of residents of the community between their ranches and the community centre is closely tied to the school calendar. During weekends, school holidays and, above all, during the summer and winter breaks, the centre is mostly empty. During these times, many families take their children to their ranches. Movement between the garden, the community centre and the city of Boa Vista is also articulated by the dates in which cash-transfer benefits and wages are paid, which is generally at the start of every month. The terrible condition of the roads that connect Jacamim to the city does not favour the commercialization of surplus goods, and most of it is consumed or exchanged locally. Some of the local produce is sold in monthly markets, which take place every last Sunday of the month, with teachers being the main clients.

During the last decade, retirement funds, wages and money from cash-transfer programmes increased the purchasing power of the families of the communities. In 2011, data gathered by the Health Post revealed the presence of 40 retirees and 79 families enrolled in social programmes, out of a total of some 123 families in the community.⁶ On the one hand, this injection of monetary resources is considered positive. The resources aid in the acquisition of equipment and tools for developing regular activities, such as motors for manioc grating, chainsaws and ovens. It also allows for the diversification of meals, contributing toward food security in cases in which food production suffers, which are increasingly common with climate change. On the other hand, many inhabitants of the community are perceiving changes in social values that stem from this monetization. Mr Estevão analyses the dynamics of comings and goings into the city, and the growing consumption of food that is not produced locally.

⁶ The Programa Bolsa Família (PBF, Family Stipend Programme), created in 2004 by law n° 10,836, is a cash-transfer programme that benefits families in states of poverty and extreme poverty in Brazil. For further information on the PBF, see <http://www.mds.gov.br/bolsafamilia>

A: When you go into town, you buy food to last for how long?

E: For two months. Then I go every two months. Some people go every month. I'm going this month. In the winter that's how it is, I go every two months. It's May now right? Then I'll only go back in July. I almost never lack food. I just go to buy rice, you know, spaghetti. Maybe some soap, like, I go to the city. But farina and these things... We make them here, to eat.

A bunch of people don't know to buy food, but they don't like making gardens, so they go to Boa Vista to buy farina. I never buy farina, I've been retired for 12 years, never bought farina. We can plant manioc stems right? You can buy eggs, rice, spaghetti, these things. I just planted, day before yesterday, I have a garden with eight rows and seven rows, of stems.

I also planted maize. There are new people here who don't like to work anymore in the gardens. I have a brother-in-law, he's retired, doesn't work in the garden, buys farina, everything, in Boa Vista. "My garden is Boa Vista", he says. (Mr Estevão, Jacamim, 2011)

Reflecting on these transformations, Eliezer, which works as an Indigenous Health Agent (Agente Indígena de Saúde, AIS) in the Marupá community, observes that his kinspeople *want to eat things that are already made, nobody knows anything about doing*. According to him, this began with the Federal government which, at first with retirement pensions and later with cash-transfer programmes, *got people accustomed*. Among the ensuing effects, he notes that people *don't want to work in the gardens anymore, they just wait for payday (...) end of the month they just want to go into Boa Vista (...) This is what change is: food and planting*. As he works in the health sector, Eliezer pays attention to changes in people's clinical condition: "*We already find disease from there, from the food of the whites, we don't know how to use it, we don't know how to eat the food of the whites, we want to eat it like we eat our food and the community hurts itself because of this as well*".

On the one hand, these issues raised here bring us to a debate concerning the growing importance of local agricultural systems in international discussions on the maintenance and insurance of the diversity of food production in the world, and the role of agriculturalists. On the other, locally these elements make evident how the flow of products and monetary resources interfere in the community and the resilience of these systems. Most of all, they draw attention to the effects of the circulation of industrialized foodstuffs in the communities, both in what concerns the health of people and the quality of their daily relations.

These local impressions raise important questions about the transformation of traditional agricultural systems in Amazonia and the local answers to the logic of the market. In studies on the agricultural diversity of the Rio Negro, Eloy and Emperaire (2008) show the resilience with which the local systems for managing biodiversity react to the new conditions of space, biological vulnerability, and the social and economic issues linked to its reproduction. In general, this agriculture is extremely rich in plant diversity, in associated knowledge practices, and is crucial for its central role in food security for families, with manioc being an example of genetic diversity that has been preserved and controlled by Indigenous horticulturalists for millennia, through their experimentations, selections and breeding.

The rhetoric of valuing traditional knowledge that underscores a public plea for the value of these productive systems is still timid in terms of its effect in the area of the Brazil-Guyana border, when contrasted to the sharply unequal relations between the people who develop these traditional practices and the socioeconomic regional flows that threaten them. One result of this has been the devaluation of the former as a result of the lure of urban lifestyles and access to agricultural produce through financial resources. This, as I see it, is the thrust of Mr Estevão's and Eliezer's critique of social transformation, access to social benefits offered by the Federal government and their moral reflexes, the devaluation of garden work and health effects for people who start to eat "ready-made" products, acquired in supermarkets, forfeiting knowledge practices.

This line of Indigenous analysis resonates the importance of technical processes, not only in the sense of producing food, but also as processes that imply relations of cooperation between people who are the strength for the continuity of a sense of community. As the description of the different circuits seems to reveal, these socioeconomic transformations alter complex relational networks which are not restricted to humans, and which generate valuable knowledge of a category of edible plants. Interferences along the networks of relation affect these ways of knowing, tending to paralyze processes which are vital to the very existence of whole communities. Beneath these processes, there is a permanent technogenesis of the social.

Final Thoughts

Throughout this article, I have sought to circumscribe the intersections of technical processes and vital flows in human-plant relations in the context of pluriethnic communities in the Serra da Lua region, on the border between Brazil and Guyana. My ethnographic aim has been to make visible the techniques through which the Indigenous communities *handle* this plant, and, in so doing, construct collectivities. The study of techniques offers certain conceptual and methodological tools for describing how these plants are transformed into components of a way of producing food and relations.

In this field, the notion of the “operational sequence” is a basic tool for registering series of operations involved in any transformation of matter by human beings. A focus on “action upon matter” establishes a methodological delimitation of the very object of study, which helps to delineate technical processes, but use of the word “upon” retains an anthropocentric character and leaves other modalities of “actions” vague. The human-plant relation represented here raises questions for this formula, since it consists of flows in which humans act upon manioc stems and these act back in different ways, depending on the phases of the stem’s very being, because the stem is not passive material, according to the Indigenous explanations of the vital processes of this plant.

Elaborating an operational sequence that incorporates every detail of the technical process can turn out to be an unviable, and probably unproductive, methodological strategy. It falls to the researcher to find a form or representation adapted to the sort of activity and the type of question under study. As Coupaye proposes, the operational sequence is not a methodological resource that objectifies an exhaustive or complete description. It is a form of ethnographic composition that enables the visualization of how a technical process mobilizes a network, and it is useful for adding to the description and allowing the development of inferences concerning different vital circuits. This “sequence” should not be taken as a prescriptive model, since cultivation, for example, always has an unpredictable character and involves aspects such as continuous mindfulness, care, judgment and improvisation. The operational sequence as a transect is a type of formalization which does not correspond to an abstract, prescriptive or deterministic model. It establishes a profile, and the limitations of this sort of procedure are themselves informative, confirming the fact that, at the methodological margins, interesting properties of the phenomena being studied can become visible (Coupaye 2009), or, in Simondonian terms, can illuminate their “obscure zones”.

The anthropological analysis of techniques consists of understanding human ways of relating to material, not just in acts of production, but also as mediators in the life of humans and animals through mutually constituting relational flows. Haudricourt (2013 [1962]) has offered us valuable insights that qualify contemporary studies of human-nonhuman relations. A botanist, anthropologist and linguist, Haudricourt proposed two models of action that affects plants, animals and humans. Taking the examples of yam cultivation in Melanesian New Caledonia and sheep husbandry in the Mediterranean, he observed that while cultivation of the tuber is a form of *indirect action* – which seeks to create the conditions for the realization of the plants’

potentialities and does not require “brutal contact in space nor simultaneity in time with the domesticated being” (2013: 2), sheep husbandry requires *positive direct action* – the permanent contact of shepherd with the domesticated being.

This proposal was developed by Carole Ferret (2012), who has sought to analyse ways of acting as different forms of inter-action between humans and nonhumans. In Ferret’s terms, while in an *operation* the subject acts upon an object with the aim of achieving a goal, in *manipulation* the form of action includes the potential for the actions of plants and animals, making them also act with the aim of achieving a goal.

In this perspective, technique is always relational and its analysis must always provide room for the perspective of plants, for instance. These ideas are in dialogue with an ecological perspective, in which plants are not considered inert material, finished and crystallized, but living beings the properties of which are condensed in histories of what happens to them as they flow, mix and transform (Ingold 2011), in their interactions with humans. The technical process of *manipulating* the stems jumbles up these terms, for it involves both *direct positive* and *indirect negative* acts – and, we can venture, it includes its converse, since plants directly and indirectly make humans act with the aim of achieving their *own* vital goals. This is what I mean by a technogenesis of the social. Hence, to opt for *ready made* things is to break the flow of this vital relation for both humans and plants, demobilizing the ontogenetic processes of a sense of community.

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On the way: Technique, movement and rhythm in the training of guide dogs

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Abstract

In the article I present an ethnographic reflection on the process of guide dogs generation, an animal assistive technology developed to facilitate the mobility of the visually impaired person. Focusing especially on the training phase, I try to understand the trajectory of transformations, the unfolding of events and the changes of movement that make certain dogs able to “graduate” as guides. Following a Maussian perspective, the guiding technique is understood here as the result of a certain relationship between movements and things, encompassing tools, human and canine bodies and their displacements in different environments.

Keywords: human-animal relations; techniques; movement; corporality; blindness.

No caminho: Técnica, movimento e ritmo no treinamento de cães-guia

Resumo

No artigo apresento uma reflexão etnográfica sobre o processo de formação de cães-guia, uma tecnologia assistiva animal desenvolvida para facilitar a mobilidade da pessoa com deficiência visual. Focando especialmente na fase de treinamento, procuro compreender a trajetória das transformações, o desenrolar dos eventos e as mudanças de movimento que vão tornando certos cães aptos a se “graduarem” como guias. Seguindo uma perspectiva maussiana, a técnica de guiar é aqui entendida como resultado de uma certa relação entre movimentos e coisas, abarcando ferramentas, corpos humanos e caninos e seus deslocamentos em diferentes ambientes.

Palavras-chave: relações humano-animais; técnicas; movimento; corporalidade; cegueira.

On the way: Technique, movement and rhythm in the training of guide dogs

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Introduction

The associations between humans and dogs that occur throughout the process of training a guide dog challenge the bodily boundaries and the frontiers of interspecies subject and agency. When we see a “pair” working on the street, who is moving: the blind person or the dog? Who starts the movement? Who is moved?

On my first visit to the CTCG¹, I followed the work of Instructor João, who was completing the adaptation of Paula and Darwin. The activity proposed by the instructor was a semi-solo walk with dog/human team and the instructor accompanying at a distance. The walk took place on Avenida Brasil, the busiest street in Balneário Camboriú, a coastal city located in the southern region of Brazil. We were headed to a mall eight blocks away, crossing several streets and the avenue itself. João attached the walkie-talkie receiver and its microphone in Paula’s clothes. She put the harness on Darwin. João instructed her about the route and jokes that the goal was for them to stay alive. From there on, it was only the two of them – Paula and Darwin – with as little interference from João as possible. He reminded Paula that she must be careful and use her hearing as best she can in order to make sure that it is safe to cross streets. João and I stood some 20 meters away from the pair, maintaining eye contact with Paula, but without Darwin being able to see us. Pedestrians were moving in both directions. There were manhole plates, poles and dumpsters in the middle of the sidewalk. On the avenue, the cars kept going by, making a racket. The team were already in the last days of their adaptation process and the present moment was now one of “abandonment,” as it is called in the “Orientation and Mobility” course: the moment when the instructor moves away to let the blind person literally “turn around” on their own with the aid of their assistive technology, be it the walking stick or a guide dog.

At one point Darwin is walking with Paula when a pole appears to their front. A little ahead of that, on the right side of the sidewalk, a bicycle was parked, locked to a railing. One of its wheels blocked the middle of the sidewalk. Further beyond, between the post and the walls of the neighboring houses, three women talking in a group, likewise blocking the path. To the left of the post, next to the street, was a small open passage. Two meters ahead of that, however, a public telephone on the corner would oblige the dog to make a risky maneuver if he chose that “open” route. Darwin would have to avoid the post and then circumvent the payphone with enough leeway for Paula not to hit her head on the phone’s shell. Then he’d have to look for the curb because there was already a new street to cross. João and I remained silent, intent, watching what would happen next.

Darwin advances with a gently rolling, elegant gait. He avoids the bicycle wheel and goes towards the pole to move around the group of women. He threads through the narrow passage on the left and then moves diagonally towards the center of the sidewalk. João says “straight to the curb” on the walkie-talkie. Darwin receives Paula’s instructions and circumvents the payphone at the precise distance needed so that she doesn’t

¹ The CTCG-IFC-Camboriú Training Center for Dog Trainers and Instructors is a pilot project that is guiding the implementation of another 6 centers planned to be installed in Federal Institutes throughout Brazil. The project was born as an action of the Assistance Nucleus for People with Specific Needs (NAPNE) with the support of the Secretariat of Professional and Technological Education (SETEC/MEC) and the National Secretariat for the Promotion of the Rights of Persons with Disabilities (SNPD/SDH). Subsequently, “Living Without Limits”, launched in 2011 by the Federal Government, was incorporated as one of the priority actions of the National Plan for people with disabilities. In the current scenario, although the works have already been completed in most of the centers, only Camboriú (SC), Alegre (ES) and recently Urutaí (GO) are in operation. I thank the teachers, trainers, students and employees of CTCG-Camboriú for opening themselves to and hosting this research project.

hit her head, even though the dog himself is free of the threat. Darwin approaches the curb and places his two front legs parallel to the sidewalk, facing the next street the team needed to cross. I am dazzled by the duo's performance: it looked like a dance. I wondered if Paula had any notion of what had just happened, the risks she had faced and the confidence with which Darwin had led her along their path: João enthusiastically comments "A big treat there!" and I realize that I wasn't alone in my appreciation of the dog's performance. João smiles proudly and then compliments the dog's choices: Darwin managed to be accurate in his decisions. Few dogs can perform such maneuvers around so many obstacles and in the face of so much stimulation with such precision, he said.

The walk marked the final stage of the very successful adaptation between Paula -- a blind person who was already a guide dog user and was receiving her second dog -- and Darwin -- a chocolate-colored flat coated retriever. Adaptation is the final part of a two-year dog training process², where the blind person is trained in mobility techniques with guide dogs (the dog itself has already "graduated" from its training). The trainer's observe if the dog and the person are able to work well together: will they be able to form a "team", in other words. To achieve such precision in movement, a guide dog like Darwin has to go through his own prior training phase, and correspond positively -- creatively -- to it.

The recent normative classification of guide dogs as an "accessibility tool" or "assistive technology" which (like a blind person's white cane) aid the mobility of visually impaired people seems, at first, fruit of the theory that considers animals to be little more than automata or objects (Lestel, 2001). But if we think of the centrality of the notion of "technique" or "technology" that has, at least since Mauss (2003), appeared in analysis that seek to reveal the status of human beings and their different forms of sociability, we can see it in another light: the guide dog can be considered as an organism equipped with technology.

Following a Maussian perspective, the technique of guiding is understood here to be the result of a certain relationship between movements and things, embracing tools (harness and leash), human and canine bodies, and the surrounding environment (Mauss (2009), Leroi-Gourhan (1984), Sautchuk (2015)). Training, in this view of things, can be understood as an "operative chain" or a technical system that involves a set of steps and a chain of actions (Mauss, 1979) that provide the dog with a "skill" (Ingold, 2015: 108). As Schlanger suggests (1991: 122), this notion of an "operative chain" invites the researcher to become what she studies and make of this becoming a research subject itself.

Focusing especially on the training phase, I try to understand the trajectory of the transformations that occur, the unfolding of events, and the changes in movement that make certain dogs able to "graduate" as guides³. I then consider the relationship between the development of a dog's technical ability to guide and the process of building a being that, although not a human person, will have a well defined social status⁴.

² This is the mean time needed for the education of a guide dog, from birth to adaptation with a blind person. The beginning stage is called "socialization", when the puppy, after weaning, stays in the home of a family that volunteers to receive it for a period of 13 to 15 months. When that stage is complete, the dog returns to the training center for training, which lasts from 4 to 6 months, depending on the evolution of the dog. The last step is the adaptation of the already graduated dog as a guide for a visually impaired person, which lasts a month. The first three weeks of training are held at the center itself, a time when the visually impaired person needs to develop the proper relationship with the dog and the ability to lead the dog and learn the techniques necessary to do this. The last week of the adaptation process takes place at the home of the visually impaired person, with the instructor marking down with the team the main routes that they will use together. From then on, the duo will work together for about 8 years when, depending on the disposition and the physical and mental health of the dog, it will be "retired".

³ In one of the first conversations with one of the CTCG coordinators, we learned that the average rate of success (that is, of puppies initiating the process and effectively "graduating" as guides) is about 33%. Of the 41 pups involved in the project's first socialization cohort, 16 became guide dogs.

⁴ In Brazil, Decree No. 5.904 / 2005 and Law 11,126 / 05, known as the Guide Dog Law, ensures the right of the dog, either graduated or in the process of socialization and training, to enter and remain in vehicles and public and private establishments of collective use accompanied by the user, the trainer, or the socializer.

The social is here understood not as a special domain of reality, but as a certain movement of association: a principle of connections that allow a dog to acquire a specific place and agency in the composition of the human collective (Latour, 2012). The question before us is not so much to understand what a guide dog *is*, but rather to understand how a dog *becomes* a guide. How does it gain existence in the social universe? In order to tackle this question, we will look at the work of the trainers with their dogs and investigate the whole technical and pedagogical apparatus that shapes them.

The present article is the result of anthropological research that I have been developing since April 2016 at the CTCG. My project seeks to present the complex reality of the guide-dog in light of the relationships that allow it to come into being, as such, in the world: an event that is “between” and is encountered precisely in the hyphen that relates both sides of the pair “guide” and “dog”. I seek to make visible activities and interactions that are often unseen and silent, revealing bodily abilities and knowledge forged in the everyday experience of interaction between people, things, and dogs in and around the training center. The search is to illuminate the intimate links between action and agency (Despret, 2013), as well as the relationships of strength and confidence that are created and that make certain canine beings fit to make certain human beings more capable.

From home to kennel

The beginning of the training process is marked by a ritual: the ceremony of the delivery of the dogs by their socializing families. These families have kept the puppies for a year and a half, on average, and were not only responsible for their care and well-being, but also – literally – for socializing them⁵. In the carpeted auditorium of the training center, the families that socialized the dogs of litters C and D gather. The event is loaded with emotion, especially for those who have had the experience of having their lives “tied” to that of another being. These people have synchronized all their rhythms and movements – things as basic as walking down a street – with the pace of a quadruped. They experienced being “read” by him in their routines, intentions and even feelings⁶. The intensity of the atmosphere is directly proportional to the time and emotions invested in the socialization of the puppy. At the ceremony, the families also return the items from the “kit” they received from the training center (leash, cape, food bowls, whistle, toys, sleeping box). After the ritual, the dogs will be taken one by one to the kennel. The socializers say goodbye because from this moment on, they should not meet the dog during the animal’s entire training period. The final reunion takes place only in another ritual, when the socializer delivers the dog to the visually impaired person with whom he will work, if he has been successful in training and adaptation.

Although expressing emotions in different ways, the shock of passage and the intensity of the event are felt by both the socializers and the dog. The first phase of training, “kennel adaptation,” is a critical point in the process:

⁵ Although it is not possible to deepen our understanding of all the processes involved in this phase, it can be said that the role of the socializing family is to “show the world” to the puppy: a world that is, to a large extent, human. The puppy should be presented to the diverse environments frequented by people, urban and rural. He must learn specific rules -- to urinate and defecate when commanded to do so; to eat only when authorized; to respond to the commands “stay, lay here, your place” -- besides being educated to respect the authority figure of the house. Socialization is not training, however. At this stage, the dog is also a “domestic” dog: it must have moments of freedom and leisure and live with the family, developing bonds and experiences of affection with humans – adults and children – and, if present, other animals. In the socializing family, one of the people responsible for the dog must commit to taking him every day to the human’s daily tasks – work or study. The dog must have the same routine as one of the family members, in other words. During the socialization process, the volunteer family and the pup will be followed weekly by students in training at the center, supervised by the trainers. I developed an initial reflection on this socialization stage in a book chapter (von der Weid, 2019).

⁶ As Lestel points out, the dog is sensitive to the human voice and gestures, being able to perceive intentionality and to understand the meaning of an act, attitude, or expression. Many of our daily actions are routine and by sharing these situations and living among humans, domestic animals acquire some of our habits and voluntarily transfer their social relations to this “common world” (Lestel, 2001, p.213).

They [the dogs] feel it; they feel it a lot. Man, there are a thousand behaviors that are provoked by separation anxiety! Dogs that had a very strong connection with their socializer, dogs that are heavily affected by the change from house to kennel, they tend to engage in coprophagia: eating feces. They destroy things inside the bay, eat the float, eat the water fountain, dig at the wall... Millions of different behaviors: they bite the iron bars (a great indicator of stress) beat at them, howl at night... They really suffer with this change. Some suffer more, others adapt faster. It varies greatly from dog to dog. Each is a unique individual. (Renato, student of the trainer and guide-dog instructor training course)

The transition from socialization to training represents a sudden break in the dog's life trajectory, which goes from "family life" to "life in the kennel". The transition was compared by one of the trainers to the experience of a new recruit at boot-camp. This comparison is useful for us to understand the phenomenological dimension of the experience of the kennel. It is like socialization at a boarding school, with strictly controlled schedules, a focus on discipline and hierarchy, a decrease in the intensity and weight of previous family ties, and the physical demands involved in training (Castro and Leirner 2009). Dogs take time to get used to the new routine. The first two weeks are the most dramatic:

João: The energy in the kennel is very strange, you know? Very weird. When they arrive. It's been two weeks for them ... you know? For everyone, well, to balance out the thing.

O: Do you think [the dog] also needs to detach?

J: Precisely, precisely. Indeed. Wow, he was alone living inside a house: now he's living with a lot of dogs inside a kennel? It's complicated. There at *Guiden Eyes* they retire⁷ dogs that do not... dogs that do not fit in. Gil and Gloria were an inconvenience for a whole month. They howled all night. It was complicated... A dog that is by the side of the human all the time, that was raised this way, with a very great amount of affection. So I'd bring Gil [from training] and leave her in the kennel. If she saw one of us that she has a closer relationship with... If she did not see someone like that, she would come and stay calm. But if she saw me or Marcelo or someone else passing by, she was already screaming there. And that was that. It was a situation. (...) During the training they have to sleep in the kennel; they have to stay there. But there, too, they will develop a pack relationship.

In addition to interaction in the kennels, throughout the training phase the dogs will have moments in their routine called "assisted freedom" by the trainers. The term refers to the daily periods, usually performed in the morning, in which the dog is free to "be a dog". They will be released in a fenced area (called a "loom") along with other dogs where they can smell the lawn, run, play, and interact. The word "assisted" indicates that even in these moments, the dog should not lose discipline: the trainer must have control of the dogs and exercise their obedience through play. In the first week, this period is decisive because this will be when the dogs will form a new "pack", establishing the links and the hierarchies that are internal to that collective. Each trainer should form his or her own "pack"⁸ with the dogs he accompanied in socialization and who now arrive for training, with the trainer himself in the position of "leader". Kohn (2007) reminds us that, historically, dogs have always been highly social animals that lived in packs with well-established hierarchies of dominance. What happens in training mirrors the historical process of domestication of dogs which involves replacing, at the apex of the hierarchy, a dominant dog with a human leader, who must also know how to communicate leadership to canine beings.

⁷ Although the term "retirement" refers to the stage where the guide dog has reached a more advanced age and shows signs of tiredness, indicating that he should stop his guiding activity, the expression "retire a dog" is also used by the trainers to refer the withdrawal of the dog from the training process at any stage of the program, whether for physical or behavioral reasons.

⁸ The number of dogs in these sub-packs varied from 3 to 6. The larger pack, which formed when the trainers released all the dogs at once, totaled 16 to 20.

Body language: Interspecies communication

Guiding activity is not just a human imposition upon a canine world, but a practice that is the result of interspecies learning and partnership. In it, each animal's way of making the world -- canine and human -- crosses and interconnects, forming a circuit that relates the living beings that participate in it. In the first phase of life, socialization, the dog lives in a fundamentally human universe, learning about environments that other dogs do not access, learning to obey the rules and criteria established for him by the humans that surround him. In the next stage, living in the kennel and in "assisted freedom", the dog strengthens the "world of sense" (Uexkull, 1982) that is characteristic of the canine species. The process as a whole will result in the participation and entry of dogs into a predominantly human social universe, heavily weighted with human meanings. It will only work, however, if the humans participating in this process are able to engage and learn to communicate with the dog in a language that means something to canines.

Mead, analyzing language as part of social behavior, understands that there is an indefinite number of signs and symbols that are not translatable to articulated discourse, but which can be read through behavior or the bodily attitudes of another. In discussing the concept of a "conversation of gestures" the author provides an example of a bodily conversation between dogs:

Dogs approaching each other in hostile attitude carry on such a language of gestures. They walk around each other, growling and snapping, and waiting for the opportunity to attack. Here is a process out of which language might arise, that is, a certain attitude of one individual that calls out a response in the other, which in turn calls out a different approach and a different response, and so on indefinitely. (Mead, 1934: 10).

Mead understands that communicative action, as an organized action, is already present in the social acts of animals when they develop actions stimulated by attitudes or gestures of another. This, then, according to Mead, is the principle of language. The success of the training process resides in trainers establishing a relation of partnership, leadership and affect with dogs. For this, they need to be able to communicate with the dog in the dog's own "language": engage in a particular regime of movement and action that may be meaningful to canines. Following Uexkull's (1982) notes, in order to access the dog's point of view, its subjectivity or "world itself", two elements are fundamental: understanding what the animal can perceive and how it acts in the world. The logic of the pack is the way the world is constituted within the circuit of perception and action of a dog:

J: In assisted freedom, when you let go, they start jumping on top of each other and establishing a relationship of which dog commands, right? I stay there to make sure this does not generate a fight. Now they're there: if they lean against each other, growl and such, it's being a dog. They're expressing themselves, showing off to the other, they're establishing... Because when I get there with three dogs, it's one pack. When I put 20 dogs into the loom, that's another pack. Then they have to establish their relationship, and I'm in there to make sure there's no fighting going on. If I see traces of aggression, I go there and I separate them. But normally I leave them there and they create a relationship between themselves. The energy starts to go down they calms down, understand?

The importance of assisted freedom is to provide means for the dogs to form their own "environment" which, in the perception of the trainers, is directly related to the establishment of a hierarchy corresponding to the greater or lesser authority of each individual canine in the group. Each dog inserts itself into the collective according to its morphological structural type and its regime of perception and action, which will result in a range of positions in a specific gradation running from submission to dominance. The trainers need to learn the bodily ways of expressing themselves to dogs and this is a precondition for their training. The learning of the canine "point of view" and canine expressiveness occurs through the coexistence with dogs. Students who are learning to train guide dogs acquire this through socializing with the dogs in their socialization phase, but also by close observation of the interaction of the dogs in "assisted freedom" activity.

J: You see how a dog reacts to the pack – if he tries to impose himself, if he accepts it – in his bodily expressions. Is he a dog that, when he sees another, raises his body, his ears or tail? Does he bristle, demonstrate power? It is similar to humans: when they want to show off themselves, they inflate everything, increase their body size, scowl... They show... they are dominant, too. They will participate in that game of ego, of power, and someone will come out on top. The submissive dog, he will diminish, will contract, lower his ears, put his tail in the middle of the legs, throw himself on the floor, lick the dominant dog's mouth. One dog licking another's mouth is a sign of submission. When one rolls belly up, that is the maximum signal of submission: he is showing his viscera and is completely helpless. So when you are living with dogs, you will see which is more dominant, which is the most submissive.

During the training process, it is not only the actions of the dogs that will be significant in determining the positions of each dog being in the group: the whole enterprise will depend on the trainer's insertion into the pack and how, through his actions, he asserts the position of leadership in relation to the group of dogs he will train. João observes that the dogs themselves read humans through the logic of domination and submission, relating differently to people who display one or another characteristic. Establishing a leadership relationship is a crucial step, as it allows trainers to "talk" to dogs and be "heard" by them. The established communication of gestures allows the trainer to make new propositions for canine becoming (Despret, 2004). To do this, the trainer needs to learn to inhabit the canine world, activate the canine point of view using his own body as a technology (Mauss, 2003), as a tool to get to know the dog and relate to him. Leadership is not established by will alone. The trainer must embody it by developing a certain mode of engagement with the dogs that lead them to recognize and respect his authority.

Speech is a crucial aspect in the relationship with the dog, but not so much the words themselves as *how* they are said – the tone of voice and body posture that accompanies the words. Speech is significant as a body act or acoustic gesture, and the different reactions of the dog in response to different vocal stimuli allows the trainer to gain a finer control of the significant aspects of this "incarnate language" (Csordas, 2008). It is a type of meaning immanent to conduct that, however, communicates and is understood.

J: How do we communicate with them? In their language, since they don't speak ours. And his language is 80% to 90% body – bodily expression. He has no verbal language, but understands voice intonations. For example if you say "no, no, no" (low and soft tone) or "no" (strong and serious tone of voice). The word is the same, it has no meaning to the dog: what matters is the intonation. If I say to the dog "sit, sit, sit" (medium and mild tone of voice), it will look, like, um ... (expression of disdain). [But if I say] "Sssssit!" (firm, with the "s" extended and a grave tone of voice). Look at my eye: "Sssssit!". I shaped my body – "Sssssit!" -- my intonation.

Body language relates humans and dogs in training and can be learned and taught through its pragmatic functions (Despret, 2008). It is an effective means of acting and of making dogs act⁹. Training takes place via the development and the positioning of the trainer in this incarnated communication. By behaving "like dogs," in their own regime of perception and action, trainers are at the same time developing in themselves a new body language – leadership and pack behavior. They learn to produce a "dog view" that allows the canine world to affect them, as well as allowing the human world to affect dogs.

Is there a double process of animal anthropomorphism and human zoomorphization at play here (Renneson, Grimaud and Césard, 2011: 39)? On the one hand, we take the animal from its home ecosystem to make it participate in training, a game in which the human also participates. We subject them to an anthropomorphism. Human participation in the game, on the other hand, sharpens the sensitivity of the trainers and their ability to act in

⁹ It is also through a bodily conversation of gestures that dogs exercises the "right to want" or takes a stand regarding the training process, adhering to or resisting what is proposed by the humans. Reflections on the extent of the dog's ability to choose in the exercise of guide activities will be explored on another occasion.

the perceptual space of the dog. Sometimes even unknowingly or uncontrollably, the trainer participates in a process of zoomorphosis and begins to communicate with dogs through vibrations, postures, and gestures that are meaningful to canines. A series of ritual techniques and bodily attitudes facilitate mutual understanding:

J: My relationship with him starts with food. I feed him. Wait! It's already begun because I am the owner of the food. I am the owner of the area. You eat at the time I send the food in. So already ... the [training] technique induces this, all this is consciously done. When I speak with the dog, it is important that I speak once and not "sit, sit, sit" (over and over again). "Sssssit!" Right? If he does not sit I go in there and make him sit down. You go there and do it. You speak at first. The second time, you'll already be gesturing. That may sound like bullshit, but it's critical. Are you going to walk through a door? The one that crosses first has to be you: the leader goes ahead. And this is not subjugating: it is talking to them in their own language.

These techniques rearrange quotidian activities – such as feeding or even the games in which dogs usually engage – in such a way that the trainers integrate themselves into canine sociability, occupying a specific position: the role of leader. Although there is a hierarchy implicit in the leadership role, training is not simply the command or mastery of the trainer over the dog: it is the opening of a communicative channel of mutual influence. This is a direct connection that makes it possible for both human and dog to conduct common actions. In interspecies communication, what matters is to broaden contact areas and not lose them (Renesson, Grimaud and Césard, 2011).

Canine Subjectivity

Training work is essentially relational, occurring in face-to-face interactions between a given dog and a given person. The bond formed is not generalizable to a relationship that said animal might form with any other human being. It is singular and depends on a process of familiarization between human and dog that creates, in addition to recognition of leadership, a reciprocal affective bond. Training is the result of an interspecific crossing and is made possible by hierarchical discipline and affectivity in the training of a "companion species" (Haraway, 2003). As Haraway reminds us, not all animals are alike and their specificity – individual and type – matters. Dogs that have an "aptitude" for being guides need to present a certain favorable combination of canine "*repertoires of behavior*" (Despret, 2008) composed, among other things, of energy level, body sensitivity, type and degree of distractability, as well as aspects of dominance and submission.

After the kennel adaptation phase, the second week is taken up by "evaluation walks". Here, the trainers observe the behavior of the dogs in movement, without giving commands or corrections. This is a time of getting to know the dogs better by observing how they walk and the way they react to different environments. Trainers will also learn about the walking speed and rhythm of each dog, if they resist certain kinds of situations or if they need a more energetic incentive to be interested in walking.

Although one-on-one observation continues throughout the training period, at this stage the trainers also perform a more detailed evaluation of the intrinsic qualities of each dog, related to both their morphology and behavior. The characteristics are jotted down on note cards: pulling the leash when walking, zig-zagging, barking at people or other dogs. In addition to keeping these records, the trainer completes a weekly report analyzing the development of the dog, describing its behavior along the different walk routes: if distraction occurs (for dogs, cats, food, noise, people, other animals), if it shows signs of aggression, anxiety, fear or distrust, degree of concentration and willingness, initiative, bodily sensibility or responsiveness in handling. Each item is graded from 0 to 6, which allows the trainer and others to follow the evolution of the dog and also guide the training script itself through working on certain types of situations.

A dog with guiding potential is never at extremes: he is neither too insecure nor overconfident to the point of being aggressive. A very suspicious dog does not adapt well to the work, nor does an excitable or anxious dog. Fear and insecurity are emotional states that the dog expresses physically, either by walking faster and with his tail between his legs (often looking back to get the leader's support) or by being frightened by loud noises – thunder, horns, the barking of another dog at a gate – and physically reacting in an exaggerated manner or fleeing.

J: You'll notice how the dog behaves, it's distraction level. Every dog has a distraction. Every guide dog on planet Earth has a distraction, just like us humans. Does he have a high, medium or low level of distraction with regards to balls, birds, cats, people, other dogs, dogs on the street, dogs behind fences and gates? The distraction can be positive or negative. A positive distraction would be this: he sees another dog, gets excited and wants to play. A negative distraction would be if he takes up a guard posture. Not that he's going to attack, mind you, but that he's more reactive or wants to go up to the fence to... to do that dog thing, right? Does that happen? So this has levels of intensity. It has a tolerable level, a good level and an intolerable level. So if the dog can not manage this well he will not graduate as a guide. This is behavioral.

In training it is not enough that the trainer wants and demands that the dog do things: the trainer also needs to know how to negotiate each dog according to his individuality, to know the things that interest him, the degree of verbal and tactile encouragement he needs to receive to take a command, the strength level that the trainer must use on the leash to make a correction. It's knowing how to give that particular dog the chance to get it right, finding the right tone of voice to use, and the right signs on the leash.

To slow down, to pack up, to lower oneself, to shrink, to put one's tail between one's legs, to make body movements contrary to the direction that the trainer wants: these are all ways a dog demonstrates resistance to or refusal of training. The dog may resent a stronger correction via the collar or leash and, if it does, it is difficult to convince him to return to training, at least for that day:

J: Body sensitivity is the sensitivity of the body itself. It will influence the response to the leash. For example, if you give a strong correction to a dog with high body sensitivity, he will feel it there and it will be harder for him. A dog with low body sensitivity does not feel it so much. If you correct a dog with low bodily sensitivity with the same intensity that you correct one with high bodily sensitivity, he may not even give you a ball. So there are two factors there, okay? A dog with a high bodily sensitivity usually resents correction. It's another aggravating factor. So if you're working and do not know how to do the correct correction, and you give a strong pull to a dog with a high body sensitivity, you can end the dog right there. The work is over. He will not work anymore that day. He resents it and he will manifest his fear and it is over.

Each dog has a threshold of strength and intervention towards the use of the leash that must be known by the trainer and should not be exceeded. Going beyond this threshold may mean discontinuing training because of the dog's refusal to participate in the game. Canine resistance itself is thus a vector of agency in the training process, a way of demonstrating its point of view regarding that situation; the dog's uniqueness, desires and wants.

The energy needed is the equivalent of each dog's coefficient of activity, measuring the "motivation to act" (Taks, 2012) that emanates from each canine being. This "built-in" or internal energy must be balanced in order to generate health and well-being, whether it be that of the dog or of the team. Knowing this characteristic is important because it will later on indicate what kind of person the dog should be adapted to. A low-energy dog can not pair up with someone who has an intense lifestyle that is full of activity, like a young athlete who is also a student. The cross between the person's "lifestyle" -- the human term used by them to qualify our motivation to act – and the dog's energy level is an important variable in the formation of teams.

In the course of training, the trainer increasingly accumulates detailed information on each dog's repertoire of behavior and temperament. At the end of the period, these observations will serve as a basis for completing the "final report" in which the combination of the qualities noted by the trainer will constitute the particular subjectivity of each dog. In addition to knowing the technique of guiding, the dog needs to have a guiding potential, good social behavior and emotional control in situations of canine stress, and a balanced temperament. All these factors combined will compose a final picture that will determine if the dog can become a guide.

J: Wiron is a labrador whose physical structure is naturally much larger than most labradors. He was 37 kg of muscle mass. Extremely strong. Big and strong. Body sensitivity? Very low. For him to feel a correction in the leash, you have to yank so hard you think you were going to rip the dog's neck off. This was just to get him to look at you, right? And it's a dog with a scary distraction for balls. If I train with him, walking with him, and there is someone throwing a ball, this dog goes crazy. It's no use for me to correct him. If it were a dog with a high bodily sensitivity, a minimum of correction on the leash would do... And he still also dominant. There is that factor as well. There is a combination of factors that go into the assessment of a potential guide dog. So it's a big dog, a very strong dog, with low bodily sensitivity, with a high distraction for balls, and who is also dominant. That is, it combines a set of factors that make a whole and that have to be taken into account before you place him in the hands of a blind person... It's complicated.

The guide dog, as a tool or technology, will only exist in the gestures that move it and in the actions that it performs as the effect of the systems that created it and continuously recreate it. Becoming a guide dog is a process of becoming, a resolution that needs to manifest internally in each dog throughout the training. It is not only a matter of a dog graduating or not graduating as a guide, however. Each dog that succeeds and each dog that fails will do this in a unique way, with a given subjectivity or a constituent interior that also manifests and develops during the training process, and through which individuation as a guide may or may not occur.

Routines, tools and routes: *anthropozootechnical agencement*

The guide dog will, in the future, be recognized as assistive technology, however it's activity cannot be exercised without the tools that enable it to do its work: the leash and harness. Dore and Michalon (2016) proposes the concept of "anthropozootechnical agencement" to refer to assemblages in which the coordinated action between humans and animals involves technological mediation. Certain material devices used in training gain prominence in interspecies agency because they allow the creation of contact zones where there is the exchange of significant perceptual signals between human and dog, in addition to the synchronization of movements that will facilitate the development of a singular and surprising canine competence: the ability to guide.

From a very early stage, the guide-dog will learn to differentiate moments of leisure, free time, and exercises from the moments in which it must act with seriousness. The main marker that activates the behavior change in the dog is the cape, which should be used whenever the dog is in a "work" situation. As a puppy, whenever the socializer takes the dog for a walk on the street or in the places that he frequents, he has it wear the cape. When the dog is wearing the cape, it is recommended that people do not pet it. The socializer himself should not cause any kind of excitement in the dog, but encourage calm behavior, preferably by lying or sitting next to him. When people ask to pet the dog, if there is space and time for it, one should first remove the cape and only then let the dog interact.

The puppies soon understand the change of temperament that is to be triggered by the cape and behavior begins to correspond to a certain *script* that is presumed by the object. Dore and Michalon (2016) define a *script* as a program for action that specifies roles for human and nonhuman entities involved in an interaction. It establishes referential indications for performatizing their behaviors and engaging them in a common history. The cape and the instructions for its use that are included in the Volunteer Socializer Manual¹⁰ can be understood as one of the fundamental *scripts* that allows us to stage behaviors and situations of interaction between humans and dogs during the formation of guide dogs. In the third week of training, the cape will be replaced by a harness: an apparatus that covers the back and the chest of the dog so that it can lead, and which also includes a handle, through which the dog will actually guide a person. Swings, vibrations, ascents and descents, irregularities and path directions are transmitted from the dog's body to the person's body through the handle. In addition to enabling certain motor functions, the cape and harness can be thought of as material objects that embody a model of coordination and selection of actions, shaping a *script* of behavior for the dog: do not interact with other people, do not get distracted, keep calm and focused.

If the harness loop is a continuous flow channel of movement, facilitating the adjustment of rhythm in displacement, the leash, on the other hand, is an instrument of learning and correction. The pick up movement through the leash expresses to the dog a change in direction. According to J: "The leash and collar are corrective. It has this name [*guia*, or "guide" in Portuguese] because when the user picks up the leash he is guiding; he is guiding the situation at that moment". When the dog is correct in his movements, the leash should be loose and in the same hand that holds the harness handle. It is only when the dog does something it should not – like lowering its head to grab a piece of bread on the sidewalk – that the trainer makes a corrective movement: a quick pull on the leash with his right hand. This is a signal that will be transmitted bodily, especially through sound, but also by a tightening of the collar around the dog's neck. The pull should be done vigorously, but not too hard. Its purpose is to serve as an alert: it is not a physical punishment and should not cause pain. The dog is then given the opportunity to correct his behavior.

The notion of *script* is employed by Dore and Michalon (2016) to think about the organizational specificities of anthropozootechnical assemblages, which consists of producing, monitoring, executing, and diverting scripts, and making them coherent. The concept of *script* allows us to understand the predictable sequences of behavior and interaction that compose the framework of a given situation. The training of dogs is structured by the performatization of a series of previously planned routes that seek to organize the interactions between trainer and dog, defining frameworks for their joint action. Along these routine routes, the dog will learn how to proceed in different situations: 1) in different environments – rural walking, shopping, supermarkets, town squares, churches, restaurants, shops, airports, ports, bakeries, pharmacies, banks, etc.; 2) in various conditions of movement – sidewalks alongside streets and avenues with different traffic conditions (at night, heavy, many pedestrians), crosswalks, bridges and walkways, stairs (metallic, escalator, closed, open), ramps, steps, elevators, buses, etc.; 3) in different walking circumstances – in front, to the right or left, following a person, stay, come back, stop, lie down, seek out (seats, desks, benches, ATMs, bathrooms, bakeries, pharmacies, ramps, guide strips), avoid obstacles (aerial, fixed lateral, mobile), potholes, puddles, doors opening and closing, etc. The situations are encountered along a varied series of "routes" that must be traversed weekly and are daily annotated in a training table.

These scripts compose modes of synchronization and coordination in time and space of varying importance. With each new situation, the dog will learn how the trainer expects him to act. He must begin a walk only after receiving the command "go forward", accompanied by a perpendicular gesture made with the right arm, from back to front, the palm of the hand facing upwards. In front of a ladder or stairs, he must stop with his

¹⁰ Instructions on how to educate a guide dog puppy are made available to socializing families through a handbook that is delivered with the puppies.

two front legs on the first step and his hind legs on the ground. He waits for the human to place one foot on the first step to continue his climb, always with the front legs a step above the human being.

All this learning takes place through practice and the relentless repetition of scripts such as those mentioned above. The trainer is gradually, bodily showing the dog how to proceed through the redirection of the dog's actions and the "education of his attention" (Ingold, 2010: 21). The trainer shows what he expects from the dog in a given script, in increasing levels of difficulty. One of the training routes passes through a university that is near the training center. There, they train the dogs to go through the corridors, search for doors and the entrances and exits, for stairs or ramps and how to climb these, to find toilets, enter the toilet stall or wait out in front of its door, while the trainer simulates a trip to the bathroom. The dog is also taught to search for a garbage bin and position himself in front of it to show that he has found it.

The *scripts* are potentially infinite, but the training is designed to encompass a minimum number of situations for teams that will in future work mainly in urban environments. As Dore and Michalon (2016) point out, these environments can be extremely dense for a guide dog, involving traffic crossings, pedestrians and cyclists, traffic lights, tracks with rough surfaces, sidewalks, and obstacles along sidewalks. One day, I followed one of the routes that is considered the "Gaza Strip" for canine training: Biguaçu Avenue. I ask Marcelo why this route is so hard and he shows me the obstacles along the way: a sloping sidewalk, open culverts, huge potholes, boards and signposts, open garage doors, exposed garbage in the street, cars parked across the sidewalk, many houses with dogs barking through the fences, loose street dogs... He comments that this is a crucial difference between imported guide dogs, trained in American cities but working in Brazil, and Brazilian dogs trained here. The number of obstacles and distractions and the density of urban situations that a guide dog needs to deal with in Brazilian cities is much greater than in American cities, where urban planning and accessibility are generally more available. Depending on where the blind person lives, an imported guide dog may not be able to adapt because it did not embody the *scripts* necessary to navigate in that environment. The adjustment of movement of the dog-trainer pair is facilitated by the *scripts* present in the harness and the guide. As we have seen, however, a single urban route can also incorporate the need for different scripts to be linked together. The effectiveness of human-guide-dog anthropozootechnical agency will depend on the alignment of a series of *scripts* in an emerging and constant movement of production of cohesion between heterogeneous entities in such a manner that coordinated action is carried out. It is in local contexts and in situated actions that the different scripts that frame the team's relation will be embodied.

On the way: Movement, rhythm and learning

To understand the guide dog as technology, one must put it in relation to other beings, human and nonhuman, in a common field of activities. Learning how to guide is something that grows along one's life path through engaging in practical activities and engaging in a series of relationships with qualified practitioners. As Ingold (2013: 115) suggests, referencing Leroi-Gourhan (1987), rhythms create form. It is by the tuning into each others' rhythms and gestures that trainers and dogs create guiding techniques in dogs during walks in different environments.

During a walk, the leash is the instrument that allows adjustment between the dog's and the trainer's movements, helping to shape their joint actions. The timing of corrections is essential for the dog to associate behaviors with gesture: "It is you walking and working with focused attention. The level of attention is total. [You have to] realize that the dog will make a move and correct it. The moment of correction... it's no use for the dog to do it and then I wait two seconds to correct it. Then it's already over. And that, the timing of correction, is fundamental." (João) The timing of correction refers to the trainer's tuning in to the movements and gestures of

the dog and vice versa. The walk must be sustained, perceptively and materially, by the continuous involvement of a pair engaged in moving through a field of practice (Ingold, 2015).

From the beginning to the end of a walk, the trainer's movements and attention must be continually attuned to the dog's movements and the constantly changing conditions of the path: people who cross it, litter on the ground, street dogs, obstacles, holes, or puddles. Correction is part of the walk and requires a high degree of concentration of both members of the pair. As Ingold reminds us, following Lefebvre, "rhythmicity implies not only repetition, but differences in repetition. Or, put another way, fluent performance is rhythmic only because imperfections in the system require continual correction" (2015: 108).

The paths traveled always go from one point to another and the curb is the boundary that delimits the path. When the pair leaves the training center they should walk directly to the nearest curb and stop. Then the trainer gives the voice command and the gesture to turn right or left. As they approach a new curb, the trainer says "straight to the curb," to always mark that point. With repetition the dog recognizes the situation and already anticipates the movement. In the advanced stages of training, it is not necessary to halt at every curb, because the dog has already understood the process. The goal is to find the destination directly. Verbal commands are usually accompanied by specific gestures – "right," "left," "back," "forward." The gestural is as or more important than the vocal gesture, although both must be executed accurately. The more expressiveness the trainer is able to imprint on the gestures, the better the dog will perform the action.

When the dog misses a cue, the trainer stops moving and says "no", pronounced firmly, but not violently. With his right hand he slaps his own right thigh as a way of drawing attention through gesture and sound, while turning around and going back 5 to 10 steps to repeat the action. The pair then does it again and the trainer gives the dog signals, once again, of what he expects of him – "straight to the curb" or "look for the ladder." Learning takes place through movement and misunderstanding leads to redoing movement, opening the possibility for adjustment and continuous negotiation of what is being learned. Errors, misunderstandings, and repetition are essential conditions that allow the exchange, understanding, and attuning of rhythms in the training. According to Bernstein (1996), insistence on the same technical gesture results in a "repetition without repetition": what is exercised here is the flexibility of the dog's response to variations.

Locomotion is the starting point for learning the practice of guiding. Ingold suggests that the ability of any bodily technique resides in attuning movement in response to the ever changing conditions of an unfolding task. We can understand the training walk as a form of "ambulant knowledge" (Ingold, 2015: 89) that creates a rhythmic pattern between a dog and a person's movements, one that is responsive to continuous perceptual monitoring of the ground ahead: holes, puddles, unevenness, stairs, street work, obstacles in the way, etc. In order to undertake the activity of guiding, the ground itself must gradually become a focus of the dog's attention. Therefore, the trainer's perception must similarly be "grounded" along the way, focused on what can be distinguished regarding on the surface the pair walks on.

If training can be thought of as a process of domestication (Cassidy, 2007)¹¹, it is not in the sense of what humans do with animals, but rather in the interaction between them as they move through a specific environment. The role of places where interactions occurs, its topography and the physical characteristics of the environment, is as prominent as the attuning of movements and rhythms, affectivity, and the human-animal relationship that is established during these journeys.

¹¹ Unfortunately, it will not be possible, here, to go into a deeper dialogue with the fertile anthropological literature regarding domestication relations. I intend to do this on another occasion.

Game and training: The role of play

The spirit of training resembles a play or game in which actions are related to – and denote – other actions, those of non-play (Bateson, 1998). Each act carries a double charge of reality. What is being done (to divert around an obstacle, to cross a street, etc.) is always infused by what the dog is expected to do in the future: the same gestures will be used, but this time not as in a game, but as an exercise of an activity – a job. If animals' play-fighting is surrounded by a non-warlike field, but nevertheless teaches what is proper to the combat arena (Massumi, 2017), dog training teaches what is proper to the activity of guiding in a ludic field where the dog does not yet have to effectively guide, but is already performatively rehearsing the gesture:

R: The other week (we did) the walk, showing the way, already making some observations for the dog, making him stop at the curb, already introducing everything to the dog. At first, I'm the one who stops and I show "curb" and I say the command "straight for the curb". When it arrives at the curb, I make the dog stop and I show with my foot: "curb, curb, good boy!" Then I encourage the dog, so he thinks it's great to find the curb. First for him to understand what the curb is, and second for him to find it great to show me the curb. *It's almost like we are playing.* I do not know if you noticed how Apollo and Becca look at me when they stop at a curb, like someone who is saying "Oh, I found a curb! Where is the party? Where is the affection?" They are waiting for that reward.

There are the previously planned *scripts* for the dog to learn what to do in each situation. But what motivates the dog to move? As in the relationship of the players with their beetles in the *kwaang* duel (Rensson, Grimaud and Césard, 2011), here too the dog and the trainer form a binomial during the walks that is linked by excitement, rather than by command. Finding the degree of excitability needed to motivate a dog to enter into the training game, according to the intrinsic characteristics of each dog, is one of the trainer's key skills. It consists of knowing how to identify when a dog is "bored" during a route and find ways to make it more interesting by increasing the degree of challenge and enthusiasm that can be embodied by the trainer – in his voice, in his posture, in his gestures – thus influencing the behavior of the dog through affective contagion and contact.

The training intensifies over time. One of the main challenges is to make the dog understand that, in addition to avoiding posts and holes, and crossing the street without getting run over, things that are a survival strategy for itself, it should also do this for the one who is at the other end of the leash, a being that has a very different mode of displacement (bipedal) and physical structure (height, width, weight) from it. In other words, when the dog veers around an obstacle, he has to do it at a sufficient distance so that both he and the trainer can pass. With aerial obstacles the challenge is greater because the shell of a pay phone or a trash bin lying at a height of 1.5m from the ground are things that are not normally part of the perceptual universe or self-world of a moving dog. They are objects that have no functional use for canines and, therefore, would have no "effector content" to be noticed (Uexkull, 1982).

The uses animals make of objects provide the perceptual images that give meaning to their world. Uexkull indicates that in the course of his individual life, an animal can accumulate experiences and learn to handle certain objects that were not previously part of its own world. Each new experience leads you to take a new stand in the face of new sensations. The dog's experiences in training allow him to expand his abilities by increasing the number of objects that populate his world. He acquires new perceptual images, with new effector contents. Repetition plays a key role here. Going through the same path several times leads to the fixation in memory of the impulses communicated to the gait, which will serve as indications of direction or signs of orientation. By traveling several times over the same route, signaling the obstacles and objects that make it difficult to move, the trainer brings into the dog's own world, through the challenge of the game, signs that are of interest to humans, but which until then were not interesting for the dog. The dog gradually enlarges its own world by taking into consideration human-only worlds.

Increasing the number of objects that populate the dog's subjective world is one step in the training. Another is related to the development of an extended body perception, a new corporality composed of two moving beings. Here again, play promotes learning. Along the walk, the trainer simulates a thump, exaggerates a hit on the pole or booth, amplifies these situations to catch the attention of the dog, redoing the course until the dog hits the exact width necessary for the passage of both bodies, but the dog to some extent knows that this is all part of a game.

As Massumi (2017) suggests, play allows passage to a pragmatics in which a different logic is embodied directly in actions, equalized by the gesture. This is a logic that will be nothing if it is not lived: it needs to be performed. The dramatization of stumbling, as a playful gesture made by the trainer, is minimally different from the analogous gesture it evokes, the action of bumping and stumbling. The difference is in the intensity, both quantitative – the force with which one is struck when one is playing is distinct from when an actual encounter with a post occurs – and qualitative – the playful gesture of stumbling is made with a certain exaggeration and a jocular spirit. With this, in the training game, the trainer gives the dog the possibility to enact the ability to guide in a preparatory “playful” fashion. The game of training induces and equalizes performance through the immediacy of the execution of the gestures, allowing the dog to embody the complex activity of being a guide, adjusting its shape to the task of guiding.

With the dramatization and repetition of a path, the trainer makes room for the dog to investigate gestural forms and to act, activating in it alternatives and powers of variation. Although a fairly complete repertoire of situations is staged, there is no way to predict in training all the conditions the dog will encounter in its life as a guide. Play is thus as fundamental in training as the rigor of the performance of normative gestures (voice commands with the corresponding gestures – left, right, stay, forward, back, etc.), or the making of corrections. Play activates the improvisational powers of the dog. Each dog's ways of guiding are variations invented by the training game, which only acquire adaptive and social functions at a later time. Training can be understood as a kind of enacting cartography that, in staging the possible futures of dogs as guides, creates the territory it maps.

Blindfolded walk as a proof situation

The actuality of the situation of the game widens with the approximation of the possibility of guiding: it becomes more serious or more real. As the training advances, the difference between the playful gesture and the analogous gesture it evokes (playing guiding and guiding) decreases until it becomes minimal. The apex of this process is the “blindfolded walk”. When the trainer judges the dog to be at an advanced stage in its development of the ability to guide, he blindfolds himself and has the dog lead him along a certain route. The route chosen is quite familiar and has been traveled countless times before throughout the training. In the course of the walk, the dog must perform the same actions he had previously been practicing – avoiding holes, looking for curbs, avoiding aerial obstacles, looking for seats, etc. The situation is still a “lived abstraction” (Massumi, 2017:24), embodied in action and staged as play because the trainer is not really blind. But the difference that it brings to the analogous gesture it evokes – when the dog will perform the act of guiding and no longer be playing at it – is quite small.

During the walk, the trainer must be fully active and present to perceive extensions, attenuations, tensions, changes of direction, slowing, distractions, or deviations, now no longer using his vision, but concentrating on the vibrations he picks through his left arm, via the harness handle, in the continuous flow of movement that is mobility with a dog. Next to the pair is another person, responsible for guidance and safety, since the blindfolded trainer does not have his usual locomotion skills and the reaction of each dog to the intensification

of seriousness in the game is unpredictable. The situation I observed was particularly strained on both sides, animal and human, as the students in learning to be trainers had not experienced this before.

In the blindfolded walk, the trainer does not simulate stumbling or bumping into a payphone: he really trips or collides. The person who is acting as security for the pair cannot always avoid such situations. The dog immediately realizes that something is different by the very balance of the body of the person he is leading. João comments that anyone who sees can hardly walk in a straight line when blindfolded. Changes the body's balance point and the person will tend to one side or the other: to the left, walking closer to the dog or to the right, slightly pulling the harness away from the dog's body.

Dogs react differently to the situation. Some demonstrate greater caution, others are visibly resistant and uncomfortable. On the first day of blindfolded walking done inside the training center, Bel simply crashed. She did not want to start the walk under any circumstances, no matter how much she was verbally encouraged, shown the leash, or attempted to be whipped into enthusiasm by the trainer. Marcelo said that the reaction was a way for the dog to demonstrate that she was looking for support, she did not want to take responsibility for guiding. The following day, Bel walked an urban course, but she had her tail between her legs all the way, her head was lowered and she was panting. In a 5 minute long filmed stretch, she took her trained into the middle of the street four times. She did not stop at the pedestrian lane and was going to cross right at a crossroads, even with cars going by.

At first, Becca also did what she was not supposed to do during her blindfold walk: she led her trainer into the middle of the street and turned her head several times to see what his reaction would be. It's as if she wanted to understand who was in charge of the pair. Then she reacted by doing the opposite of what she had been training to do for months: instead of turning away from obstacles, she led Renato into them. When she got very close to a pole, she slowed down, stopped and looked at Renato, awaiting his reaction. She would walk very close to a railing until Renato bumped his shoulder into it. It was a way of showing Renato, in the new situation, that she was discovering the obstacles.

Amora, Amorim and Baby were the dogs that best managed the experience, although they all had some reaction in order to test what was going on during the walk. When we passed a Bank of Brazil agency, Amora tried to enter, turning right. João said that this was a way the dog found to try to end the situation quickly, but with a successful outcome, accomplishing something he has become accustomed to doing in training: finding that destination. Commenting on the dogs' performance, he reinforced the critical importance of that moment. João says that it is a stressful situation for the dog, who realizes (through the change in balance, movement, and rhythm between him and the trainer), that there is something very different going on. Here, the dog begins to understand that the playful gesture of training references an analogous gesture: the serious and responsible guiding experience.

Blindfolded walking is a critical time in the guide dog training process. It makes a sharp break with the dog's expectations regarding the training game, purposefully introducing a disturbance into the dog's routine. At the same time, it can be understood as a device for testing and revealing capabilities. Dogs are put on probation: a moment of uncertainty that demands resolution (Latour, 2016: 43). This gives them the possibility of experiencing an essential component of guiding for the first time: responsibility for conducting. The situation poses a problem for the dog. It reveals that it is not possible to proceed in the same way: the trainer is not reacting as he used to react; his perception and balance are altered. His actions are no longer precise. He does not immediately stop the movement when the dog does something it should not. Faced with this anomaly, there are several possible attitudes for the dog. He understands that he needs to do something and mobilize his resources, whether to test what is happening (he runs the driver into obstacles or takes him into the middle of the street), to try to get out of the situation (turn into some known street, entering a store) or finding the confidence necessary to resume the proper course of action.

The blindfolded walk allows the trainers to evaluate the dog's ability to adjust to guidance via the observation of the dogs' different reactions to it. From there, they come together to discuss which dogs have the possibility of becoming guides, which need more work because they are not yet mature enough, and which have clear signs that they are not able to carry out the activity in a "serious" way, that is, which dogs cannot bear the burden of the responsibility of guiding. In the blindfolded walk, the activity starts to denote what it really means: the dog is now effectively guiding. Although he does not have the power to decide the final destination, it is he who decides the best way forward and leads the pair's steps along the path. The ludic dimension of the gesture retracts until it becomes instrumental action: the dog starts to guide and no longer plays at guiding (Massumi, 2017).

Final considerations

The image of a dance, describing the movement of a dog guiding a blind person, was the first thing that struck me when I watched Paula and Darwin walking. It served not only as a poetic element, but also alludes to the technical investment and the exercise of training and repetition necessary for a dog to lead a person safely. The dog's body must know where to go, what movements to do when encountering different situations such as climbing a ladder, diverting around a pay phone, or stopping when encountering an obstacle in the way. These are situations that need to become corporeal or gain "lived importance" (Massumi, 2017: 60) for the dog. Throughout their life, these situations are being produced by the humans who accompany them through a continuous series of events: first in socialization and then, more systematically, in training. These are actions, simulations and play that stimulate a direction, a becoming to its existence: the activity of guiding.

Like the formation of a rowboat man the process of making guide dogs depends upon a broader physical constitution which involves the association of the dog's movements with the movements of the trainer and information regarding the environment transmitted by the harness, forming a system of perception and action which transcends the dog's own body (Sautchuk, 2015: 131). Walking together, trainer and dog learn how to "move in concert" (Sheets-Johnstone, 2017:1), to be alive both in the dynamics of their own movement and in the dynamics of movement of the other. Moving in concert means being able to move together with other body(s) harmoniously. By repetition and practice, the dog and trainer move in tune, finding a rhythm that is the result of a dynamic coupling of their bodies and movements. A resonance between the professional, the dog, the harness, and the environment is created, which is never the same from moment to moment.

The human/guide dog team, together with the technical apparatus that links them, can be seen as a kind of anthropozootechnical agency: a multiplicity composed of heterogeneous terms that, through the bonds and relationships established between them, finds its own unitary mode of co-operation (Dore and Michalon, 2016). To describe such agency, it is necessary to consider how heterogeneous entities hold together, the conditions of coexistence of the different entities, and the sequences of connections through which they are linked. Training can be seen as a crucial step in creating this agency, where techniques and connections are developed, as well as unique modes of perception, movement, and action that will allow the dog to graduate as a guide. It is difficult to say whether the success of a dog's graduation stems from the trainer's technical ability and know-how, or the intrinsic qualities of the dog, his "will to serve," as the trainers say. The subtlety of the training process is to push the trainer-technology-dog collaboration beyond what would be their normal, individual limits, making such questions as the one asked above moot.

Developing the ability to guide is like achieving improvisation in dance. To get to that stage, the dancers must have experienced the situation countless times, so that their body has moved and explored their abilities, has repeated the gestures, incorporated the steps, and naturalized the choreography. The choreography becomes the sameness of past situations, already lived, that inform the experience of the present situation.

Recognition is according to Massumi (2017), the mental operation involving the lowest degree of abstraction in animal life (human and non-human). Lived importance, made corporeal through training, is a condition for lived abstraction, where the dog, guiding, will be able to overcome what is given and perform acts of improvisation that go far beyond the gestures, commands, and movements that were passed to him in training. Recognizing a situation and being able to perform the steps that have become known is, however, the foundation of improvisation. It is precisely this recognition process that I have intended to illuminate here with the description of the techniques and practices of training guide dogs.

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When the Animal is the Therapist: Interspecies Practices in Human Care

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Abstract

The present article deals with the technical dimensions of zootherapy, focusing on the practices developed in this field in order to prepare the animal and the abilities already present in the animals themselves. Employing ethnographically-grounded data and focusing on the interactions between beings and the effects of these interactions, as observed and reported, we will discuss the works of Georges Haudricourt and Carole Ferret. We will then look at the potential and limits of the models presented by these two researchers, broadening the debate with the help of anthropology, by looking at the agency of the non-human beings involved in these practices (practices which seek to control many different processes). Finally, we will demonstrate that while zootherapy presents something of an enigma from the point of view of communications theory, it involves and highlights a series of actions that are socially learned by both humans and animals. In conclusion, we will consider some of the effects that this process has on humans.

Key words: Technical anthropology; actions; therapeutic processes; human-animal interactions; zootherapy.

Quando o animal é o terapeuta: práticas interespecíficas de cuidado humano

Resumo

A partir da construção do processo terapêutico conduzido através da Zooterapia o artigo trata da dimensão técnica desta prática objetivando as ações que são desenvolvidas para preparar o animal assim como as habilidades presentes nos animais. Contando com um conjunto de dados etnograficamente fundamentados e centrados na prática a respeito da interação entre os seres e dos efeitos observados e relatados, serão trazidas à discussão duas proposições a respeito da técnica, o trabalho de André Georges Haudricourt e a abordagem de Carole Ferret. Em seguida, trata-se dos potenciais e limites dos modelos expostos ampliando esse debate com a ajuda de proposições em antropologia que consideram a agência de não humanos nas práticas que tentam controlar os mais diversos processos. Por fim, apoiando-se nas considerações anteriores, indica-se que embora a zooterapia apresente algo enigmático do ponto de vista comunicacional, ela deixa aparecer uma série de ações socialmente aprendidas tanto pelo homem quanto pelos animais e algumas considerações a respeito dos efeitos que a técnica provoca no homem, são levantadas.

Palavras-chave: Antropologia da Técnica; Ações; Processo Terapêutico; Interação Homem-Animal; Zooterapia.

When the Animal is the Therapist: Interspecies Practices in Human Care

Ivana Teixeira

Introduction

The question the present article deals with are the practices and relational horizons that cross-cut contemporary social dynamics, most particularly the therapeutic techniques developed by societies which aim at the recovery of good human health. More precisely, two propositions are described and analyzed in the following article regarding therapeutic techniques that insert living, active animals into the equipment and technology of the Western health system. Looking at this allows us to see other contours of the contemporary world regarding the relationship between nature-culture and man-animal, as well as certain questions in the field of biomedical knowledge. During the field work related to this project, carried out at various Zootherapy Associations¹, I noticed that this activity allows us to objectify some of the mechanisms upon which therapeutic efficacy is based, clarifying the role of animals in healing or care processes. I will conclude by considering what changes zootherapeutic processes provokes in both animals and humans. Contextually, the political-social scene in which these techniques are developed is set in the urban spaces of large cities which have seen an exponential increase in cases of mental illnesses such as depression, Alzheimer's disease, autism, and schizophrenia. It is also framed by the therapeutic limits of biomedicine, the limited means of treatment of certain diseases, the communicative limits of mankind, and the emergence of other types of relationships with nature.

Furthermore, given that the therapeutic component involved in these treatments is not a substance produced by the animal or located in a part of an animal's body that will be used as medicine², something other than the mere cataloguing of animal substances is currently occurring in medicine. Zootherapeutic techniques involve using the animal in its entirety in order to intervene in processes of human life. Technically defined as the use of animals trained by health professionals (who themselves are trained through various social processes) in order to achieve specific measurable and documented progress for individual patients, the zootherapeutic animal as mediator, co-adjutant, or therapist is (literally) a completely different beast from those animals trained for other medical activities, such as service animals who guide people with reduced mobility. A pet dog can be used in physiotherapy, for example, for a patient who is seeking to improve their range of movement by causing the patient to throw a ball, which the dog recovers. Apparently, however, the physiological and psychological changes linked to the sustained positive therapeutic effects arising from human/animal interactions are not quite as clear or concrete in the field of mental health. Sometimes, the benefit of animals in these situations may be that of a "social mediator", which allows the patient to feel more comfortable and, consequently, more able to develop a therapeutic relationship with a human therapist.

¹ Research carried out between 2011-2013 in the cities of Porto Alegre, São Paulo, and Rio de Janeiro and from 2014-2015 in France.

² The theme of animals as a therapeutic resource is the most present research agenda in that field of biology which is concerned with identifying different animal species and their handling, particularly in *ethnomedicine*: the practices of riverine, indigenous, *quilombola* or metropolitan communities, under research principally in Central and Latin America (Mussolini, 1946; Araújo, 1977; Costa Neto, 1999; Alves and Dias, 2010; Machkour-M'Rabet et al., 2011), Africa (Soewu, 2013) and Asia (Kang et Phipps, 2003; Mohawar and Jaroli, 2008; Dixit et al., 2010). In animal mediation zootherapy, the species most commonly employed are dogs, horses, rabbits, birds (calopsite, parrot, parakeet and caturrita), guinea pigs, goats, some fish, snails, dolphins and -- more rarely -- reptiles, such as iguanas.

Given the determinants of zootherapy, as they are described below, some fundamental actions of this activity were observed, such as the general process that animals must pass through in order to become therapists, as well as the actions and skill sets that they can develop and perform. Based on this, I suggest that these actions are producers of therapeutic efficacy. For this purpose, my argument will be developed along two theoretical lines. The first employs the work of André-Georges Haudricourt (1962, 1987) and Carole Ferret (2006, 2012, 2014) regarding the categorization of actions developed by man towards nature, and the theoretical positions of which have uses and limitations when applied to zootherapy. The second explores the potential of the concept of *Passive Action* (Ferret, 2012), through an analysis that looks at the exchanges between animals and patients and, more precisely, describes the gestures and abilities of the animals in question, in order to demonstrate a chain of events.

Zootherapy as a technical skill

When observing zootherapy sessions, two instances of the technical relationship involved in these stood out to me. The first takes into account the logic of production: in other words, the management of an animal in such a way as to make it “good for therapy” (training, sanitation and social measures, etc.) The second takes into account procedural logic (the way people/patients relate to the technique) and, therefore, the chain of actions that occurs during the therapeutic session. These two dimensions may present different points of view when, first of all, they lead us to consider the actions that man develops towards the animal and, secondly, they allow us to take understand the therapeutic moment through the actions that animals develop toward humans. Although these two dimensions are more of an analytical resource than two separate instances in real life, it is possible to observe a technical process exists that is composed of these two types of actions, in which humans and animals internalize technical behavior.

Behaviors that are understood as socially determined and expressed in embodied choices are, as Marcel Mauss taught us, a technical fact. In other words, they relate the body to the social realm: “the body is the first and most natural instrument of man” (Mauss, 2003: 407). This notion that the body carries traces of culture that are expressed in gestures and ways of doing things influenced several researchers in the early twentieth century, among them Mauss’ disciples André-Georges Haudricourt (1911-1996) and André Leroi-Gourhan (1911-1986), who insisted upon observing the “concrete” linguistic and technical aspects of behavior, their relationships to the “social” and thus to larger social “mentalities”. Leroi-Gourhan (1964) emphasized (as Mauss had already pointed out) that it was necessary to describe the manufacturing process, for example, as a technically linked set of activities (Leroi-Gourhan, 1964: 18) where technique was subjugated to matter, and not the other way round. The chief intellectual of what was to become known as the theory of the “operational sequence»³ in the field of analysis of prehistoric objects, Leroi-Gourhan had an enormous influence upon his colleague, André-Georges Haudricourt. Concerned about understanding technique as an activity, Haudricourt believed that technical objects cannot be separated from the operational sequence to which they are associated (1962: 41). In other words, he claims that technical facts can be analyzed through the lens of abilities that individuals acquire or have and that are present in function of the technique itself.

The main problem for Haudricourt was therefore to create a system of recording gestures which would enable us to establish a genealogical relationship that could account for a historic process. As Bechelany (2012: 249) points out, Haudricourt does not start by analyzing objects, but by looking at “the motor that makes

3 The operational sequence concept seeks to attribute meaning to an object in the sense that an object reveals its entire history. In this sense and in the same way, it transforms that which is static in the eyes of the researcher, turning it into something that has lasted to the present moment as a carrier of information regarding relations between subject and object, subject and subject, subject and environment and even object and object (Galhardo et al., 2015:12).

the tool effective". The Haudricourt technique is inseparable from the manipulations that are influenced by a given activity as its developed in its ecological and social dimensions.

In Haudricourt's article "*Domestication des animaux, culture des plantes et traitement d'autrui*"⁴, originally published in *L'Homme* in 1962, one sees a correspondence between the treatment of nature and the treatment of the other in, of all things, differences noted in the production of yams in Oceania and the rearing of ewes in the Mediterranean (Haudricourt, 1964). In this oft-quoted article and in a second, perhaps more illuminating text, André-Georges Haudricourt postulates the predominance, within each given society, of a certain type of action, both with regards to the treatment of nature and the treatment of other humans, opposing the agricultural techniques of yam cultivation and pastoral techniques as archetypes of two different models for action. He defines *direct* and *positive action* as represented in the art breeding sheep. This is qualified as *direct* because it exhibits a physical or permanent interrelationship between man and nature/the other. *Negative indirect action* is represented in the actions that man takes in the environment that surrounds the object, such as in yam cultivation. Although Haudricourt considered that different animal species would provoke different performances, these collectively remained in a model that proposes a bilateral division of the world in *direct positive* and *indirect negative* relationships.

Without necessarily accepting all of Haudricourt's arguments, Carole Ferret (2006), emphasizes that the analysis of concrete actions, whether in relation to objects or to the other, must consider that "actions exercised over a living being" are expressed not only in terms of "doing", but also, often in terms of "doing doing". She thus redraws the object that was once a sort of patient Haudricourt's theory, transforming it into an agent (Ferret, 2006: 22). Author of a large study horse-raising among the Yakoute in Siberia, Ferret employed an ethnography focused on the field of technique, dissociating the *direct*, *indirect*, *negative* and *positive* categories into three other dimensions of functionality, moving from *passive action*, where subjects abstain from doing, to *interventionist action*, which vigorously interferes the order of things and their becoming (Ferret, 2006, 2012: 134).

From this base, actions may be defined as *endogenous* (when the subject acts alone), *exogenous* (when it is aided by an external factor), and *participant* (when the object participates in the action). There is also a *contrary* form of action, consisting of exercising an action upon an "object-actor" (Ferret, 2012) in order to obtain a reaction contrary to the one stimulated. This would be the case, for example, of a rider who makes his horse march in zigzag fashion so that he learns to walk straight. And finally, Ferret stipulates that there are *deleterious* actions (which deteriorate an object), *maintenance* actions (which work towards an object's benefit), *transformative* actions (modifying the object) and *neutral* actions (having no effect on the object). The action of *letting things go* became known as *passive action* in Ferret's scheme, because "the subject (man) does nothing; or rather he does: he acts towards the object object by letting it take its own time" (Ferret, 2012: 126). This moment of "rest", where the subject is passive, is not simply stagnation because it can allow the object to transform. According to Ferret, this transformation can be caused by the object itself or by an exogenous factor such as time or changes in the environment (we will deal with this category further, below). The set of possible actions, as retuned by Carole Ferret, resulted in the following modalities: *interventionist/active/passive action*; *endogenous/exogenous/participative action*; *direct/indirect action*; *positive/negative/contrary action*; *internal/external action*; *a priori/a posteriori action*; and *continuous/discontinuous action*.

4 An English version was published in *L'Homme* in 1969 (Haudricourt, 1969). The geographical scope of Haudricourt's research included two large areas: Mediterranean sheep herders and yam farmers in Oceania and here he established a relationship between the "pastoral" mode and the "horticultural" way of treating vegetables, animals and people. According to Haudricourt, the actions one observes in the pastoral mode are "à gouverner" and in the horticultural mode "à cultiver": *direct* and *indirect actions*, respectively (Haudricourt, 1962). The action of the shepherd on the sheep is constantly imposed in this model, since the domestication (or sub-domestication, as Haudricourt refers to it) of these animals relocates them in flat regions that are unlike their natural habitat (rocky mountains), making them susceptible to predators (wolves). On the other hand, the processes installed around the production of giant yams unfold via a contrary route -- that is, by virtue of the process of maturation and thinning of the yam. The yam demands of man actions that he must perform in order to protect the plant.

What makes an animal a therapist

The process of forging a therapist out of an animal passes through different moments in which acts, physical values, and abilities are weighed in accordance with what it is desired that the animal do and be. Using Ferret's categories, we propose to objectify these steps. Looking at a process that involves different types of technologies. These range from the search for a certain adequate type of behavioral profile, to the observation of indicators of personality, to the training of skills. The stages delineated in the table below indicate how the animal is chosen, initial veterinary care, the use of certain artefacts, esthetic maintenance, and gestures that the animal must learn.

Tabela 1 - Main Actions Undertaken with regards to Dogs, Birds, and Rabbits

Animal Type	Dog	Bird	Rabbit	Typology of Actions
Principal situations involving human intervention				
1 Choosing the animal	Application of Campbell Test	Observation of animal's appearance or breed (breeder certificate)	Observation of animal's appearance or breed (breeder certificate)	Direct and participative actions External action (choosing based on animal's appearance)
2 Health check	Vaccination, castration, worming, and anti-flea medication	Exams and worming if necessary	Castration, worming, and anti-flea medication (for cats)	Direct/external/internal/deleterious/contrary actions
3 Socialization	Stay together with the most experienced animals in the environment. From 3 months old on	Stay together with the most experienced animals in the environment. From 15 days old on.	Stay together with the most experienced animals in the environment. From 3 months old on	Exogenous/participative actions
4 Hygiene	Bath and grooming	Cutting of wings	Bath, grooming, nail cutting	Direct/participative/deleterious/transformational actions
5 Use of artefacts	Use of leash, toy, snack, or clicker	Use of leash, toy, or snack	Use of leash	Direct/interventionist actions

When it comes to dogs, animal selection seeks to evaluate the degree of a puppy's dominance in order to fit it into an ideal profile: the "dominance" trait must be tenuous, but present. This behavioral trait, common to individuals of various species, has a strong evolutionary importance for social species and, above all, for the man-dog relationship, which -- to a certain extent -- is based on dominance/submission (Kohn, 2016: 19). This characteristic is manifest in animals in a number of ways, that can be measured in tests with dog pups, such as the widely used Campbell Test (Campbell, 1972). The test is divided into five stages, each corresponding to a different operation undertaken with the puppy, where his response is evaluated and classified as *very dominant*, *dominant*, *submissive*, *very submissive*, or *independent/fearful*. The test is divided into the following steps: Social Attraction, Examiner Tracking, Containment, Social Dominance, and High Dynamics, each of which has characteristic operations. In Social Attraction, for example, the examiner backs away about a meter, calls to the puppy while clapping, and observes whether or not the pup answers the call and how he does it. Does he come promptly with a raised tail, seeking contact with the examiner? Does he come promptly, with a raised

tail, but does not make contact with the examiner? Does he come promptly, with a lowered tail; comes hesitant, with tail down or, does not come at all and runs away? The other stages of the test are, respectively, to verify if the pup follows the examiner through space and how it does so (following with tail raised and playfully; following with wagging tail; following with lowered tail; without raising the tail; not following at all); the pup's reaction to being held down on his side (how much he struggles, bites and growls, as well as the position of his tail (wagging or lowering)); his reaction to being held down on his stomach; and his reaction to being lifted off the ground (does he vigorously struggle, snarl or try to bite, or does he accept it and start to lick the hands of the examiner). The technical gestures developed by humans in this context alternate between *direct* and *participatory actions* that embrace a broad framework of gestures which will be evaluated as response to the artificial stimuli created. In the case of birds and rabbits, the animal will be chosen based upon aesthetic preferences, combined with the animal's origins with respect to its breeder's reputation.

The second step in the process of preparing the animal concerns the risk of transmission of diseases and zoonoses. For an animal to be used in zootherapy, the therapist must present documents attesting to it being free of diseases and correctly vaccinated. The application of these actions involves a vaccination plan of several doses, whose most common vaccines for dogs are designed to prevent distemper, parvovirus, kennel cough, hepatitis and leptospirosis. Worming is added to this list in order to eradicate internal parasites (worms) and doses are administered to dogs at 15 and 45 days after birth, and then every six months afterwards. Deworming of birds is usually done twice a year, a month before and immediately after the breeding period, through deworming drops that are applied to the animal's skin. With regards to rabbits, the vermifuge is marketed in liquid form and should be administered orally every four months. To avoid flea infestations, the animals should be periodically brushed and given a flea bath or treatment. The actions undertaken by humans in this context are of the *external* type, given the uses of additional resources (medicines, vaccines), but are also of the *direct* type because they directly affect the body of the animal and are *internal* in the case of oral administration orally or injections.

It must be remembered that the fact that an action is positively or negatively direct does not mean that it is negative for the animal or that it causes a damaging change, as is the case of a *deleterious action*, characterized by causing a change in the animal such as the cutting of nails, hair, ears, tail, and etc. An action is *positive* when the therapist reaches his goal through the animal and *negative* when, instead of the therapist making the animal do something, he stops it from doing something (Ferret, 2012: 126). The castration of animals, for example, is a destructive transformative action, which serves two purposes: it changes the behavior of the animal by attenuating its sexual instincts and reduces behaviors such as urinating too much, mounting other animals or people, or keeping being too aggressive. Castration as a definitive transformative act modifies the body of the animal, however, and preventing it from reproducing or entering into estrus. It is also an ambiguous action because it prevents an animal with a good temperament for zootherapy from reproducing. It is therefore a contrary action, because when man acts upon the animal in this case, he receives another action in return.

With respect to the maturation of the puppies, in Stage 3 the animals are socialized with humans and other animals from their earliest days, being stimulated to learn commands like sit, beg, talk, fetch, and play. Through exogenous actions that occur via external stimuli prompting an animal to perform an action, the socialization procedure of the young animals is begun, with therapists often working with two or three animals during a single session. Pragmatically, the process of socialization begins by forging situations of physical interaction between the puppy, the therapist, and other people who circulate in the environment (initially, usually the therapist's home, then their workplace). The human therapists also encourage the animal to interact with the other animals in the house, in order to later insert it in therapy situations with the more experienced animals, setting the scene for *exogenous* and *participatory* type actions. At the beginning of these activities, the human therapist does not exactly know the animal's capacities. This causes uncertainty with regards to the animals'

ability to adapt to the therapeutic activities (and raises the possibility of their withdrawal from the program), which are *participatory actions*. Signs of fatigue and/or stress usually indicate the end of the therapeutic session or the rejection of the animal as a zootherapist (given that the activity does not please the animal).

Step 4 involves various hygiene and aesthetic treatment techniques and includes bathing, applying perfumes, lotions, props, hair, feather, and nail trimming. Different from dogs, rabbits and birds do not need to bathe, and water and shampoo can harm them by removing the natural protections from their hair or plumage. These animals clean themselves daily, licking their hair or grooming their feathers with their beaks. When cleaning themselves, rabbits stand on their hind legs and pull their ears down with their front paws in order to attempt to lick them. As for birds, they “like to take baths” and do this both in the wild and in captivity. A bath should be made available to the animal, however, in order to let him groom himself without any hints or help. Birds’ wing feathers are trimmed with scissors to prevent them from flying, modifying not only the aesthetics of the bird but also its ability to fly. The actions developed in this stage can thus be classified as direct, participatory (because birds bathe on their own when they want to), deleterious, and transformative actions.

Artifacts such as leashes, collars and harnesses are also used to manage different species of animals. Dog, birds, and rabbits can all be guided with the aid of these objects, which to a certain extent are fundamental in zootherapy in order to exercise strict control over the animal by allowing the human therapist to conduct a series of direct/positive actions that directly affect the body of the animal with the help of the tool. The human makes the animal perform actions such as standing still or moving, walking in determined directions, climbing or riding, descending, jumping or remaining in a bipedal posture resting on their hind legs. However, even though most zootherapists make use of some sort of artefacts in the training process, there are professionals who work with free animals during their therapeutic sessions, making use of leashes only to move the animal through the public areas of health facilities, which require animals to be leashed. One of my informants during this research, the director of the Syrius Association, works with free animals (without a leash) and maintains communication through physical signs: hand signals and facial expressions. He was a canine educator and sought training in animal mediation (designation in French - *Médiation Animale* or *Zoothérapie*)⁵, becoming one of the pioneers in working with free animals.

The actions highlighted in Table 1 above, present a stimulated and desired behavioral panorama linked to a type of “singular” animal (to use Dominique Lestel’s term⁶), but they do not allow us to objectify some of the interactions that take place between the animal and patients that take place in a scenario full of direct, deleterious, or transformative actions. However, if we look more closely at participatory and passive categories of actions, considering the way these are employed by Ferret, we can affirm that participatory actions denote voluntary actions on the part of the animal which contribute to reaching a human objective. Meanwhile passive actions demarcate the absence of human action: they allow activities to happen without humans intervening in the animal’s actions. As described by Carole Ferret, these are linked to the human action of letting things take their own pace. In the scenario that I describe here, this means moments or periods in which the human let the domesticated animal act for itself. This should not be mistaken for “freedom”, however, because passive action is guided by the belief that by abstaining from pushing towards a goal, this will be achieved by the “object” of the training without direct human action.

5 The Fondation Pierre Sommer et Adriene is responsible for regulating the profession of animal therapist in France.

6 Dominique Lestel has developed three levels of analysis with regards to animals. First, considering all animals as subjects in the Uexkullian sense of the term: that is, they are beings that evolve in a space of meanings, which distinguishes them from machines. Secondly, Lestel shows that some animals may become real individuals, or singularities: a leader, for example, but also any individual who presents particularities in comparison with the rest of the group. Finally, some animals tend to become *people* when they come in contact with humans who consider them to be such. Lestel’s study dialogues with the evolution of understandings of animals in the history of philosophy. This is the starting point for an approach that Lestel calls “bi-constructivist”, permitting him to defend an ethology that interprets, intervenes, innovates, and creates and allowing him to largely avoid causality, the monotony of behavioral routines and/or genetic or environmental determinism. See Lestel (2011).

Participatory actions happen when the animal cooperates in such a way that human goals are achieved. This occurs in different contexts where animals are involved in processes such as insect control, for example. The use of the “sterile insect technique” is an *internal, indirect, participatory, and contrary action*. This involves the mass breeding of mosquitoes, selecting males and sterilizing them (by irradiation or genetic modification) and finally releasing them. These males, if they are large enough to compete with wild males (at least ten times as large as the wild variety), rapidly reduce the total mosquito population, because each female mosquito mates only once. Alex Nading’s (2013) work describes this technique in the fight against dengue fever in Nicaragua, while Sandrine Dupé (2015) describes it in actions to control Chikungunya on Reunion Island. In the context of zootherapy we see this sort of action occurring when the animal performs with or without the therapist’s demand.

Thus, when we take into account the dynamics of learning the trade of zootherapist and the importance of the personality of the animal in this, we can observe that animal behaviors associated to their needs and intentions can be classified as *participatory* type of action, both in those cases where the animal becomes a therapist and in those where the animal does not adapt to the dynamics of zootherapy, do not pass the personality test (i.e the Campbell Test) or does not “like” this sort of activity. According to my interviewees, “almost all animals can be used for therapy, but some animals cannot, such as those that are poisonous or those who simply do not want to be involved in the activity” (Pet Therapy and TAC, Field Registry, Porto Alegre, 2013).

Image 1: The dog is restrained by the therapist so that it stays still while the children can interact without risk to either party. This is an example of *direct/interventionist action*.

Apae Nova Iguaçu. Associação Pêlo Próximo.



Photo: Pêlo Próximo

Image 2: Furby the dog stays still on the table while the hoops are placed around him. A direct action that is the fruit of training and participative action in which the animal disposes itself to the activity and helps the patient by putting his head through the hoop. La Roche-Guyon Retirement Home. Associação Cyrius Médiation Canine.



Photo: Ivana Teixeira.

Image 3: Three animals together in the same therapeutic session so that the young calopsite can be initiated into socialization with other animals, where she will learn her job through exogenous/participative action. (A censorship effect was used to blur certain parts of the image to preserve anonymity of patients.)



Photo: Ivana Teixeira.

The performance of non-human agents involved in the process

If relational experience between beings is a continuous kinetics, as Tim Ingold has shown us, we must, as he teaches us, look at trajectories that are generative of other conceptual languages before seeking out the associative nodes that define humans, animals, or objects. For Ingold, the source of anthropology's difficulties in explaining such languages (or human practices of adaptation), whether rooted in the environment or culture, lies in the assumption that human relations with the environment are necessarily mediated by culture (Ingold, 2011: 76). This assertion completely excludes animals from mediation between life and environment practices. Deprived of the human capacity for symbolic representation, they are thus supposedly deprived of cultural reason. Methodologically, the process of bringing things to life would not require an effort to equip them with external agency, but rather "restores them to the generative flows of the animal world in which they exist and continue to exist" (Ingold 2011: 48).

In his article entitled "Art and Agency. An Anthropological Theory", American anthropologist Alfred Gell claims that agents initiate actions that are "caused" by themselves and by their intentions, not by the laws of physics or the cosmos (1998:16). In this case, intention is cause and action effect. Assuming that human beings are able to initiate actions in this sense, Gell believes that the organism is distributed around a series of artifacts-objects inscribed by human-originated intentions, but that these artifacts may shift from being secondary agents to primary agents and initiators of human actions. Not everyone agrees with Gell that actions are the effects of primary intentions, however, since intentionality and agency are not exactly a consequence of each other. For Ingold, the beings involved in a relation would not have agency in and of themselves: "they are rather possessed by the action ... they are swept up in the generative currents of the world" (Ingold, 2011: 214). Ingold (2000) shows that skills are present in all participants in an agentive process that becomes pragmatically objectified through a set of techniques and knowledge.

Thus in order to visualize in greater detail the process by which animal activities or engagements gain the status of agency in zootherapy, one must expose the manners in which animals do this. In zootherapy, animals have an obvious general function: they interfere with the patient's state of mind and attention through actions that lead him to produce actions, phrases, reflections, and sensations. The animal itself is supposed to produce an effect that the therapist develops. They do not remain linked to the therapist. During the session itself, it is especially important that the animal can move around. How this interaction occurs is the result of a collaboration that allows us to raise questions about the agents involved in the process and what they should be doing. Pitrou's work (2011, 2016) has looked at the ways in which different non-human beings are interwoven in various human processes in agricultural, political, and therapeutic contexts. His study is important for our analysis in that it shows us to objectify the different beings involved in these processes through the actions that they develop, exploring the forms of agency that they put into practice (what should they do?) and the result of their actions in humans.

Table 2, below, presents a synthesis of certain animal actions that are relevant to zootherapy and that develop in the course of therapeutic sessions, linking them to the effects they cause in humans and the meanings attributed to them by patients and therapists.

Table 2 - Actions that animals can or should execute

Animal agent implied in the process	Actions that animals can or should perform	The visible effects that actions produce in humans (patients)
Dog	Lick	Happiness at being “kissed”. Action: kiss the animal.
	Bark	Surprise, attention. Action: dodge or take a step backwards.
	Jump up on bed	Happiness, care Action: hug, kiss
	Jump on legs	Happiness, laughter, or surprise. Action: hugs, pet fur, smell the animal; feel the temperature of its body.
	Sniff or smell	Pleasure, tickles. Action: lean back or move towards the animal
	Lie down on side	Action: incline the body towards or kneel down to run fingers over animal’s belly
Rabbit	Lie down on stomach with body stretched out	Calming, tranquilizing. Action: poke the animal with finger or toes (“tickle” him).
	Twitch nose	Humor, interest and curiosity. Action: laughter, talk with animal
	Move jaw from side to side	Curiosity and pleasure Action: laughter, talk with animal
	Dig	Curiosity and laughter. Action: incline body or walk towards animal, dig up animal, poke in the dirt with hand
	Lick	Tactical sensations and exchange of caresses. Action: kiss the animal.
	Run around person’s feet	Pleasure. Action: shift body’s balance.
	Purr	Pet animal with hand.
Bird	Sing (sounds, chirps, songs).	Action: sing, imitate the animal, or converse with the animal, attributing ideas to it.
	Fly towards someone.	Excitation; satisfaction (sensation of being chosen). Action: dodge and then follow after the animal.
	Lightly pick, gnaw, or nip.	Establish a dialogue with the animal; the idea that he is giving curing massage.
	“Caress” – lowering head in order to receive a caress on its neck, cheek or chest.	Calming and tranquilizing. Action: raise index finger to the animal and caress it.
	Eat from hand	Happiness, satisfaction, and concentration. Action: hold the animal in one hand and give it food from the other.
	Urinate or defecate	The patient considers themselves to be lucky. Action: clean with hand.
	Fluff feathers	Action: put finger in amongst animal’s feathers to caress it.

Non-human actions thus become circumscribed in a field of intentionalities and become activators of human actions during the course of the therapeutic session. Animals must perform a range of actions and abilities that, even as they generate representations about the animal, also generate other actions in humans (Teixeira, 2016). Moreover, as we can see in Table 2, the same actions performed by different animals -- such as vocalization -- do not have the same meaning among humans. Although different species vocalize differently and this is administered/understood differently by humans (birds *should* sing, but dogs *should not* bark), vocalization has a very polyvalent role in all species, being interpreted as the anthropomorphized speech of the animals, to whom the patients respond, often singing songs like “What Does the Fox Say?”, “Happy Birthday to You”, or football club hymns. The grunts of animals, such as the purr of the rabbit or the noise made by the birds when they “talk softly”, become triggers for real dialogues with great demonstrations of human pleasure.

More expansive actions, such as a dog jumping up on a bedridden elderly person, are stimulated in some animals (small dogs) and for some patients. Others, such as the flight of a bird towards someone, can be understood as a signal that the animal is stressed. The dog that jumps up on a patient will do it if he knows the subject with whom he interacts, provoking in most cases intense physical interaction between the two as the human hugs or holds the animal next to their body. Actions such as licking of human hands or faces (by dogs and rabbits) or nibbling at the skin or ear lobe (birds) are usually understood as a show of affection or a caress, which leads the patient to reciprocate this act by kissing or caressing the animal. In addition, smells, fur textures, skin and feathers, the shape and color of eyes, physical characteristics in general, the type of food eaten and customs display – all of this, along with other information, become characteristic of each animal, resulting in differentiated interventions by humans, who may smell the animal, rub their face or hand on it or feel its texture.

Some animal actions lead to the human action of caressing. When a rabbit stretches out its body by lying down on its belly, with its ears resting backwards, humans pass their hand along its back, caressing it. The same thing is true of a bird that tilts its head sideways and forward as if offering itself to receive affection, which it is promptly given by the patient, who passes the tip of their index finger along the animal’s neck. Likewise, a dog lying in the supine position invites patients to lower themselves or crouch down, extending their arm and moving their fingers to caress the animal’s belly. These actions are important, because if manipulation and physical interaction are established, the feeling of enjoyment, fun and satisfaction will be the motivation for new actions and, therefore, a continuity of the exchange. This will ensure that the animal also expresses itself more, as do birds as they walk over patients’ bodies, or rabbits when they hop around patients’ feet, or dogs when they place their front paws on patients’ legs.

It should be borne in mind that, contrary to the idea of the animal, as object, machine, or tool, whose domestication transforms it into something “artificial”, in zootherapy, the animal destined to be a therapist does not get used to the activity in many cases. The human therapist is eventually forced to look for another animal because the current one seeks to escape or avoid patients or shows irritation towards them. This, along with certain other behaviors, will be interpreted as demonstrations that the animal does not want to participate in the activity because he is tired, because he does not appreciate the environment, or for some other reason attributed to an animal’s demands that is, in turn, increasingly discussed in the specific and academic context. These signs differ between the different species (in dogs: physical agitation, panting and panting, dilated pupils, lack of eye contact, yawning while looking away, among others; in rabbits: thumping with the hind leg, turning away and ignoring calls, grunting, growling, snarling, biting, kicking, running away; in birds: aggressive behavior such as bites, wheezes, lunges and excessive screams, agitation). If these behaviors are noticed in animals that already participate in zootherapy, they serve to indicate that the human therapist must bring the session to a close, according to the Delta Society (s / d: 91-92) and Chandler (2005: 60).

The desired behavior of a therapeutic animal (neither dominant nor apathetic) indicates that the animal must withstand touch and human handling without attacking, so that the patient feels safe to proceed. What is expected of or demanded of the animal in terms of its actions implies the acquisition of skills by the animals, and includes concrete actions. As an example, let us take the ability to seek something indicated by the therapist and bring it to the patient. This is a very demanding task for dogs, often performed during zootherapeutic sessions, because it encourages the development of games between patients and the animals. There is likewise the ability to “find the treat”, where the dog should choose with its paw which cup a snack is hidden under. He will then eat the snack as a reward.

It is important to point out that the acquisition of skills and knowledge⁷ is understood here in the context of culture, with the learning of a wide range of behaviors linked to actions, including professional techniques and all the corporality this implies. Skills are developed through a process of learning that approaches that which is densely described by Sautchuk (2015) regarding the processes of the construction of the personhood of coastal and lake fishermen in the Amazon estuary. In both cases, abilities result from a conjunction of movements. Skills enable the animal to relate to other people, to appropriate space, to understand and to interfere in the scenario in which it finds itself. Table 3 shows some of the most recurring abilities in the zotherapy sessions, from a positive point of view according to Haudricourt (1962). In other words, these are seen as things that contribute to human goal being achieved.

Table 3 - Animal Agent Abilities

Animal agent involved in process	Ability that animal can or should perform	Effects - visible actions that animals produce in humans (patients)
Dog	Demand or desire the patient’s attention. Action: look at patient, place front paws on patient’s knee, jump up on patient.	Take animal in arms or touch animal’s face with hand.
	Silence (lack of barking or growling).	Talk with animal and expressing comments as if these came from the animal.
	Control physiological needs of express these in an area outside of the work environment (lawn).	Perceive animal as a well-trained living being, prepared, apt, and acting appropriately.
	Execute training. Action: search out objects Action: find the treat	Happiness, smiles, satisfaction, enchantment. Action: clap hands, pet animal, emit words to encourage the dog.
Rabbit	Exhibit exuberant plumage	Fascination, curiosity and desire. Action: touch animal with hand.
	Control physiological needs of express these in an area outside of the work environment (lawn).	Perceive animal as a well-trained living being, prepared, apt, and acting appropriately.
	Accept being held	Action: hold animal in arms or lift it up on its hind legs.

7 The “cultural” abilities of human beings are constituted within a enskilment proces and “this leads me to conclude that in the growth of human knowledge the contribution that each generation makes to the next is not an accumulated supply of representations but an education of attention” (Ingold 2010, p. 7).

Bird	Pirch on shoulder or other part of the body.	Action: stay still with the animal perched on oneself.
	Learn a song such as a football club hymn or “Happy Birthday”	Fascination and contentment. Action: sing or whistle the song.
	Hop along patient’s arm, perch on patient’s shouler, or hop down the other arm, moving across patient’s torso	Feeling of being tickled. Action: extend arm out and hold it there.

Based on the above table, we can see that zootherapy operates through sensory, physical, and emotional exchanges that are closely linked to interactions between humans and animals and to their psychological states. While the sequence of exchanges between man and animal is complex, the human responses will be according to their experiences and in line with what we see in Table 3 above. Many health professionals research and write about these effects⁸, as can be seen in the studies conducted by Levinson (1969), Silveira (1982) and Schutz (2012). The psychological effects of this therapy include changes in patients’ perception, demonstrations of happiness, and emotions attributable to anticipation of the animal’s visits (Fine, 2010). One benefit often reported in both child and adult patients is that of relief or distraction from psychic distress (Serpell, 2010). With regards to social effects, the animal acts as a communication bridge, allowing the patient to connect with and change the outside world (Levinson, 1969; Silveira, 1998; Halm, 2008). As far as physiological effects are concerned, the movements that zootherapy promotes are of a different order, because they cause changes in the levels of certain physiological elements that are considered beneficial to human health, such as enzymes, neurotransmitters, and hormones which, in the long run, transform the state of mind and health of the patient. Mendelson and Baggot (2007) reported changes in oxytocin levels (responsible for, among other things, provoking feelings of empathy, pleasure, and fear), with concentrations doubled after interaction between humans and animals. These researchers also report decreasing blood pressure and cortisol levels in humans. Nepps et al. (2014) conducted a one-year study in which a total of 214 patients admitted to the psychiatric unit of Lancaster General Hospital were evaluated regarding the effects of a zootherapy program according to psychological and physiological variables such as symptoms of depression and anxiety, as well as blood pressure, pulse, salivary cortisol and pain. After participating in the animal-assisted activity, patients showed significant improvement in psychological and physiological indicators such as reduction of signs of depression, anxiety, pain, and pulse rate. These findings are consistent with equivalent reductions in anxiety found by Barker (2005), who investigated the optimal time to measure stress and immune function effects after interaction with a therapy dog in twenty-one subjects in a hospital setting. The concentrations of cortisol, epinephrine, norepinephrine, and lymphocytes collected at the beginning of the session were evaluated. Analysis indicated significant reductions in serum and salivary cortisol, whose peak of reduction appeared within minutes after interaction with a dog.

8 One of the best-known scholars in this field is Boris Levinson, a child psychiatrist who, from the 1960s on, theorized regarding the use of animals to treat emotional disorders in autistic children. Levinson worked with dogs (Jingle was his first animal therapist) and conducted a one-year study that showed that patients living in an infirmary where pets were present consumed half of the medication of a control group in an animal-free ward (Levinson, 1969). For Levinson, the animal’s role in the healing process can be traced to the “transitional object” that Winnicott (1975) refers to: objects that appear to be soft, cute artifacts such as teddy bears given to children between the ages of 4 and 12 months. According to Levinson: “contact with the inanimate and particularly the animate world via the pets is most important to whole-some emotional development” (Levinson, 1969: 12). In the 1980s, psychiatrist Nise da Silveira described the development of zootherapeutic activities at the Pedro II Psychiatric Hospital in Rio de Janeiro, stating that a partnership of one of her patients with the dog Wolf “led to a calm perennial psychic reorganization, as [the patient] indicated that some of Wolf’s actions were related to his ghosts” (Nise da Silveira, 1982). The study by Alexandre Monteiro et al. (2012), one of the interlocutors of the present research, carried out in the dependencies of a clinic in Rio de Janeiro specializing in the treatment of Alzheimer’s cases through, shows that weekly sessions over a period of more than four months are associated with partial recovery of memory, reduction of levels of aggressiveness, and cognitive rehabilitation in people suffering from Alzheimer’s disease (Monteiro et al, 2012).

Image 4 - Two therapy dogs, Furby and Elko, lay on patients who pet them or simply smell them and feel the texture of their fur in a demonstration of *participative action*.
Hospital de La Roche-Guyon, Associação Syrius Mediation Canine.



Photo: Ivana Teixeira.

Image 5: The dog Faith lies down on her side, turned towards a lady who places her hand between her paws in an example of *passive/participative action*.
Residencial Terapêutico, Associação Pet Terapia.



Photo: Ivana Teixeira.

Image 6: Child and the dog Lira lay together and play, without input from the human therapist, in an example of *passive/participative a ction*.Hospital de Clínicas de São Paulo.
Associação TAC- Terapia Assistida por Cães.



Photo: TAC.

Image 7: Ozzy the calopsite tilts his head so that a lady can extend her hand and pet him.
Associação Pet Terapia.



Photo: PetTerapia.

Final considerations

In affirming the therapeutic character of contact with animals, zootherapy presumes that interspecific relational experiences can provoke psychological, psychic, social, and physiological recovery. Zootherapy also indicates that by experiencing different types of “ecological” relationships, human beings can regain sensations they have lost or have poorly developed in their social context. These perceived recoveries or effects in humans, centered on interactions with animals, demonstrate restitution of physical, social, and affective dimensions using a kind of analogy of interiorities and an exchange of gestures. In general, animal mediation works with attributes as a kind of relational complementarity, allowing for reciprocal cooperative exchanges or mutual production, according to Ingold (2000: 52). In this relationship the animal emerges from a position as object to one of subject of communication and intervention because, being signified with therapeutic capacities, it also becomes transformative agent.

There is an alternation of roles in the course of the therapeutic session, because human and animal switch off to one another in their roles as mediator. The human therapist will mediate the interaction of the animal with the intention of exploring the fruits of the developing relationship between it and the human. At a more or less constant pace, *passive* (human) *actions* are enacted, allowing the animals to develop this relationship (Ferret, 2014, 1012), offering them space to do so. Here, we have the *active* and participative actions of the animals, that are subdivided and expressed in the diverse movements exchanged with the patients. Motivated by the actions of the animal, both human therapists and patients make use of body techniques that lead to health and well-being, relating to the (inter)actions provided by animals that, despite being trained for this task, demonstrate a particular pre- associated with the animal’s character. With this as our background, we can question to what extent these same practices allow us to identify a pedagogical dimension that is expressed in the learning of a way of looking at and perceiving oneself and the animal, constituting what we could call a new ethos that changes the way humans see animals. These competencies are acquired, as shown in Table 1, through the standardization of therapeutic techniques in formal health institutions (professionalization courses, bibliographic production, scientific research, etc.), as well as in informal instances (in the family, with groups of other animals) which are inscribed in differing ways in different environments and spaces.

Zootherapy establishes a specific relation in its environment because the hierarchy of the animals seems not to be based on the biological evolution of beings or on human characteristics, but on the variations in the modes of communication between them that allows an expression of sensitivities and qualities that are differently distributed in the diverse species that act in zootherapeutic practice. These can be observed in the interaction between species because there exists a predisposition in both parties, human and animal, to communicate by establishing quiet offerings and psychic organization. This allows us to point out that, although the agency of nonhumans has a special place in naturalist ontologies, field data shows that, in the context of live animal therapy, actions exchanged between animals, patients and therapists do not develop solely from the driving motor of human action.

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“It’s no longer the same job”: robotization among breeders and dairy cows

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Abstract

In agriculture, mechanization and robotization are two terms that are generally associated with processes characteristic of a “Green Revolution”: industrialization, cost reduction and “rationalization”, increased output and modernization. In this article, I reflect on the relations implied in this evolutionary-style narrative through an ethnography of cattle breeders and dairy cows in Haute-Savoie, France. I will show that the technical transformation engendered by the implementation of a milking robot is, first and foremost, a reconfiguration of the relationships between humans and cows. I will analyse the effects of the milking robot for both humans and cows through the notion of ‘technical objects’ and their associated environment, which configure a transformation in the technical system linked to the process of domestication. I show that modifications in the rhythm, gestures and interactions with the animals also redefine how cows are made to produce milk, and that, furthermore, this does not necessarily constitute a virtualization, an objectification or distancing in relation to the animals. In brief, it lacks many of the defining features of ‘industrialization’.

Key words: domestication; robotic milking system; technical mediation; agricultural systems.

“Não é mais o mesmo trabalho”: a robotização entre criadores e vacas leiteiras

Resumo

Na agricultura, mecanização e robotização são dois termos geralmente associados a processos usados para caracterizar a “revolução verde”; industrialização, redução dos custos e “racionalização”, aumento da produção e modernização. Neste artigo, proponho uma reflexão, a partir de uma etnografia realizada junto a criadores de vacas leiteiras na França (Haute-Savoie), sobre as relações apontadas nessa narrativa de cunho evolucionista. A partir da transformação técnica constituída pela implantação de um robô de ordenha, tentarei mostrar que se trata, antes de tudo, de uma reconfiguração relacional entre homem/ vacas. Analisarei as práticas que são implicadas pelo robô de ordenha, tanto para os homens quanto as vacas, a partir de noção de objetos técnicos e meio associado. Configurando assim uma transformação do sistema técnico ligado ao processo de domesticação. Meu objetivo é demonstrar que, a partir de modificações nos ritmos, nos gestos e na interação com os animais, existe uma redefinição da maneira de fazer as vacas produzirem leite, e que isso não configura necessariamente uma virtualização, uma objetificação ou um distanciamento em relação aos animais, ou seja, uma industrialização.

Palavras-chave: domesticação; robôs de ordenha; mediação técnica; sistemas agrícolas.

“It’s no longer the same job”: robotization among breeders and dairy cows

Jeremy Deturche

“Post-productivist” agricultures and the Green Revolution¹

The productivist drive in agriculture that dominated the “Green Revolution” (with its focus on quantity) had, as its main pillars, an increase in mechanization, the widespread use of various “phytosanitary products”, cost reductions, and stimuli towards industrialization. This verticalized movement framed farmers as the recipients of practices that had been projected and masterminded elsewhere, derived from national policies of food management, laboratories, big firms, and engineering and zoo-technical schools (Mazoyer & Roudart 2009).

Since the 1980s, this movement has faced a number of increasingly acute crises in what pertains to the environmental, social or even productive spheres. We are effectively witnessing a number of initiatives that seek to reconsider the agricultural model “from the top”.² These policies affect the practices of farmers, promoting the diversification of productive techniques, and a reconfiguration of their self-image. We thus encounter constant conflicts over what it means to be an “agricultural producer”, with representations that derive from the Capitalist industrial model (CEO, agricultural entrepreneur, agricultural manager, rural producer, or definitions linked to the agribusiness model) and more complex identity claims that salvage, or seek to salvage, a specific way of being (farmer, breeder, peasant, tiller, *paysans*) associated with sustainable practices. Notice, however, that definitions are ambiguous, and that techniques and identity claims can be interwoven in complex ways. Thus, for example, organic production can be linked to identity practices of small-scale farming, while also being a large-scale industrialized mode of production.

We can distinguish varieties of strategies and diversification, depending on what the farmer focuses on. In the European ethnography that I will present in this article, it must be considered that the diversification of modes of production occurs within the context of a politically-structured continental policy that resulted in the unsustainability of the productivist model, forcing farmers to adapt. The unsustainability of the model results not so much from radical changes in the paradigm of agricultural policies, but above all from the endless socioeconomic crisis that has been punishing agriculturalists in general, and in specific those working with dairy (Droz 2002; Droz et al. 2014; Droz & Forney 2007).

Faced with this situation, the response of farmers has, in part, retained a local character: their choice of competing agricultural systems have become diversified and varied. Some authors propose to interpret this diversity through a so-called post-positivist paradigm, wherein agricultural aims and objectives cannot be reduced to “rationalization” and to an increase in production, but rather convey various types of practices and objectives in a systematic and sustainable way (Dubois & Sauvée, 2016). From a socioeconomic point of view, Forney (2012), studying the Swiss case, distinguishes three main axes of, or paths, toward reorganization:

¹ I would like to thank the members of the LACT – UNB, CANOA-UFSC and Anthropology Department of the Federal University of Santa Catarina for the discussion about this research and the IBP – Instituto Brasil Plural - UFSC for the material found that made it possible.

² One of the characteristics of the Green Revolution is the separation of farmers – who are deemed to be mere executors of techniques and modalities of production – from the public and private spheres that develop agricultural policies (public institutes, ministries, large private laboratories, and ergonomic companies). The latter compose what is known as the “top”, referring to their ascendancy in the decision-making processes which determine the knowledge that will be “applied” by farmers, the latter thereby demoted to the category of “producers” (Bedoussac & al. 2013; Bonneuil & Demeulenaere 2007).

1. Specialization in excellence and quality, which globally continues to conform to what he calls an “industrial” orientation, an idea that will be called into question below.
2. The organic option / PDO (Protected Designation of Origin), which constitute specific niches.
3. The diversification of produce and services, such as the “paid landscaping services”, for instance³. This strategy may develop into modes of permaculture or agroforestry.

These options, it must be stressed, represent paths that do not allow for purely local choices. Even when they take into account the opinions and orientations of farmers, they only do so through State policies, so that the participation of public powers emerges as a mediator of the relation with “consumers” or companies in the private sector. PDOs are exemplary in this sense, since they necessarily result from a negotiation involving farmers, producers, and public agencies that sanction and provide legal and economic assurances, thus resembling process of heritage listing (Micoud 2004; Lizet 1998; Ricard 1998).

Figure 1 - Cow waiting to be milked in a mechanized system.



Photo alexmouthon@

These paths, however, are not mutually exclusive, as revealed by the research I have been carrying out since 2001 among dairy cow breeders in France (near the Swiss border). Here, while the general economic orientation conforms to Forney’s first axis, which takes place within a PDO context, it does not exclude diversification through polyculture and steadfast identity claims (Deturche, 2012).

³ Swiss agricultural policy includes subsidies for practices that upkeep a certain landscape, in the context of care for mountain landscapes. These include, for instance, subsidies for cutting hay after a predetermined date, to allow field plants to produce seeds, thus maintaining a variety of flower species in mountainous areas.

Robotization, mechanization and technical transformation

Mechanization or robotization are two terms that, at first, appear tied to processes linked to the Green Revolution. In what pertains to dairy production, we would be dealing with the quasi-“Fordization” of work with animals and, thus, with an increasing objectification of cows, which would conform to the Forney’s first axis and would be the final avatar of industrialization. This “reaction in continuity” to the problems of agriculture throughout the world plays an important role in processes that seek more precise answers, guided and controlled by more rigorous parameters, defined by a significant rise in the use of technological resources. We are here faced with so-called precision agriculture (Lebrun 2016) and with the “technophile” demands of the sector (Franzoni 2017; Roscoe 2013)⁴ – a phenomenon present in many different narratives of agriculture, mainly in agribusiness and more industrialized sectors involved in the modernization of agricultural production. This positivist narrative is particularly developed in the discourse of consultancy agencies that provide aid to farmers. It is through it, for example, that the “genomic revolution” in bovine selection was presented (Deturche 2017), or that precision agriculture is depicted in the many sites that offer aid and advice to Brazilian agribusiness.

Many people say that Brazil has not progressed much in the area of science, technology and innovation. It is true that progress is slight in many of the sectors of the economy. We lack the culture of investing in industrial research. Companies innovate little and we lose competitiveness before our competitors. But is it fair to say that this is also true of the Brazilian economic locomotive? Does farming also innovate little in Brazil?

The Brazil of the “naïve hick” is gradually a thing of nostalgic minds. The numbers of the farming industry constantly invade the news (Roscoe, 2013: 1).

With data obtained from technology, the farmer can manage the field of production in a precise manner, and obtain a much more positive result from his activities. The more efficiency he has in the application of the available resources, the more chance he has of ensuring the quality of his activity. Thus, technology, and more specifically precision agriculture, have contributed to the profitability and the growing development of agribusiness in the country⁵.

These two passages, written by the Brazilian agribusiness sector, reveal how this positivist narrative is constructed, with technology emerging as the main factor in progress, leaving behind the “naïve hick” and taking agriculture into the modern world, symbolized by ever-growing production numbers.

In this article, I reflect on the relations that this narrative trace between industrialization, use of technological resources, mechanization, and robotization, in the dairy sector.

My research was carried out among specialists in cattle breeding, particularly of the Montbéliarde breed, which are considered to be of high genetic quality, and which follow a particular “performance” pattern. Dairy is an important element in this context, but it is not the only one: among the breeders I researched, “investment” in cows went beyond the mere production of milk, carrying with it, as well, a heavy symbolic and affective load. This investment was accompanied by a generally favourable view of the modification of technical apparatus and an openness to “new technologies”. Breeders are thus involved with new techniques of reproduction and selection, which require genetic analyses, embryo transfers, and assisted reproduction (Deturche 2012, 2017; see Leal 2016 for the elite cattle breeding in Brazil).

4 See, for instance, agribusiness blogs in Brazil, such as InCeres or RuralCentro.

5 News from the website santanderempresasnegocios, from August 2017. Consulted in May 2018.

Since the last decade, an important technical procedure has been developing. Although introduced in the 1990s, it was only effectively appropriated by breeders towards the end of the 2000s, when it was, finally, considered to be “ready”. This procedure has a direct impact on what many breeders see as the “heart of their profession”: milking. The most visible aspect of this new technology is a robot that “automatically” carried out this task. Milking dairy cows, which exist mainly to produce milk⁶, is the pinnacle or paradigm of working with them, and it can metonymically express the totality of the farming work involved. It is representative of the ethos of “caring for the animals” (*soigner les animaux*) and of the profession more broadly: it is the *métier* of the breeders.

What meanings are implicated in different ways of milking, and particularly in the passage from a so-called mechanic, or semi-automatic, technique, to a robotized system? How does this transform affect forms of representation, ways of making, raising, and the gestures and rhythms associated with milking? What engagements and jumble of relations become reconfigured by robotized milking? How does robotization/mechanization interfere in relations between breeders and cows? Or in how breeders see and understand their animals, and how the latter react to this technical mediation?

Ethnographically, these questions mesh with what farmers have to say about the installation of a milking robot, and what it implies for their practices and relations with cows. What type of milking is “milking with a mouse?” (Forney 2012: 10)? What is implied in the “loss of the herd/drove effect” noticed by the breeders? Finally, how do they perceive the differences thereby implied when they say that, ever since the robot was installed, “it’s no longer the same job”?

In answering these questions we are also called to reflect on what the robot means in terms of industrialization and conservation, maintenance and the strengthening of a process of Cartesian objectification of cows. Instead of taking the robot to be a technological resource that causes a process of industrialization, like the modernization of pig husbandry which transformed pigs into a “product” (Porcher 2002; Mouret 2012), for example, we should be open to the uses, configurations and relations that the robot establishes in the technical process of domesticating cows (the “domestication system”⁸). Domestication should here be taken in a wide sense, one which, precisely, is not limited to a relation of domination, and does not characterize the state of certain animals. We should integrate current thinking on domestication, which does not consider it to be a singular and linear *acting* on the natural world, as synthesized by Lein (2018) for *eider* ducks in Vega Island, Norway. The author prefers to speak of *assemblage*, or to adopt Fijn’s definition of ‘codomestic relationship’: “the social adaptation of animals in association with human beings by the means of *mutual* cross-species interaction and social engagement” (Fijn 2011, 220, emphasis in original)” (p. 129).

As Tsing (2018) and others observe, the problem with definitions of this type is that they are so broad that they are unable to explain what exactly domestication is. I cannot resume this discussion here; what interests me is the possibility of identifying a non-unidirectional relation, which allows (indeed, requires) us to be attentive to the complexity and reciprocity of human-animal relations, even in contexts in which a more restrictive or classic definition of ‘domestication’ would apply. The cows my research is concerned with are, in effect, a paradigmatic example of the definition of domestication. As Ferret notes in an article with the provocative title of *Outils vivant? De la manipulation des animaux* (2016; ‘Living tools? On the manipulation of animals’), attention to complexity should not blind us of the asymmetry involved in these relations.

6 Today most dairy cows are specialized breeds.

7 “Traire à la souris” (my translation). Unless otherwise stated, all translations from French are my own.

8 Cf. Digard (1988; 1990), who coined the expression *système domesticoire* to remove relations of domestication from the scope of relations of economic production, conferring on them the dimension of a total social fact. This expression is clearly related to the idea of a technical system, developed by the anthropology of technique from the works of Gille (see Lemonnier 1986, 1992, 2010; Coupaye 2009, 2015).

My perspective in this article incorporates a clear recognition of the relational asymmetries implied in breeding dairy cows (what Ferret calls “anthropocentrism” (ibid.)). However, this allows us to apprehend the construction of the subjectivities at stake with greater nuance.

Thus, combining the possibilities contained in the idea of “technical system”, we can think of the critiques of domestication, coming both from the anthropology of technique (Sigaut, 1988; Haudricourt et Dibia, 1988) and from post-humanism, in terms of techniques (as social relations) and daily practices in relation to animals. I believe that it is possible to thereby identify complex characteristics of the relation between humans and animals as mediated by techniques and technical objects – such as robots.

I will focus specifically on the practices that are implied by the robot for breeders (and for cows, as we shall see) in their relations with animals. Using a robot transforms human-cow relations, but also cow-machine/robot, and human-robot/machine relations.

In *The Perception of the Environment*, Ingold (2000a) discusses the impacts of mechanization and industrialization from the point of view of animals, focusing on domestication through the notion of ‘skill’. This latter concept is defined by five main points:

Pour définir plus précisément ce que j’entend par habilité je souligne cinq dimensions discriminantes de toute pratique habile. Premièrement, viennent l’intentionnalité et la fonctionnalité qui plutôt que d’être des propriétés préexistantes d’un agent ou d’un instrument sont intimement liées à la pratique proprement dite. Deuxièmement, l’habilité n’est pas un attribut du corps isolé d’un individu, mais partie intégrante d’un système de relations matérialisé par la présence de l’artisan dans son environnement. Troisièmement, plutôt que d’être l’expression d’une simple application d’une force mécanique, l’habilité implique des qualités de soin, de jugement et de dextérité. Quatrièmement, ce n’est pas à travers la transmission de formules que les habilités passent d’une génération à une autre mais par la pratique et l’expérience, “les mains dedans”. Finalement, le savoir-faire n’est pas la pour réaliser un dessein préexistant mais plus précisément pour générer les formes des artefacts. (2010: 290, print version).

Through this definition, Ingold reflects on processes of industrialization and mechanization that are characteristic of the West. However, he also notes a certain ambiguity related to the difficulty of distinguishing mechanization or robotization from processes of industrialization and development of the Capitalist system. Although they are undeniably historically linked, we must encounter a non-naturalized way of conceiving of this relation. This leads him to a critique of the notion of technology:

Instead of assuming that technical operations are, by their very nature, mechanical, I argue in this chapter that the machine is an outcome of the historical development of the forces of production accompanying the growth of industrial capitalism. In this development the relations between workers, tools and raw material have been transformed, such as to replace subject-centred skills with objective principles of mechanical functioning. It is to these principles that the modern concept of technology refers. I show how the emergence of this concept was bound up with the rise of a mechanistic cosmology that separated design from construction, and reduced skilled making to ‘merely technical’ execution. [...] I began to think that this picture of a progressive evolution from skill to technology, in which the craftsman or artisan gradually gives way to the machine operative, is too simple (2000a: 289-290).

This critique of “technology” in favour of the notion of “technique” is important, and recurs in other studies, particularly in the tradition of the anthropology of technique. I will highlight two justifications for this critique. First, the concept of technology is value-laden in a way that technique is not. In general, technology is conceived as the culmination of a process of evolution that is marked by a rupture between techniques (understood as ways of doing that are anterior to the development of science and of the industrial world – and which are, therefore, “primitive”) and technology, which is both the product of and the means for the contemporary

industrial and scientific age. The distinction between the “naïve hick” and the modern farmer in the citation above clearly captures this discursive distinction – along with an ethnocentric dichotomy (separating an intuitive technique from a technology that requires the application of prior scientific knowledge), this view, Sigaut (1985) reminds us, creates a competition among researchers seeking to establish when we crossed the Rubicon from technique to technology (see also Coupaye 2009; Coupaye & Douny 2010).

The second reason is related to a point of view that is resolutely descriptive, regarding the potential that a concept such as ‘technique’ affords to an analytic descriptive methodology, thus reencountering the Maussian definition which founds the anthropology of technique (Mauss 2012a [1935], see also Sautchuk 2010). Use of the term “technique” does not appear to prejudge a transcendental difference between different ways of doing. In the case of domestication and farming processes, it prevents us from instating a radical divide between less mechanized and robotized techniques. I believe it is important to avoid *a priori* ruptures between ways of milking, and instead to analyse the social and relational implications of different ways of milking. We thus respect the social and technical logic that exist in the many forms of mediation between humans, animals, plants and medium.

By reconfiguring the use of machines through the notion of *skill*, Ingold seeks to escape the pitfalls of the notion of ‘technology’. He shows that the implications in and transformations of the processes of mechanization do not necessarily correspond to an objectification, or a loss of skill, but rather to a transformation in the relations to objects.

Likewise the machine operative of industrial society remains a skilled practitioner: his skill, however, lies in coping with machines rather than in their operation, and what it produces is not commodities for the owner of capital but his own personal and social identity (2000a: 290).

However, Ingold’s interpretation remains ambiguous, insofar as, throughout his *oeuvre*, we find a reaffirmation of the relation between mechanization, industrialization and the global loss or disappearance of skill. In the article *Tools, mind and machines* (Ingold 2000b), Ingold posits a correlation between skill and non-industrial processes. Later, returning to this issue, Ingold uses the notion of ‘technical object’ proposed by Simondon (2012 [1958]) to solve this ambiguity and to “save”, once and for all, the notion of skill: through Simondon, the notion of skill can be reintegrated to processes of mechanization (Ingold 2011). This perspective furthermore leads the author to separate machines from automatons, as argued by Simondon, where the former characterizes open technical objects, and the latter defines self-closure within a programme.

These reflections will be my guide as I seek answers to the questions that I posed above, concerning the technical choices involved in implementation of a milking robot. Above all, they will allow me to consider this technical transformation in all of its implications and all of the uses it affords breeders in relation to their animals, and animals in relation to their breeders.

The Milking Robot

The milking robot automatizes the milking of cows, which is otherwise carried out by hand or by methods of mechanized milking. The distinction between manual, mechanized and robotized milking is established by the breeders themselves, and by the advisors and technicians who participate in the implementation of this machinery. Briefly, milking by hand involves the extraction of milk by direct hand contact with the teats of a cow, in a rhythmic movement which causes milk to flow. Mechanized milking covers various methods, all of which involve a system of pumping milk through vacuum tubes. This system admits many possibilities, but in all of them humans intervene by fastening the teat cups (allowing for milking to take place in dedicated milking chambers (figure 2), rotating stations, or moveable posts). In mechanized milking, milk is placed directly in a cooling tank. Robotized milking delegates the work of fastening the teat cups to a robotic arm.

Figure 2: Mechanical milking installation with two rows (“docks”) and cows in a “cob” formation. In the middle we see the pit where the breeders watch.



Photo alexmouthon@

Figure 3: Milking robot, cows beside it...

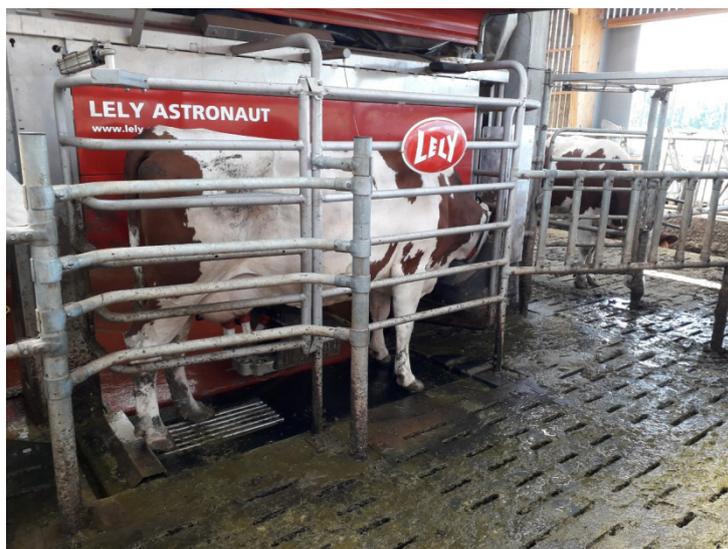


Photo by the Author.

The decision to use a robot depends on a number of factors, which may be of an economic nature: improvement in production due to the individualization of the milking process; faster milking; free hands, and time for carrying out other tasks, instead of being constrained by an obligatory task that needs to be carried out daily, at set times⁹; more precise measurement of data, enabling a more accurate distribution of food supplements and attention to teat care. More time and economic gains are the benefits usually stressed by salesmen and technicians¹⁰, along with the trope of participating in the “modernization” of farming and in technophile positivism. Breeders, however, are aware that these are mainly sales pitches. Even if they are sensitive to these concerns, what influences the decision to adopt a robot is, first and foremost, an interest in gaining a deeper understanding of the animals (we will see shortly what this understanding consists of), and to improve the management of their herd. They thus do in fact seek to improve “production”, but in terms of efficiency – apprehended according to criteria specific to breeders. The positivist argument is not enough. Furthermore, robotization requires high financial investment in a context in which there are no guarantees of financial returns. Thus an emphasis on financial gains is less significant for the breeders than the process that allows them to enhance their knowledge of the herd, learning to manage it with greater care, and individualizing relations with animals further. These are the gains that truly transform farming practices and the animal husbandry system.

Figure 4: Live, the quantity of milk by quarters, in kilograms.
On the left-hand column, there is a list of available items.

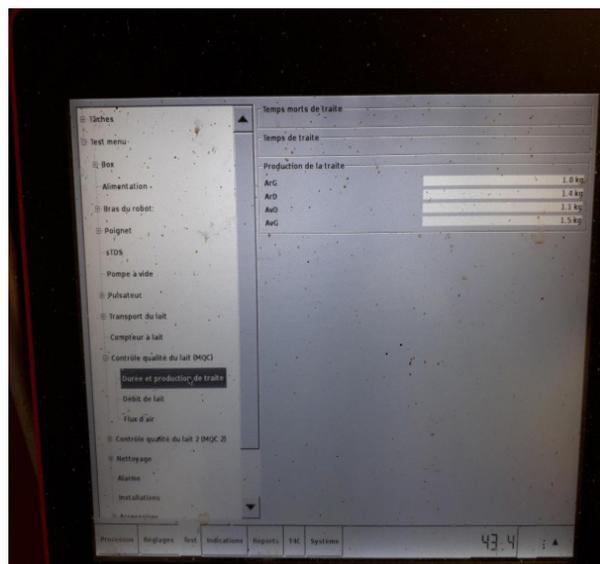


Photo by the author.

⁹ Lagneaux and Servais, for example, refer to an ad that claims to “free your hands to free your mind” (2014: 73), where we find a clear separation between technical and intellectual activities.

¹⁰ “Technicians” designates the different professions of advisor and salesmen (which are often combined).

Figure 5: The robot's panel, human side. We see the name (Ladygaga), the weight, the amount of food supplements to which it is entitled, the total amount of milk obtained in this milking session (live), the time spent milking... This screen lies exactly on the other side of the robot. These data are furthermore available, as are other, in the computers connected to the robots.

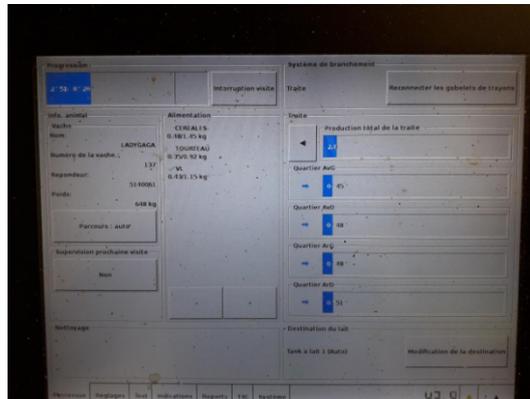


Photo by the author

In an article called *De la traite robotisée au raid d'avatars. Incorporation et virtualisation*, Lagneaux and Servais show how a virtual profile, not all that dissimilar to the *avatars* of videogames, is constituted via the robot. They show how the robot is able to transform the cow into *data* (2014: 88), making her available on a computer screen through controlling software. The screen displays global data on the herd, including median daily production, various graphs displaying different measures of productivity, and also state of health, as well as individual stats about each cow. These data are not limited to aspects of production relative to the quantity and quality of milk, but serve as indicators of the health of the animals – through the detection of possible teat infections or sudden slumps in productivity – as well as of their reproductive cycle (detecting moments of potential fertility) and so forth. By computing this information, relating it to the pedigree of the animal (ascendancy and descendancy) and other indexes obtained through various animal management software, the robot produces a “virtual body” for the cow.

These data are not, in themselves, anything new. However, they are now systematized and, thus, easily and accurately retrievable.¹¹ As a breeder told Lagneaux and Servais: “with the robot I am more within my animals”¹². Efficiency, defined as an emic concept (Coupaye 2009, 2015), involves, first and foremost, an improved interaction, imbrication and entanglement with animals or *assemblages* (to recuperate Lien’s (2018) term), even if this ‘tangle’ is controlled and defined by humans.¹³ In this *assemblage*, the robot is a mediator or facilitator. As I mentioned earlier, we are not, however, dealing with new data. While the robot may produce a “virtual cow” in the style of an avatar of modelled data, it is not the first such “virtual cow”. Before the robot, and even now for those who do not have a robot, a large quantity of data available from various sources and types of analyses was already incorporated in the relation between breeders and animals¹⁴. The system of managing the breed is, in itself, a way of producing genealogies and qualitative analyses of the animals. Even without a robot, a cow already has a virtual portrait: the OS Montbéliard form¹⁵ (formerly the HerdBook for the breed)

11 The robot can provide, for instance, direct and real time data on milk production, weight, milking speed and quantity of milk per quart (photo).

12 “Avec le robot, je suis plus dans mes bêtes” (ibid: 74).

13 In this sense, Ferret (2016) provides us with an interesting provocation, recalling that even in the constitution of a “relational tissue without stitches” between animals and humans, we should not lose sight of the anthropocentrism and asymmetry of relations of domestication.

14 Elsewhere I have written of “paper cows” (Deturche 2017), but, as Prof. Rafael Devos reminded me, the term ‘paper’ is somewhat outdated.

15 OS means *Organisme de selection*, ‘Selection Agency’.

(Figure 6) or, more recently, the “genomic portrait” obtained through genetic analyses (see Deturche 2017). The system of milk control, carried out by external agencies, is also an important supplier of data, providing information on quantity and quality of production, and eventually raising health concerns. The difference is that these data are collected monthly and are generalized by algorithms so as to produce continuous graphs. In other words, for those already entangled in relations of domestication with cows, the robot is seen as a *plus*, a more complete and precise resource for compiling data used in the individualized management of the herd; that is, in feeding, reproducing and selecting the animals. The robot thus becomes a part of a system of breeding animals that is already constituted, rather than a revolutionary tool.

Figure 6: Example of a “paper cow”. We find genealogical information, and notes on the different items that were chosen in the selection agencies.

These virtual cows, constituted through the computation of data on animal bodies, are a constant in cattle rearing and they affect the choices made by breeders, participating in the various degrees of protected designation status (AOP, AOC, IGP¹⁶) of local milk products (mainly cheese, but also butter and yogurt). However, these are not the cow-organisms with which the breeders deal on a *corps-à-corps* basis, to resume Lagneaux and Servais’ characterization. The virtual cows produced with resources such as the robot are engaged at the breeder’s discretion for purposes of management and projection. Interacting with cow-organisms is a daily necessity, with a mutual aspect. The idea of “resonance” is a useful way of understanding the various interactions between breeders and the many syntheses of cows produced by gathered data. Breeders constantly make these data resonate with the cows that they live alongside, just as they compare these virtual bodies to one another: they consider genealogy and data concerning milk yields, behaviour of specific cows in the corrals, and so forth.

16 Appellation d’Origine Protégée (Protected Designations of Origin), Appellation d’Origine Contrôlée (Controlled Designation of Origin), Indication Géographique Protégée (Protected Geographical Indication).

It is through this ability to make resonate many different cows that breeders are able to navigate the many dimensions of a complex agricultural system, embedded in an industrial and capitalist world. It is in this way that they can live and constitute themselves as cattle breeders: selling milk, cows, embryos, participating in local constructions of identity and managing the reproduction of their herd (Deturche 2012).

In what concerns the production of virtual cows, this reading helps us to understand how robots are inserted in the context of breeding in a system of domestication. However, it is not enough to clarify the associated nor how cows in a corral can, in fact, resonate with virtual cows. To understand this, we must pay closer attention to the practices of the robot, the way they are in fact used. Breeders are not constantly mesmerized by the data on their cows; the *corps-à-corps* is predominantly a relation of affect, of touching, of sensation, perception and coexistence.

The introduction of robot in a technical system does not only imply in the use of its “products”, that is, the information that it gathers. In considering these questions, we should look to understand the synergy that is created in the corral between animals, men, space and robot, turning to how the introduction of a robot in a technical system occurs in daily practice.

Even this analysis would only provide us with a partial understanding of the motivations driving this technical choice. We cannot ignore, for example, the technophile appeal of the robot, which places its use into a broader dynamic. Simondon had already noted that, contrary to the expectations of common sense, including those represented in discourses on the “naïve hick”, agriculturalists are not naturally refractory to technical innovation (1959, apud Guchet 2016: 140-141). Nonetheless, in a system in which most innovations and transformations come from public policies or top-down impositions, proposed changes are only rarely adequate to the existing agricultural system, and even more rarely do they take into account emic notions of efficacy.

The robots currently in use are presented as a feat of engineering. However, they result from coproduction (Darré 2001) with breeders, since the very first robots, introduced in the 1990s, were considered inadequate for their intended results.

We still need to understand the breeders’ view, presented at the start of this article: as producers of virtual cows, robots are in continuity with the former practices; however, the discourse of cattle breeders seem to point to a wider transformation, since, in their understanding, they are no longer part of the same profession (*métier*). We must thus investigate how this technical transformation transforms the system of domestication itself.

Robots, technical objects and social mediation

As part of their daily routine, robots effectively transform bodies into virtual *avatars*, converting them into numbers and indexes. This, however, results from the processing of data obtained during the period in which they function. For example: a health alert is flagged when abnormal conductivity is detected in milk, indicating the start of an infection in the udder. Breeders immediately receive the notification in their cell phones through an app that they must install, but the milk itself may be automatically discarded (if the robot is programmed to do so), thus avoiding the contamination of the tank where it is conserved until it is time to be collected.

In mechanized milking, the perception of a clinical problem in the udder of the cow is one of the abilities of the breeders. With robotization, we have more than a simple delegation, to the machines, of an ability that formerly fell to the breeders; indeed, what we find is a diversification and a transformation, since the way that the robot perceives the problem is not the same as how the breeder perceives it. Touch, visual perception, and observation of behavioural signs are not discarded with the analysis of the conductivity of milk by the robot. Even if humans no longer milk their cows twice a day, they continue to exercise their perceptive activities

on other occasions. It is important to stress that breeders are adamant on the need to relate with their herds in a continuous manner – compensating the time that they would have spent together during breeding – by walking beside their animals. I will return to this point shortly.

Figure 7: The gesture of “connecting” the cow to a mechanical system. In this case, we see a milking installation behind the cow. Rotary system.



Photo Samuelducloz@

I think that this is what is suggested by the breeder who told Lagneaux e Servais that he feels “more within his cows”. This is not only because he has access to more precise and patterned data, producing virtual bodies (for instance, by separating the daily production of a cow into mammary quarters, rather than simply quantifying the production of the udder as a whole¹⁷), but also because he adds his abilities to the capacities of the robot.

The robot also has an adaptive capacity which is necessary for its proper functioning. Simondon attributes this capacity to adapt to the “margin of indetermination” of technical objects, which is necessary for their concretization (2012 [1958]: 11, 185-202). The robot can, for instance, adapt to modifications in the animals’ udder during the lactation process and throughout their lives. In order to properly position the robotic arm¹⁸ that will extract milk, the robot must have the capacity to recognize the morphology of the udder and the position of the teats. The first time the cow enters the milking stall, the robot carries out a complete recognition through laser teat position sensors. This reading provides the basis for subsequent proceedings, when the robot will use the information obtained to speed up the process¹⁹.

¹⁷ A cow’s udder is made up of four sets of mammary glands, designated “mammary quarters”, or simply “quarters”, which, depending on context, can be divided into anterior udder and posterior udder, each one with two quarters.

¹⁸ Which make direct contact with the teats of the cow (or other animals).

¹⁹ Cows are drawn to the milking unit by the offer of food supplements. The robot must control the quantities of these supplements made available to each cow – this is a decision of the breeders, which takes into account individualized criteria such as the daily milk production of each animal. The robot recognizes the cow by the chip it carries in a collar, which then allows it to provide the amount of feed stipulated for that animal, and also to certify if it is

This information is updated daily so to follow the evolution of the udder during lactation. This capacity for “retroaction” is what, for Simondon (2012), characterizes technical objects in the process of concretization, which makes them differ from non-concretized objects such as automatons, for example. It is this “margin of indeterminacy” that connects them to the exterior, making them sensitive to the external world.

However, Simondon clearly demonstrates that this process of concretization should not be taken to be a decrease in human activity, or a progressive domination of machines. For him, the mythical vision of a robot saturated with its own intentions is as unsustainable as a view of machines as mere aggregates of meaningless matter, the main attribute of which is their “utility” (ibid: 11). This is an important point for us to understand the relations that are established between breeders, cows and robots, since, as Simondon suggests, it is not possible to conceive of the suppression of the human and his or her replacement by the robot. The very existence of the robot as a technical object implies its insertion into the relations that are required for its functioning. Even if it contributes to the emergence of these relations – through its characteristics and capacities (abilities) – it is still part of the medium in which man, in the words of Simondon, is a “maestro” who organizes this network and its relational medium (ibid: Part II).

The breeder is thus a maestro of a robotized milking (or breeding²⁰) system, managing relations that are woven by the installation of a milking robot. This is true both of the use of data provided by the robot, and in relation to the adjustments and maintenance of its work (we will see shortly some of the daily practices associated with this). It is possibly in this characterization of the activity of breeders that we can understand and perceive the differences that they draw attention to when they speak of a “change in profession” or of “milking with a mouse”.

Figure 8: “Roto” milking system (rotary parlour). The cows are on a plate that spins depending on the position in which they enter or exit, and in which humans stand in the external corridor.

The cows are milked from behind.



Photo by the Author.

apt to be milked – respecting the minimal interval between milking sessions.

20 The milking robot is not the only robotization possible in animal breeding: there are cleaning robots, and feeding robots, for instance. But, according to the breeders, the robotization of the breeding system, which acts upon the installations, causes less of an impact.

We must be attentive to what is transformed and reorganized, as well as with what emerges, with the installation of a robot. Perhaps the most obvious and jolting transformation concerns rhythms. Since Leroi-Gourhan (1964) and Mauss (2012b), we have known of the importance of rhythm in the analysis of techniques. When we are dealing with manual, mechanized or robotized milking, we definitely see changes in rhythm. In milking, the activity of the hands is always interesting: in both manual and mechanized milking, hands move in gestures characteristic of milk extraction. In manual milking, gestures carried out with one hand stimulate the milk to flow through the teat, block possible backflow into the “quarter”, and then exert pressure to make the milk shoot out of the teat. This movement is based on a rhythm that alternates between both hands, creating a corresponding swing in the gestures of the body. In mechanized milking, the gestures of the hand position sucking equipment on the cow’s udder²¹. In this method of milking various cows can be milked simultaneously, but even so there is a rhythm to the gestures, which are repeated for each cow in an alternating sequence or in a continuous flow, depending on which system is adopted.²²

In the robotized system, the direct contact that occurs during milking is carried out by the robot, through a series of tactile sensors and lasers, and not by the breeder’s hand. The movements of the hand in fact disappear. Milking continues to function through the alternating rhythm of the pneumatic system for sucking milk (with its characteristic sound). Sonic rhythms which not only regulate the activities of humans, but are also clearly perceived by the cows, as we will see. At this point we can already discern important changes in activity during milking which more or less correspond with the delegation of tasks.

IMG_1949This freedom²³, however, does not feature much in the discourse of the breeders, for two reasons. The first is that freeing up time is not what allows breeders to “think” (in the sense intended by the salesmen). We know that “to do things with our hands” is already a way of thinking and that this hylomorphist way of dividing “doing” from “thinking” does not help us to understand what people do, nor why they do things in a specific way (c.f. Ingold 2000; Warnier 1999; Guchet 2016; Simondon 2005a). The second is that the idea of “freedom” depends on the presupposition that there is nothing else one needs to do with one’s hand, which is distant from the reality of breeders.

Returning to the idea of ‘rhythm’, it is evident that implementation of a robot produces a drastic transformation in the collective human-cow rhythm. Both manual and mechanized milking must, in general, be carried out twice daily, with as equal an interval as possible (every 12 hours), typically at the start and the end of the daily routine.

21 Milk is then aspirated by a pneumatic system

22 In an alternating system cows are arranged in two rows. While one is milked, the other is being prepared. In more fluid systems, such as rotating systems, there is a continuous flow of cows entering the stall, and they are positioned in a circular moving platform with an automatic system for removing the suction cups.

23 A term used by the salesman as a pitch: “... to free your hand to free your mind”.

Figure 9: Entering the “Roto” system. The corridor connects the waiting room to the milking plate. When they leave, they return through a corridor in the stable.



Photo samuelducloz@.

The robot requires a continual flow of milking animals that, in principle, choose when they want to be milked, since they enter the robot of their own accord. Yet the twice-daily rhythm continues to feature often in discourse and remains a paradigm of animal breeding. To breed milking cows is to milk them; to care for animals is to milk them as much as to feed them. These activities are closely related in manual as well as mechanized systems. Cleaning the stables, fixing or changing roofs of straw or other materials, are all activities that are set in accordance with the rhythm of milking. These activities are preferably carried out while cows are being milked, or when they are in the waiting room, which clears space for easy circulation. All of this synergy, this integration, is transformed by the robot. Since it sets a continuous flow, the daily rhythm of work vanishes, allowing for a greater independence of tasks. This rupture helps us understand what many breeders consider to be an important transformation of their profession (*métier*).

Furthermore, it seems to me that the loss of the herd effect, which many breeders have observed, describes this transformation from a conjugated rhythm to a growing individualization of the animals. With the absence of the twice-daily milking schedule, animals no longer gather to pass through the milking stall; they are no longer grouped or confined to certain spaces (the waiting room). In practice, cows can move freely through various spaces in a more individualized and whimsical manner. The net result is a continual flux of cows wandering through the stables, going to pasture when this option is available to them, and going, on their own initiative, to “pass through the robot”. In such an environment, humans also organize their own labour in a more fluid fashion. Even if robots clean certain areas of the stable or provide animals with feed, it would be a mistake to conclude that humans no longer “care for” their animals, since they must regularly pass through their midst. In other words, the loss of the twice-daily encounters does not reflect a distance between humans and cows – or, rather, if such a distance exists, it cannot be understood to be a consequence of the adoption of the robot. Constant care is necessary in the stable, including cleaning areas that are inaccessible to robots, controlling cows which are late for their turn (as signalled by the robot), and supervising the functioning of the machines and the well-being of the animals. The time made available by the robot is reinvested in the

relationship with cows. As a consequence, there are important changes in the spaces wherein humans and cows circulate, which, as its counterpart, allows more intensive inter-specific relations, with more time spent in a single locale.

Figure 10: Integrating the robots to the stable. In the foreground, there is a space to eventually block cows that are late, forcing them to go through the robot in order to exit. The barrier is raised when it is not in use (which is most of the time).



Image by the author.

This also impacts how breeders visually perceive their cows. In mechanical milking, the breeders' view of his cows is attuned mostly to their udders, with which he is frequently in contact. In the milking stall, humans are situated below the cows, with their field of vision limited by the udders. Breeders can, thus, recognize their cows by their udders. By spending more time with them in the stables, they also change their field of vision, apprehending their cows from above.²⁴ The touching, caressing and shoving that takes place at these times are also different from touching during milking. It is impossible to caress a cow in the milking stall, where the animal's head is usually far from the field of vision of whoever is milking. With the robot, these encounters become more frequent, since the breeder spends more time between his cows.

Yet it would also be mistaken to assume that the robot estranges the breeder from the milking process. As the "maestro", he is always connected to the robot, through cell phone apps that inform him of events in real time: which cows have been milked, which are late and which, eventually, display a problem²⁵. The computer also enables remote control: breeders can manipulate the robot from a distance, regulate the quantity of food supplements provided, and analyse the data. These activities take place all of the time (including holidays), anywhere at all, and with alarms sounding in the case of emergencies. In practice, breeders are constantly breeding their cows. What differs is the intensity and the rhythms deployed.

As we can see, the installation of a milking robot does not amount only to the robotization of a task, but also transforms the very breeding system and the relation of domestication, modifying rhythms and movements of humans and cows. This transformation does not take place in the change from manual to mechanized milking

²⁴ The installation of a robot is frequently accompanied by the construction or rearranging of breeding installations, the stable, the place where calves are kept and to conserve milk, etc.

²⁵ Breeders can be called on at any moment, having, for example, to interrupt what they are doing because a cow is blocking the robot.

because both have similar rhythms, even if mechanization implies the adoption of specific installations. The same occurs in the change from a mechanized system of milking in which cows are lined up in rows – where the breeder positions himself in a pit between two rows of cows – to a rotary milking system, which requires the reconfiguration of the milking stall, but not of the rhythms involved²⁶. The robot does not impose a strict rhythm, making the process more flexible and rendering a dedicated milking stall obsolete. Places for milking become integrated to the stable itself, strategically situated so as to facilitate the circulation and orientation of cows that pass through it²⁷.

This has an influence on the behaviour of cows. Space is conceived to guide them and stimulate them towards making certain moves, the main one being their voluntary movement towards the milking robot. In a manual or mechanized system, times are imposed on cows by the breeders, with no room for negotiation with the animals beyond choosing whether they will be at the start or the end of the queue. This can generate conflict between humans and their animals and, according to breeders, they highlight personality traits of the cows. While some go through the process easily, other may need to be coerced, and some may refuse to go first or demand to go through only certain positions²⁸. With the robot, they have a wider margin for action, with greater liberty to decide when they are milked²⁹.

In a very interesting article, Porcher and Schmitt (2010) ask whether, in this context, we can claim that cows participate in the work, and in what way this participation would occur. Without going into the issue of defining ‘work’ (the difference between collaborating with work and working (ibid: 256)), or of discerning what would be the practice of human work and the practice of animal work³⁰, the authors clearly show the effects of a robot on cows through a study of the “conditions de travail d’un troupeau de vaches, leurs relations au travail – avec leur éleveur et entre elles – et leurs relations aux objets techniques” (: 241). They point precisely to how cows adapt and react to conditions imposed by humans and robots; how they follow, anticipate or try to cheat the conditioning activities of both, getting up before their owners want to change they hay that they lie on, or else refusing to do so, for example, or exploiting a glitch in the robot’s door to try and eat without being caught or avoiding being expelled right after having been milked (ibid: 253). What is fascinating is how they show that cows “understand” how the robot functions, and accordingly how they adjust, test or interpret the robot (particularly its sounds), and try to cheat the system. Thus, cows do not behave “mechanically” before the robot, just as they do not do so before the breeder (ibid: 254).

The behaviour and practices of both cows and breeders show us that the robot is not a mere device that automatically mimics humans, replacing their gestures and practices of milking. On the contrary, it is an example of how an apparent mechanical “complexification”, a robotization, seems to delineate – in a certain context – not an “objectifying” distance in relation to the animals, as we might expect in processes of industrialization, but rather to consolidate the relations between humans, machines and animals. Techniques, or technical objects, take on the role of mediators in complex relational processes.

26 In a rotary milking system (rotary parlour), the flow of cows during milking is constant, following the spinning movement of the platform on which they are positioned. Thus, it differs from the system with rows because, when they enter the platform, cows sometimes have to be shoved.

27 A robot milks a herd of more or less 60 cows.

28 A classic case in systems with two rows in the milking stall is that of cows that only accept passing through the right side or the left.

29 Although some regulation is possible, the general minimum interval between milking is 6 hours. If a cow moves towards the robot before this time, it will be refused the food supplement and be expelled from the robot, with an “electric poke” if necessary. If a cow does not show up for more than 12 hours, the robot considers it to be late, signalling to the breeders that they may want to fetch it or to wait, if they deem that there is no rush (e.g., cows that are towards the end of the lactation period, for example, and which no longer produce much milk)

30 The authors point to what they see as a distinction between human work of maintenance and management, and animal work which occurs “concretely” in contact with the robot. If I understand correctly the distinction they propose, I do not agree with the dichotomous character they confer on it, mainly because the relation with the robot is apprehended as if it were an object separate from the “associated environment” (c.f. Simondon 2012). The authors do not take into account that the concrete and practical relation with the robot also occurs through, for example, cell phones. I do not think that the mastery to which Simondon refers concerning the role of humans in relation to technical objects assumes the form of a “maintenance”. On the contrary, he shows that this is due to the separation between those who operate machines and those who operate the network in which they are inserted. It is thus a problem of the “Technical Culture of the West” (2012: Introduction)

Robots, humans and cows

After the Green Revolution, the argument for “non-conformity” would supposedly distance us from processes of valuing creole races or of rediscovering neglected plants (Demeulenaere & Goldringer 2017; Demeulenaere 2014). But, as we can see in studies of participative selection (Brac de la Perrière 2014; Bonneuil & Demeulenaere 2007), or in agroforestry projects (Lafon 2016), for example, there is a constant attention to the connections between humans and plants or animals, through ways of acting and techniques of management. Environments made up of landscapes and mediums that appear to be more or less “technicalized” (in Simondon’s (2005b) sense) nonetheless always form systems. That is, both the investment in creole races or varieties in the context of specific techniques or environments, and the installation of milking robots, can be apprehended through an analysis that enables us to conceive of agricultural processes as “triadic”: techniques come to imply a mediation between humans, animals and the environment, in opposition to the binary logic of the “Green Revolution” (humans/nature). Robotization as a technical transformation of agricultural systems also raises a series of questions concerning the process of robotization, or on the “operation of mechanization” (Grimaud & Vidal 2012). In a dossier they organized on the theme, Grimaud and Vidal (2012b) show that an anthropology of robotics requires that we understand robots and robotization through their modalities of action, their representations and multiple dimensions, in a panoptic and comparative perspective, since this is how robots are in the world and how they relate to humans.

Returning to milking robots, these appear, from this perspective, particularly intriguing, since they mechanize a specific gesture, or a series of gestures (an ‘operational sequence’; c.f. Leroi-Gourhan 1964; Lemonnier 1992; Coupaye 2015), that are central to ways of “working with cows”. With the introduction of robots, these gestures are becoming a mechanized operation, but, at the same time, we are not faced with an automatised repetition.

Ce qui se machine n’est plus aujourd’hui forcément de l’ordre de l’automatisme et de la répétition ou des transferts de force et d’énergie. Désormais, il s’agit d’introduire de l’intelligence de calcul, du programme, voire de l’apprentissage. Les sequences de gestes automatisés ont fait place à des rapports plus qualitatifs de délégation, de complémentarité, de coaction et de coopération au sein d’agencements relationnels beaucoup plus compliqués et ambigus (Grimaud & Vidal 2012a: 11).

As we have seen, the milking robot emerges as an instrument of multiple uses, depending on how it is represented, of the environments in which it will be used and the uses to which breeders will put it, affording new possibilities for breeding. It is a technical object, in Simondon’s sense, and should be analysed as a technical process inserted in a network and its associated medium, composing thus a technical set. Along this line, we can also refer to the work of Dubois and Sauvée (2016, 2017), who consider modifications in the current agricultural landscape to be a new agricultural technique, in the manner of Simondon (following the studies of Guchet (2016)). Thus, the technical culture³¹ considered is one that is needed:

Pour redonner à la culture le caractère véritablement général qu’elle a perdu, il faut pouvoir réintroduire en elle la conscience de la nature des machines, de leurs relations mutuelles et de leurs relations avec l’homme, et les valeurs impliquées dans ces relations (Simondon 2012: 15).

Thus, humans and machines are to be reintegrated by the idea of the “set” and, above all, by perceiving machines as mediating technical objects, at once concrete and open; that is, inserted in multiple relations in an environment. We might see that humans, as much as robots and animals, are engaged in the constitution of a space, a common environment. What the milking robot seems to bring to this environment is its potential for

³¹ Technical culture is to be understood in Simondon’s terms, relating to the adequacy of certain human practices and discourse and their degree of technicality: “conscience de la nature des machines.” (Simondon 2012: 15).

producing information and auto-regulation, but also its openness and concreteness. With its own rhythms, its own spatial-temporal structuration, it is a mediator the activities of which are entwined with those of humans and animals. Indeed, the characteristic of this technical set, as Sigaut (1976, 2012) clearly points out, is that it is a three-way technical system: where living beings are diverse and disseminated, subject and object of different activities and in various contexts. Three terms: humans / robot (as technical object and associated environment) / cows – recalling the three terms that Stepanoff (2012) identifies in the reindeer breeding system in Siberia: human / environment / reindeer. The milking robot is the medium of the relation, a mediating technical object, and an associated environment, corresponding to Stepanoff’s ‘environment’, which is entangled in the relation between humans and reindeer.

Figure 11: The breeder as maestro, fixing, verifying, always present... Part of the tasks are carried out continually for the system to work. Photo taken from the “human side” of the robot.



Image by the author.

The ideas of set and concretization are also fundamental in the matter of the representation of the machine, the industrial and objectification. As Dubois and Sauvée (2016, 2017) demonstrate, this issue can be understood as a backdrop to the current strands of agricultural diversification, including agroecology, permaculture, and organic agriculture. It may seem counter-intuitive to associate these agricultural techniques to the installation of a milking robot, but they too can be interpreted through this reinvention of an agricultural technical culture oriented towards concreteness and synergy, where the “maestro” is the depository of skills, which Ingold had claimed were lost in the first investitures toward mechanization. Lost, not so much as a direct result of mechanization, but because of the loss of control and the possibilities of integrating them into an associated environment.

It is worth considering what sort of rupture with traditional agricultural systems is instated by robotization. This leads us to other questions, and, more specifically, to a critique of the distinction between the categories of “artisanal” and “mechanic” proposed by Simondon, and to problems of scale. I cannot go into this issue here, but we can register the possibility of reflecting to what degree a new “technical culture” is, in fact, a rupture. In all cases we are left with the problem of interpreting contemporary robotization, which to Dubois and Sauvée seems like a characteristic of this new culture, but which presents a socio-political line of fracture between the milking robot and, say, permaculture. I think that this is due, precisely, to the following equation: mechanization/robotization => industrial and Capitalist phenomena => objectivization of nature.

On this issue, I disagree with Dubois and Sauvée (2016, 2017), who adopt the equation from Guchet. If, on the one hand, it is positive and interesting to consider a technical culture that rethinks technique “comme relation constitutive des rapports Homme / Nature / Technique” (2017: 185), where the technical emerges as a medium (and system), on the other, and contrary to what they propose, it does not seem to be compatible with the maintenance of the idea of technique as an action upon nature à la Descartes. Following Simondon, the redefinition of agriculture and its relation to nature as an “imitation of nature”, both in permaculture and in “ultra-technicalization”, is incompatible with Descartes objectification of animal-machines (Guchet 2016: 138)³².

In this vein, the research of Porcher and Schmitt on how cows participate in work with the robot and the medium associated with it (with the human inside), shows that it is impossible to sustain a linear reading of the three-way relation, which is the principle of the Cartesian relation to living beings (Simondon 2004). It is interesting, as Porcher (2002: 199-210) sustains elsewhere, to perhaps think in terms of *umwelt* – centred on techniques in this context of domestication. A partially shared *umwelt*, common to humans / robots / cows.

However, this does not deny the relation between robotization, industrialization and Capitalism. In general, in order to install a milking robot, one needs to be inserted in industrial and Capitalist circuits. It is this relation to industry and Capitalism that allows agriculturalists to technically transform their systems, but also keeps them in a financially difficult situation where they retain a very low level of power in making decisions (Droz 2002; Droz & al 2014). I also do not want to deny that, as an investment with consequences, the robot inexorably ties breeders in an asymmetrical relation to the Capitalist and industrial system that moves the world economy. However, I also consider that the installation of a milking robot in an agricultural system does not automatically imply a progression in the industrialization of the system of agriculture and breeding, nor does it necessarily represent an advancement towards a model which objectifies animals and transforms them into machines in relation to which humans become mere business managers. Unlike many agricultural engineers and zootechnicians, agriculturalists in general manage to remain agriculturalists and do not convert completely to a Cartesian industrialism (at least in what concerns their relations with animals) and to the Fordism of business management. If, in fact, the industrial system (such as in pig breeding) transforms animals into mere objects, it only does so through a crisis of representation of those who work in this industry (Porcher 2002; Mouret 2012: 107-132); that is, when they no longer see themselves as animal breeders, and are no longer so seen by others.

Hansen (2013; 2014) describes a similar phenomenon in the transformations of dairy farming in Hokkaido, Japan. In the social and political context of a crisis of alimentary insecurity (Hansen 2014: 58), Japan pioneered a radical transformation in the system of dairy farming in Hokkaido. Promoting strong industrialization, within which heavy investment in “new technologies” resulted in what, to do the author, is a loss of skill

³² I am unable to discuss this in detail in this article, but, following Canguilhem’s (2008) reading of Descartes, for instance, we are forced to conclude that the radical distinction between Human/Nature and Soul/Body in Descartes is incompatible with the Simondonian interpretation of the relation to nature and technique.

(Hansen 2013: 54-55) by the workforce, mostly waged labourers, while landowners came to assume the position of business managers. This industrialization caused an increase in production and farm size (as well as an overall reduction in the number of farms), from dozens of cows per farm to hundreds and even thousands.

In his 2013 article, the author shows how this process occurred through the intensive use of a milking system called the 'rotary parlour', which allowed this industrialization to take place by the concomitant proletarianization of cows and workers, blurring the boundaries between them: "In other words, it is likely clear that with 1000 'livestocks' passing by high turnover workers with 18 s [second] window of contact, worker, bovine and equipment blur, again there is individuation but not individuals" (ibid: 7). The author explains that milking robots were not adopted in this case for a number of reasons, related to aborted efforts (breeders initially claimed that robots had significant problems), but also high costs and the investment needed to milk herds of hundreds of cows: unskilled workers and foreigners are still cheap in Hokkaido. If the implementation of the robot in cases such as that of the small-sized breeders in France, which I have analysed here, is an important transformation of human-animal relations, requiring different practices and strategies of care without, as such, being less attentive to animals, it is also possible that, in the context of a process of intensive industrialization, it may not be that well-adapted.

However, Hansen interestingly shows how a technical object is inserted in a process of industrialization that objectifies humans and animals. Nonetheless, it does not seem to me that there is a necessary causal link between the former and the later. The "rotary parlour", or *roto*, as it is known where I carried out fieldwork, is the rotating system of milking (figures 8 and 9). In the cases that I investigated, it is not possible to conceive of them in the same way that Hansen does for the process of industrialization in Hokkaido. As I have claimed, in this system, as in other systems of mechanical milking, breeders recognize their cows via their udders, and they hence remain individualized. It does not annul the effects of continuous communication between humans and cows, nor does separate workers from managers. It does not seem to me that the rotary parlour is, in itself, an industrialization of the milking process that creates a distance between human (owners) and cows by their objectification and through waged labour. But it can, of course, be an instrument of industrialization when it is inserted into a socio-economic and political context like that of Hokkaido.

Figure 12: "Our cows are milked in a calm and silent environment. Thank you for not yelling".

Sign placed at the entrance of the human space of the robot.

The installation of the robot does, in fact, attract visitors.



Image by the author.

Likewise, this shift is not effected by the robot, but by its context of actual and potential use. Effectively, it constructs a new technical relation with animals and implies distinct associated means in what pertains to their rhythms and spaces for mechanical and manual milking. The robot also further integrates breeders to a Capitalist system, because of high costs and diverse economic and political chains that connect them. The installation of a robot transforms and renders necessary a new integration of techniques, humans and animals, and the result can be conducted in different ways according to the uses to which the breeder puts the robot. He can use it to maximize the production of milk, thus setting the distribution of food supplements with that aim in mind, but this implies a constant tension between managing the herd to avoid the negative effects of *pousser les vaches*.³³ Thus, this option is possible, and can be a reaction to certain economic imperatives, but it is not a necessary condition emerging from the installation of a robot.

Similarly, the robot also enables a degree of pacification in the relation between animals and their breeders by affording greater room for manoeuvre to the animals and reconfiguring their movements and rhythms in a more fluid and idiosyncratic manner. Breeders are unanimous in saying that a good installation calms the herd, makes the cows more tranquil, less nervous and disturbed. There is certainly a regression in the change from a forced containment to a smoother coordination according to the cows' will. They still align, to a degree, with the interests of humans, who need to meet their cows at the same times and under the same conditions of tension (mechanized milking is, indeed, a tense moment, for various reasons, and this is reflected in relations maintained with animals)³⁴.

Figure 13: Strolling amidst the cow, cleaning manure on the sleeping mat, taking late cows to the robot, or spreading hay or sawdust on the carpet (task carried out in the mechanical system when the cows are not in the stable).

Tasks carried out at least twice daily.

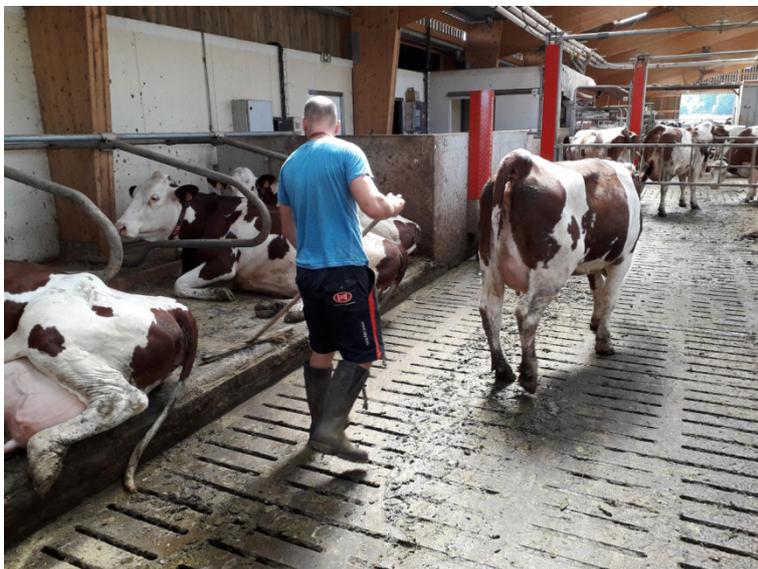


Photo by the Author

³³ *Pousser les vaches* means 'to force the cows', by controlling nutrition and breeding conditions, seeking to maximize milk production. The tension between economic imperatives and affective relations is Always a sour point among breeders, because they have negative effects on the health and longevity of the animals.

³⁴ It is difficult to be precise regarding the degree of containment involved in manual milking. However, it should be recalled that in many cases animals have to be docked to a space where milking will be carried out, and that often its legs have to be bound.

In other words, reflecting on robotization in agricultural systems through a linear model that implies a growing distance between humans and animals, along with the objectification of the latter, does not capture the complexity and diversity of agricultural systems, nor the resilience of daily relations of coexistence and *assemblage* which are common to all relations of domestication. It seems evident to me that the installation of a robot transforms gestures, rhythms and skills, without thereby automatically delegating these aspects of human-animal relations, but, rather, creating a complex relational medium. As Holloway and Bear (2017) note, the constitution of the subjectivity of animals and humans is modified in relation to other milking systems, but without implying the loss of acting subjects. Following the analyses of Ferret (2014, 2016), we might say that the ways of doing implicit in any system of domestication are modified and transformed, but continue to be oriented by the characteristics of the living who are constituted at the edges of this technical relation.

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Fences in the borderland: technique, landscape and the architectures of domestication in the Brazilian-Uruguayan Pampa

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Abstract

Recent perspectives on domestication have emphasized the importance of technical objects and other environmental elements as mediators of the relations between humans, animals and the many landscapes they inhabit. Using the concept of “architecture of domestication”, proposed by Anderson and others (2017), this article investigates the role of *alambrados* (wire and wooden fences) in the context of animal husbandry in the Brazilian-Uruguayan Pampa, the technical processes involved in their construction, as well as the new configurations and uses for these structures that have emerged along with the biological invasion of European wild boars (*Sus scrofa*) in the region. I will show that the *alambrados* are key elements in the difference between positive direct action and negative indirect action in relation to the animals of the herd within the Pampeano system of domestication.

Key Words: Domestication; Animal Husbandry; Fences; Wild Boar; Pampas.

Cercas na fronteira: técnica, paisagem e as arquiteturas da domesticação no Pampa brasileiro-uruguaio

Resumo

Recentes perspectivas sobre domesticação têm enfatizado a importância dos objetos técnicos e demais elementos ambientais como mediadores das relações entre humanos, animais e as diferentes paisagens que habitam. A partir do conceito de “arquitetura da domesticação”, proposto por Anderson e colegas (2017), examino neste artigo o papel exercido pelas cercas de arame e madeira (*alambrados*) no contexto pecuário do Pampa brasileiro-uruguaio, os processos técnicos envolvidos em sua construção, bem como as novas configurações e usos para estas estruturas que emergem em face ao processo de invasão biológica conduzido por javalis asselvajados europeus (*Sus scrofa*) nesta região. Viso demonstrar, por fim, que os *alambrados* são peças-chave na dialética entre modos diretos positivos e indiretos negativos de relação com os animais de rebanho no sistema domesticatório pampeano.

Palavras-chave: Domesticação; Pecuária; Cercas; Javali; Pampa.

Fences in the borderland: technique, landscape and the architectures of domestication in the Brazilian-Uruguayan Pampa

Caetano Sordi

Introduction

Extending from the confluence of Quaraí and Uruguay rivers to the mouth of the Chuí stream, the border between Brazil and Uruguay extends for some 1000 km in a northwest-southeast direction. Much of this border is “dry”; that is, it is not marked by watercourses or by any major topographical features. Thus, in the zone between the so-called Rincão de Artigas¹ and the Aceguá/Aceguá international conurbation, there is a prevalence of rolling prairies that, in his *Facundo: Or, Civilization and Barbarism* (1895), the writer (and later Argentinian president) Domingo F. Sarmiento referred to as “the image of the sea upon the land; the earth as it appears upon the map” (Sarmiento 2010: 72).

Indeed, anyone who travels through the back roads of the interior of the Ibirapuitã Environmental Protection Area – the only federal conservation unit in the Brazilian Pampa, situated precisely along this tract of the border (fig. 1)² – is frequently possessed by this feeling of vastness and infinity, particularly in those early morning hours when a fog makes it difficult to discern the horizon, the limits of the land and the beginning of the sky. The succession of rolling plains confers on the landscape of the Pampa, or the Campanha, a maritime rhythm, often described as tedious or monotonous, an image expressed in Sarmiento’s analogy and which reverberates in writings of more recent Rioplatense authors. The Argentine essayist Ezequiel Martínez Estrada (2017: 18-19), for example, wrote of “the amplitude of the horizon, which always looks the same as we advance [...], gives the impression of something illusory in this crude reality of the field”. It would be easy, in this context, to lose track of the depth of the terrain, were it not for the omnipresence of another important element in the Pampeano landscape: the fences of straight or barbed wire known as *alambrados* or *aramados*³, which, arranged in straight lines throughout the field, provide a peculiar and comforting sense of perspective.

¹ Rincão de Artigas is the name of the interfluvium of the Quaraí River and the Invernada Creek. Along with the so-called ‘Brazilian Island’, located on the Uruguay River, it is one of the only disputed areas in the border.

² This conservation unit was created by presidential decree in 1992. It is made up of over 316,000 hectares divided between the rural zone of four municipalities of the state of Rio Grande do Sul: Santana do Livramento, Rosário do Sul, Alegrete and Quaraí. Its territory is made up of small, medium and large properties, mostly used for extensive animal herding. It is administered by the Chico Mendes Institute for Bio-Preservation (Instituto Chico Mendes de Preservação da Biodiversidade (ICMbio)), an agency linked to the Brazilian Ministry for the Environment.

³ These terms are derived from the Portuguese and Spanish words for ‘wire’ (*alambre* and *arame*, respectively).

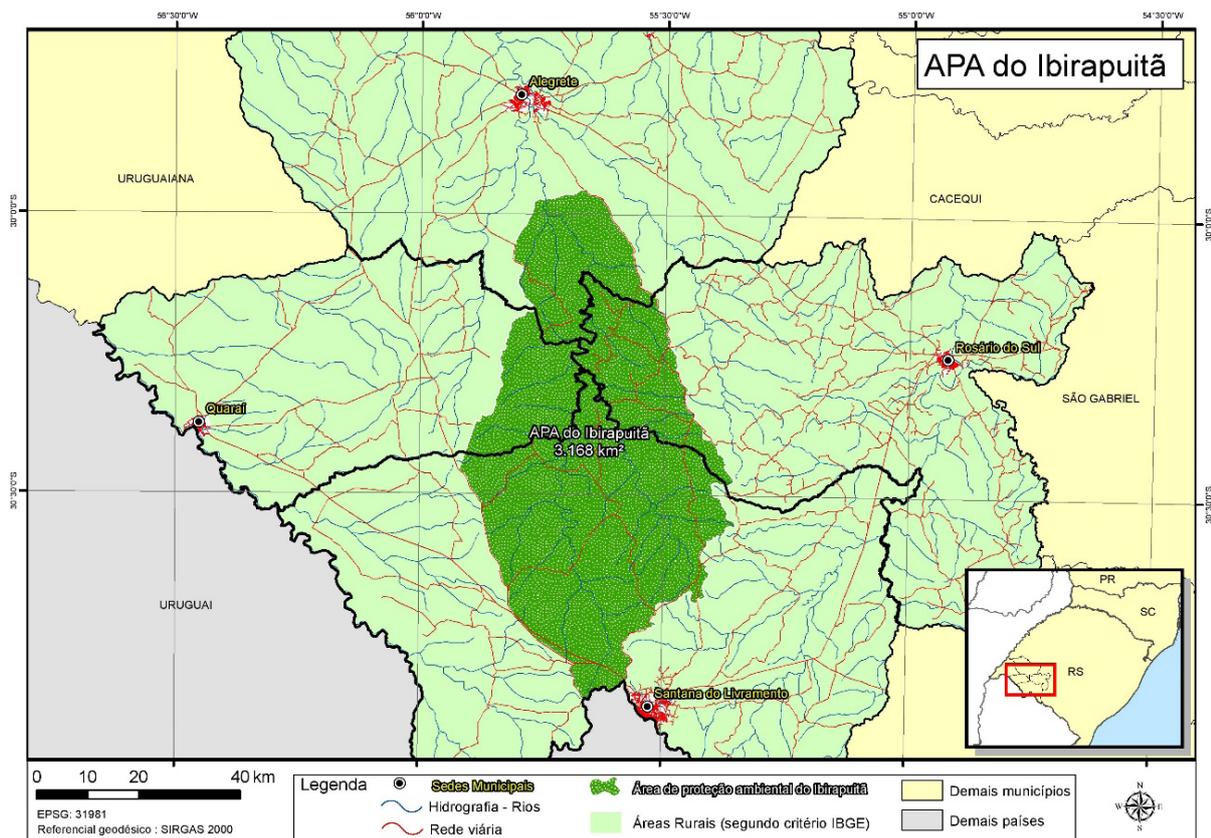


Figure 1: Map of the field site. Dark green area: Ibirapuitã Environmental Protection Area. Light green area: surrounding rural areas (cf. Brazilian Institute of Geography and Statistics/IBGE) belonging to the Santana do Livramento, Quaraí, Rosário do Sul and Alegrete municipalities. Yellow area: Other municipalities in Rio Grande do Sul, Brazil. Grey area: Uruguayan territory Blue lines: water courses. Red lines: roads.

Map by: Victor Ricardini.

Traditionally erected by people possessing a wisdom passed down through generations of a family lineage, *alambrados* divide properties from one another, and also delimit areas within each property, such as grazing land for cattle (*invernadas*), large corrals for branding and castrating animals (*mangueiras*), as well as domestic areas used by bosses or employees, and the main residential area. According to local knowledge, a good *alambrado* can last up to a century, depending on the expertise of the builder, and the diligence and persistence of those who care for it. Furthermore, along the so-called ‘international corridor’, the extensive dirt road that follows the dry tract of the borderline, *alambrados* can also divide sovereign territories, purportedly preventing herds from one country from mixing with those of another. Everyone knows that this is not always effective. As a zone of intense legal and paralegal exchange, the prototypical crime along the Brazil-Uruguay border is cattle raiding, or *abigeato*, the most common evidence of which is the damaged *alambrados*, along with slaughtered livestock left behind as an affront to their former owner.

In this article I will discuss the role of these fences in what we might call, following Anderson and his colleagues (2017), ‘architectures of domestication’, which configure relations between human and non-human agents in the Pampeano landscape. These authors propose that a closer look at the structures that inscribe human-animal relations within a territory enables us to overcome certain structuring dichotomies in the debate on domestication, including the one that underscores the very definition of domestication as a ‘domination/submission’ or as a ‘collaboration/symbiosis’ (see also Russell 2007 and Stépanoff and Vigne 2019). In other words, through an analysis of these physical structures and their agentic potentialities, we can

better understand the oscillation between “cultures of control” and “cultures of reciprocity” (Anderson 2014) that supposedly permeate different systems of domestication, moving beyond the focus usually afforded to one or the other relational modality.

This perspective, as I see it, converges with that of other contemporary researchers who have underscored the ethnographic importance of technical objects and material infrastructures in mediating interactions between humans and nonhumans (Sautchuk 2016; Segata 2017; Stoeckli 2017), as well as that between the landscape and its surrounding medium as aspects of the process of domestication (Ingold 2000; Leach 2007; Wilson 2007; Stépanoff e Vigne 2019). Finally, my approach in this article is also inspired by authors linked to the Maussian anthropology of techniques tradition (Akrich 1987; Lemonnier 2012; Descola 2002), which focus on the indissolubility of technical, social and political processes, endowing technical objects, their patterns of manufacture, use and selection, with great heuristical value for the social sciences in general.

For Lemonnier (2012: 119), in particular, an ethnographical interest in technical objects stems from their capacity to communicate, non-verbally, “key values or key characteristics of particular social relations that are usually hidden, although they pervade everyday life”. Thus, technical objects act as “perissological resonators” of the social relations in which they are embedded, reiterating them⁴ and stabilizing them in a concrete or material sense. In light of this, we must ask: what social and power relations are condensed in the apparently banal Pampeano *alambrado*? What can its structure, disposition, manufacture and use tell us about the human and more-than-human dynamic that composes the border landscapes?

To answer these questions, I will first describe the process through which the *alambrados* emerged in the Pampeano landscape through two temporal registers. The first is a “phylogenetic” register, so to speak, which will reconstruct the historical macroprocess of fencing fields in the Pampas, and of structuring large grazing properties as the socioeconomic base of the Rioplatense region. The second, “ontogenetic” register, will describe the process of constructing a traditional *alambrado*, revealing the operational sequences and the labour relations involved in the craft of the *alambrador*. I will then explore the role played by the fences in the relational game that involves humans and herd animals in the Pampas, understanding them as material resonators (Lemonnier 2012) of the oscillation between positive direct and negative indirect (Haudricourt 1962) modes of domestication. In the conclusion I will discuss how recent transformations in the Pampeano environment, in particular the biological invasion of wild European boars (*Sus scrofa*) and their mating patterns with domestic pigs, have reconfigured the affordances (Gibson 1979; Reed 1988; Ingold 2000) of the *alambrados*, conferring new uses and potentialities on old material structures.

Phylogenesis of the *alambrado*: from the smooth field to the chequered landscape

To understand the meaning and emergence of the *alambrados* in the Pampeano landscape we must first reconstitute the history of its establishment as a political and pastoral frontier. Before European colonization, the territory that now makes up the south of the Brazilian state of Rio Grande do Sul, Uruguay and the northeastern Argentine provinces, was inhabited by various ethnic groups, most of them living exclusively by hunting and gathering, such as the Minuanos and Charruas. The Guarani, in contrast, were manioc cultivators who also collected *yerba mate* (*Ilex paraguariensis*), the consumption of which is arguably the most enduring contribution of these peoples to the culture of the Plata River valley and adjacent regions.

Starting in the 16th century, Spaniards from the Society of Jesus established reduction missions to settle and convert the Indigenous people of the region. Their establishment is coterminous with the introduction of European cattle and the creation of extensive breeding grounds for feral animals, known as *vacarias*

⁴ The term “perissological” conveys this sense of redundancy and reiteration. Lemonnier (2012) takes this idea from an analysis of non-linguistic elements in ritual, the engagement of which reiterates, non-verbally, the values cultivated throughout the ritual.

(Osório 2006; Farinatti 2007). A way of life based on the predation of feral herds which reproduced freely in the prairies was thus established during the first two centuries of Iberian colonization. Initially, livelihood was based on the commercialization of leather in the plaza-forts of Spanish colonization along the Prata River. Later, Portuguese explorers penetrated the Pampeano territory, seeking both animal prey and Indigenous captives to be sold in the mining centres of the Brazilian southeast.

Ownership of land and animals only became stable in the Pampas, conforming to what Ingold (1980) would classify as a ‘ranching economy’⁵, after several border treaties were signed between the Portuguese and Spanish crowns during the long and troubled period that extends from the Guarani War (1753-1756) to the national independences at the start of the 19th century⁶. This later cycle of pastoral development, which spans the period from the mid-18th century to the second half of the 19th century, sees the emergence of the productive unit known as the *estância*: the large rural property with feudal overtones that moulded the structure of land ownership in the region, as well as its sociocultural imagination, until the present.

This period also saw the first stone fences, known as *taipas*, many of which were constructed by African slaves (Osório 2006; Farinatti 2007)⁷. More than boundaries for rural properties, these stones protected the agricultural areas of the *estâncias* from animal intrusion, and delimited corrals and domestic perimeters. At the time, the predominant productive structure was based on shared grazing land used by the herds of the *estancieiros* (legitimate land owners) and their *agregados*, that is, the small breeders and free occupants tied to a lordship through bonds of clientelism. According to Xavier (1964: 58):

The free worker – the *agregado* and the peon – is employed in rural work under the direct supervision of the *estancieiro* or his foreman. The *campeiro*⁸ and his family occupy tracts of land, where he builds his ranch, plants and harvests his produce for his own consumption. The enjoyment of these benefits is dependent on his fidelity to the owner of the land. Some foremen or more capable and useful *agregados* receive animals – *terneiros* – during branding, as a reward for their services and their interest in the work.

In the absence of precise limits marked on the landscape, the limits of properties were in most cases defined by natural features (embankments or watercourses), or occasionally by stone markers that carried the insignia of the *estancieiro*, that same used to brand his animals (fig. 2). In the collective memory of the region, the period prior to the *alambrados* has mythical and nostalgic hues, as we can read in the prelude to a short story by the Rio Grande do Sul writer João Simões Lopes Neto (1976: 28):

Everything was open; the *estâncias* touched each other without fence or siding; the divisions of each was written in the papers of the *sesmarias*⁹; and maybe one *estancieiro* or another would place stone marks on the lines, when a pilot would show up, who knew the business and was suitably backed.

5 According to Ingold (1980), rancher economies are characterized by the establishment of property relations over both animals and land. In the pastoralist model, in contrast, property relations only concern herds, with grazing land being used communally.

6 The United Provinces of the Plata River, the embryo of the modern Republic of Argentina, declared their independence in 1810. Brazil became independent from Portugal in 1822. Uruguay separated from the Empire of Brazil in 1828. The Guarani War involved the Guarani against an alliance of the two Iberian crowns. Under the command of the mythical figure of chief Sepé Tiaraju, the mission Indians contested the borders established by the Treaty of Madrid (1750), which handed the Eastern Missions (currently the northwest of Rio Grande do Sul) to the Portuguese Crown (Golin 1999; Neumann 2000).

7 Xavier (1964: 58) points out that the *estância* mixed two types of work regime, which he classified as “natural economy” and “mercantile economy”: the former results from the work of slaves, and are associated with harvesting, domestic work and domestic industries. The latter is developed from the work of freemen, with clientelist characteristics that are increasingly emphasised”.

8 A synonym for *gaúcho*, rural livestock rearer.

9 The *sesmaria* was a Portuguese juridical institute that oversaw and ratified the occupation of land in the colonies. The first *estâncias* of the Brazilian Pampa were constituted from this system of land distribution. In the region that concerns us, most of the *seismeiros* were made up of veterans of the border wars who received a portion of the conquered land.



Figure 2: ancient stone marker of the São Marcos Estância, Rosário do Sul (Rio Grande do Sul, Brazil), May 2014. Note the figure etched on the stone, the same brand used on animals. Photo by the author.

This was the time of the great horseback incursions to gather feral cattle, separating them according to the brand of their respective owners (*campereadas*). While there is no doubt a certain Romantic exaggeration in recurring qualifications of this work as a “diversion”, it is important to observe that these undertakings were part of a labour identity anchored on the founding experience of confronting a wild animal, which has ample reverberations in local notions of masculinity and honour.

For the Uruguayan anthropologist Maria Fernanda de Torres Álvarez (2011: 157), this breeding system, with its poorly delimited wide open fields, is at the origin of a cosmology native to the inhabitants of the region which she calls a “cosmology of smoothness”, disdainful of the sedentarism of agriculture, and in which “the extensive fields, which looked the same for over a century, had instilled slow processes of variation and the conservation of places in memory”. Inspired by Ingold (2011), and Deleuze and Guattari (1997), she argues that the modernization projects developed in her country after the middle of the 19th century always sought to tear up the native field with the civilizing virtues of agriculture, exorcizing it of the nomadic, violent and wild ethos usually associated with traditional pastoralism (Beretta and Markoff 1978; Giles and Gefu 1990).

Indeed, the ideological process to which Álvarez refers can be generalized to the three countries that make up the South American Pampas, the elites of which have always sought ways to develop and domesticate the landscape and its inhabitants, or, as I have suggested elsewhere, to “capture its feral-becoming” (Sordi 2017; 2015). It is in this context that the *alambrados* first appear, in tune with pressures to increase pastoral profit (mainly by introducing new breeds) and to ‘modernize’ productive relations in the countryside.

In the Brazilian case, the chequering of the prairies, by means of physical barriers to the flux of animals and men, gains favour with the 1850 Law of Lands (Farinatti 2007; Da Ros 2012). In Argentina, the introduction of wire fencing in the 19th century resulted in peasant uprisings led by groups of *gaúchos* who did not accept the new terms of land ownership (Beretta and Markoff 1978). In Uruguay, Nahum (1968) points out that the *alambrados* are associated with what he calls the “woolly revolution” of the second half of the 19th century, in which properties increasingly took up sheep farming as their main activity, looking to explore the international market in fibres.

In terms of labour, fencing led to the intensification of the *campeira* workforce, which was definitively transformed into a rural proletariat. It also resulted in increasing tensions between “traditional” ways of dealing with animals, closer to patterns of hunting and capturing, and “rational” or “modern” ways, advocated by zootechnicians and rural land owners interested in increasing production through the incorporation of imported technology (Bornholdt 2016; Nahum 1968). According to Pereira et al. (2016: 198), due to the changes introduced by fencing:

Some *estâncias* gradually worked exclusively with fattening calves, other kept the full cycle of breeding and commercialization of animals, others mixed the two systems. There are *estâncias* where pastoralism is extensive, and others which have adopted the Voisin system, which is characteristic in that ‘in this case, it is the bull who chases after the man and not the man who chases after the bull’, and in which the horse is mostly absent; and there are those that mix the two models. The greatest difficulty, according to those land owners who have tried to adopt the Voisin system, concerns finding a suitable workforce for this sort of pastoralism, because most peasants do not adapt to work without the lasso and horse, without the need to violently dominate cattle: it is the traditional treatment of animals that employees miss most.

Another socially perverse effect of fencing has been the concentration of land ownership and the expulsion of occupants from common lands, which furthered rural flight and the formation of peripheral belts of unemployment or semi-employment in the border towns. Finally, fencing has also had negative ecological effects, leading to over-grazing and degrading the capacity for renewal of much of the natural grazing land, since *estancieiros* were forced to increase the number of animals per hectare to ensure a profit (Cruz and Guadagnin 2010).

According to Akrich (1987: 209), “one of the first operations carried out by a technical object is to define actors and a space”. She argues that this dispositive capacity of technical objects – in the very sense of *disposing*, organizing an ensemble of things – reveals its intrinsic political component, insofar as they are key elements in the stabilization of relations among humans and between humans and the environment. Applying these considerations to the phylogeny of the *alambrados* in the Pampeano landscape, we may conclude that their emergence reconfigured the formerly given relations between humans and animals by scheming in the replacement of the capture of free-range cattle by an increasingly intensive and technical form of husbandry; and those among humans, by consolidating relations between employees and employers through dichotomies such as honour/distrust, discipline/liberty, protection/precariousness, which continue to characterize these relations to this day. But how is an *alambrado* raised? Who are the subjects tasked with building them? Which knowledge and technical expertise is mustered every time a new fence is built?

Ontogenesis of an *alambrado*: the craft of the *alambrador* and its operational sequence

Having reconstructed the sociohistorical phylogenesis of the *alambrados* that chequer the southern prairies, I will now turn to the process of creating the structure itself, its ontogenesis as a technical object. To this end, I will focus on the craftsmen that constitute it, the *alambradores* (‘fence-makers’) and their work. Like other craftwork typical of the Pampas, the work of the *alambrador* is usually characterized as being ‘arduous’ – very hard work, riddled with setbacks and difficulties. Raising kilometres and kilometres of fencing across vast fields requires many days’ work, as well as exhausting travel, often in dreadful weather. In the Pampas, summers are torrid and winters are cold, submitting men and beasts to constant tests of physical endurance.

Alambradores are not generally employees of the *estâncias*, but itinerant workers who sell their trade via temporary contracts with landowners. In this they are similar to sheep shearers, known as *esquiladores*, who, during the height of wool production in Rio Grande do Sul and Uruguay, also had a similar work regime.

Both professions are in the wane, due to the new technologies increasingly present in rural properties, the disinterest of younger generations in *campeiro* trades and, more widely, the chronic crisis of southern livestock breeding, where pastures have been suppressed and substituted by agricultural and agro-forestry monocultures.¹⁰

A lot of the time they are called to work, *alambradores* go to properties only to fix stretches of fencing damaged by people, animals or simply by the natural wear and tear of decades of use. Sometimes, however, they are asked to set up new divisions, for which they are paid higher wages, and which often also involve bringing down older fencing. After everything has been arranged with the landowner, the team of *alambradores* starts to work. The terrain, the soil, the topography and hydrology are all surveyed with care, since one of the greatest virtues of an *alambrado* – for which it is valued by those who commissioned it – is its ability to set a straight and steady line across a surface that is not always regular or receptive to geometric lines. Great value is thus placed on how each line of wire is stretched out. A common analogy compares the *alambrado* to the strings of a finely tuned guitar.

Veteran *alambradores* tend to align the fences “by sight” (*a olho*), a skill they credit to accumulated experience and to transmission from fathers and grandfathers. According to a renowned *alambrador* from Alegrete, theirs is not a task that one “learns in a rural school”, but by “doing and building”. In the countryside of the Ibirapuitã Area, with its predominantly basaltic soils, there is an additional challenge: to break through the stone and set the *palanques*, the hardwood stakes that support the structure. The preferred wood for the stakes is *guajuvira* (*Patagonula americana* L.) and *angico* (*Anadenathera* sp.), procured and carved in the forested areas of the properties. Recently, Australian eucalyptus (*Eucalyptus* sp.), an exotic tree which is widely distributed throughout the Pampa, has also been used.

The most important *palanque* is the *esquineiro*, placed where two stretches of fence meet at a right angle, which is where the wires are tied and stretched. To set it, a hole three *palmas* deep (around 70 cm) must be dug. The stake is set in the hole, where it is kept stable by an aide known as the ‘pillow’ (*travisseiro*). The *travisseiro* is a piece of wood, somewhat smaller than the *palanques*, placed horizontally near the base of the *esquineiro*, where it is buried at about 10 cm depth.

A common supporting structure is the so-called *duplo canto* (‘double corner’) composed of a *palanque mestre* (‘master stake’) and *contramestre* (‘foreman’), *trava* (‘lock’), *morto* (‘dead’) and *rabicho* (‘tiny tail’). The *palanque mestres* and the *contramestres* are installed at a short distance from each other, and they are joined at the top by the *trava*. A ditch is then dug next to the *palanque mestre* where the *morto* is inserted – the *morto* is a large-gauge wooden stump on which the *rabicho* is set. The latter is a reinforced weave of various lines of wire which, when extended diagonally form the *morto* to the juncture of the *trava* and the *contramestre* keeps the latter secured to the *palanque mestre* (Fig. 2).

¹⁰ As I noted elsewhere (Sordi 2017), the population of the municipalities that compose the Ibirapuitã Area – Santa do Livramento, Alegrete, Quaraí and Rosário do Sul – has declined sharply in the last few decades. Furthermore, despite their regional identity being anchored in the *campeira* mystique, their rates of urbanization are very high. The countryside is increasingly considered “empty”, which is reflected in the complaint of rural landowners about the lack of a suitable workforce.

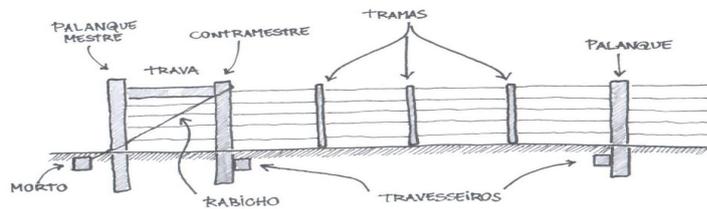


Figure 3: simplified model of an alamedado with double corners and its constituent parts.
Elaborated by the author



Figure 4: traditional alamedado with cantos duplos (double corners), Estância Renascença, Santana do Livramento (Rio Grande do Sul, Brazil), May 2016. Photo by the author.



Figure 5: Detail of a palanque. In the background we see the remains of a stone fence. Estância Renascença, Santana do Livramento (Rio Grande do Sul, Brazil). May 2016. Photo by the author.

When the corners are installed, the other *palanques* are fastened to the fence at a distance of 7 to 10 metres one from the other. The space that is thereby created is then filled with the *tramas*, slightly thinner, but equally hardy, pieces of wood, laid out in sets of four. Both the *palanques* and the *tramas* are previously perforated with a manual or electric drill to allow the passage of the wires, which cross them all until they reach the *palanque mestre* or *esquinaeiro*.

The number of wires in an *alambrado* varies from four to seven. Due to the prevalence of sheep farming in the Ibirapuitã zone, seven-wire *alambrados* are more common. Three men working at a regular rate can dismantle one thousand metres of old *alambrado* and raise one thousand metres of new *alambrado* within a week. This all varies, however, with the vagaries of weather, and the famously unpredictable atmospheric conditions of the Pampeano region.

In an hour, teams of *alambradores* set up camp next to the fence that they are building, and they move as their work progresses. As with other Pampeano craft, the tie between *alambradores* and those who hire them is always narrated and conceived in terms of honour and trust. Bornholdt (2010, 2016), however, observes that this way of construing matters tends to conceal the low wages and the almost complete absence of any sort of formal labour guarantee. As a bargaining tool, many *alambradores* recall the old bosses and their unfettered generosity – old bosses who are often the direct ancestors (fathers or grandfathers) of the landowner with whom they are negotiating. The success of this manoeuvre is nonetheless increasingly slight, which obliges the few itinerant *alambradores* left to conform to the conditions imposed by their hirers.

Furthermore, it is ironic that many *alambradores* today live in the precarious peripheral belts of border cities, which have largely resulted from rural flight, itself historically catalysed by fenced fields. In the 2000 census, the municipality of Santana do Livramento had 90,849 inhabitants; in 2010 it had 82,464 inhabitants. This is one of the highest rates of depopulation in Rio Grande do Sul. Equally indicative is the fact that, although Santana do Livramento is the second largest municipality in the state, only 9,78% of its population lives in rural areas, a rate that is similar to the municipalities of Rosário do Sul (12,11%), Alegrete (10,38%) and Quaraí (7,43%). In all of them, the percentage of people living in rural areas falls below the average for the state (14,9%) (Brasil 2000, 2010).

The *alambrados* and the architecture of domestication in the Pampa: between the control and autonomy of animals

We must now turn in greater detail to the role of the *alambrados* in the architecture of domestication that sustains the relations between humans and herd animals and landscape in the Brazilian-Uruguayan Pampa. In his classic article *Domestication des animaux, culture des plantes et traitement d'autrui*, Haudricourt (1962) proposes that we distinguish between the domestication systems of the Mediterranean and the Far East through the difference between “positive direct action” and “negative indirect action”. While western breeding regimes are characterized by the constant intervention and management of the movement and vital cycles of animals by the herdsman, the horticultural model prevalent in East Asia is based on the creation of favourable environmental conditions so that other living beings can develop according to their own rhythm.

More recent perspectives, however, have revealed that a great range of ways of relating can be maintained within the same context of domestication. For Stépanoff and Vigne (2019: 10), domestication “is not a homogenous reality but a variety of ongoing interconnected biological and social transformations which extend through a continuum of interactions between control and autonomy”. Anderson et al (2017) argue that different configurations of shared space between humans and non-humans enable mutual engagements that very often contradict one another, so that a corral or a cage can be interpreted both as *dispositifs* of control over animals, or as means of approximation and familiarization.

In agreement with what Anderson (2014) claims in an earlier article on reindeer herding in the circumpolar north, I propose that the skills required for herding work in the Pampas constantly shift between “cultures of reciprocity” (based on preserving the autonomy of animal agency) and “cultures of domination” (based on the imposition of human will upon other living beings). In other words, those who deal with animals in the Pampa develop skills that pertain both to the domination of and direct control over animals, and to their indirect management based on the manipulation of the affordances (Gibson 1979; Reed 1988) of the surrounding environment so that certain patterns of movement can be facilitated while others are avoided.

In this way, the *alambrados* play an important part in the indirect organization of animals, mainly by establishing the limits of grazing. It is worth recalling what Gell (1996) has to say about structures such as cages and traps: they are “surrogate hunters”; that is, material extensions of their cynegetic intentionality and working models of their venatic skills:

Once a trap is in being, the hunter’s skill and knowledge are truly located in the trap, in objectified form, otherwise the trap would not work. This objective knowledge would survive even the death of the hunter himself. It would also be (partially) readable to others who had only the trap, and not the animal lore that was reflected in its design. From the form of the trap, the dispositions of the intended victim could be deduced. In this sense, traps can be regarded as texts on animal behavior. The trap is therefore both a model of its creator, the hunter, and a model of its victim, the prey animal (idem: 27).

We may say something similar of the *alambrados* in a herding context. While in a model of positive direct action it is up to the *peão*, with the aid of dog and horse, to conduct and guide the movement of the herds, in a model of negative indirect action this function is delegated to the *alambrados*, which, in its material constitution, incorporates and “resonates” (in Lemonnier’s (2012) sense) rural workers’ knowledge of the *Umwelt* of animals. Figure 5 illustrates some of this process. It shows two *peões* conducting a troop of cattle along a rural road (*corredor*) in the interior of the Ibirapuitã Area, delimited by *alambrados* on both sides. This scene depicts an interaction between positive direct means of dealing with the herd, embodied in the act of conducting the troop on horseback, with a lasso and a whip; and negative indirect modes of relating to the same herd, inscribed in the landscape as restrictions on the autonomous movement of animals afforded by the fences.



Figure 6: peões conducting a troop of cattle. Serra do Caverá, Rosário do Sul (Rio Grande do Sul, Brazil). May 2014. Photo by the author.

As we saw in the previous section, by the disciplining the movement of herds through physical barriers inscribed on the surface of the landscape, the *alambrado* gradually rendered part of the *campeiro* workforce obsolete, in particular those tasked with capturing feral animals in open fields. It was against the sense of injustice instigated by this technical transformation that we must understand the peasant revolts against the *alambrado* in Argentina in the late 19th century (Beretta and Markoff 1978). Many of the contemporary *gaúcho* songs, which sing of rural flight and the ruin of traditional craft, are also nurtured by a melancholy caused by this same sense of injustice.

I mentioned earlier that one of the most common crimes in the Brazil-Uruguay border is cattle raiding. According to a survey carried out by Marlene Spaniol (2015), cattle raiding is the crime most commonly reported to the police in the region, accounting for 60,16% of crimes registered between 2012 and 2013 in Livramento (444 cases) and 67,4% of crimes in Quaraí (122 cases). The precarious nature of rural roads, the lack of proper policing, and the demand for cheap meat on both sides of the border contribute to these statistics, which authorities treat as an “endemic” problem.

It is hence worth stressing that there exists a technical continuity between “legal” and “illegal” activities in Pampeano herding, since the same ethological knowledge and pastoral skills that are employed to care for cattle are also used to raid them. In this case too we can refer to positive direct and negative indirect actions of animal raiding or contraband: indeed, along the border, it is common for the *alambrados* to be lowered, so that cattle will cross the border line of their own accord. In this type of misdirection, it is not the human being who herds and forcibly conducts cattle out of the property, but the cows themselves who, perceiving the affordance (Gibson 1979; Reed 1988) of the lowered fence, follow their desired path. In a way, then, the cow becomes the agent of its own theft; all that humans have to do is to propitiate the environmental conditions under which this theft can take place.

***Alambrados* and *alambradores* in times of wild boars: new risks and new possibilities for action**

Recently, the Pampeano *alambradores* have started to experience a new type of risk in their countryside undertakings: attacks by wild boars. These animals were introduced into Argentina and Uruguay in the first decades of the 20th century, for breeding and hunting. They became feral and spread throughout the southern cone of South America, composing, along the way, hybrid populations with other types of pig, both wild and domestic (Lombardi *et al.*, 2007). In Brazil, it seems as if the presence of wild boars is due both to spontaneous migration from Uruguay and Argentina and to isolated events of legal and illegal introduction of the animal in various parts of Brazil, in a process that began some three decades ago (Debert and Scherer, 2007). The region of the Ibirapuitã Area, which is only a few kilometres from one of the major points of dry-land transhumance in the Brazil-Uruguay border, emerged as one of the main vectors of animal penetration, as attested by the antiquity of the some of the reports I gathered during fieldwork.

Boars pose a risk to the *alambradores* who travel on foot, in small groups, across the countryside for long distances, and hence can run into females protecting their offspring or solitary males (*cachaços*) who can mortally wound a man with their sharp incisors. Since boars are nocturnal animals, chance encounters between *alambradores* and boars is attenuated by the daytime character of the former's activities. However, it is not uncommon for *alambradores* to run into large herds of feral pigs moving from one wooded area to another, or with *cachaços* resting in the woodland areas that sometimes lie in the path of new *alambrados*.

It is worth asking to what extent the proliferation of boars and the fear of encountering them has contributed to the decline of the *alambrador* trade, and the disinterest of younger people in the activity. As I have argued elsewhere (Sordi 2017; Sordi and Lewgoy 2017), however, the presence of boars in the fields of the south of Brazil are frequently a trope for evoking other problems that threaten the reproduction of a way of life tied to traditional herding, particularly that of the lack of a *campeiro* workforce, the replacement of areas of pasture for agricultural and agroforestry monocultures, as well as the presence of other exotic and invasive species such as the South African grass *Eragrostis plana* nees.

Nonetheless, the presence of boars has altered the material configuration of the fences. Many of the farmers of the Ibirapuitã Area have opted to electrify their *mangueiras* ('large corrals') and grazing areas, so as to keep wild pigs away from their herds and gardens. Likewise, the widespread belief that the appetite of feral pigs for newborn lambs will make sheep farming impossible in the long term leads many breeders to consider that the days of the seven-wire fence are numbered. In general, the fences have been deemed ineffective at containing the boars, which are able to nuzzle their way below the fences with ease. This evidently has an effect on the symbolic status of the *alambrado* as a material resonator of relations of property, resulting in many analogies and metaphors between the behaviour of wild pigs and the *modus operandi* of cattle raiders (Sordi e Lewgoy 2017).

In January 2013, the Ibama – Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (Brazilian Institute for the Natural Environment and Renewable Natural Resources) – published a Normative Instruction allowing for the indefinite slaughter of boars throughout Brazil. Thus, the administrators of the Ibirapuitã Area, who are linked to the ICMBio – Instituto Chico Mendes de Preservação da Biodiversidade (Chico Mendes Institute for Bio-preservation) – forged an alliance with landowners and local amateur hunters who had already started to manage boar populations of their own accord, even if in an unofficial capacity.

One of the main points of negotiation between State agents and local hunters concerns which techniques should be used to capture the boars. State agents sought to inhibit forms of hunting that they saw as being excessively violent or inefficient from an ecological point of view. The administrators of the Ibirapuitã Area have thus tried to convince rural landowners to invest in the construction of cages and corral-traps to capture the animals through food lures, and to thereby prevent landowners from delegating managerial tasks to *active chase* groups; that is, to hunters who chase boars across open fields and corner them with the help of hounds.

The corral-traps, also called *encerra* ('arrests') by analogy with the portals of livestock husbandry, consist of large and fixed capturing structures that are able to hold many animals at once. They are generally circular, constructed in a manner similar to the *alambrados* – that is, with wooden stakes, wire lines and screens. Needless to say, there remains a technical continuity between the knowledge and skill of the *alambradores* for raising traditional fencing, and those put into practice to construct corral-traps. Similarly, many structures originally built for *alambrados*, such as the *mangueiras*, have been actively transformed or adapted to trapping wild boars, conferring new uses on old structure and exploring new possibilities for action.



Figure 7: corral-trap for capturing wild boars which makes use of the corner of a former *alambrado*, Estância São Marcos, Rosário do Sul (Rio Grande do Sul, Brazil), August 2014. Photo: Ibirapuitã APA, ICMBio.

The preference of environmental managers for cages, however, is hardly consensual in the region, where many of the actors involved in management endorse the efficacy and pertinence of *active chase* strategies. Alongside the ecological-population arguments put forward by these advocates, there is the evident support of hunting as a sportive activity that is constitutive of a rural, clientelist and masculine identity. As shown by Ortega y Gasset (2007), and developed by Marvin (2006, 2010), sportive hunters do not set out to kill prey, but rather kill prey for having set out on the hunt – that is, for having partaken of an intensive immersive experience in the wild, one which sharpens the sensory-perception and heightens the emotional excitement that accompany the chase and encirclement of wild animals

According to explanations frequently put forward by environmental managers, in contrast, the upkeep of fixed cages and traps is a good strategy for involving landowners with the management of wild boars, instead of delegating species control to often unknown hunters, interested in the sportive aspects of killing and capturing animals. It should be evident that this is evocative of the imaginary surrounding the theft of animals and other “illegal” activities intrinsically linked to the circulation of strangers through one’s property,

as discussed earlier. From a different angle, the dichotomy between a type of capture that is based on directly chasing the animal and another characterized by the manipulation of its *Umwelt* so as to facilitate its capture, recalls Marvin's (2006: 222) distinction between hunting by disturbance and hunting by disguise. As he observes:

Although each form of hunting has its own unique social and cultural shape and can be distinguished by its particular hunting practices, I would like to suggest that all forms of hunting can be divided in one of the two types according to the ways in which their practitioners are present in the countryside. These I will define as hunting by disturbance and hunting by disguise, and in each category the relationship between the hunters and the prey are fundamentally different. In hunting by disturbance (...), the human presence in the natural world is clearly signaled and openly intrusive. In the case of hunting by disguise, the distinction between the human and the animal becomes blurred; the physical, behavioral, and emotional distance is closed.

As we can see, there is an approximation between, on the one hand, Marvin's (2006) distinction between hunting by disturbance and hunting by disguise, and, on the other, Haudricourt's (1962) notions of positive direct action and negative indirect action in relation to animals. Thus, just as the *alambrados* can be considered material resonators of the tension between the sedentary breeding and nomadic capture of cattle that has historically characterized Pampeano husbandry, the corral-traps and other fixed structures introduced by the agents of the ICMBio can also be interpreted as resonators of the negotiations between positive direct and negative indirect means of capturing boars, thereby reproducing, in the key of hunting, a set of asymmetrical relations and identity tensions that have long been a part of the pastoral world in the extreme south of Brazil.

As stressed by Bornholdt (2010, 2016), Beretta and Markoff (1978), and Pereira et al (2016), among others, the historical resistance of the *campeiros* to the more intensive methods of animal breeding – the start of which is marked by the emergence of the *alambrados* – is not a result of their simplicity, ignorance or aversion to the rational, but rather to their desire to retain a mode of subjectification and of the construction of masculinity that is necessarily tied to direct confrontation with animals and to shows of strength against natural elements. The same can be said of the support for the sportive hunt by advocates of the *active chase*. Through their rejection or mistrust of the corral-traps, they align themselves with a venatic subjectification which sees the boar as an opponent in a game, or as an adversary to be defeated in warfare, more than as a biological species to be managed.

Concluding remarks

In this article I have investigated the role of the *alambrados* and the *alambradores* who make them in the context of domestication and extensive herding developed in the Pampas of the Brazil-Uruguay border. To this end, I have used the concept of an “architecture of domestication” (Anderson et al. 2017) to draw attention to the importance of technical objects and environmental infrastructures in modulating and stabilizing the relations between humans and herd animals. By tracing the phylogenetic history and ontogenetic techniques of the *alambrado*, I have revealed its status as a “material resonator” (Lemonnier 2012) of the socioeconomic transformations that make up the Pampeano landscape and its set of human-animal relations, particularly the dichotomy between positive direct and negative indirect methods of animal rearing.

More specifically, I have underscored the importance of *alambrados* for the definition of “actors and spaces” (Akrich 1989) in the complex relational game that permeates daily life in the Pampas, even now, when pastoral activities are at a nadir. While, on the one hand, on the phylogenetic level, the fencing of open fields is an obstacle to a way of life and its associated skills, on the other, on the ontogenetic level, the knowledge associated with the construction, maintenance and use of the *alambrados* shows how new social configurations give rise to new skills and forms of existence, as well as different ways of relating to material things and the landscape.

Without neglecting the tragic aspects of changes in the labour regime introduced by the fencing of fields, I see the *alabrado* as a marker of the historical emergence of another way of domesticating the agency of its human and other-than-human inhabitants, one which is closer to what Haudricourt (1962) classified as negative indirect action.

Finally, turning to the contemporary biological invasion stemming from the proliferation of wild boars and their hybrids in the region of the Plata River, I have stressed the technical continuities that exist between the more traditional world of cattle and sheep herding and the newer world of boar hunting, both of them made intelligible by a study of the physical structures that arrange space and the actions carried out by the beings that inhabit it. Through the existing tension between *active chase* hunting and the use of fixed traps, I have proposed that we find, in relations to wild boar, a mirror of the same conflicts that have structured the social relations in the Pampeano region for various decades; conflicts that occur against the backdrop of, on the one hand, the organization of territory through unequal relations of land ownership, and, on the other, the coexistence of distinct (if not antagonistic) relations between humans and animals.

By raising the hypothesis that there is an echo between the structural tensions of herding and hunting, we evidently disturb the very definition of what hunting is, and what, at the end of the day, distinguishes it from relations usually included under the label of “domestication”. Is hunting a prelude to domestication? Is domestication a continuation of hunting in other terms? Is the difference between the two one of nature, of degree, or does it reflect an ethnocentric projection of western ways of classifying our relations with and to animals? This is, of course, a fascinating and contentious theme in anthropology (Ingold 1980; Descola 2002; 2005; Sautchuk 2016), to which this article has sought to contribute with historical and ethnographic data from a region in which these two worlds – cynegetic and pastoral – meet in a permanent state of contact, translation and friction.

Much like the idea of ‘culture’, the notion of ‘domestication’ possesses the paradoxical virtue of being, at once, a fundamental concept in anthropology and one which is permanently contested and asked to prove its heuristic use. In this article, I hope to have contributed not only to an understanding of the dynamic that gives form to the contemporary Pampeano taskscape (Ingold 2000), but, above all, to the more general development of an anthropology of domestication that can overcome its founding dichotomies, and provide new analytical instruments for understanding how humans and nonhumans build a common habitat. The anthropology of techniques, with its emphasis on the mediations made possible by technical objects and the gestures that animate them, seems to show us a fruitful way forward.

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Ceramic Production Technology among the Asurini of Xingu: Technical choices, transformations and enchantment

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Abstract

Several studies in the anthropology of techniques have emphasized that beyond their material and pragmatic aspects, technologies are social constructs that produce meanings. Moreover, technical processes mediate relations between persons (human and nonhuman) and things, as a mode of transformative and symbolic action for the (re)creation of the world. In this article my intention is to present an ethnographic description of the ceramic production technology of the Asurini do Xingu to show the intertwining of the technical choices with the principles and social, aesthetic and cosmological perceptions of this people about the objects, and materials, and their transformations.

Key words: technology; ceramics; technical choices; transformations; enchantment; Asurini do Xingu.

Tecnologia de Produção Cerâmica entre os Asurini do Xingu: Escolhas Técnicas, Transformações e Encantamento

Resumo

Vários trabalhos de antropologia das técnicas e da tecnologia têm enfatizado que para além dos seus aspectos materiais e pragmáticos, as tecnologias são constructos sociais que produzem significados, ou ainda, que os processos técnicos mediam relações entre pessoas (humanas e não-humanas), materiais e substâncias (tangíveis e intangíveis), como um modo de ação transformativa e simbólica para a (re)criação do mundo. Neste texto minha intenção é trazer uma descrição etnográfica da tecnologia de produção cerâmica dos Asurini do Xingu a fim de mostrar o entrelaçamento das escolhas técnicas com os princípios e percepções sociais, estéticas e cosmológicas, próprios deste povo, sobre os objetos e os materiais e suas transformações.

Palavras-chave: tecnologia; cerâmica; escolhas técnicas; transformações; encantamento; Asurini do Xingu.

Ceramic Production Technology among the Asurini of Xingu: Technical choices, transformations and enchantment

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Introduction

The Asurini have always been recognized for their refined aesthetic sensibility and ability to make beautiful things with a wide range of raw materials, including industrialized materials. The transmission of knowledge and cultural reproduction take place for the Asurini through the elaboration, use, storage and disposal of their objects. These actions allow them to reaffirm their worldview, think about themselves and re-elaborate their notions of identity and alterity (Müller 1990, 2002; Ribeiro 1982; Silva 2000, 2013).

Passing through their villages it is possible to observe a profusion of objects spread throughout the spaces for domestic and ritual activities and in the areas used for disposal. They are various objects produced with raw materials and techniques specific to the Asurini as well as those produced from the incorporation of non-Asurini raw materials and techniques. These objects are joined by those that are industrialized (Silva 2013). Among their productions, the ceramic vessels – which they call pot – stand out for their beauty and their social and symbolic importance. They have various formal shapes that correspond to their functions (for ex. cooking, serving, consuming, transporting and storage) – as indicated in the chart below – and some are carefully painted with a broad variety of combinations of motifs related to Asurini cosmology (Müller 1990, 1992; Silva 2000).

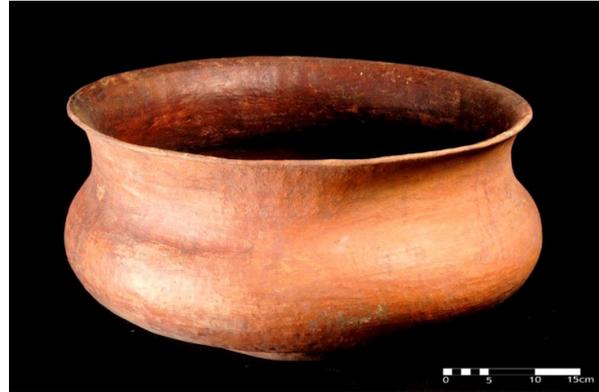


Each type of vessel is developed through a relationship between form, surface treatment and use. The *ja'é* vessel, for example, used to serve food, has a quite pronounced lip, and this attribute is always painted with the *ja'ekynga* (head of the *ja'e*) motif, to highlight it from the rest of the vessel that is usually painted with an infinity of other motifs. In this way, the *japepa'i* vessel, which is used for cooking, has a less pronounced lip, a more rounded formal shape and its outside walls are not painted (Müller 1990; Silva 2008) (Figure 1 and 1a).

Fig. 1. *ja'é* vessel (for serving)



Fig. 1a. *japepa'i* vessel (for cooking)



For the Asurini, all of the technical processes undertaken along the operating chain for the production of their objects have an aesthetic dimension; that is, they are also “aesthetic processes” (Barcelos Neto 2005/2006:369). As I will show in this article, in their ceramic production technology it is necessary to “make [the vessels] beautiful”, “smooth them beautifully”, “burn them beautifully” and “paint them beautifully”. Thus, functionality and beauty are inseparable and indistinguishable aspects in the Asurini concept of these objects. It can be said that for the Asurini, useful things must be beautiful as beautiful things must be useful (Müller 1990; Silva 2000, 2009a, 2013).

Some social aspects of ceramic production technology

The production of the ceramic vessels among the Asurini is an eminently female task, and the teaching and learning of the techniques is based on encouraging observation, and on the practical and repetitive exercise of making these objects. The teaching is highly regulated and involves verbalization and demonstration by the experienced potters of the technical procedures and of the results to be attained in each step of the production sequence, and the performance of the apprentices in reproducing each one of these procedures, along the entire operational sequence (Silva 2009b, 2010). Perception and action are at the heart of the acquisition of this knowledge, implying a corporal conditioning, the embodiment of the technical abilities (Ingold 2000); that is, a girl's body is transformed into the body of a woman potter. Learning to make “pots” fundamentally takes place within the domestic group, based on the transmission of knowledge and expertise from the older women (for ex. mothers, aunts, grandmothers, sisters) to the younger ones (Figure 2). This is a long process that takes place throughout a girl's childhood and puberty, and at times, continues into adulthood, when she is already married and has children. If a young potter leaves the maternal home after her wedding,¹ she will conclude her learning with the women of her husband's domestic group (for ex. her mother-in-law,

¹ Although uxoriolocality is the residence rule after marriage, young couples do not always continue to reside in the house of the woman.

sister-in-law, and her husband's grandmother and aunt) and, over time, participate in the teaching of her younger sisters-in-law. This network of social relations through which this technical knowledge is transmitted also delineates the objectives of this ceramic production.

Fig. 2. Kira'í learning to make a pot with her mother Muruka'í



The learning begins around 5 or 6 years of age, when girls begin to more systematically observe the pottery-making activities of the women in their domestic groups and to imitate their actions. A girl begins to acquire her abilities, by accompanying the collection of clay, painting miniature vessels – made by the older women for didactic purposes – and also by making their own miniatures based on which, over time, they learn to dominate the rigorous Asurini cannons of proportionality in the morphology of the vessels. As they acquire knowledge of the pottery production techniques, they also become familiar with the nomenclature and functionality of the vessels, and learn to develop their own work tools (for ex. smoothing tools made from gourds, vegetable and feather brushes and wood spatulas) and to collect and process the raw material.

The learning of pottery technology takes place in parallel with learning about activities in the gardens, gathering, food preparation, rituals and other techniques used to produce other objects that are female prerogatives (for ex. hammocks, baby slings, and cotton body ornaments). Complete command in ceramic production technology is normally attained at an adult age – close to 30 or more – and provides a woman social recognition. It is important to say that among the Asurini, the people most skilled in the production of objects are also those who have the most knowledge of the oral tradition and ritual performances, of social etiquette and subsistence strategies and are often shamans, and social or political leaders. Knowledge in these different aspects of life propitiate to them the status of adults, and certifies them as *awaeté*, truthful or genuine Asurini person.

The production process of ceramic vessels

The production process of ceramic vessels is conducted through an *chaîne opératoire* whose sequence of actions is shared and reproduced by all the women. To make ceramics, or, as the Asurini say, “*mapapira uapá*” (make pot) is an activity that they highly appreciate, whose technical procedures are realized with great interest and dedication and through a dynamic that is established among the precepts of the tradition of production² and their individual creative experience. All of this technical care results in *ikatu* vessels, that is, those that they consider to be beautiful, and that have functional, aesthetic, social and symbolic efficiency.

The sequence of actions that takes place along the operational sequence involves technical choices by the women. These choices, in turn, define the way that the Asurini make pots, their technical style. This technical style is understood as the processual dimension of the style and refers to the way that people realize their technical activities, that is, it relates to the choices that they make about the materials, techniques, tools and the way – sequential and or concomitant – that the technical actions should be conducted along the *chaîne opératoire* (Carr 1995a, 1995b; Hegmon 1992, 1998). In recent years, various researchers have sought to understand the relationship between technical style, identity and social boundaries, demonstrating that the difference or similarity between technical styles of different populations can be related to their social, linguistic and cultural similarities or differences, on local or regional scales (p.ex. Chilton 1998; Gosselain 2000; MacEachern 1998; Hegmon 1998; Haour et. al. 2010; Wiessner 1983). It has also been revealed that the visual characteristics of the objects (for ex. morphology, surface treatment, weave), and the technical knowledge needed to produce them, are both involved in the constitution of their social and symbolic meanings (for ex. Barcelos Neto 2008; Gell 1992; Gosselain 1999; Hugh-Jones 2009; Munn 1977; Silva 2011; van Velthem 2003; Walker 2009).

Therefore, the concepts of technical choices and technical styles are based on the premise that people have a range of opportunities and options available to them to learn their technical activities (Gosselain 1992; Lemonnier 1992, 1993). This implies understanding technologies to be a result of a complex inter-relationship between materials, energy, knowledge and the social and symbolic universe of human collectives (Pfaffenberger 1992; van der Leeuw 1993). Thus, by describing the technical choices and the technical style of the Asurini potters, I intend to demonstrate that their ceramic technology is not determined by the physical and chemical coercions or potential of the raw materials (for ex. clays, pigments, resins), or by the functional effectiveness intended for the vessels, but that it is the result of how the women apprehend the materials, the technical procedures and the ceramic vessels. My intention is to reflect on this Asurini ceramic production technology in terms of their interlacing with the social, aesthetic and cosmological principles and perceptions of this people about the world of objects and materials and their transformations.

The operational sequences and technical choices

In general, the operational sequence for pottery production follows some basic operations that are similar to those observed in other contexts of potters. It includes 1) selection and securing of raw materials; 2) preparation of the raw material; 3) manufacturing the vessel; 4) drying; 5) firing; 6) and finishing the surface³.

On the following pages I will describe this sequence of actions and techniques and to do so I will use as many photographic images as possible, which I hope can serve as a way to make this experience understood “to someone who was never there” (Samain 2006: 57). During my research about the Asurini ceramic technology I produced an archive of approximately 4,500 photographs (analogical and digital) which provide an account of

2 I understand tradition of production as a “shared dispositions guiding choices in the *chaîne opératoire* of production” (Dietler and Herbich, 1998:255).

3 The definition of this operational sequence resulted from ethnographic observation and interlocution with the Asurini potters, given that operational sequence corresponds to the way that they themselves order the actions needed to transform the clay into a ceramic pot. The description of the actions in the production sequence was realized through the perspectives of Myra Asurini, Parakakyja Asurini, Apirakamy Asurini and Wewe'i Asurini. They also defined the spelling of the lexicon of the ceramic production technology (Silva 2000).

this experience that is lived and shared among and with this indigenous people. The use of the photography was essential so that I could visually register the technical actions of the women and the various aspects related to the production contexts. In this way, I could analyze and re-analyze the technical processes beyond my fieldwork experience⁴. Therefore, the photographs serve as a technical instrument, a narrative resource and a research object - data. As various authors indicate, images are translations of ethnographic experience based on a certain view, and can acquire different analytical meanings (Banks and Morphy 1997; Edwards 2001; Ribeiro 2005). I understand that the images in this text are an essential part of my explanation, and at the same time, allow readers to accompany my narrative, or even to question it through their own look at the images.

Selection and obtention of raw materials

During my research (1996-2018), the Asurini women used three sources of clay (*jae'uma kwara*) to make their vessels. All were located close to the village, gardens and on the margins of the Xingu River – some 2km to 8km from the *Kwatinemu* village – and easily reachable by foot or boat. One of the sources of clay has been used since the beginning of the occupation of the *Kwatinemu* village in the early 1980s, because it has “good clay”, according to the Asurini. The other sources were abandoned some time ago, because “the clay is no longer useful” – in fact clay deposits can be depleted as they are used. It should be said that in their discourse the Asurini women do not indicate that a source of clay is chosen as a function of its proximity to the village, but in practice, the sources they use are nearly always close to their villages.

With each installation of a new village, one priority is to locate “a good clay” to make the ceramic vessels. Normally, the sources of clay are found during the incursions of men and women through the forest or the recently-opened planting fields, considering that they are always attentive to possible signs of this raw material. Those that I observed being explored are found close to the surface of the earth and were revealed by erosion or various bioturbations (for ex. close to a fallen tree with exposed roots, at an armadillo den, in a grotto or storm gully).

The “good clay” for making a pot has the following characteristics, according to the Asurini: “it is not sticky and stays firm for making the pot”; “it is smooth and has little dirt”; “it has the color of a pot”; “it does not crack when it is dried or fired”. Thus, each time that a new source of clay is discovered, they “experiment with the clay” to see if it has these qualities. They usually rub the clay between their fingers and chew it to perceive its texture and the quantity of sand and water (Figure 3). In addition, they take samples of clay to the village and make small vessels to check its performance during drying and firing. Therefore, the choice of a source of clay depends on the performance of this raw-material, according to the prerogatives of the Asurini women.

⁴ Over my twenty-three years of research with the Asurini do Xingu I have produced an archive of more than 15,000 photographs, which is the object of a project of curatorship and reflection about the uses of photography in anthropological and archeological research (Silva and Pellegrini 2019).

Fig. 3. Ipikiri collecting clay



From a mineralogical point of view it can be said that in the choice of clay the Asurini consider the plasticity, granulometry and the amount it contracts during drying and firing (Munita et al. 2005; Silva 2000; Silva et. al. 2004). All of the clays that present the qualities needed to be used in the preparation of the ceramic vessels are defined indistinctly as *jae'uma eté* (true clay). Clays not suitable for this use are known as *jae'uwyrîga* (yellow clay), *jae'upyrîga* (red clay), *itauatîga* (white clay), *jae'umuvi* (bluish clay; very plastic), *ityjuká* (white clay) and *jae'ujuva* (black, shiny clay).

The archaeometric analyses of the clays from different sources used by the Asurini reveal that they involve raw materials that are different in mineralogic terms, but that have a high and average concentration of sand and grains of quartz – characteristics that result from the process of sedimentary deposition of the clays⁵. One of the sources (source A) has clays belonging to the kaolinite and halloysite group and the other (source B) to the smectite and illite group (Silva 2000; Munita et. al. 2005). In the production of ceramic objects, these two groups of clays have general performance standards that are a bit different: 1) the clays of the kaolinite and halloysite groups (source A) have good plasticity, low contraction during drying and good performance when firing; 2) the clays of the smectite and illite group (source B) have materials that absorb and retain a larger quantity of water, a factor responsible for the high plasticity and increased probability of contraction during drying, and breaking during the firing (Rice 1987). What was interesting about this experiment was to find that in their practice the potters recognize the differences in the clays. They say that the clay from source B, although it is “good to work with” – i.e. malleable – was more likely to break during drying and firing the vessels. This source wound up being abandoned at the end of the 1990s, while source A continued to be explored in the following decades.

The selection of the clays and of the tempers is an essential procedure and always conducted with great care by ceramist populations, and it varies considerably, given that it is related to various economic, technical, social, political and symbolic factors. In the case of the Asurini, the selection of a certain clay is directly related

⁵ Thirty-five clay samples were analyzed with the following techniques: 1) Infra-Red Absorption Technique, by Prof^ª Dr^ª Maria Tereza Nóbrega, Geography Department, Universidade Estadual de Maringá; 2) Neutron Activation Analysis, by Prof. Dr. Casemiro Munita, of the Instituto de Pesquisas Nucleares (IPEN), São Paulo).

to the fact that women do not intentionally employ any type of antiplastic (temper)⁶ in the ceramic paste. It is inconceivable to them to add any substances to the clay, because this would mean “dirtying the clay” which in their perception must be clean from the impurities that it contains (for ex. organic material and stones). Therefore, the clays that they use usually have a high and or average concentration of sand and grains of quartz, given that these materials act as a natural hardeners, regulating the characteristics of plasticity and extensibility of the clay. What is important for the Asurini in the process of selection of sources are the performances of the clays, more specifically, how they behave during the operational sequence of production, that is, “the clay is good for making pots”. For the Asurini, only after experimenting with the clay can it be said that it is *jaé’uma*, that is, “that which will become *ja’é*”, a pot.

In his reflections on materials and materiality, Ingold (2011a, 2011b) proposed that the “active properties of the materials” should not be identified as fixed attributes, but as processual and relational stories to the degree to which they are neither objectively determined nor subjectively imagined but experienced in the very practice of working with the materials. According to Ingold, the material is in movement, in flow, in variation and the artisans follow the material, they are itinerants, guided by the “intuition in action”. The Asurini potters appear to collaborate this concept, because they exalt the qualities of the clays and define the sources to be explored through their sensorial experience with these raw materials. That is, the properties of the clays reveal themselves through touch (sticky/not sticky), sight (color of the pot) and palate (smooth/dirty). They recognize the active properties of the clays based on that which the clays do, and not from what they are in an intrinsic way. For this reason, different clays – from a mineralogical perspective – can be *jaé’uma*. It can be said that in Asurini thinking, the clay is a living thing that has subjectivity and intentionality, given that this becomes clear in various steps of the operational sequence as I will show further on. So much is it alive, that it needs to be killed (*aajuka*), crushed, (de)subjectivized to be able to be transformed into a ceramic pot.

In terms of the form of exploration of the sources of clay, this is done indistinctly by all the women who share this task in three different steps: *jaé’uma katy’aa* = looking for the clay; *jaé’uma aak* = removing the clay; *jaé’uma aerut* = transporting the clay. The clay is removed with the assistance of a digging stick and during the operation they eliminate the excess stones and organic material that may be present. When the men find a source of clay during their incursions through the forest they eventually bring a small sample for the women to determine if “the clay is good”. When the source is close to the village the women test the quality of the clay *in situ*. The baskets used to transport the clay from the source to the village are of the “poteiroforme” (*pyrywytiga*) and “jamaxim” (*manakutiga*) types and the quantity varies according to the pretensions of each woman. They rarely stock a large amount of clay in the village, given that the reutilization of clay after it dries requires a relatively laborious process, according to the potters.

Pregnant or menstruating women should not “remove the clay”, because it “becomes ruined” and the vessels can crack or break during the drying or firing. Nevertheless, they may accompany the other women to the place of the clay, observe its extraction and later, help to transport it to the village; but they should not touch the clay.

As was demonstrated by various authors, for the different indigenous peoples of the Amazon, the meaning of certain substances, fluids and altered states of the body are related to their conceptions of corporality (for ex. Seeger et al. 1987). In relation to menstrual blood, this can be associated to notions of impurity, danger or interdiction and there are various mythical stories that link the origin of menstrual bleeding to incestual sexual practices. Menstruation is also related to other transformational processes of the body of women such as conception, gestation and post-partum bleeding. Normally, pregnant or bleeding women interrupt their execution of some daily tasks, observe sexual abstinence and avoid consuming certain foods (Belaunde 2006).

⁶ In some bibliographies the word temper is used to define a hardening agent that was intentionally added to a ceramic paste, in contrast to a natural hardener found *in situ* in the clay deposits (Rice 1987).

In the Asurini case, the origin of menstruation is related to the myth of *Jaytitá* that refers to the theme of incest and the dangerous consequences of this act for humanity. In the myth, *Jaytitá* wants to have sexual relations with his sister *Arimajá* who rejects him and through a ruse paints *Jaytitá's* face with jenipapo. Ashamed, he decides to abandon the world of humans and rise to the sky, accompanied by his relatives. Using a cord made of arrows they rise, and as *Jaytitá* goes higher he throws arrows back to earth, which dangerously hit the ground and enter the underground world. Those who remain had to be careful not to pull out the arrows, because if they did the world would be flooded by subterranean waters. When he reached the sky *Jaytitá* became *Jay* (moon), and warned that his face should not be seen, because this could cause evil. However, on the full moon women looked at *Jay's* face, and for this reason began to menstruate (Müller 1990:334-335).

For the Asurini, the menstrual blood is perceived as a substance that can be harmful for those who contact it, particularly men. Moreover, menstruation and pregnancy are physiological processes that require that women care for their bodies. In relation to conception and pregnancy, the woman's blood is seen as a substance complementary to semen in the formation of the fetus. According to the Asurini, various sexual relations are needed and various transfers of semen for a good formation of the fetus. The woman's blood is the substance that nurtures the fetus, while the semen is the substance that forms the fetus. Thus, menstruating and pregnant women, in addition to not removing the clay also, eventually, avoid working with the clay, because they say the ceramic vessels are often damaged. In addition, they do not eat "stronger" meat (for ex. tapir, paca), they do not have sexual relations with their husbands and abstain from planting corn.

Ceramic technology is a theme that is very present in the Amerindian cosmology and is normally associated to the mythical stories about the genesis of the world and the creative acts of the demiurges. In addition, the clay, because its origin is related to the transformational processes and creative actions of these beings, has its manipulation involved in care, precepts and prohibitions (p.ex. Lévi-Strauss 1986). Like other materials, it can also manifest the moods, behaviors, and therapeutic and or pathogenic powers of its "owners" and present certain properties that define its efficiency, potency and agency (p.ex. Barcelos Neto 2009; Bealunde 2017; Fausto 2008; Silva 2011; van Velthem 2009).

In Asurini cosmology, bees (*jautipitá*) are the "owners" of the clay, and they fly over the clay deposits and the clay sticks to their feet. According to the Asurini shamans clay was created by *Maíra* – the demiurge creator of humans, and of all things and techniques – but it was the beetle (*mamygá*) who showed this material to the *bava* (ancestors), pushing it from underground to the surface.

Handling clay is the prerogative of the Asurini women, while the men also come into contact with it in a few situations of daily life and ritual life. In different Amazonian populations a relationship between gender and certain objects, substances or raw materials can be noticed (p.ex. Silva 2011; Londoño 2012). For the Asurini, the clay is eminently associated to the feminine gender; "it's a woman's thing" according to the Asurini men.

Preparation of raw-material

The process of preparation of the raw material is relatively simple and the first operation is defined with by expression *ja'e uma aajuka*, which can be translated as "to crush or kill the clay". It involves kneading the clay while it is still moist, hitting it with a stick and later with their fingers and removing its impurities, such as, leaves, roots and stones (*ita aak* = remove stones). They continue to make a pile of the processed clay until they reach the amount needed to make a vessel (Figure 4). When they process a clay that is already dried because of its time in storage, the work takes longer. They grind the stiff clumps of clay and then pass it through a sieve until it becomes like a fine sand. They then rehydrate the clay and begin to knead it with their hands until it reaches the desired extensibility.

Fig. 4. Tapira preparing the clay for it to become “smooth” without dirt



In various contexts of potters the preparation of the clay involves the addition of antiplastic (either mineral or organic), which can have different pragmatic, social and symbolic reasons according to the local context (Arnold 2000; Arthur 2006; Dietler and Herbich 1989; Miller 1985). In the case of the Asurini, as was previously described, there is no intentional addition of antiplastic in the paste considering that the clays are chosen to the degree to which they correspond to the needs of the production process.

Preparation of the vessel

The technique used for preparing the vessels (*japepa'i apa* = making a cooking pot) is called coiling,⁷ given that the first operation realized by the ceramist is the production of rolls. They place a portion of clay on a piece of flat wood (*ipe*) and roll it with their hand to produce a coil (*jae'uma amuema* = roll the clay) (Figure 5). They then coil one of the coil on the palm of their hand and prepare the base (flat or rounded) of the vessel (*apyyk pyyk* = grab, seat; *amamyn* = join). The vessel is always begun from the base that at times may be pinched instead of coiled (Figure 5a).

Fig. 5 and 5a. Tapira making the coil and preparing the base of the vessel



⁷ According to La Salvia and Brochado (1989:11) the coiling technique is constituted in the “use of coils of clay that are placed on top of each other, to form the intended shape”.

Coils are added to the base to gradually form a cone that initiates the body of the vessel (Figure 6). Later, it is placed on a wooden board called *yvyrapyrera* and coils are placed on top to complete the body of the vessel (*jae'uma amamyn eraka* = add the clay that is already made). All types of vessels are prepared from this initial conical shape to which coils are added and expanded until they lead to the desired form. The *jape'e*, which is the vessel used for toasting flour, is the only one that is not made on the *yvyrapyrera*, but on a circular base that is dug into the ground, whose size will determine its diameter (Figura 6a). As the women place the coils on top to form the body of the vessel, the women join them with their fingers, to do the initial smoothing of the outside and inside surfaces of the vessel (*amamyn apiwuyim; apuy piwu* = passing the fingers to join, in the sense of smoothing with the fingers).

Fig. 6 and 6a Tapira making a *jape'e* used for toasting flour



After this, they use a tool made of a gourd to attain a finer smoothing of the surfaces (*kuia pywu aka ikatuaka apiree* = with the broken gourd beautifully smooth the pot) and produce the formal shape desired for the vessel (Figure 7). They usually place a few layers of coils and then smooth them together, and then add others, and once again smooth them with their fingers and with the gourd, and so on, in succession until completing the body of the vessel (*a'amuapepug* = widen and expand the body of the pot). The smoothing tool the women make from a gourd, (*kutiape*) is essential not only for good smoothing and to define the formal shape of the vessel but also to finish its bottom (*ekara akatuaka* = fit, leave the bottom beautiful) and smooth its external and internal surfaces. All of these steps are slow and require care, skill and patience.

Fig. 7. Maya carefully smoothing a *kumé* vessel used to serve food



In the mythical stories about the deeds of *Maira* there is a passage in which the demiurge modeled the body of his son *Kyty*, smoothing his skin (*apiree*) so that he becomes beautiful. In the Asurini language, the word for skin is *pirera*, and when the women smooth a vessel (*apiree*) they refer to this production step as “smoothing the pot like our skin”. The term *apiree* is only used to describe this step in pottery making, because in other situations the word *amukavut* is used to mean smoothing in generic terms, in the Asurini language. Therefore, for the Asurini, to smooth a ceramic vessel and carefully finish it relates to the mythic narrative about the perfect and beautiful elaboration of the body of *Kyty* (Silva 2000).

After the smoothing step is finished and the final shape is given to the vessel, the potters smooth and finish the vessel’s surfaces and the lip (Figure 8). To make the vessel lip quite thin they remove small portions of clay with their finger tips (*eme akatuak* = refine, fit the mouth) and in parallel, smooth the lip with their fingers moistened with saliva (*eme rupi apuyup* = pass the fingers on the mouth of the vessel) to give it the final finish that, in most cases, leaves it rounded. Saliva is used during the entire process of smoothing the vessel and is considered a substance that helps make the vessel prettier (*ikatuakunume ae uendy umuy* = embellish, fit with saliva). According to the Asurini “the saliva moistens the clay very well, because the water gets it very moist” or, even, “the saliva leaves the pot with a more beautiful smoothness”. It should be mentioned that in the act of passing saliva to smooth the vessel, they also smear their mouths with clay and wind up ingesting some.

Fig. 8. Tapira finishing the edge and lip of the *jape’é*



According to Müller (1990:183), among the Asurini, saliva is a feminine substance “that gives origin to the main manifestation of the vital substance”, that is, the fermented porridge that is consumed by shamans, supernatural beings and *kairau* (initiates) in the rituals. Therefore, the use of saliva to make the ceramic vessels can be understood as more than an aesthetic issue, and is also related to the transformational processes of the ritual performances and with the perception of foods in general as a “vital substance” for the constitution of a person.

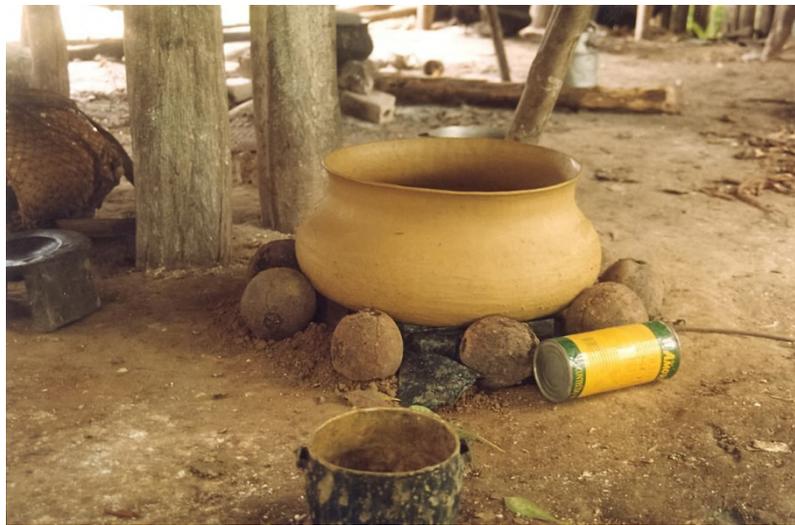
Some women abstain from eating and drinking water during the process of manufacturing the vessel, because they say that if they do “the pot does not dry correctly”. In addition, they avoid “passing gas”, considering that “the clay of the pot cracks when a woman farts”. Others stop work to make the meals, or to conduct their domestic tasks and care for the children. Women who have small children are less dedicated to making the ceramic vessels.

When asked about who had taught these manufacturing techniques to the *bava* (ancestors), the Asurini mention the myth of *Tauwuma*, which concerns the origin of the *Tauva* ritual that relates to the themes of war, the initiation of youth and death, and that has part of the rites conducted by women shaman. *Tauwuma* is a woman who abandoned the world of the humans and was transformed into *Tauva*, after her brother killed her “boyfriend” (tapir-man) to whom she served porridge in clay pots, whenever they had sexual relations. In the mythical narrative she, together with the bees, (owners of the clay) and *tapiti* (female-rabbit) go to look for clay to make the pots. According to the Asurini, it was *tapiti* who taught *Tauwuma* to make all the types of pots. Some Asurini also say it was *Anumaí* whose legacy to them was the knowledge of ceramic technology. She was the sister of the primordial shamans and the first *uirasimbé*, owner of the porridge in the mythic ritual performances. At a certain time when *Anumaí* was cooking the porridge in a *japepa’i*, and the shamans were conducting the ritual songs and dances, *Tapijawara*, a monstrous being, emerged furiously from the underground world. Reacting to the attack of the *Tapijawara*, *Anumaí* threw her ceramic vessels at his head, and they broke, leaving only sherds spread on the ground (Silva 2000).

Initial drying

After a vessel is in its definitive form it is placed to dry in the shade (*aruyga neiteni utuwiramu* = dries in the shade). The drying time is proportional to the size of the vessel and varies according to the season of the year and the weather conditions. In the rainy season, a vessel can take from three to five days to dry and in the dry season one to two days. Normally, the potters dry the vessels inside their homes or in adjacent structures, far from the reach of animals and small children.

Fig. 9. *japepa’i* vessel drying in the shade in a domestic space



The position for drying the vessels depends on their morphology. The vessels *yawa* and *pupijekanawa* are placed with the overture diameter on top and this causes their body to expand during the drying. The *japu* vessels dry upside down and in this way the neck is set better on the rest of the body of the vessel which, in turn, does not expand as much. The *jape’e* are dried in the same place as they were made, because it is a large vessel that breaks easily when handled when it is still moist. The types of vessel that have extroverted overture diameter (p.ex. *japepai*, *ja’e*, *ja’eniwa*) dry with the overture diameter on top or upside down. The large vessels with rounded bases dry with the overture diameter on top and the bases placed on supports (for ex. Clothes, Brazil nut pods or small clay balls) which leaves them balanced and not touching the ground (Figure 9).

Some potters place a damp cloth on the vessels so that they dry more slowly, to avoid cracking. In addition, while the vessels dry, they improve the smoothing of their outside and inside walls, with a small *inajá* coconut (*inataia'pina*) or a smooth stone (*itakuy*). They rub these tools against the surfaces as the clay hardens (*inataia'pina iatajykame apiree* = smooth the pot with inajá coconut while it hardens). This process also relates to the myth of *Kyty* in which there is a passage that describes that while *Maíra* smoothed his skin, he could not move, that is, he had to keep still until it hardened. The Asurini say that his is also how it is when making a clay vessel, “it grows and is smoothed and adjusted until it hardens” (Silva 2000).

The drying causes a retraction in the clay that can may cause small cracks that are repaired with the application of more clay in specific locations. The Asurini usually say that by passing the tiny coconut, and smoothing the vessel while it dries, it is possible to know the right moment to place the vessel on the fire for the final drying.

Final drying or pre-firing

After drying for a few days, the vessel is placed close to the fire or over coals to become completely blackened by the accumulation of soot (*tata pywu amuun* = darkened by fire). Generally, they use the fire and coals from the place where they are cooking. This technique helps to complete the drying of the clay and according to the women is used to “leave the pot hot so that it will not break in the large fire” (Figura 10).

Fig. 10. *jape'e* vessel made by Tapira, drying on the coals



Firing

After it is totally darkened, and preferably still hot, the vessel will be definitively fired *apy pame pywu* (fire with a palm spathe). The Asurini prefer to fire the vessels in places farther from their homes, where fewer people pass by and there are fewer objects. Some women say that “the clay does not like noise and the vessel can break if there is a lot of commotion around the fire”.

The firing is done outdoors and this technique is known as firing in oxidizing atmosphere, and is common among various populations of potters (Figure 11). It is a relatively simple process from an operational perspective, but complex in terms of the control of the variables and results. In the case of the Asurini, it begins with placing the vessels on a circular structure of bricks or pot sherds, together with a pile of embers. The vessels are then covered with *babaçu* palm spathes or barks from various kinds of trees, such as: *anygirãna* (sucupira), *jayva* (castanha-do-pará), *maritauyva* (surucucu), *jayridi* (jarana-mirim), *akutitiriwayva* (cutite),

jayrana (jarana-mirim), *iwipekatinga* (pacovi), *ywitiryva* (mata-mata), *murureyva* (pé-de-bucha), *jeniparidyva* (jenipapo bravo) and *iagyva* (amarelão); most of which are quite resinous woods that reach high temperatures when burning. The firing varies from 20-50 minutes and can reach temperatures between 500°C to 800°C, according to the variations in weather, air temperature, number and size of the vessels (Silva 2000).

Fig. 11. *jape'e* made by Tapira nearly completely fired



This is the most critical phase of the operational sequence of production for the Asurini women, because all of the previous work will be lost if the firing is not successful; that is, if the vessel breaks, cracks or has many fire-clouds. They refer to this step as *apykatu'yva* (that which makes it pretty). Normally, they fire the vessels in the late afternoon, which they say avoids unexpected gusts of wind and the temperature is more moderate). A proper firing in the concept of the Asurini is that which results in vessels that have no cracks and whose surface is totally clear, without carbonization marks. This is so important that some women come to fire the vessels again if they have dark stains on the surface. They say that these vessels “did not burn prettily”, an expression that is also used in other situations of daily Asurini life, like when burning the gardens or burning a trunk to make a canoe (Figure 12).

In Asurini cosmology the fire is a transformative element that was acquired by humans through the intermediary of *Uirá* (bird-woman). She took the fire from her brother the king vulture and took it to cook porridge for *Ajaré*, the only human who survived the flood caused by the monstrous *Tapijawara*. During the narrative, the king vulture became angry with the theft of his fire, but winds up teaching this technique to *Ajaré*, and thus, the fire became a property of humans (Müller 1990:341). In their daily life, the fire transforms the wood into a canoe, the brush into a garden, and animals and plants into food. In ceramic technology, it transforms the clay into a vessel, given that this transformation should involve beauty (for ex. an absence of cracks and carbonization marks). In the rituals, the smoke is the means by which the shamans can travel and access other cosmic domains and meet with the supernatural beings that provide the *ynga* (vital principle) to humans.

Fig. 12. *japepa'i* vessel that “did not burn prettily”



Surface finishing

The surface finishing is conducted in three steps: painting, the application of resin (*jutaika*), and the application of *titiva* (resin from *inga sp*), depending on the function of the vessel. Vessels that go to the fire are not painted, but receive the application of *titiva* on their outside and inside surfaces. Vessels that do not go to the fire are painted on the outside, they receive *jutaika* on the outer surface and *titiva* is applied on the inner surface.

The painting (*japepa'i juak* = paint *japepa'i*) begins with the preparation of the mineral pigments in the colors yellow, red and black (Figure 13 and 13a). The yellow (*itaua*) and red (*itauapirygi*) pigments are constituted from the iron oxides (goethite and hematite), and the black pigment (*itaudi*) from manganese. To produce the pigments, the minerals are rubbed directly on a large stone called *itauamugyawa* – a stone anvil – and mixed with water. These materials are collected by men in their incursions through the forests and are found randomly on the ground or in specific deposits.

Fig. 13 and 13a. preparing the yellow (*itaua*) and red (*itauapirygi*) pigments



After producing the pigments, the women apply the yellow pigment to the entire surface of the vessel using cotton wadding (*amyniju*). The yellow pigment is the base for the motifs that are painted with the red and black pigments. Three types of tools are used to apply the motifs: a mutum feather (*muturuaja*) for the fine lines, and babaçu or inajá stems (*pina'wype*) and a plant stalk (*jupuywa*), for the thicker lines (Figure 14 and 14a).

Fig. 14 and 14a. applying the yellow pigment and painting the *tayngava*



When the mineral pigments are dry, the women pass jatobá (*jutaika*) resin on their outside surface. First, they clean the outside part of the resinous agglomerate (*jutaika akatuak*= prepare the *jutaika*) and place a piece of resin in a wooden fork (*ywyrawaka*= cracked stick). They heat the vessel (*amukup mapapira* = heat pot) and pass the resin, which melts upon contact with the surface of the vessel, varnishing it (Figure 15). The finer the layer of resin, the better will be the surface finish and this requires skill from the potter. As they pass the resin, they smooth it with a spatula made with the stem of a babaçu palm (*pina'wipe*). This step is called *akatuaka pina'wipe pywu* (fit, make beautiful with the palm stalk). While they pass the resin they should avoid eating, drinking, urinating or defecating. They say that these actions can cause the resin to harden and not spread with the perfection desired for the surface of the vessel.

Fig. 15. Passing the resin (*jutaika*) on the vessel



After this step is concluded they pass the *titiva* (resin from *Inga sp*) to “make the pot pretty inside and outside”. They scrape the inside of the bark of the trunk of this tree (*akay titiva* = scrape *titiva*), removing the fiber impregnated with the resin, and as if it was a sponge, they rub it on the inside and outside surfaces of the vessel (*mungavamu titiva mapapira* = pass *titiva* on the vessel) – the resin is only applied to the outside to the vessels that go to the fire and are not painted (Figure 16 and 16a). As can be observed, this resin serves both to embellish, giving a shiny finish to the surfaces, and to seal the vessels – like a layer of Teflon. According to the Asurini, a vessel without the application of the *titiva* cannot be used for cooking or holding food. In practice, it is seen that without this layer of resin food sticks easily to the internal surface. Moreover, a vessel without *titiva* is considered to be poorly finished.

Fig. 16 and 16a. preparing the *titiva* to be applied on the internal surface of the *kumé* vessel



Painting reveals or highlights the different parts of the body of the vessel. This production step is the moment in which the creativity of the potters is exercised in full (Figure 17). The great variety of motifs allows the women to make different combinations of them. Thus, they paint the vessels either with a single motif, or with various motifs, producing a highly diversified and very particular repertoire of vessels.

Fig. 17. Ceramic vessels with different combinations of motifs



As Müller demonstrated (1990), the Asurini graphic art is constituted from a variety of combinations of geometric motifs (for ex. zig-zags, diamonds, straight lines, crossed lines, curved lines, diagonal lines, points, triangles), while most of these combinations include a structural pattern known as *tayngava* – characterized by a 90° angle. *Tayngava*⁸ has been translated as “human image” and this is the name given to the anthropomorphic doll made with vegetable fibers used in the *mburaai* ritual and that is hung in the *tukaia*⁹ during the ritual performance. The *mburaai* is a propitiatory and therapeutic ritual in which, based on the agency of the shamans and the consumption of the porridges, the *ynga* (principle/vital energy) is shared among the beings (humans and non-humans) of the Asurini cosmos (Müller 1990, 1992). Müller (1990:232-251) emphasized that the use of the anthropomorphic doll (*tayngava*) in the *mburaai* ritual allows understanding that in the Asurini cosmivision, human image (*tayngava*) and the principle/vital energy (*ynga*) are interlinked and that both are constitutive of being. That is, there is a correlation of meanings and a similar semantic use of the words

8 The etymology of the word *tayngava*, in comparison with other languages of the Tupi-Guarani linguistic family, allows identifying the following elements: *t* = a relational prefix that indicates generic human possession; *ayng* = from the transitive verb *a'yng* from the class “*ia*” to immitate; *av(a)* = suffix nominalizing of circumstance + argumentative case. Thus, *ayngava* is understood as “resulting from an instrument for imitating, or a place for imitating, or imitation”, given that this imitation can be functional, that is, in the sense of “being in the function of” or “that is in the place of” (personal communication Ana Suelly Arruda Câmara Cabral 2015).

9 The *tukaia* is a structure made of a plant material that serves as a hideout a hunter uses in the forest while watching the prey. In the *mburaai* ritual this structure serves as a “hideout” for the supernatural, and has different designs, according to the being that must be hidden (for ex. *tivá*, *apikwara*, *arapuá*, *tajaú*).

tayngava (human image) and *ynga* (principle/ vital energy): *ynga* is the substance that constitutes the living beings (humans) /undivideds and that are different from those who do not have it, that is, who are *añynga*, beings (non-humans, dead) who are absent/divided; as human image, *tayngava* refers to living beings (humans) /undivideds who possess *ynga*. In addition, according to the author, in graphic art, the *tayngava* pattern reveals the link between the different domains and beings of the cosmos – a single motif can be called *tayngava* and *javosifafera* (jaboti paw), *tayngava* and *tembekwaropitá* (the base of the lip ornament), *tayngava* and *jagivaky* (branch of the *jagiva* tree), *tayngava* and *tayngava eté* (true) – and relates to the ontological principle that the human is the image of the being.

According to Asurini cosmology, humanity obtained the patterns of the graphic arts after the encounter of the mythic ancestral *Añyngavuú* with the supernatural *Añyngakwasiat*. *Añyngavuú* had secretly reproduced in the weavings the graphic designs found on the body of this supernatural being and had taught them to the ancestors who passed them on from generation to generation (Müller 1990:252-253). These motifs were reproduced on the pottery, woven items, gourds, corporal adornments and body painting.

As various studies have shown, in the Amerindian theories about materiality, objects can be simultaneously persons and the objectification of subjectivities, of social relations, or even of non-material intentionalities (Santos-Granero 2009) and “their very existence indicates the presence (real or potential) of the Other” (Barcelos Neto 2008: 29). In the case of the Asurini, the motifs painted on the ceramic vessels refer to the mythic being *Añyngakwasiat*, they reproduce his image/body and in this sense, the ceramic objects reaffirm the principles of Asurini sociality and are themselves as persons.

Spatial context of the production of ceramic vessels

Among the Asurini there is a prescription in the use of space in the village to keep more or less demarcated the places related to collective activities (for ex. ports, the ritual space, *tavyva*, the indigenous association, football fields, a school, flour mills, pharmacy, FUNAI structures) and those related to the activities of the domestic and residential groups (for ex. residential units, domestic structures, yards, garbage sites). This spatiality defines a taskscape (Ingold 1993) in which various activities combine and overlap and whose temporality is eminently social and resides in the web of inter-relations between the multiple rhythms of Asurini life. In this dynamic of social life, the activities of production, use, storage and disposal of objects and food – which are defined by the prerogatives of gender – are all realized in the places destined for domestic activities. These places tend to be multifunctional to the degree that various actions are realized in them, concomitantly or over time. In addition, these places are either abandoned, or transformed into other places and this takes place through the rhythms of Asurini life as well as the seasons of the year (for ex. the areas of activities are abandoned or redimensioned in the rainy season and in the dry season). Thus, the places have different dynamics and meanings during their uses (Silva 2000, 2008).

In relation to the production of ceramic vessels, the women normally conduct the activities of preparation of the raw materials in the yards between the residential units, or in the structures for cooking and storage. The preparation of the vessels, in turn, takes place both in the yards, and in the structures for cooking and storage, and in the residential units themselves. The activities of painting and applying the resins are conducted in yards, domestic structures, and depending on the light, inside residential units. The application of jatobá resin (*jutaika*) is usually conducted by taking advantage of a cooking fire, and preferably, in the first hours of morning when the temperature is more amenable. The firing of the vessels is an activity conducted in the yards, farther from residential units, in areas with little circulation of people, and nearly always in late afternoon. All of the raw-materials and tools needed to prepare the vessels are stored inside the residential units (for ex. pigments, resins, tools) and in the yards or domestic structures (for ex. clay, tools).

All of the steps for producing the clay vessels are conducted in the same places as and concomitantly with the various other daily domestic activities; that is, there are no places specifically destined for the production of the ceramic vessels as there are in other pottery-making contexts. Thus, the spaces where pottery is made can also be used for the preparation, consumption and stocking of food, to do body paintings, and for manufacturing various other objects (for ex. baskets, stools, corporal ornaments, hunting tools, etc.). At the same time, ritual performances are also conducted in these spaces (for ex. *mburaai*). In this multifunctional dynamic of the places destined for domestic activities, the potters momentarily define specific spaces for pottery making. Nevertheless, they must always be attentive to the movement of people and especially of children who often destroy, in just seconds, a recently made vessel – a fact that is accepted naturally and becomes a pretext for them to begin again (Silva 2000).

Producing clay vessels and (re)producing bodies

For different Amazonic indigenous peoples, there is a correspondence between objects and bodies. Thus, objects can be like bodies or parts of bodies, and bodies can be like objects (for ex. Lagrou 2009; Hugh-Jones 2009). In this correlation (object-body ↔ body-object) it is perceived that the concepts of fabrication, the definition of the constituent parts of objects and in the same way, their decorative cannons, follow principles similar to that of human bodies. In the Wayana ontology, for example, objects are manufactured with the same techniques as humans and are born, live and die like humans (van Velthem 2003).

The Asurini's clay vessels are also like bodies and this is evident in the way that they describe the constituent parts of their morphology: edge=*eme* (lip); diameter of the opening=*juru* (mouth); base=*ekara* (buttocks); internal bottom=*aua*; body = *ga'a* (holder, belly). In addition, the sequence of operations realized during the productive process emphasizes this morphological division, given that a vessel is produced by parts, from the base to the lip, finally receiving the surface treatment (resin of *ingá* or *titiva*, painting, resin of *jatobá* or *jutaika*), given that the painting on the vessel highlights these divisions that refer to the body. The relationship between ceramics and body is also evident in the fact that the women share substances (*saliva*) with the ceramic vessels and simultaneously consume the raw material that they are made of (clay). They also exercise different types of care for their bodies from the time of gathering the clay until the passing of the resin of *jatobá* (*jutaika*), and together with the learning of the techniques of making ceramics they also learn the corporal techniques related with this knowledge (for ex. the seated or squatting position)¹⁰.

Finally, it is important to say that the clay vessels are the property of women, goods that they accumulate and exhibit with pleasure to others. Recalling Lévi-Strauss (1986:164) it can be said that an Asurini woman “metamorphizes in her products; from [being] physically exterior [to it] she becomes morally integrated to it”. Thus, when she dies, her vessels go with her, because they are broken and thrown out, and according to the Asurini, this is done “so that no one will remember her, miss her”. The Asurini clay vessels are bodies and simultaneously the objectification of the subjectivity of those women who produce and use them”.

The technology of ceramic production and the things of the whites

Since their official contact in 1971, the ceramic technology of the Assurini has been observed and registered by different researchers (for ex. Müller 1990; Silva 2000, 2008, 2013). In these works, what was evident is that the steps of the operational sequence are the same, despite nearly 50 years of contact with the non-indigenous. However, this does not mean that there were no transformations in the technical choices. In this sense, by

¹⁰ The video “As mulheres das cócoras” [The Squatting Women] produced by Regina P. Müller and Graziela Rodrigues clearly shows what was described. [HTTP://www.youtube.com/watch?v=SinFo62gNDE](http://www.youtube.com/watch?v=SinFo62gNDE).

incorporating the concept of technological tradition as a set of “shared dispositions that guide the technical choices” (Dietler e Herbich 1998:255) – emphasized at the beginning of the article – I do so because I understand that it allows me to consider the technologies as a dynamic corpus of knowledge; an idea that has been worked with by other authors in their reflections on the notion of technology (for ex. Chilton 1998; Dietler and Herbich 1998; Ingold 2000; Mura 2011).

In the twenty-three years in which I have been dedicated to the study of the ceramic technology of this people I have observed that some women invest in technical innovations in relation to trying to “imitate the things of the whites” (for ex. large jars for water, perfume flasks, fruit bowls, candle holders, ash trays) (Figure 18). These innovations were quickly abandoned, because they did not attain the aesthetic excellence sought by the ceramicists. Specifically relating to the clay vessels, some tried to produce vessels with lids, and also innovated in the painted patterns, in this case, investing in different combinations of colors (background/design). The pots with lids were abandoned, but the experiments with the painting continue to be made, because they involve something that they appreciate and consider aesthetically gratifying. Over the years, there was a gradual increase in the production of miniatures of vessels that reproduce the types used as a didactic resource for teaching the girls, with this being a generalized choice among the women. All of these innovations and the preeminence of the miniatures were motivated by the desire for commercialization. It is important to say, that because of the sale of miniature vessels, the girls could enter the market of “craft sales”.

Fig. 18 candle holder made for sale



Nevertheless, in my view, what is interesting to highlight is the fact that ceramic vessels were increasingly being substituted by aluminum pots in daily use, given that the Asurini consider them to be as or more effective than the ceramic vessels for cooking. In this case, the women work to improve their “acquisition techniques” (Mura 2011:119), because the types of aluminum pots – in terms of morphology, size and thickness – are acquired according to their effectiveness for processing the different types of foods (cultivated or industrialized) to be consumed. These aluminum pots are usually very well cared for and cleaned, emphasizing once again the aesthetic concern of the Asurini women.

In other studies I examined in depth and detail the transformations in the Asurini's technologies for production and use, contextualizing them in terms of their relations with the non-indigenous and the intensification in the purchase of industrialized goods and products. At the same, I sought to demonstrate how these transformations in techniques are articulated with social, political, economic and cosmological aspects (p.ex. Silva 2009a, 2009b, 2013). In this sense, I reaffirm that the technological transformations among the Asurini involve: "1) the creation of new objects and or the recreation of traditional objects from industrialized raw materials, objects and tools; 2) the diversification of supports, pigments and raw materials for the graphic art; 3) the substitution of traditional artifacts and tools for industrialized artifacts; 4) the acquisition of industrialized goods and raw materials and the learning of new technical procedures". These transformations should be understood through the principle of Asurini ontology that it is essential to encounter alterity to construct identity, with these new technical choices being "synonyms of cultural vitality and (re) creation" (Silva 2013:735, 741).

Fig. 19 domestic shelf with aluminum pots



Technologies and technical processes as (re)creation of the world

Various authors have sought to emphasize that beyond their material and pragmatic aspects, technologies are social constructs that produce meanings (p.ex. Dietler and Herbich 1989; Gosselain 1999, 2000; Lemonnier 1992, 1993, 2012; Pfaffenberger 1992; Silva 2000), or even that technical processes are embedded in the web of social relations, while technical relations must necessarily be understood in this relational matrix "as an aspect of human sociality" (Ingold 2000:314).

Reflections were also realized to understand the techniques as being constituted by skills developed and acquired by people during their lives, whether through their involvement with each other in the realization of their activities, or through their own experiences with the materials, energies and or substances (tangible and intangible). Thus, they would be simultaneously acquired knowledge and the practice of knowledge (Ingold 2000).

Therefore, for some authors, the processes of selection of materials and or substances, tools, and technical processes and the definition of the sequences of technical actions – the technical choices – result from a socially learned perception and at the same time, during their lives subjects experience the way that things should or should not be done and or used (for ex. Gosselain 2000, 2018; Herbich and Dietler, 2008)¹¹.

These perceptions and reflections about technologies and techniques reveal that technical processes are always invested by meanings, and that technical actions, like other social practices, are engendered through a “*habitus*” and, therefore, also transform over time. In my view, this is why it is important to conduct ethnographic descriptions of technical processes, as I sought to do in this text. This does not involve conducting a mere inventory of technical actions, tools, materials and sequence of production steps, but to show that the operational sequence is a “web of social, ecological and historic relations” (Gosselain 2018:1), which expresses a specific mode of engagement of certain subjects in the technical activities. It involve seeking to reveal “the processual and relational histories” (Ingold 2011b) that are at the base of these social practices. In recent years, various studies about the animist and transformational character of the Amazon Amerindian cosmologies sought to highlight the importance of objects in the sphere of relations between humans and non-humans (for ex. Santos-Granero 2009). During this period, some authors have also reflected on technical processes, showing that for different indigenous peoples they have an ontological relevance, and are grasped as transformative and symbolic action for the (re)creation of the world (for ex. Barcelos Neto 2005/2006, 2008, 2009; Belaunde 2017; Hugh Jones 2009; Silva 2000, 2008, 2011; van Velthem 2003, 2009).

In the case of the Asurini, their ceramic production technology is characterized for bringing to the sensitive universe, in a concomitant manner, functional, aesthetic, social and ontological precepts of this Amazon people. During all the phases of the *chaîne opératoire*, the notions of utility and beauty coexist with the themes of Asurini sociality and cosmology.

Although this article did not analyze the structural aspects of the myths, or conduct an exegesis of all their ethnographic significance – a task that would involve the preparation of other articles – it is possible to see that there is a mythic repertoire in which ceramic objects and their productive processes appear to reaffirm different ontological principles of this Amazon people. The Asurini acquire the techniques, materials and energies needed for the production of ceramic objects based on their relations with animals (bees, rabbits, beetles, vultures) – which in mythic times were all human – and with Maíra, the demiurge who through a creative act, made the clay, just like the mythic ancestors Añyngavuí and Anumaí, being that the first copied the corporal designs of Añyngakwasiat, and the second, sister of the primordial shamans, left the shards of her vessels spread on the ground. For the Asurini, only humans can make ceramics, because where the non-human “others” live there is no clay, and for this reason their vessels are all used and very worn.

Thus, by making ceramic objects, the Asurini women reiterate relations between different types of persons (humans and non-humans), revise the ontological principles of grasping the materials and of acquisition of technical knowledge, reaffirm their social relations and roles, reveal the significant aspects of domestic space and interlink different temporalities, living the dynamics of their way of life at the encounter with alterity.

I understand that this ceramic technology corresponds to what Alfred Gell (1992:43-44) defined as a “technology of enchantment”, based on “enchantment of the technology”. The enchantment, in this case, is in the capacity that the ceramic objects and technical processes have to act as indexes and agents of the creative and aesthetic virtuosity of the Asurini women, as well as of the relations between persons (human and non-human) and different worlds (of humans, supernatural beings and materials).

¹¹ Considering that this article is not a theoretical reflection on the field of anthropology of techniques and technology I will not focus on explaining the different meaning given to the terms technology, technique, technological sets and technological systems by different authors. I intend, however, to highlight that I am dialoging mainly with authors who despite their divergences in certain contents, have sought to reveal that technical processes are an integral part of social practices.

Their agentivity, in this case, stems from an intersubjective relation with the human agent, considering that in Asurini thinking, vessels and technical processes are the embodiment of persons and also the objectification of relations between persons.

The ceramic production technology of the Asurini of the Xingu is an expression of a transformational and symbolic process. Different things, bodies and people are transformed, and meanings are triggered and produced that transcend the act itself of producing ceramic vessels. This technology (re)creates the world of the Asurini of the Xingu.

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Digital Inclusion for Indigenous People: Techniques for using computers and smartphones among the Pataxó of Aldeia Velha (Bahia, Brazil)

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Abstract

This article reflects on information and communication technology from the perspective of the Anthropology of Technique. It provides an ethnography of technical relationships and interactions that occur through the medium of computers, smartphones and software, among the Pataxó of Aldeia Velha, in the far south of the Brazilian state of Bahia. These relations both transform and are transformed by the social morphology of the group, generating new skills, mobilizing and organizing material flows and revealing new operational sequences.

Keywords: pataxó, technique, technology, smartphones, social morphology.

Inclusão digital entre povos indígenas: técnicas de uso de computadores e smartphones entre os Pataxó da Aldeia Velha (Bahia, Brasil)

Resumo

Através de investimentos etnográficos, este trabalho busca fazer uma reflexão sobre tecnologias da informação e comunicação sob uma ótica da Antropologia da Técnica. Os casos apresentados ilustram as relações e interações técnicas que ocorrem na Terra Indígena Pataxó Aldeia Velha, no extremo sul da Bahia - Brasil, com usos de computadores, smartphones e softwares. Tais relações e interações transformam e são transformadas pela morfologia social do grupo, gerando novas habilidades, mobilizando e organizando fluxos de materiais e promovendo cadeias operatórias inéditas.

Palavras-chave: pataxó, técnica, tecnologia, smartphones, morfologia social.

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Introduction

This article reflects on the use of computers and smartphones by the Pataxó of Aldeia Velha (literally, ‘Old Village’), an Indigenous Land situated at the far south of the Brazilian state of Bahia, in the North-eastern region of Brazil. Through the description of ethnographic cases, I intend to provide new discussions and analytical possibilities to the broad field of the study of technical relations. As a starting point, I will consider processes of transferring technology and their developments, focusing not on the question of its eventual successes or failures, but rather on how new techniques are incorporated, meanings are re-elaborated and individuals are engaged.

In the first section I present a panorama of the problems broached in the article. I also describe the concepts of ‘technique’, ‘technology’, ‘transferences’ and ‘modalities of use’ of technical objects, as discussed by numerous authors through varied analytical approaches.

In the next section, I describe the ethnographic context in which the analyses described previously will be investigated. I present how different Indigenous actors in Aldeia Velha organize to ensure access to resources and spaces where computers and smartphones can be used. I also describe the digital inclusion projects in progress among the Pataxó, which will illustrate the dynamic present in the transferences of technology, and provide greater detail on the daily relations of the inhabitants of Aldeia Velha.

The third section furnishes an ethnographic description of how the mass-dissemination of smartphones enabled certain changes in hierarchical and power relations among the Pataxó. I also describe here how technical choices concerning smartphone models and apps are arrived at. Simultaneously, I reflect on the skills and potentialities afforded by these new devices in what concerns the social organization and techniques of the Pataxó.

Finally, in the conclusion, I will show how the technical transformations described in the article imply a transformation in Indigenous social morphology.

Technical Relations: Subjects, Artefacts and Environments

It is undeniable that the paradigm of the so-called ‘new technologies’ has undergone a great transformation. The computer, as we know it, which had previously been at the heart of information and communication technologies, has been losing ground to smartphones, particularly in the market of end-users, an expression for individuals who use computers but do not work directly with technology. Mobile devices have gradually become more conspicuous. In Brazil, in what concerns internet access, mobile devices overtook personal computers in 2014.

Many academic disciplines have taken note of this change. In the human sciences, we have a range of studies, mostly in the area of cyberculture. Anthropology has also weighed in, with a number of studies having been organized by Daniel Miller, who is currently managing a project called “The Anthropology of Smartphones and Smart Ageing (UCL Anthropology, 2018)”, with ten participating anthropologists carrying out research all over the globe.

This project follows another from 2016, in which Miller and eight other researchers released a book, resulting from 15 months of ethnographic fieldwork. The authors’ reflections on social media offer important insights into the themes and approaches of this article. It is evident that, when writing of the use of devices such as computers and smartphones, we are also dealing with internet connection and with the vast field of social media. Miller et al (2016) clearly strive to overcome claims based on hasty generalizations concerning the use of these technologies, through studies of various groups in different countries and contexts.

What needs to be observed are the localized data that investigations can reveal, which requires a dynamic approach that takes into account differences in gender, age, power and formal education, rather than a unitary view of the development of the internet along a singular path (MILLER et al., 2016). Another pertinent critique by the authors concerns an over-simplification of matters of use in public and private spheres, as well as treatments of the impact of technology on people who tend to create two worlds, one *online* and another *offline*.

Miller et al’s (2016) analysis seeks to question the phenomena of social media, to carefully bring out its complexity and accomplishing a vast comparative study that interrelates continents, countries, cities and groups. Their reflections are also pertinent to the present study, turning to the usages and possibilities that the devices enable, connecting the individual to social media. As we will see below, when it comes to smartphones, more doors are opened, with a broad participation of individuals in the worldwide web.

How does all of this play out in an Indigenous village? This is a fundamental question, which underscores this study. Bringing an Indigenous experience to this field of analysis takes us further from outdated narratives of an encounter between two worlds, with, on the one hand, the Indigenous people as avatars of the traditional, and, on the other, new technologies as symbols of what is most modern. Ethnic borders are aligned with and attributed according to modes of usage and the production of objects, so that, even if a people do not have the technical capacity to produce a certain product, this product is nonetheless often considered to belong to them (MURA, 2011).

Other relevant questions concern social morphology (MAUSS, 2015b), which, when observed and analysed at a deeper level, provides us with an important panorama of its transformations vis-à-vis certain phenomena. Villages display certain peculiar characteristics when compared to more usual contexts for research on the use of technology. It is evident that each context possesses its own dynamics, resulting from numerous social processes experienced throughout history. This is a crucial topic, since, according to Mauss, “the telluric factor should be related to the social medium in its complexity. It cannot be isolated” (MAUSS, 2015b, p. 427).

This being so, certain points emerge as relevant in my analysis. The way that families are organized may exercise greater moral pressure, since family members who live close to each other can constrain specific acts. Despite its proximity to the centre of the Arraial D’Ajuda district, Aldeia Velha is very different from the heterogeneity of an urban context.

Following Mauss (2015b), observing social morphology furthers our understanding of sociotechnical processes, since it transforms and is transformed by usage of objects and the incorporation of new techniques. This multiplicity is here understood as a combination of all the environments and matters related to the political ordering of the village, to religious condition, among other aspects present in that space that channels the various flows. This will become clearer when I contextualize the Aldeia Velha Indigenous Land and its practices.

My investigation looks beyond the artefact itself, toward an understanding of the paths that lead to the diverse uses enabled by a vast field of technical concatenations. I question the line of thinking that focuses on the use of informational devices as something that is exterior, annexed to the individual, by hybridizing subject and object. We understand these uses to be a process of exteriorization which has been constantly evolving through the release of both body and memory. This idea is important, supplying us with elements for a different understanding, since it is still common to conceive of artefacts as something beyond the human, which creates the impression that the technologies in vogue today (smartphones, computers, artificial intelligence, etc.) are completely distant from the social world; or, as Simondon (2007) put it, technical objects are considered foreign even though they are human products.

This process of liberating mind and body has been seminally developed by Leroi-Gourhan (1987), who, in brief, describes it processually, narrating the human adventure through diverse movements. Beginning with freeing up quadruped mobility, culminating in freeing up the hands, which, in conjunction with acts of feeding, frees up the mouth, making verbalization possible. With each of these events of liberation, other elements are able to specialize even further, widening the operational sequences of the subject.

Concerning exteriorization, the author considers that human history displays an expansion of memory, which gradually becomes collective, transitioning between groups. In the process it comes to be decodified, written and stored in books, which, in due time, incorporate new techniques, such as catalogue cards and information that will later be indexed. These types of indexation of information enable the use of perforated cards, which are at the origin of electronic memory (Leroi-Gourhan, 1987). As early as 1966, the author had already predicted that:

What is already clear is that we know how to, or very soon will come to know how to, build machines capable of recalling everything, and to decide on the most complex matters without making mistakes. This simply reveals that the cerebral cortex, much like the hand or the eye, as admirable as it may be, is insufficient, and that methods of electronic analysis can overcome its deficiencies [...] (LEROI-GOURHAN, 1987, p. 67).

Despite the work of Simondon and Leroi-Gourhan being exceptionally relevant to contemporary studies, it should be emphasised that they were written during a time (the 1950s and 1960s) when computers were yet to become important to society. As we can see from the passage above, Leroi-Gourhan's thought looks ahead of his time, when computers were undergoing significant changes, passing through first, second and third generation models (UFGA 2015). Some important transitions include: the change from valve to transistor, which increased speed and decreased prices; the change from binary to symbolic language (from 0's and 1's to something closer to standard English); and the introduction of keyboard and monitor as alternatives to perforated cards and printers, which were previously the only input and output devices.

It is thus useful to think of the devices studied here as exteriorizations of human beings, rather than the contrary. It is likewise useful to conceive of contemporary smartphones and computers as elements that enable an amplification of the technical skills of individuals, concatenated in their technical performances.

There are two further important concepts elaborated by Leroi-Gourhan, that of *technical tendency* and *technical fact*. For the author, these concepts are two sides of the same phenomenon. *Technical tendency* is predictable, inevitable and rectilinear, leading, for example, "a flint held in the hand to acquire a handle" (Leroi-Gourhan 1984, p. 24). *Technical Fact*, in turn, is unpredictable and specific, resulting from the encounter between the *tendency* "and the thousand coincidences in-between" (Leroi-Gourhan 1984, p. 24). According to the author, tendency, unlike fact, is an abstract concept involving the causal effects of man on matter, and moving beyond these types of acts.

The concept of *technical tendency* allows us to understand how certain technical transformations can be triggered, favouring the development of specific technical experiences and concatenations in a given sociotechnical context. In what pertains to the present analysis, I will show, throughout the article, how during fieldwork I observed a technical transformation involving a tendency to replace computers with smartphones. This substitution is relative to a number of factors which take into account the conditions of availability of and accessibility to the materials desired by the Amerindians. Mura defines the balance between what is available and what is accessible as a “repertoire of possibilities”:

The availability of materials and their accessibility in the territory have an influence on both the conditions of the territory and the decision-making possibilities of the social actor who can participate in different levels of this process. In this way, the interaction of the landscape – as ends, plans and expectations – with the binomial availability/accessibility will determine what I have called a repertoire of possibilities (MURA, 2000).

Considering activities and technical choices through a certain repertoire of possibilities allows us to conceive of the *technical tendency* in a wider sense, not only in relation to humans and matter, but including, within the technical process that allows us to apprehend it, political aspects and subjective and collective intentionalities. Mura (2017) draws attention to the need to consider political action itself as technical behaviour, since it is a fundamental component for understanding technical processes and ways of defining specific operational sequences in specific contexts.

Fieldwork among the Pataxó of Aldeia Velha indicated certain uses and possibilities, not only in what concerns smartphones, but for computers in general. In my early research, I reflected in the construction of technical relations resulting from the transferral of technologies, between projects of digital inclusion and the Pataxó, specifically focusing on projects that used free software. During my research, I observed diverse experiences, occurring in different spaces, that were conceived as catalysts for a more equitable access to information and communication technology, alongside significant change in the configuration of varied activities between the individuals and groups involved. It is this diversity that I will discuss in this article.

Before proceeding, I will expound certain points that will illuminate the claims made throughout the article, and also avoid discussions which were more adequately addressed in studies by important authors. To begin with, I would like to query the usual understanding of the concept of ‘technology’.

Some anthropologists have provided important reviews of studies of technology and technique. In some translations into Portuguese, the concepts of ‘technique’ and ‘technology’ are at times mixed up, causing confusions. In an article called ‘Science and Technique’, Sautchuk argues that a preference for ‘technique’ over ‘technology’ is not tantamount to a rejection, but to caution. Usage of the concepts of ‘technique’ and ‘technology’ are linked to regional contexts: in Anglo-Saxon countries and in Brazil, the term ‘technology’ is more common, whereas in Francophone countries the term ‘technique’ is preferred. Indeed, in the translated works of certain French authors, ‘technique’ is rendered as ‘technology’ (SAUTCHUK, 2010).

I will here use the term ‘technology’, with the requisite caution, since it can take us along a path riddled with dichotomies such as traditional-modern, subject-object, and nature-culture. Within anthropology, these famous dichotomies have been superseded, both on a methodological plane and in a conceptual plane (INGOLD, 1988; MURA, 2011). Unlike other specializations, the anthropology of technique has been analytically engaging with humans, nonhumans, and technique beyond deterministic and/or utilitarian paradigms.

Following this argument, considering the theme of the article, which involves information and communication technologies, it is worth recalling issues raised by Bryan Pfaffenberger (1992) concerning a standard view of technology. He argues that there is a wonderment that stems from this view that takes technological knowledge as a pillar of Modernism, which contributes to what I raised above through the studies of Leroi-Gourhan (1987), Simondon (2007) and Miller et al. (2016).

It should be stressed that this type of wonderment is not exclusive to the present, to our “technological world”. The Italian philosopher Paolo Rossi, recovering a statement by Campanella, writes that there was “more history in one hundred years than the world had in four millennia” (CAMPANELLA, 1941 apud ROSSI, 1989, p. 64). They are referring here to 18th Century, and the technological novelties that the authors refer to are the magnet and the press. Pierre Lévy (1993) also mentions this wonderment, in reference to the printing mutation that would lead to the printing of books. This artefact, with its evolution, would become mobile, easy to handle on a day-to-day basis, and also available for personal appropriation (LÉVY, 1993). We might easily bring this past wonderment, with the advent of the magnet, the press, the book, and apply them to the appearance of the smartphone, which today occupies the peak of our fascinations.

Against this view, we here take the concept of technology as a process of *design* – that is, as planned in the mind of an individual and introduced into a system (INGOLD, 1988). This way, as I will show throughout the article, assuming this standard view renders invisible the sociotechnical system (PFAFFENBERGER, 1992), separating it into two processes: thinking and doing. The latter, according to Ingold (1988), gradually becomes “merely technical” and it is, consequently, lessened. This separation contributes to a radical divide between what is technical, what is social, and what is political.

We have an outstanding contribution to the study of technique in Mauss, who helped elevate technique to a major topic. For Mauss, the study of technique is central not only to understanding objects or machines, but also social morphology, space and time, gestures, movements and knowledge itself (MAUSS, 2015a). In what pertains to the transferral of technology, a technical analysis reveals a greater complexity than one focusing on the adequacy of the use of a technological package.

Success and failure of products go beyond a simple relation between producer, consumer and middlemen. A smartphone device purchased in Brazil may have been projected in the USA, using raw material mined elsewhere, such as in Africa, assembled in China, arriving in Brazil through various means. Perhaps a company secured a deal with a Brazilian company, or received some sort of tax break, or maybe it was brought here by small-time businessmen who bought them abroad to sell them here.

During this trajectory, political and social elements are completely inherent and active within a sociotechnical web, and they cannot be analytically separated. What falls to the analyst is to reveal these relations, which may, at first, seem concealed.

Concerning technical acquisitions among ethnic groups, their successes and failures, Leroi-Gourhan (1984) argues that there may be three stages to a technical rejection: *technical inferiority*, where the group does not master essential associations; *technical inertia*, where there is no effort to assimilate a given technique; and, finally, the stage of *technical plenitude*, where the group has no interest in what is being offered.

Leroi-Gourhan (1984) elaborates hierarchies for these stages: very rustic; rustic; semi-rustic; semi-industrial; industrial. He later updated the hierarchy, changing it to: pre-artisanal; proto-artisanal; isolated artisanal; grouped artisanal; and industrial (LEROI-GOURHAN, 1984, p.33). The change was necessary because, according to the author, the initial hierarchy did not directly engage technology, as the term “rustic” had a more aesthetic meaning.

Despite this hierarchy, Leroi-Gourhan is clear that these relations can co-exist within one group. An ethnic group can thus have different experiences, and different ethnic groups can have the same experience. However, the author’s analysis nonetheless focuses on production, disregarding issues of use and acquisition (MURA, 2011).

Considering these other relations, we can provide a wider reflection on the matter of the different ways that technology can be transferred. In the case at hand, it occurs through a process of inclusion, focused on access o use of the computer. Taking the use and dissemination of free software as an important factor, I will show how the understanding of philosophical political and technical elements were not assimilated as expected.

The French engineer and sociologist Madeleine Akrich (1992) developed an interesting study of the matter. She argues that this expectation is typical of a *designer* who seeks to transfer a technical set to an imagined user. There is hence a *script* that should be followed for the transferral to be successful. What Akrich observed is that this expectation often finds a different user from that imagined by the *designer*. In this conflict between real user and imagined user (Akrich 1992), the approach moves through paths that diverge from a simple adoption. It must be considered that the adoption of a specific artefact does not imply in the adoption of the logic of the group that produced it.

Transferrals undergo numerous re-elaborations which culminate in functions and meanings that differ from their initial *script*. Through ethnographic engagement, we see that there are no neat frontiers between the hierarchies noted by Leroi-Gourhan (1984), and that, many times, they are jumbled up. Transferrals are thus concatenated in traditions of knowledge (Barth 2000), in a large flux of cultural and physical materials. To these are added social, political and symbolic principles (Mura 2011). That is, what is being transferred finds a body of technical knowledge that was constructed through processes that are not only social, but also environmental (Mauss 2015b), composing traditional local knowledges (INGOLD; KURTTILA, 2000).

With these conceptual and methodological precautions, this article concerns how technical skills are developed by the individuals of Aldeia Velha, and how these skills, as well as the technical objects associated with them, are concatenated in their operational sequences (LEROI-GOURHAN, 1987; CRESWELL, 1994; SIGAUT, 1994).

Digital Inclusion in the Aldeia Velha Indigenous Land: Technological Transferrals, Experiences and Skill Generation

Before presenting my thoughts on the sociotechnical relation in the field, I will provide a brief context of the field, to help the reader understand the approach I have adopted.

According to Mura (2006), within a western frame of thought the term ‘village’ designates nucleated spaces with bureaucratic forms of administration and political representation. Despite their similarities, each village has its own specific socio-historical processes, particularly when we consider a country of the territorial dimensions of Brazil, with political-regional divisions that result in an asymmetry of analyses. When we choose a village in the Northeast of Brazil this becomes especially evident. When compared to the Indigenous people of the Amazon region, Oliveria writes that:

Given the characteristics of the frontiers and their chronology of expansion in Amazonia, Indigenous people retain a significant part of their territory and ecological niches, while in the Northeast such areas were incorporated into earlier colonizing flows, their current lands not differing much from the peasant pattern, being interspersed with the regional population (OLIVEIRA, 1998, p. 53).

The Pataxó are among this latter lot, with the aggravating factor that their lands are on the stage of the Portuguese colonization of Brazil. According to Grünwald (2002) this contact was shot through with slave raids, deterritorialization and serious conflicts between Amerindians and colonizers¹. There are currently twelve Pataxó Indigenous Lands², nine of which are in the state of Bahia and 3 in Minas Gerais.

¹ Numerous ethnicities, among which the Pataxó, were gathered in colonial villages where they were completely forgotten. Their existence was unknown for some time, and it was even considered that the Pataxó were “extinct”. For more details of this process, see: Carvalho (1977) and Grünwald (2002).

² In the state of Bahia we have the following Indigenous Lands: Águas Belas, Aldeia Velha, Barra Velha, Comexatibá, Coroa Vermelha, Coroa Vermelha - Gleba C, Fazenda Bahiana, Imbiriba, Mata Medonha. In Minas Gerais: Cinta Vermelha Jundiba, Fazenda Guarani, Muã Mimatxi (Fazenda Modelo Diniz). According to FUNAI's records, these lands are in different stages of demarcation (under study, regularized, Indigenous reservation, delimited and declared). For a complete map and further information, see: <http://www.funai.gov.br/index.php/indios-no-brasil/terras-indigenas>. Accessed in August 2018.

The Aldeia Velha Pataxó Indigenous Land is situated in the district of Arraial D'Ajuda³ (far south of Bahia, Brazil), some 2 Km from its centre. Its total land is 2000 hectares and roughly 928 individuals live within its bounds (FUNAI, 2018). Along with residential houses, the land has a schoolhouse, a “culture point”, a health post and three churches, one Catholic and two Protestant.

It is important to note the expressive Protestant contingent in Aldeia Velha. The fact is interesting because, as I will show later, certain religious positions contribute to the control over and flow of materials.

Political organization is centred on the figure of the *cacique*, elected by the inhabitants, and supported by other Indigenous leaders. As Pataxó villages are geographically close to one another, there is a significant flow between the inhabitants of different Indigenous Lands. It is common for “relatives” to visit each other, as is political articulations between Indigenous leaders.

When it comes to digital inclusion policies, we must keep in mind the developmentalist slant that is at its core. It carries with it categories such as developed, underdeveloped, First World, Third World (RIBEIRO, 2008), that imply an evolutionist trajectory in which a certain group must reach the technical-scientific-economic model of another group, the latter being seen as the “successful” one. It is thus seen to be necessary that this process be helped along, through interventions such as funding, investments, projects, and programmes for transferring technologies (FERREIRA FILHO, 2017b).

It is important to highlight certain aspects of the modalities of transferring technology. According to Cresswell (1983), there are problems with planning and policies that tend to ignore the social contexts in which these take place, or which focus primarily on the objects themselves, and not on the technical processes. This problem is also raised by Akrich (1992). The author stresses that transferrals of technology do not move toward an acritical recipient, nor will the characteristics of the transferred technology remain the same in the new context. Local social relations will thus play a significant role, which leads Cresswell (1983) to highlight the need to include the idea of an open system within these processes, in which non-linear pathways can be followed.

Another point that must be taken into account in transferrals of technology is their frequently homogenising character. They do not taking into account the local characteristics and the interests of the actors who are supposed to be the beneficiaries of these activities. These do not often perceive, or else fail to consider, that various technical objects have their functions re-elaborated according to local traditions of knowledge.

In what follows, I will focus, precisely, on the ideological and practical aspects of some processes of transferral of technologies that took place in Aldeia Velha.

During its history, Aldeia Velha underwent various projects of digital inclusion, stemming from a number of different initiatives. These were managed by different institutions, including government, NGO's, and other initiatives. I draw attention to two of these experiences. The first is the National Programme of Technological Education (Programa Nacional de Tecnologia Educacional, ProInfo)⁴, implemented in the school in 2009. This project was made possible by the Porto Seguro Secretary of Education (Bahia, Brazil), tied to a national policy of digital inclusion.

The second, Bailux, was experienced the following year. It began operating outside of Aldeia Velha, where Indigenous people went to a place with computers, internet and maintenance workshops, which made use of various software. After a while, this experience moved into Aldeia Velha, operating inside the school and later in an annex.

3 Arraial D'Ajuda is a district of the municipality of Porto Seguro which, along with the districts of Trancoso and Caraíva, are part of a tourism circuit of beaches.

4 The programme, according to the Amerindians, did not work satisfactorily, for it was far too bureaucratic for the reality of Aldeia Velha. For further details on its implementation and operation, see Ferreira Filho (2017b).

Unlike ProInfo, Bailux was the brainchild of an individual who was a member of a collective of activists for “a critical appropriation of technology” called The MetaRecycling Network (Rede MetaReciclagem)⁵. It sought a different approach to government efforts at digital inclusion, even coming to reject the idea of “digital inclusion” altogether (FERREIRA FILHO, 2017a). The MetaRecycling Network always looked to work with distinct audiences, using other practices and spaces, such as the “culture points”. Bailux thus followed a different logic when working with the Pataxó, starting from the *a priori* premise that the group would use technology in its own terms, tied to the appropriation of tools and meanings for emancipation and ideological activism.

Thus, while the ProInfo lab was a venue for digital inclusion aiming to transfer technology, supported by a discourse of democratic access to new technologies and targeting the Pataxó as an excluded target group, Bailux sought to promote a critical venue where communication and information technology would undergo appropriation, guided by the image of a population of Indigenous activists, thinking beyond a simple inclusive access and using technology as part of activist policies.

Despite their differences, both projects opted to use free software. Free software is the source of an intense debate because it champions a different business model from that of the computing market. Its proponents argue that software should be freely available to users. This is tied up with a different view of the ideological components of the process of software development, which has been investigated by a number of anthropologists (MURILLO, 2009; MILLER, 2015). The examples mentioned here themselves reveal the varied understandings of these software.

ProInfo was based on public policies and investments inherited by the Workers’ Party (PT), which promoted its use as part of their policies of digital inclusion. Free software reduced costs with licenses, and, in consonance with the discourse surrounding it, was generally used as a means to resist the neoliberal policies of a globalized world. Bailux is also a product of this period of widening access to technologies, and of furthering free software as a means to achieve this end. Despite this conformity, the second project always took into account the possible specificities of Indigenous users. In this way, the use of computers concatenated various meanings that connected with the image of an Indigenous population in need. It is through this image that the computer and free software could become tools not only for counter-hegemonic engagement, but also for recovering cultural traditions.

My early research was concerned with how the computer was to be used in diverse contexts: how its tools (particularly software) were to be used for solving daily problems and generating income, and how free software was linked to political-ideological-moral matters, as well as with issue of familiarity with specific software. During my fieldwork, I learned that the use of free software was mostly unsatisfactory, at least from the point of view of those who brought it to the village.

It was clear that the Pataxó did not understand the specific meanings implied in the use of free software; others knew what it was, and even agreed with the issue raised by its use, but nonetheless felt that it did not solve daily problems in the village, since it was far too difficult to use, demanding further training.

The main operational system for free software is GNU/Linux, which, unlike Microsoft Word, requires the support of specialized technicians in order to allow users to grasp its basic operations. Another problem often noted by the residents of Aldeia Velha is that, at the time, many of its tools (pre-installed programmes) were in English. Using GNU/Linux thus required greater effort, both in acquisition, since few people at the village had it installed, and internet access was necessary to download it, as well as with its daily use.

⁵ MetaRecycling is a decentralized and self-organized network of various activists. It is principled on a critical appropriation of information and communication technology. The network also promotes actions involving collaboration, “hacker attitude”, and free software. For more information on the network, see: Atroch (2015) and for more on its relations and actions in Aldeia Velha, see: Ferreira Filho (2017b).

As I mentioned at the start of this article, information and communication technology are undergoing a paradigm shift. At Aldeia Velha, access to computers was only available to the few. In terms of public access, there was the school and the culture point.⁶ The former offered limited access to a few computers. Privately, the use of computers was likewise scarce. Some of the Pataxó with home computers were studying for teaching degrees.

In what concerns the acquisition of computers, I would like to present examples that I was able to observe under diverse factors: economic, spatial and infrastructure; and family hierarchies. The district in which Aldeia Velha is situated is a tourist spot, and the cost of living is relatively high, which also raises the price of computers. In the district itself, there are only three places where computers are sold, and they only tend to be visited when the odd emergencies occur. The usual option, not only for computers but for electronic devices in general, is to travel to the city of Porto Seguro, or, for those with the necessary experience, to buy it through the internet.

Along with the matter of acquiring a computer, it is also necessary to have a designated space for using them, particularly where desktops are involved. A basic infrastructure is also needed, including adaptors, electrical sockets with different fits, a voltage stabilizer. To explain the following, I will refer to ethnographic cases⁷ that also touch on the two preceding points, showing their interlinkages, allowing us to envisage the specificities of the acquisition process.

The need for a computer was met in two distinct cases. In both, I took different computers to Aldeia Velha. In the first I took a computer case to fill a local administrative need. The Cacique had asked me about the possibility of buying a computer in my city (Recife), which would be cheaper. All he needed was a computer case, since he had a monitor and a mouse, which had been donated by a family friend. When I asked people I know about cheap computers, a friend of mine donated a computer in an excellent state. I made sure it was in fine condition before taking it to Aldeia Velha.

If we take into account the terms in which the discussion has been framed, we can say that the stage of acquiring a computer had been completed. However, there was still the need to acquire space and infrastructure, since it was a desktop computer. It was also necessary to take care and not connect it directly to a power outlet, which meant acquiring a voltage stabilizer. After remaining for some time inside the box, the computer was finally assembled when a stabilizer was obtained from the culture point.

Although the computer was not meant for personal home use, since it was installed in another space near the school, it was evident that the device required more physical space and electrical infrastructure. When it was set up for tests, it was placed in the kitchen, each of its parts in an improvised place. The voltage stabilizer was set beside a water fountain near a socket. The case on a stool and the monitor, keyboard and mouse were on the top of a table. Since the power cords and the sockets did not match, a connection had to be improvised using a piece of cut wiring, the “Type B” stabilizer plug and the “Type N” new Brazilian socket. This adaptation was used only for testing the computer; an adaptor was later acquired.

The second case involved taking another computer to a young man with great interest and skill in computing. Although he wanted to learn more, a series of problems immediately presented themselves. The first was very limited access to a computer, since there were no more computing classes in the school. A further problem was that, even if he could get access in school (when a teacher let him use it, for example) or when he borrowed a computer from someone, he was still unable to try out new skills, such as installing a new programme or changing the computer’s operational system.

6 There were only two notebooks in the culture point. These were used by the local staff, as well as by visitors. Although the school had a “computer kit”, it did not have a well-structured lab. For more on these spaces and the information laboratories, see: Ferreira Filho (2017b).

7 For more detail on both cases, see: Ferreira Filho (2017b).

As with the cacique's house, a desktop computer would take up too much space, and he would have no way of keeping it in his home. As a solution, I suggested the use of a computer called Raspberry Pi⁸, which is roughly the size of a credit card and could be easily connected to a TV. It would thus not pose any problems of physical space, nor raise any issues of outlet adaptability, since its energy needs could be met through a USB chord, which was quite ubiquitous in the village, as it is the same type used for smartphones.

My suggestion came with an offer to donate the computer. Despite his enthusiasm, however, the young man could not accept the donation because of family problems. He would not share his reasons with me. He just said that his family had restrictions on computer use. I later learned that these restrictions were religious.

If we compare both of these cases, we see that the use of a computer has certain prerequisites. For both, the problem of acquiring the computer was solved by a donation, and difficulties involving space for the computer were solved using different strategies. However, in the second case family restrictions prevented the acquisition and use of a computer. The hierarchical aspect of our analyses is evident. An interesting aspect of Aldeia Velha is that many of its families are Protestant, including the two families involved in the cases described above.

Although it is not a unified discourse, there are significant cases in which there are religious interferences in the use of information and communication technology. These interferences range from an association between the electronic chip and the Biblical image of the Beast to demands from the pastor that the faithful cease to use social networks, particularly WhatsApp, for a certain period of time.

We can see here that the computers, as technical objects used as essential tools in the democratic access to new technologies, or even in Indigenist activism, were not transferred to daily usage. The research also revealed that the occasional use of the computer was losing ground to the use of smartphones. Taking this data into account, I would now like to turn to a comparative panorama of the use of computers and smartphones in Aldeia Velha, focusing on important elements of their use and acquisition.

Between Computers and smartphones: techniques, concatenations and re-elaborations

As we can see thus far, using a computer in Pataxó villages presents certain difficulties of various orders, not just economic. Owning a computer reveals certain important points, especially when attached to local uses that reflect specialized work which accrues prestige in the eyes of others. What I call specialized work, in this article, is work that needs a computer in order to fulfil its tasks.

I have categorized uses according to characteristics that, although far from rigid and exclusive, help me illustrate the different ends of the same object within the local context. I believe that the information analysed here can also aid in reflections on the transferral of technology, particularly when conceived as digital inclusion. Above I mentioned a degree of homogenisation, where possible solutions are based on an *a priori* view of their necessities, I here want to turn to some of the specificities encountered during fieldwork.

Bureaucracy is the main use not only for the computer, but also for an adequate connection to the internet. 'Bureaucracy' is used here in the sense of a way of dealing with recurring problems which range from public tenure to the Indigenous school, through public notices providing funds for village projects. The cliché "knowledge is power" applies here, since the ownership of a computer provides speedy access to certain information, such as knowing who was approved in a selection process for the Indigenous school. In this case, access to the internet was needed to download an electronic file listing the approved candidates. As well as a regularly functioning internet for downloading a large file, a monitor was also desirable, since it was hard to read the information on a smartphone screen. For this task, the easy solution was to head to a lan house to obtain the information on approved candidates, so that the appropriate actions could be taken.

⁸ This computer was created for teaching computer science during primary education. The hardware was conceived so as to be fully integrated, and to keep costs low.

The need for other devices typically included with a computer can make certain tasks more efficient. A keyboard makes it easier to type up reports, notices, schoolwork, and to edit graphic and audio-visual material. Likewise, computers are useful for Indigenous teachers which, for the most part, are studying for teaching degrees. They use computers both as teachers and students, in researching for class, elaborating slide presentations, and producing texts for their courses. Those who do not own a personal computer, hope to acquire one, in order to have greater autonomy in these tasks, and to avoid borrowing from others.

A final use for the computer is for those who have jobs related to the maintenance of computing devices. I got know the main technician for this type of work in the village, which demands certain skills and the ownership of a number of devices (computers, components), but also software. If we were to make a hierarchy of these categories, this one requires the most skill in operating a computer, both in what concerns hardware and software. Since it requires a high degree of specialization, it is the rarest category to find in the area.

As I have mentioned, these categories are only meant to help illustrate a panorama that is certainly more complex. I also include here those few families that are aware that knowledge of how to use a computer may, in the future, prove an advantage in the job market, and therefore invest in information technology courses and the acquisition of computers for their children. The use and acquisition of computers is certainly directly linked to the social mobility of the individual. It is through these material flows that each individual must overcome economic and social factors, such as those mentioned above, concerning the young man who tried to convince his family to accept his use of a small computer given to him as a gift.

If, as we have thus far seen, the computer is an artefact that is hard to acquire, and which demands a certain specialization, as well as financial resources, to be able to use, it is now necessary to turn to smaller computer that has been present in the daily affairs, not only of the Pataxó of Aldeia Velha, but of all of us: the smartphone.

For lack of space, I am unable to provide a history of the smartphone, but will briefly recuperate a model which is commonly stressed today. It has been little more than a decade since the iPhone⁹ was released, and it was followed by a spate of phones that run on the Android operating system. Despite a small screen and the lack of a comfortable keyboard, it is widely used in the village. One of the descriptions given to me of the village is that, at night, there were “firefly Indians”, that is, residents that used the led screens of their smartphones during their nocturnal strolls as torches to illuminate points within the Indigenous land that lacked electric lighting.

The choice of a smartphone over a computer can certainly be explained by economic reasons, but is this all there is? Which aspects reveal a preference for the smartphone? For there are other technical factors that guide these choices, and which vary between individuals. One starting point to think about these is the use of the internet.

Although the smartphone has advantages for internet access, since it can easily connect to a mobile network, the connection is not always the predominant factor in its acquisition. There are individuals who, despite owning a smartphone with internet access, have never used to access the internet. Why acquire it then? Its screen is larger than that of a feature phone¹⁰, and therefore it has a larger keyboard for thick fingers to type in phone numbers. Logically, however, the ease of connection is a major selling point for other individuals, particularly for the use of messaging services such as WhatsApp. Since internet access is scarce in the region, smartphones prove to be adequate for two reasons. They can access mobile networks according to the plans and packages provided by the operators, and they allow people to connect to the wi-fi networks of neighbours and family members who have internet access.

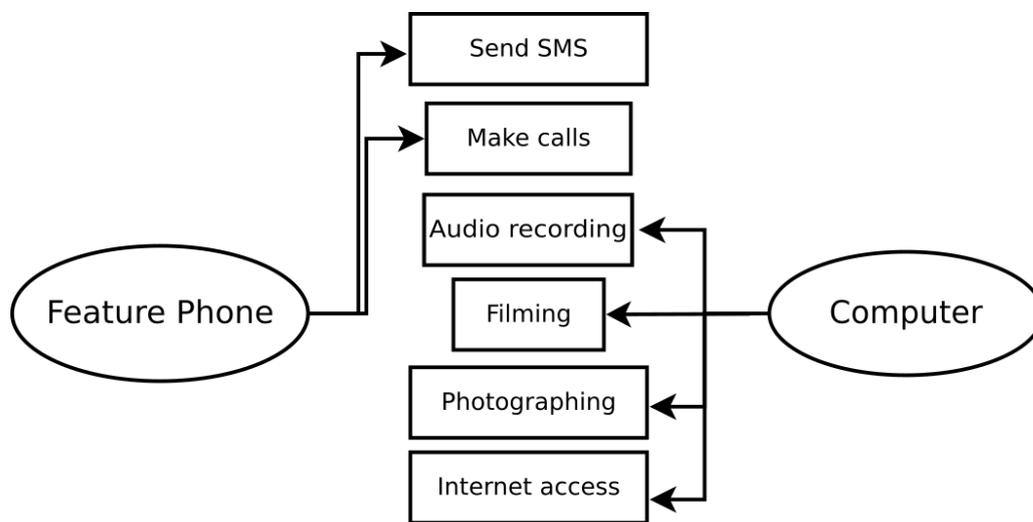
⁹ Although the iPhone is considered to be an expensive smartphone for most of the population, it is nonetheless a fundamental aspect of the development of the Android. Despite the exclusive functions of each operating system, most functions are incorporated into both with each new version of the system or the creation of a new device. The development of one thus affects the development of the other.

¹⁰ Feature phones are those devices that possess limited resources, being used mainly for making phone calls and sending text messages (SMS – Short Message Service).

I return now to the case of the young man whose family forbade him to have a computer. Under these circumstances, although access to a computer was restricted, he was allowed to use his smartphone freely. We can thus conclude that there is a wider tendency to accept this device, which is apprehended as a means to communicate with others (a phone) rather than as a “mini-computer”.

If we return to the view of the computer as an artefact that is more constrained by hierarchy, which is available only for a select few, we can see smartphones as devices that converge the functions of a computer with features of the phone (figure 1). This new object reconfigures these positions, making access to digital resources more democratic, whether by reducing costs or by concatenating new techniques. Whereas with computers it is necessary to have labs with adequate infrastructure (network cables and electrical outlets), and individuals with an intimate knowledge of the operating systems in order to teach them to others, a variety of resources are at present gradually discovered through constant experimentation.

Figure 1: Comparison between the functions of the feature phone and the computer



I remember how, in 1998, there was a degree of care with computers: plastic covers were used, people avoided touching the monitor screen with filthy fingers, and were afraid of breaking them. While this type of experience is still present, with many individuals expressing their desires to take courses to “learn to use the computer”, experiences with smartphones have proved very different. No one mentions the need for a course to learn how to handle the devices, and the icons are almost self-explanatory: a figure of a camera activates the camera; a figure of the phone activates the dialler; and so forth. One can touch the screen all the time (that is what it was made for, after all), and it can be carried in one’s pocket. In this sense, this nearness between individuals and materials promotes what Ingold (2012) defines as practical engagement, which results from the experience of individuals who construct their skills in specific environments. In the case at hand, the approximation of the Pataxó with these devices allows them to develop sensory perceptions which will lead to an improvement in practical skills and the refinement of knowledge.

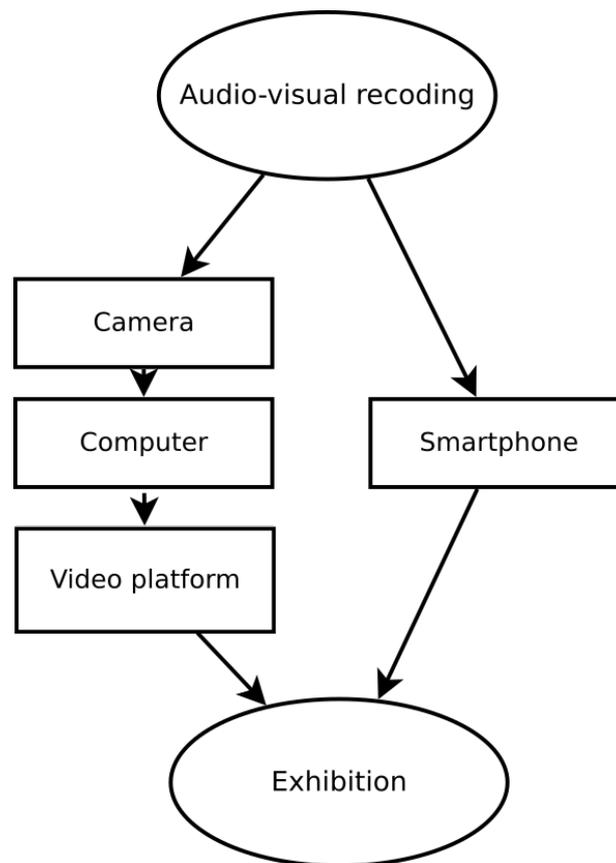
These experiences are represented in a range of nuances, such as preferences for particular smartphone makers (maker A has a better camera, maker B is cheaper, maker C has fewer problems, etc.), the age of users (elderly people still prefer feature phones, used only for phone calls), and differences in purchasing powers, given the greater costs in comparison to a regular phone. The phone also affords easier acquisition of the main apps.

All that is needed is an internet connection and access to an “app store” to download WhatsApp and Facebook – when apps do not come preinstalled, as is the case with YouTube¹¹. This is altogether a different experience from that of finding someone who has an office suite, which, in order to download even a test version, one must have the requisite computer space.

Indeed, the most common app in Aldeia Velha is WhatsApp. The acquisition of smartphones is most often guided by its adaptability to this app: it must be able to install it, and new devices are desired because of their greater memory, the old phone being overburdened with the media generated and transacted by WhatsApp. It is interesting to observe that this union of smartphone and messenger app becomes a powerful tool for amplifying the performances and desires of people, with diverse techniques capable of being concatenated in varied operational sequences. While the computer is seen to be for the few, the smartphone, in a way, breaks through structures of power. While until recently an audio-visual project required borrowing a digital camera from someone, and to have a computer into which the file could be transferred, as well as an internet connection to upload it, now all that is needed is a smartphone, which can carry out all of these tasks.

Along with a camera and a computer, it is also necessary to connect to a video platform in order for the video to be shared. In figure 2 we can see how the smartphone is more intuitive, and has greater portability. If we take YouTube as an example, a user must have an account and to know how to upload videos. With the smartphone, the operational sequence (resources + skill) is more direct: of the exhibition of the video is to be restricted to the village, all that the user needs to do is to forward it with functions embedded in the app.

Figure 2: Resources needed to record and exhibit audio-visual content



¹¹ I mention WhatsApp, Facebook and YouTube because these are the most popular apps in Aldeia Velha. For more information, see: Ferreira Filho, 2017a; Ferreira Filho, 2017b .

Services for recording and sharing videos are significantly different. Unlike YouTube, Instagram was designed to be used on the smartphone, providing filters and image editing possibilities without the use of the computer. In fact, users lose some of these exclusive resources when accessing Instagram outside of the app (in an internet browser, for instance). A more detailed analysis would consider different types of audio-visual work. Pataxó who have had some audio-visual training insist on using a camera and editing the file on the computer when preparing more elaborate videos. In terms of editing, we can find use of different software, from a basic Windows Movie Maker to the Cinelerra¹² free software, or even some seen on a MacBook belonging to a visitor to Aldeia Velha.

This vocation for audio-visual productions is an important point for the present analysis, since it greatly facilitates communication between individuals in the village. A photo of something that one wants to share can be quickly taken, and it is possible to communicate through audio recordings, thereby avoiding the difficulties that are encountered when large fingers type on small keyboards. It also helps in terms of schoolwork, overcoming an inability to read and write, since all that is needed is to memorize certain icons and understand how the app works to send an audio recording: just open the app, choose the person who will receive the recording, hold down the microphone icon while recording, and that is it. If there is an internet connection, it will be sent.

As we can see here, social media is also a relevant technical factor when acquiring a smartphone, since, in conjunction with the many resources offered by a camera or a microphone, for example, they offer a more complete and economical type of communication. The completeness of this type of communication stems from the fact that users do not have to be alphabetized, since images and audio recordings can be used. Thus a message can be transmitted more directly between sender and receiver.

Many of the Pataxó have relatives that live in other villages. The configuration results in an intense flow between territories, making efficient and economical communication necessary. I have thus far mentioned some of the apps used for this communication, now I will provide the reason for certain choices.

Although Facebook was popular before WhatsApp, use of the latter is more widespread. A number of external matters may have led to this situation. For example, the fact that Facebook comes from a model which uses the browser, while WhatsApp was made for the smartphone. In this analysis, however, what matters are the local factors emerging from fieldwork. Here, there are a multiplicity of cases in which an individual can have accounts in both services or only in one. As I have mentioned, there is a preference for WhatsApp. If the smartphone has afforded a more intimate experience, the messaging service has proven to be more conducive to this usage.

Unlike Facebook, the central point of which is its timeline model, communicating via WhatsApp is more direct, and involves a more exact selection of who gets forwarded any message. Furthermore, it does not require that a further messaging service be installed, such as Facebook which requires users to install Facebook Messenger. It is also easier to manage messages through WhatsApp.

WhatsApp groups are a significant mirror of how social groups are organized. Families, school friends, teachers, village leaders, cultural groups, and so forth, all have their WhatsApp groups, in which both membership and content is managed. They are important channels of communication, from a simple “good morning” to gossip. It is also used for political mobilization, both by leaders of a single village and for inter-village movements. According to the inhabitants of the village, Facebook provides a different experience for its users. Whether it is the model for managing these groups, where it appears more complicated, or in its target audience, which for the Pataxó is more external than internal. The external audience here refers to people beyond daily contacts, with whom interaction is possible without having to supply your phone number.

¹² Aldeia Velha actually had a specialist in Cinelerra, a non-linear editing system which is considered easy to learn, according to free software enthusiasts.

Facebook also calls for greater care, because the timeline, the photo albums and the profile images are more public. In this way, the technical choice (LEMONNIER, 2006) varies according to strategies of (internal or external) efficacy, implying, to borrow Leroi-Gourhan's (1984) concept, a multilinear, rather than unilinear, technical tendency.

Final Thoughts

By questioning the use of computers in an Indigenous Land, we have interesting data that transcend the exoticization of certain usages which reactivate old dichotomies. By widening our view to include the amplitude of material relations, we can observe various nuances that, separated into exclusive factors – such as the technical, political, economic – tend to lose their complexity and therefore obscure important interactions between the actors.

The cases presented here can help us to make important connections with the matter of technique, which, rather than being isolated, deterministic or utilitarian, emerges as more general and attentive to levels of perceptions, skills, choices, systems and operational sequences. In what concerns the adoption and use of free software, for example, it is perfectly understandable that whoever adopts such an artefact does not necessarily adopt the meaningful set it is associated with. Resignifications occur as this set moves into a different environment. According to the needs of Aldeia Velha, the freedom of the software did not matter as much as its ease of use, both for neighbours (who could be called on to provide technical support) and externally. If there had previously been a certain hegemony of the Windows operating system, at present Android, the operating system of most smartphones, is based on GNU/Linux.

Despite the widespread use of smartphones, computers and the internet remain coveted resources. Computers still have their role to play, in the hierarchy and in specialization, and internet still provides a more efficient means of communication. Both are still very much restricted in Aldeia Velha, and out of need new strategies arise, mobilizing the actors involved in using this technology. There is a telling case, in which a student at the school, who introduces himself as a “hacker”, narrated his techniques for obtaining access to the school's limited internet services. He says that, at the end of a class in which the laptop computer and the video projector were used, he helped the teacher tidy up. What he really wanted to do was to turn off the laptop, so that he could access and memorize the wi-fi password, which was only known to school employees. Knowing the password, he could spend time after school near the walls of the school, using its internet connection.

Wi-fi connection points transform social morphology, creating new spaces of sociability where teenagers and adults meet to talk, listen to music, and watch videos. These actions display great variability, particularly when we consider that mobility through the territory depends on the type of technical instrument utilized. Use of smartphones makes communication much faster, and this can have implications on political decision-making processes. There is thus a relation between the use of smartphones and the mobilization of people. It is impressive how much information gets disseminated without people actually needing to move around. Such a dynamic transforms social morphology in what concerns the spatial mobility of subjects, as well as the social organization of this information and of the technical instruments used in this communicative process.

Wi-fi hotspots are also areas in which people go to communicate with those who are close by to show a video to someone, for example. Regarding these transformations, I think we can list important parameters which should be taken into consideration.

First, however, I will narrate an exemplary case. The culture point was going to get internet access through a donation from a small local provider, and was deciding on how to divide up the resources. The administrator of the point felt that access should be public, but with one small caveat. Whenever the space needed a fast connection, it would bar other people from accessing its internet.

Along with issues of mobility, a wi-fi hotspot also reveals other nuances. If we consider that the plan to block internet access was successful, we see that those who were outside the culture point only have variable internet access. Faced with this instability, certain actions can be taken which depend on the relationship between an individual and the space. Kinship, political positions, religion – all can affect how an individual can access the internet. It is thus evident that modifications in social morphology through the incorporation of new techniques do not occur through substitution, but by a gradation of forms of political organization where communication is vital within the dynamics of territory.

New forms of communication also contribute to this transformation. There has been an increase in storage capacity, through electronic memory chips, for example, and also a greater diffusion of knowledge. There is thus a movement not only of people, but also of objects and techniques. It is likewise noticeable that relations of power and social organization are reflected in social network and messenger service groupings. News of kinspeople that had formerly taken a long time to cross the village are at present organized by WhatsApp groups.

The chief communicates through an audio recording, news that is of interest to everyone. Leaders of neighbouring villages negotiate the times and places of the next meetings. Groups organize support for this or that leader. Teachers discuss the controversial acts of the Secretary of Education.

Finally, I hope I have made it clear that it is important to analyse information and communication technology through the frameworks of the anthropology of technique. With the data I have presented here, I would say that the technical tendencies identified are not generalizable, but refer, instead, to a local dimension. In other contexts, such as, for example, in the academy and in certain professional spheres, smartphones do not substitute for the computer, and the smartphone, the tablet, and so forth, each has its appropriate activity. Yet when there is no specialized use, and/or when income is low, as with the Pataxó, we can apprehend intentionalities that lead us to substitute or privilege one device over others. For the Pataxó, where communicating via audios and images is more common, the smartphone – and a messenger app like WhatsApp – ensures greater mobility than a computer (even a laptop computer) and ensures the greater efficiency of the type of communication they prefer: fast, direct, not dependent on writing. The speed with which news is disseminated, new gadgets are released or new resources become available in the most popular apps, requires that we remain attentive to new tendencies, re-elaborations, concatenations, that can be transformed through these relations.

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The Sound of Technique: Gesture, rhythm and form in bobbin lacing in the Brazilian Northeast

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Abstract

Knocking the bobbins is how lace-makers refer to “lacing”. It is an act that, at first sight, does not present any specific technical function, but which, on closer inspection, reveals itself as a fundamental elementary act for elaborating a *good lace*, since it ensures the firmness of the weave. Through an analysis of the different meanings of this category, the article discusses the relationship between, on the one hand, gesture and rhythm, and, on the other, effects and resulting forms. Each of the senses of *knocking the bobbins* analysed here are, in turn, tied to different levels of action, since all involve gestures, rhythms, effects and specific forms.

Key words: gesture; elementary acts; rhythm; form.

O Som da Técnica: Gestos, ritmos e formas na renda de bilro do Nordeste brasileiro

Resumo

O *bater dos bilros*, modo como as rendeiras se referem a “fazer renda”, envolve uma ação que à primeira vista não apresenta nenhuma função técnica específica, acaba por revelar-se um gesto elementar fundamental para a elaboração de uma *boa renda*, uma vez que é ele que garante a firmeza da trama. A partir da análise dos diferentes sentidos dessa categoria o artigo visa discutir a relação entre gesto e ritmo, por um lado, e efeitos e formas resultantes, por outro. Cada um dos sentidos do *bater bilros* analisados vincula-se, por sua vez, a diferentes níveis de ação, sendo que cada qual envolve gestos, ritmos, efeitos e formas específicas.

Palavras-chave: gestos; ações elementares; ritmo; forma.

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Knocking bobbins

Walking down the streets of the district of Canaan, we hear a sound typical of lacing, produced when the bobbins knock against one another. The area is home to the largest concentration of lace-makers in the municipality of Trairi, itself known, by state law¹, as the “land of bobbin-lacing”, situated in the Brazilian state of Ceará. The law² is justified by research carried out in the 1990s, which registered at least one female lace-maker in 90% of the houses in Trairi that were visited by the researchers. The activity is hence part of the daily life of the municipality, and lace-makers use any spare time away from domestic *chores* to *knock their bobbins*. *Knocking bobbins* is a common expression for ‘lacing’, and, unsurprisingly, it was one of the first categories that I learned in the field (Brussi 2015).

The importance of the bobbins in lace-making is evident both in its role in naming the technique, and in the centrality of the tool to the process. The bobbins are cylindrical spindles made of wood, the length of which varies between 10 and 15 centimetres. A spherical *head* is fixed to one of the extremities, by means of which the bobbin is handled. On the other extreme, the cotton threads that make up the lace are attached, so that they are twisted and interlaced in synch with the movements of the bobbins. The bobbins thus function as extensions of the threads.

Along with the bobbins, the lace pillow, the moulds and the pins are the main instruments involved in bobbin lacing, sometimes also called “pillow lace” (Fleury 2002). The pillow has a cylindrical shape, and can be of various lengths and diameters, depending on the lacework being produced, personal preference, and the lace-maker’s skill³. Made of thick cotton cloth, it is stuffed with dry banana tree straw to make it dense. The pillow is always a support upon which the lace is *settled*, or fixed. This base must be firm, and also capable of being perforated, since the mould, the bobbins (and, consequently, the threads) and the lace will be fixed to it with *pins*, which are similar to needles, and which come from local cactus varieties, such as the *mandacaru* and the *cardeiro*.

1 Law nº 14.696, of 30th April 2010.

2 Bill nº 45/2010.

3 Children learning to make lace generally use a smaller pillow.

Photo 1: Pillow *settled* with the instruments used for lace-making: mould, bobbins and pins.



The mould is the first thing to be attached to the pillow, establishing the weave and the necessary perforations for making a specific lace. The bobbins needed to complete the lacework (always in pairs) are attached to the mould in accordance with its patterns. The number of bobbins depend on the pattern and the width of the lace. The wider and more complex the lace, the greater the number of bobbins required. Once *settled* on the pillow, the bobbins can be handled and interlaced according to the stitch. As the weave takes form, the stitches are attached by the *pins*, which will keep the threads together while the lace is confected, preventing it from coming undone. The bobbins are handled in a pendular manner, and as each stitch is implemented and the lace *grows*, all pairs of bobbins pass through the hands of the lace-makers.

When they are handled by the lace-makers, the bobbins' *heads* successively knock against each other, producing a rhythmic cadence. The sound created by *knocking the bobbins* is characteristic of this type of lace-making; it is the sound we hear as we walk along the streets of the village. The bobbins which the Canaan lace-makers prefer have a coconut shell tip; more specifically, it is a tucum seed, a palm that is native to the region. The preference is explained by the lightness of these bobbins when compared to those made wholly out of wood, and also for the sound they make when they are *knocked* one against the other, which is considered to be *pretty* and pleasant to the ears.

My initial understanding of the expression *knocking the bobbins* thus referred to the manufacture of the lace, which involved handling the bobbins and, consequently, emitting their characteristic 'knock'. As I became more familiar with the lace-makers and lacemaking, I was able to widen my understanding and comprehend further meanings of the expression related both to the importance of *knocking* in complementing family income and the entertainment it provides, and to the technical aspects of this operation in relation to the rhythm of production and its effectiveness, in light of how the lace is constituted.

This article⁴ focuses, precisely, on the technical aspects of this gesture which, as we will see, is central to lace-making. Through an analysis of the different meanings of this category, I will discuss the relation between, on the one hand, gesture and rhythm and, on the other, effects and resulting forms.

4 This work was carried out with the help of the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Brasil (CAPES) – Financing Code 001.

We will see that each of the meanings of *knocking the bobbins* is linked to different levels of action, each of which involves specific gestures, rhythms, effects and forms. To this end, we will start from the classification of cloth and the emphasis on the analysis of gestures proposed by Leroi-Gourhan (1984), Mauss' concept of 'technique' and its related conception of efficacy (2003), and the hierarchy of actions established by Roux and Bril (2002).

Before we move to the various aspects related to *knocking the bobbins*, and in order to understand more clearly its technical importance, I will present the reader a brief synthesis of the meanings of *knocking the bobbins* and of lace itself, its medium and main stages of production.

The many dimensions of *knocking bobbins*

Canaan is an eminently rural district with fifteen thousand inhabitants. Most of the population is involved in family production, in *toil in the gardens*, aimed at the subsistence of the domestic group. The staple crops are manioc, maize and beans. Jobs are scarce, there are few commercial establishments and most of them are family businesses. The large properties that exist in the district are coconut monocultures and require few employees. There are few mid-range landowners that invest in the cultivation of *gardens*, producing sugar cane candies, manioc flour and raising animals. These landowners provide seasonal employment, mostly during planting and harvesting. During these times, workers are hired daily. Women's work is required mostly during harvesting and processing of manioc, when women are hired, also on daily rates, to make manioc flour.

In this context, income stems from lacing, a specialized job which is taken on by most women of the district. Unlike other places in Ceará (Brussi 2009), this activity is still carried out by most of the women of Canaan and transmitted across generations, from mother to daughter. Considering scarce employment, the money made from lacing is an extremely important complement, or *aid*, to the family budget. According to lace-makers, the positive aspect of lacing stems from the fact that it is a domestic occupation. Women can stay at home, close to their children and family, and they can divide their time between domestic *chores* and working on the pillow. Lacing, as a productive activity, is incorporated to the domestic routine. Whenever they are not occupied with household demands, lace-makers dedicate their time to *knocking the bobbins*.

The need for a constant production is in some cases justified by the requirement to hurriedly finish a lace for sale. There is, however, another factor that leads lace-makers to use up almost all of their free time with lace-making, depending on their physical limitations. This is a moral imperative that values work, as a productive use of time, and rejects idleness. Extolling work is part of the local *ethos*. This is evidenced by the fact that even those lace-makers that do not need the financial gain that comes with the activity, because they have other sources of income, remain committed to their pillows. After a two-month hiatus from lacing due to pain and difficulty moving, Mazé (77 years old) complained of being inactive and justified resuming her lacing, even if only for a short amount of time every day, by saying: *It's very bad. I don't like to be still, a car that isn't moving carries no load. Now I do a small piece today, another tomorrow, and in time my dress is ready*. In conclusion, however, she stressed: *I'm not working because I'm needing it, I'm working for fun*.

Mazé's reasoning reveals another important dimension of *knocking the bobbins* for the lace-makers of Canaan: leisure. The activity is sometimes entertaining, a hobby, as one of them exclaims: *it's entertaining, distracting, when you notice time has flown by*. It is worth noting that, in what concerns the production of these lace-makers, the opposition between work and leisure is not all that relevant. Both are contained in the moral principle that values a productive perspective of time, which is not limited to its economic sense, but also concerns occupying the whole body. It is a way of keeping active. The continuous engagement that lacing demands occupies the time of the lace-makers while the activity is being carried out. The opportunity to focus on production is said to be an important aspect of the practice. Some lace-makers consider it a therapeutic activity:

lace-making is therapy. As well as taking up time in an active and productive manner, *knocking the bobbins* also occupies the *head*. Away from the pillow, the *head* turns to daily concerns and anguishes. Mazé argues that *stopping is worse, because then I just think, the lace entertains me, occupies my head and I don't think of the problems*.

Thus, although prolonged lacing activity can have negative consequences for eyesight, back and legs, it also has its benefits. In general, lacing is understood to be a means to avoid idleness, to ward off thought of *things that are no good*, and even to prevent disease. In this vein, a lace-maker concerned with her health, who was considering a possible surgical intervention, stressed the importance of remaining active on the pillow: *If I stop [lacing], I think, and I get more sick!*

Lacing thus occupies a central place in the lives of those who practice it. Some lace-makers even say that they are addicted to the activity. Nenê (70 years old) revealed to me: *I'm addicted, the pillow is my place, what I really enjoy and I don't see the time go by. Something we inherit from our mothers. I'll make anything from lace, so long as I'm knocking my bobbins everything is good!* Remaining active is what is most important to her, as a way to productively take up her time, her *head* and body. We can hence understand how difficult it is for some elderly women to have to abandon the activity due to physical restrictions. One of them compared her relation to the pillow to a *love affair*. *When we need to be far from each other we suffer, time stands still, the head is not busy*.

Since it is an activity that requires constant engagement and focus, time is experienced differently whenever lace-makers are *entertained* with the pillow. The pace of work, carried out rhythmically and marked by the *music of the bobbins*, absorbs the attention of the lace-makers in such a way that they do not see time go by except through the *growth* of the lace and the incidence of sunlight. This recalls the relation between rhythm and concentration highlighted by Sennett (2009). In contrast to Adam Smith's description of industrial work, which establishes a relation between (an almost mechanical) routine and tedium, the author explores the state of attention and anticipation linked to craftwork which might also be described as repetitive and tedious. In his view, "rhythm has two components: the accent of a beat and pace, the speed of an action" (Sennett 2009: 197). When these two aspects converge in practice, the craftsman can remain alert for many hours. In this way, concentration completely absorbs one in the activity being carried out.

This sense of lacking a notion of time while being *entertained* with lacework is reported by a great many lace-makers. The requisite engagement for lacework involves focus and concentration, which makes hours go by without the craftswomen being aware of it. I often heard stories of women who start *knocking their bobbins* while preparing lunch, and only remember the pan in the cooking fire when they sense the odour of burnt food.

The category analysed here has multiple dimensions, but we will present only those that are directly linked to the idea of "lacework". Before turning to the technical aspects of the activity, I will describe the lace itself and how its productive process is put into effect.

Classifying lace through gestures

Knocking the bobbins is a consequence of a movement that is at the origin of lacing. As we will see, the bobbins, and consequently the threads attached to them, can be interlaced in different ways. Hence what is called a "stitch" is a specific sequence of actions that involves four bobbins that lace-makers handle. There are many possibilities and patterns that can result. In her thesis on Slovakian lace-makers, Nicollette Makovicky (2006), questions traditional definitions of lace as textile "without a loom", thus similar to knitting, crochet or macramé. The author argues that bobbin lacing, like textiles produced on looms, is based on a combination of the threads that produces the "web" (or the warp) and the 'weft'.⁵ Thus, she argues, bobbin lace "is made by an act of weaving" (Makovicky, 2006: 77). Indeed, in some aspects, lace displays some similarities to the act of

5 Flat textiles are formed by interlacing transversal threads, equivalent to the warp, and longitudinal ones, which constitute the weft.

weaving, when considering how the threads are organized and how tensions are maintained throughout the process of managing textiles in a loom. However, when we turn to lace-making in Canaan, this similarity has its limitations, as we will see shortly.

The work of Leroi-Gourhan (1984; 1985), published in two volumes, concerned with classifying techniques through an analysis, or taxonomy, of gestures, is extremely relevant to a consideration of technical activities. Although he does not explicitly deal with bobbin lacing, the author offers us a wealth of material on the different ways of bringing together threads and fibres, which can shed light on the present discussion. Like Ingold (2002) and Makovicky (2006) after him, the French anthropologist of techniques approximated textile weaving to basket weaving. Leroi-Gourhan's classification considers only the material, "insofar as it implies special means of treatment" (1984: 197). He thus abandons the main criteria that had been used to distinguish among and classify these techniques: form, use and aspect. The author acknowledged that while a strip of bamboo or straw can be worked on with a support, cotton threads need to be (at least partially) stretched out, and that the resulting tension, the suspension of the threads, is the main difference between lacework and basket weaving. However, considering the prevalence he attributes to gestures over instruments, Leroi-Gourhan argues that, while important, this distinction is secondary:

The fundamental fact is interweaving the textile elements, the utensils are merely a means: by their rigidity, thick fibres do not need frames, and their calibre does not require devices to move them; thin threads, in contrast, require a frame to stretch them and devices to move the numerous elements of a weft (1984: 199).

Lúcia van Velthem's (1998) ethnography of basketry among the Wayana Amerindians of northern Amazonia offers a similar perspective, privileging gestures over finished products. She draws attention to the idiom of "technical procedure" (*tikaphé*) used in confectioning baskets, but which also applies to pottery and weaving. The relation that the Wayana establish between these techniques is tied to the gestures that their production requires, as the Wayana conceive them: "This designation [*tikaphé*] indicates that this technical procedure requires work with both hands, in similar movements, and not that the Wayana consider making baskets to be the same as making pots or anklets" (van Velthem 1998: 20).

Returning to Leroi-Gourhan's classification, the first element considered is how the threads are crossed, whether in textiles or baskets. The disposition of fibres in crossed layers (horizontal-vertical or diagonal) can occur successively or simultaneously. In the first case, characteristic of weaving textiles, the weaver starts with a vertical disposition of a layer of threads (the warp), before threading the second layer (the weft) perpendicularly over the fixed layer. When the two tasks are performed simultaneously, both layers are crossed over the same base, diagonally, resulting in braided patterns. These modalities of interlacing layers result, respectively, in a direct weave (horizontal and vertical layers) and a diagonal weave.

The second element of his classification derives from the first, and concerns the fundamental characteristics of interweaving by means of which the moveable elements (the weft) can be crossed through the fixed element (the warp). Leroi-Gourhan lists three possible ways of crossing threads, which may be spiralled, chorded, and woven. The third and final characteristic observed by the author is the fixed number of elements that are crossed, above and below, by the moveable elements of the second layer.

Leroi-Gourhan's classification allows us to develop Makovicky's (2006) comparison of Slovakian bobbin lacing and weaving. This approximation, based on the presence of the bobbins, the pillow and pins, is coherent, since it creates, respectively, a supporting base, fixation and a weight that keeps the threads in tension. Analogously, the loom also produces a support that keeps the threads stretched. However, when we consider the sequence in which the threads are crossed, and the ways they are crossed, this approximation becomes less plausible. Although Makovicky (2006) accepts the possibility of producing, on the pillow, different laces from those produced on the loom, she persists with the comparison, because, in her point of view, the bobbins being

handled are always divided between the pair that composes the “warp” and that which produces the “weft”. If, however, we consider the first aspect of Leroi-Gourhan’s (1984) classification, related to the position of the layers and the sequence of their production, lace-work and weaving occupy opposite positions.

While lace-work is produced simultaneously, loom-weaving is always produced sequentially – that is, first the fixed layer, or warp, is set, so that then the weft can be built. This means that in bobbin lacing we do not find two layers that cross each other successively. All threads are attached to the pillow and hang vertically, being interlaced simultaneously. Furthermore, each stitch of the lace presents a peculiarity in terms of how the threads are crossed, which can occur both in a vertical-horizontal direction as well as diagonally. From the point of view of Leroi-Gourhan’s (1984) classification, therefore, bobbin lace presents characteristics that can be seen to be incompatible, since it includes, at the same time, patterns that are defined as proper to simultaneous or successive processes and, even, a pattern which is mentioned as being proper to basketry, and which would be inexistent in weaving.

Although lace is not present in Leroi-Gourhan’s (1984) classification, his description is relevant to the present case since it highlights the ways of interweaving threads in relation to the gestures that give rise to them. Every one of the stitches of the lace is constituted by a way of crossing the lines. As we will see, the final form assumed by each crossing is, like the lace as a whole, related to the gestures and sequences of the movement that produced it. This is why it is important to consider textiles by the gestures that create them, rather than by the final form that they assume.

Considering our aim, which is to understand the importance and consequences of *knocking the bobbins* for the production of lacework, and adding to this Leroi-Gourhan’s claim that “the utensil only really exists in the gesture that makes it effective” (1987: 33), the author’s view on gestures emerges as central. It is thus essential that we turn to how the bobbins are put into action and how we build a path from gesture to lace.

From gestures to lace: delineating an *chaîne opératoire*

In his description of technical facts, Sigaut argues that techniques are not something we see; what we see is only people “doing things” (2003a: 424). We have access to a series of actions and the respective transformations that they cause, the marks of which are visible, since they leave traces in the materials used. The first step in the study of technique is, therefore, the materialization of that which is being made, so that we can analyse it. The tool which makes this transition possible and which enables the actions, elements and transformations involved in a technical activity to be captured, is the *chaîne opératoire*.

The concept of the *chaîne opératoire*, and the different forms of constructing and using it, have been presented and debated by a series of scholars, such as Leroi-Gourhan (1984), Lemonnier (1992), Schlanger (2005) and Coupaye (2009). In keeping with the aims of this article, it is enough to characterize it as a process wherein agents, tools, and materials are related toward a final project, that is, a product (Cresswell 1996: 46). It is a methodological tool, the main function of which is to try and organize the technical actions involved in production by means of an *chaîne opératoire*. As well as making visible the sequential nature of the technical process (Schlanger 1991), it aids the ethnographer in visualizing these processes, since it makes evident a sequence of gestures and the different stages of the transformation of material (Coupaye 2009: 441).

Each sequence enables the production of a small variety of products and consists of a process composed of a certain number of stages. Each phase that makes up this series can involve specific agents, instruments, technical gestures, raw materials and results. Presenting a process in stages, however, is not meant to simplify or segment the technical activity, the actions of which, in practice, are processually enchainé without any clear division into phases that follow successively one from the other (Ingold 2011: 53).

Thus, what the *chaîne opératoire* organizes as a linear sequence of stages, is, in fact, a complex process in which the practitioner is engaged and in which she is related to the properties and limits of the instruments and materials. In an analysis of the possibility of defining an *chaîne opératoire* for metallurgy, Ingold (2013a: 26) sums up his argument:

Instead of the concatenation of discrete operations to which analyst of techniques have given the name *chaîne opératoire*, we have here something more like an unbroken, contrapuntal coupling of a gestural dance with a modulation of the material.

Ingold brings us back to the gesture, an action that is at the base of the productive process, and, therefore, of the *chaîne opératoire*, along which they are grouped into distinct and successive stages. It is gestures, like *knocking the bobbins*, that integrate the lace-maker to her pillow, her bobbins, and the lace she produces. Understanding lace through its gestures, as a product that results from relations established between the lace-maker, her instruments and the environment, requires attention to the forms by which they are classified, enchainned and grouped.

In an approach to technical expertise, Roux and Bril (2002) show that an action (or a sequence of actions) can be considered in three different levels. The first is the level of “elementary acts”, those which, from a functional point of view, cannot be decomposed into smaller units. The next level is that of “sequences of operation”, which constitute the chains of elementary acts. Finally, at the widest level, we find the “course of action”, which refers to the organization of the activity as a whole and to the succession of operations coordinated towards a final aim. Although it is more restricted, this last, most encompassing level, comes close to the concept of ‘*chaîne opératoire*’ which, for its part, considers and incorporates the more elementary levels identified by the authors.

Although the lace stitches are quite diverse, as we saw in Leroi-Gourhan’s (1984) classificatory scheme, each one being characterized by a type of interlacing of the threads, all of them are nonetheless elaborated by the different combination of only two gestures, the ‘twist’ and the ‘switch’ (*trocado*). Taking Roux and Bril’s (2002) distinction of “levels of action”, these gestures can be described as “elementary actions”. In the act of twisting, two bobbins are placed in the palm of one hand (the action usually takes place with both hands simultaneously, but this is not a requisite) and have their positions inverted. The action of *switching*, in turn, can be described as throwing a bobbin from one hand to the other. *Knocking the bobbins* is involved in both situations, since in both of them the *heads* of these instruments touch and make the knocking sounds that characterizes the activity.

Figure 1: Movement of the bobbins during the *twist*



Figure 2: Movement of the bobbins during the *switch*



Following the hierarchy of actions, we may consider that each lace stitch is a “sequence in the operation”, since it involves different sequences of the “elementary actions” described above. The “course of action”, in turn, is related to filling in the frame as a whole and forming the weave. The engagement with and attention to each of these stages is reflected in the quality of the final product. However, as we will see, the elementary acts are particularly relevant toward this end.

If we take the idea of the *chaîne opératoire* in a restricted sense, as an exact sequence of operations moving from the raw material to a final product (Creswell 1996), we can see that each mould (or each lace) has its own *chaîne opératoire*. Certain elements of this sequence, however, remain the same, regardless of which lace is to be produced. These include the agent (lace-maker), the instruments (pillow, mould, bobbins, pins and scissors) and raw material (thread). As to the succession of acts, although they vary according to which piece is being produced, it is possible to define certain stages that are common to all lacework. These can be considered necessary stages, and will be synthesized in what follows.

The process of producing lace is composed of five main movements, which cover the organization of the tasks, its beginning, development, conclusion and the removal of the pillow. Although these stages are obligatory, they can be executed in different ways. It is thus interesting to think of the *chaîne opératoire* in association with the levels presented by Roux and Bril (2002), since every stage can be developed through a distinct “sequence of operations”. The *chaîne opératoire* is not, therefore, linear and planned, but involves, instead, different skill levels and choices relative to the gestures themselves, to the thread and to the use of the mould.

The preparation for starting an activity is the first phase of the process (Ingold 2011: 51). Before the lace is *settled* (*assentada*) on the pillow, a series of acts must be executed. The main task is to fill (or *charge*) the bobbins that will be used with the thread, or threads, that will compose the weave. Lace-makers describe this task as the most boring and monotonous aspect of lacework, both because of the time it requires and the strain it causes on the hand and arms due to the repetitive movement of rolling the line onto the spindle. Despite being tedious, this stage is very important and can influence the remainder of the activity, as highlighted in the following complaint of a lace-maker whose bobbins were *charged* by someone else, and who was dealing with the consequences of this while *knocking her bobbins*: *She filled my bobbins, but I didn't like it because the thread is coming loose. It needs to be very taught, or the line flees*. The fact that the lines are loosely wrapped around the bobbins causes difficulties for the lace-maker in maintaining the tension of the weft. As we will see, for some lace-makers this is a central factor in the production of lace.

Preparations for the activity also include pairing the bobbins and fixing the mould to the pillow. When this is done, all is ready for the lace to be *settled* on the pillow. This stage consists in fixing the pair of bobbins onto the cardboard, an essential step for initiating the lace. Depending on how they are placed, the bobbins can be interlaced, always according to the stitch (or “sequence of operation”) required by the mould. The remaining pairs of bobbins will be inserted according to their need, and once all are attached to the mould and interlaced, it is said that the lace has been *settled*.

The succession of movements that are to be realized from this moment on is defined by the mould, which determines the sequence of stitches and their pattern. All of the mould should be traversed and filled in during the process. More experienced lace-makers are able to use the moulds in different ways. In this sense, the same mould can be executed by different combinations of “sequences of operation”. The following stage is the completion of the lacework, when lace-makers join the threads of each pair in a knot, completing the weave. Threads can hence be cut and the bobbins removed. The last stage is the removal of the pins that still attach the lace to the pillow, and the release of the now finalized lace.

The table below summarizes the main acts, instruments and gestures used in each of the stages of producing lace referred to above. We here consider the agent (the lace-maker) and the raw material (the thread) to be constants, which accounts for their absence from the table. It should be mentioned, however, that lace-makers may receive help from another practitioner, such as a relative or daughter, during any stage of the process.

Table 1: Stages of the *chaîne opératoire* of bobbin lace

Stages	Acts	Tools	Main Gestures
1. Organization	Filling the bobbins	Bobbins and scissors	Rotation of the bobbins on their axes
	Joining the bobbins in pairs	Bobbins and scissors	Join the extremities of the threads in a knot
	Attaching the mould to the pillow	pins	<i>Sticking pins</i>
2. Settling	Attaching the first pair to the mould	pins	<i>Sticking pins</i>
	Interlacing the first pair	Bobbins and pins	Twist and switch
	Introducing remaining pairs	Bobbins and pins	Twist and switch
3. Descending the lace (Executing the mould)	Executing the sequence of stitches	Bobbins and pins	Twist and switch
4. Finalization	Joining the threads of each pair	Bobbins	Joining the extremities of the threads in a knot
	Cutting the bobbins	Scissors	Cutting with scissors
5. Removing the lace	Removing the pins that still hold down the mould and the pillow		Picking pins
	Removing the finalized lace		

The table establishes what can be described as the necessary stages, that is, those that are common to all types of lacework, regardless of the model being produced, the skill of the lace-maker, or her options in what pertains to the mould she will produce. In this exercise, which seeks to trace the path linking gestures to lacework, it is evident that the actions defined in this table basically correspond to first and last acts involved in the production process. Between these stages, the “elementary actions” and the “sequences of operation” vary, since they depend on the design of the mould and the lace-makers options as she makes the lace.

There are yet two sets of movements that should be highlighted and which can be carried out in any of the stages that involve use of the mould, from the moment of *settling* until the conclusion of lacework. The first set of acts can be defined as “occasional”, since they must be executed at certain moments during production, although such moments will be difficult to envisage beforehand. This set of movements include, for example, the substitution of *loaded* bobbins for *dry* ones, that is, those that have no more threads, or the need to mend a thread that has ruptured.

The second set of acts is a specific type, for, although it is not associated to the constitution of the weft as a whole, and hence does not need to feature in a “generic” *chaîne opératoire* such as the one I have tried to elaborate, is interesting for the present discussion because of its relevance to the lace-makers who use it. Besides that, it is also closely related to the idea of *knocking the bobbins*.

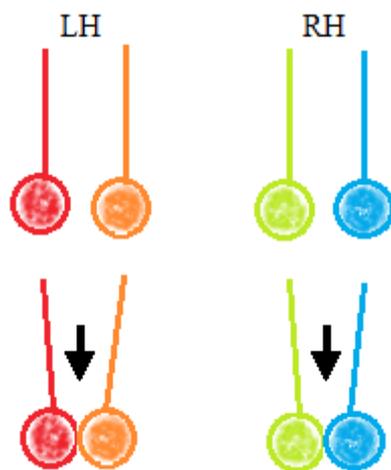
Knocking the bobbins as a technical gesture

As I have said, my conception of the meaning of *knocking the bobbins* slowly widened, as I become more involved in the context of Canaan, became closer to the lace-makers and to lacework. It was because of this growing proximity, including my own apprenticeship in lace-making, that I began to understand a central aspect of the process: that *knocking the bobbins* is not only a way of referring to the production of lace itself, but also a specific technical gesture.

According to Mauss (2003: 403), technique is defined as a “traditional effective act”. Considering its effectiveness, it is a way of doing, an act that fulfils a determinate aim, that produces an effect in terms of a desired goal. Up until this point we have been dealing with different aims, or effective forms, related to *knocking the bobbins* as an act of lace-making, such as the possibility of making some money, of entertaining oneself, of filling up time and occupying thought. However, there is another result that can be obtained from *knocking the bobbins* which involves understanding these acts in the terms of Leroi-Gourhan (1984), as an action on matter, or, in this case, on threads.

With a succession of observations and the intensification of my comprehension of the gestures carried out and the transformations that they cause, or the traces that they leave on the material being used, I noticed that some lace-makers would knock the pairs that had been used against each other, making their heads hit one another, after each stitch, or each “sequence of operation”, was executed. The main difference between the two types of *knocking* is that, in the case we have discussed above, where *knocking the bobbins* is equivalent to lace-making, knocking is unintentional, or just a consequence of the way the bobbins are handled. In this latter case, however, the bobbins are intentionally knocked against each other, as they are pulled down. This act is similar to the twist that involves the pair of bobbins that the lace-makers have in each hand, but instead of then changing their positions they are moved so as to touch one another. In other words, while the former sense of *knocking the bobbins* results in the production of lace, the second has a specific result, since it increases the tension of the threads that are laid on the mould and ensures greater firmness for the weave as a whole.

Figure 3: Movement of the bobbins during the *snap (estalo)*



We thus have two different modalities of action, with different results – or, in the words of Mauss, distinct effects. Referring to the different levels of action delineated by Roux and Bril (2002), we may say that the former modality of *knocking the bobbins* comes close to the most comprehensive level, the “course of action”, since it involves the whole process of lace-making, while the latter is a type of “elementary act” which cannot be decomposed into smaller units.

Considering my attempt to establish an *chaîne opératoire* for lace-making, we can claim that *knocking the bobbins*, as a technical gesture, is used in phases that involve the construction of the lace itself – that is, in the moments of *settling* (2nd stage) and of *descending* the lace (3rd stage). It would thus be joined to the *twist* and the *switch*, which are the main gestures of these phases. It should be noted, however, that although they represent “elementary acts” and participate in the same phases of production, or of the *chaîne opératoire*, there is an essential distinction between these acts. While the *twist* and *switch* are fundamental to constructing the weft, the *snap* that emerges from *knocking the bobbins* does not influence its constitution, even if it has a direct impact on its aesthetic result and quality. Taking Leroi-Gourhan’s (1990) distinction, the *twist* and the *switch* belong to the acts of the fixed series of the *chaîne opératoire*, while the *snap* composes the flexible series. In Lemonnier’s (1986) terms, in contrast, the first type of act constitute strategic operations, those that cannot be omitted without jeopardizing the whole process, while *knocking the bobbins* represents a technical variation, for although they are relevant in cultural and social terms, they are not obligatory.

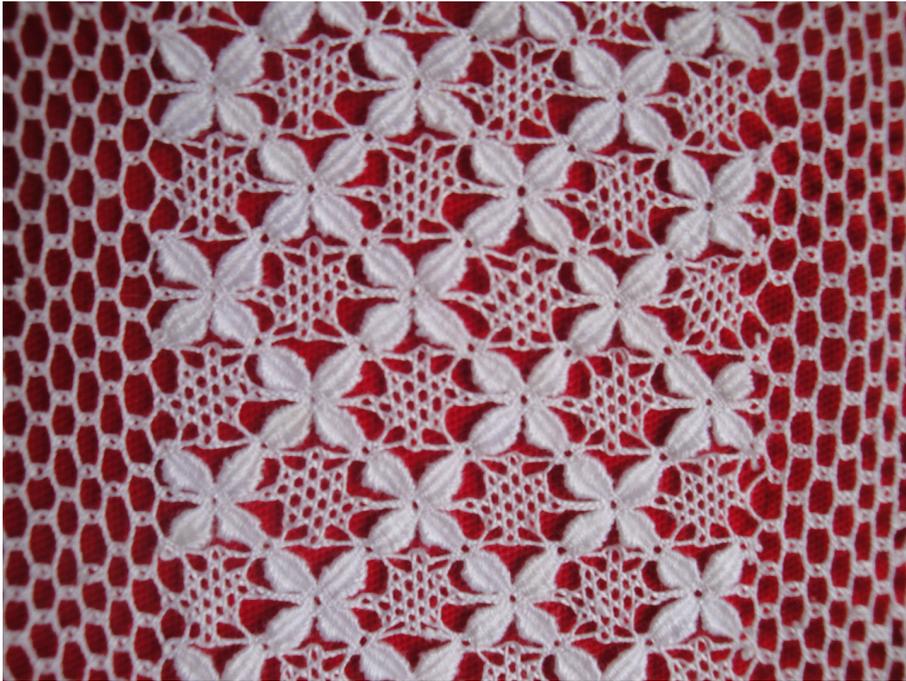
As I have mentioned, not all lace-makers use *knocking the bobbins* as a technical gesture in the production of their lacework. This action may thus be present, or not, in the definition of an *chaîne opératoire*, depending on whether it is used by the practitioner being observed. In what concerns the issue of how *knocking the bobbins* is to be integrated into the *chaîne opératoire*, it is useful to refer to Coupaye’s (2017) reflection on the potentials and limits of this methodological tool through his attempt to apply it to yam cultivation among the Abelam of Papua New Guinea.

In this work, Coupaye proposes that we adopt two distinct methodological positions regarding the *chaîne opératoire*, which I will now present since it speaks to the aims of this article. The first is that we be attentive to the essentially descriptive character of the *chaîne opératoire*, which represents an always incomplete transcription of the ethnographer’s observations in the field. It is hence “no more than the capture of a unique event, observed at a specific time and place” (Coupaye 2017: 480). The second position, which is of greater interest to us, concerns the Maussian idea of technical acts as “traditional effective acts” (Mauss 2003: 403). Starting from this conception, Coupaye stresses that the ethnographer needs to take into account the “ethnoconceptions” of efficacy that play a part in technical processes. That is, we must consider what is effective from the point of view of the agents with whom we interact in the field. The *chaîne opératoire* that the author constructs thus includes “what cultivators deem necessary for the proper development of the tasks” (Coupaye 2017: 481). In this sense, *knocking the bobbins* as technical gesture is considered, by some lace-makers, to be a central step for obtaining a lace that conforms to their criteria of quality. It is to these criteria that we will now turn.

The effects of *knocking the bobbins* and the *fine lace*

On a first impression, the expression *knocking the bobbins* had an evident sense related to lace-making. It has gradually emerged as a more complex category with multiple meanings. At first I was unable to visualize the act of *knocking the bobbins* as an act in itself, and tended to frame it as a habit with no practical effect. This perspective was justified to the extent that the act did not constitute an important movement for constructing the lace, which is what I was seeking to understand. The realization that this act is an important technical gesture only occurred when I came across what lace-makers consider to be a high-quality lace, or what they describe as *fine lace*. From this moment on, I understood that the knocks, or *saps*, were neither unnecessary nor random, but rather had a central function in relation to the specific aim of producing *fine lace*.

Photo 2: Detail of a *fine* lace



Prolonged contact with the lace-makers enabled me to access the criteria and the elements that they consider necessary for a lace to be classified as *fine*. This classification involves both formal aspects and technical aspects of production (Brussi 2017). It is interesting to observe that both are related. The indispensable attributes of *fine* lace, from the point of view of their makers, are firmness and weight, as well as cleanliness, quality finishing and a well-defined form created by the stitches. All of these criteria are intimately linked to the technical processes of making lace. It is no accident that lace-makers also call lace of this type *more worked* or *well done* lace. It is precisely because *fine* lace results from a more unhurried and laborious process that it can be described as *fine*.

The three main “elementary actions” that participate in the construction of the lace are, in this sense, essential to ensuring *fine* lace. All of these acts can be carried out with greater or lesser rigour. As we have seen, unlike the *snap*, the *twist* and the *switch* cannot be omitted from the *chaîne opératoire* since they are necessary acts for producing the weave. Nonetheless, they can be reduced or simplified, as we will see. Considering the financial needs of the families of Cnaan, lace-makers are sometimes in a hurry to finish their pieces, so that they can be sold and used to buy essential goods for household subsistence. Many therefore opt for producing *less worked*, hence simpler lace. As well as being made in less time, this choice also decreases expenditure in threads, an expensive raw material for most lace-makers.

An example of this simplification of the technical process involves the basic stitch of the lace, which also names one of the “elementary acts”, the *switch*. This stitch can be executed in two ways, as a *half-switch* and as a *full switch*. The “sequence of operation” of a *half-switch* is composed of a *twist* followed by a *switch*, and the only difference between them is that the *full switch* is formed by the execution of two *half-switches* in sequence. In the opinion of the more careful and demanding lace-makers, there is a huge difference between lace produced with the *full switch* and that made with the *half-switch*, both in what concerns its quality and its appearance. Describing the ideal way to make lace, Alda (76 years old) said: *It has to all be in the full switch, all closed up, so that it’s very firm. When you remove it from the pillow, it stands straight!* The fact of closing a stitch with a *full switch* keeps the threads closer together and the lace firmer. The opposite of *well done* lace is *rangarela* lace, which means loose, open, frayed.

As we saw above, the *twist* is the first movement to be executed to make a *switch* stitch. The importance of this gesture, however, goes beyond its role in making this stitch, since it is the main factor ensuring a firm lace, with well-defined forms and patterns. By twisting the threads of each pair of bobbins before carrying out their *switch*, lace-makers guarantee that the tension is kept in the lace. Furthermore, throughout the production of the piece, careful lace-makers are always twisting the threads attached to each bobbin on its own axis. They do this because, as they handle and manipulate the bobbins, the cotton threads tend to lose their natural torsion, becoming more fragile and likely to tear. The constant twisting of the line also makes them thinner and smoother, so that they glide easily when rubbed against one another.

Finally, *knocking the bobbins* is an act that, while not necessary for producing the lace, is fundamental for the production of a *fine* one. It is this movement that ensures that threads remain uniformly distributed throughout the weave, which contributes to the symmetry of the stitches and the definition of the patterns. They also keep the threads in tension, guaranteeing that the weft remains more firm and stretched out than it would be without this act. The pins here play a central role, since they serve not only to keep the threads united through the stitches, but also help in keeping the lace tensioned, generated by the acceleration and traction of the movement of *knocking the bobbins*. The firmness of the lace therefore results from, and is proportional to, the investment in the *snaps* of the bobbins while it is being produced. Jeane (35 years old), a lace-maker who prefers to produce *well done* lace, despite the fact that its commercial value is no different from *rangarela* lace, describes the importance of *knocking the bobbins*: *Without knocking the bobbins, the lace is soft. The more we knock the bobbins and tighten (acochar) with the snaps, the harder and more stretched the lace is. There are people who do the switches and leave it to the side, and the lace then doesn't tighten!*

Gestures, rhythms, effects and forms

Returning to Mauss' (2003) concept of technique as a "traditional efficient act", I hope that it is by now clear how the elementary gestures that we have been concerned with, in particular *knocking the bobbins*, produce effects in the final result of the lace. In the same vein, we can refer to François Sigaut's (2003b) text "Le formule de Mauss", in which he develops Mauss' definition of technique. Focusing on efficiency, and looking to respond to some criticisms that the concept has received, the author looks to add precision to the notion's definition. In his view, an effective act is that which produces an expected effect and, more importantly, an effect which has physical, material sense. It is thus sensible, available to perception (Sigaut, 2003: 5).

There is, however, another fundamental element in bobbin lacing that relates to the gestures, and which needs to be discussed here: rhythm. As we have seen, the gestures and movements of lace-making follow a rhythm, including that of *knocking the bobbins*, or the successive clash between them, which create a punctuated beat. It must be stressed, therefore, that this rhythm, as a compass generated by the gestural movements of the lace-makers, also has a physical effect on the weft that is produced. If our aim is to follow Leroi-Gourhan's view on action upon matter, and to describe the weave of the lace through gestures and the set of acts that are at its origin, then rhythm assumes a central importance.

Leroi-Gourhan had already addressed this issue. As Alexandra Bidet (2007) notes, his work is shot through by an anthropology of rhythm. Through the revaluation and amplification of this concept, he turns to the empirical aspects of human existence, with a view toward the relation between corporality and sociality. The notion of rhythm permeates his analysis of the genesis of aesthetic and the social (Bidet 2007: 2). For the purposes of my analysis, I draw attention to Leroi-Gourhan's (1987: 114) claim that "all making involves a dialogue between maker and matter".

This dialogue is established within an environment that the author calls rhythmic, at once muscular, auditive and visual. Technical operations hence involve gestural repetition and regular time intervals, a temporal rhythm that is defined by gestures is translated into space. Rhythms create form (Leroi-Gourhan 1987: 117).

In his work on “Primitive Art”, Franz Boas (1951) presents a similar analysis of form and the meaning of art, particularly among the people of Northwest Coast of North America. He establishes a relation between decorative forms and the rhythmic repetition of certain movements, or, as Roux and Bril (2002) would call it, “sequences of operation”. In Boas’ view, activities such as pottery-making and weaving connect the regularity of form to rhythmic movements involved in the production. Temporal rhythm is thus created by gestures that materialize in different types of form and pattern (Boas 1951: 40)

Considering *knocking the bobbins* as a polysemic concept, we can view each of its meanings, themselves implicit in distinct levels of action, through, on the one hand, the relation between gestures and rhythm, and, on the other, the physical effects and resulting forms. When *knocking the bobbins* simply refers to “lace-making”, the knocking of the spindles have no expected consequence, producing no discernible physical effect. It is just a way of referring to the activity as a whole, with no indication as to the quality of the lace that is being made. In contrast, when *knocking the bobbins* is considered an elementary act, it seeks a result, or a specific effect, related to the tighter tension of the lace. In this case, the lace-maker must execute more gestures, which requires more time, but results in a *fine lace*. If this elementary act is omitted, the rhythm of lace-making is accelerated and the amount of gestures that need to be executed decrease, resulting in an inferior, tatty lace – a *floppy lace*. These relations are synthesized in the table below. Its aim is to schematize these connections and to make evident the fact that *knocking the bobbins* has different meanings that, for their part, are linked to distinct levels of action. In practice, however, these relations are more complex, and both meanings can be combined in a single movement. This is what happens when a lace-maker opts to produce a *fine lace*. They associate both senses of *knocking the bobbins*, since they make lace and *snap* the bobbins after each stitch is concluded, so as to make it *firmer*.

Table 2: Schematization of the two meanings of *knocking the bobbins* and the relations established in each case

<i>Knocking bobbin</i>	Associated level of action	Knocking	Rhythm (time, cadence of work)	Resulting forms (space), or physical effects
While lace is being made	“course of action”	Unintentional (a consequence of the act which does not seek to produce a specific effect)	+ acceleration / - gestures to be executed / shorter cadence	<i>Floppy lace</i>
As a technical gesture	“elementary act”	Intentional (aiming for a specific effect, seeking a lace with greater tension)	- acceleration / + gestures to be executed / longer cadence	<i>Fine lace</i>

Regarding, on the one hand, the relation between gestures and rhythm, and, on the other, the effects and forms that they generate, it is useful to recover Ingold’s (2013b) reading of Leroi-Gourhan. Taking into account the view of production as a dialogue between maker and matter, Ingold suggests that this dialogue takes the form of a succession of questions and answers, where each gesture seeks a response, a reaction or, in Mauss’ words, an effect from matter, which, for its part, enables the work to continue towards a desired goal. A correspondence is established, in which matter registers the actions of the maker, their regularities and imperfections (Ingold 2013b: 121).

In a perspective that focuses on the relation between rhythmic movement and emergent form, Ingold (2013b) narrates the experience he shared with his students in trying to produce rope by hand, and the four lessons they learned in the process. The first thing they became aware of during the activity was that hands were capable of learning how to know, or “feel”, the material. The other lessons concern the relations between gestures and matter. Experience and practical engagement with the material allowed them to perceive form as the rhythm of bodily movement transmitted to the material. Analogously, they noticed that the material conveyed the memory of how it was manipulated, since gestures become registered upon it. Finally, Ingold highlights that it is the forces and energies applied to the materials, by way of gestures, that keep them together. The form of lace is generated thus in the field of forces constituted by the relations between the gestures and bodily movements of the lace-makers and properties of the material they handle – threads, in this case.

The sound, or *music*, heard as one walks through Canaan, produced by *knocking the bobbins*, is not dependent on the level of action of the lace-makers, on the rhythm they impose, or the forms they create. If the knocking of the bobbins does not need to be intentional, since they are implied in the very process of bobbin lacing, the same is not true of rhythm and form. The rhythm maintained by the lace-maker, much like the aesthetic result of what she produces, is deliberate, and follows from a choice that involves factors such as skill, physical condition and financial status.

Making *fine lace*, which is also considered visually prettier and more harmonic, requires, we have seen, more time and greater attention and care to the “elementary actions”. Well-defined contours and the symmetry of forms are directly tied to the ideal tension of the thread, and, therefore, to the purposeful *snaps* of the bobbins while the lace is being produced. By stressing the importance of gestures to the construction of the forms and patterns of lace, and proposing an approach that relies on them, I have sought to distance myself from analyses which are based on the relation between function and form (symbol/style), delineating a alternative framework.

Considering the relations analysed in this article, between gesture, rhythm and form, one final reflection should be made. It stems from the fact, already presented above, that each stitch of the lace is composed of a specific sequence of movements, of *twists* and *switches* of the bobbins. As in the *chaîne opératoire*, in which each act is to be analysed in relation to the total sequence, the role of rhythm can likewise not be understood by focusing on each knock on its own, segmented from the rest, but rather through the gestural set as a whole. Just as there is a relation between gesture and form, we can suppose that there is also a connection between form and the sound created by *knocking the bobbins*. If the pattern of each stitch of the lace is related to a sequence of movements performed with the bobbin, each stitch can also be related to a specific rhythmic cadence. The pattern of each stitch would thus be related not only to the gestures that give rise to them, but also to the sound produced by how the bobbins are handled during their production.

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Unproductive Participation and Protection Against Germs: Technical-Ritualistic Practices in Heart Surgery

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Abstract

There is a debate in the social sciences about the character of the effectiveness of techniques and performances in the surgical field. The literature is divided into different postures, which highlight the ritualistic aspects of techniques and procedures (Katz, 1981; Rawlings, 1989; Hirschauer, 1991) or emphasize their pragmatic efficacy and the purely antiseptic character of sterilization procedures (Collins, 1994). During ethnographic research conducted in the field of cardiac technology production, I observed that these spheres are, in fact, intertwined. Additionally, I believe that it is necessary to consider that the formation of the surgical field (a procedure that will be explored in the following article), as well as the employment of other hygienic procedures are not simply rituals to keep microorganisms away, but are also part of the conditioning of the “surgeon’s body”. Surgeries are risky procedures that require the development of techniques in order to avoid contamination with both microscopic agents and unproductive involvement. The threat of unwanted involvement implies the development of skills that allow for “good participation”. In my ethnographic research, in contrast to the surgeries performed on humans in the operating rooms, the procedures performed on animals show that the process of “depersonalization” (that is, the subject’s erasure through the construction of the surgical field) in experimental surgery has the effect of naturalizing non-human animals, instituting them as substitutes for humans. This requires a delicate game of approximation and distancing on the part of the surgeon and the medical team. In general, my aim here is to describe and analyze the technical-ritualistic aspects that are part of cardiac interventions and which underlie the establishment of the surgical field, seeking to dilute the dichotomy established in the social sciences between a technical-functional pole and a ritual-symbolic one.

Keywords: technique and ritual; body; surgical field; depersonalization.

Proteção contra germes e participação improdutiva: técnicas práctico-ritualísticas em cirurgias cardíacas

Resumo

Há nas ciências sociais um debate sobre as técnicas e atuações no campo cirúrgico, a respeito do caráter de sua eficácia. A literatura é dividida em diferentes posturas que, em contraste, destacam o aspecto ritualístico das técnicas e procedimentos (Katz, 1981; Rawlings, 1989; Hirschauer, 1991) ou a ênfase na eficácia pragmática, no caráter puramente antisséptico dos procedimentos de esterilização (Collins, 1994). Na pesquisa etnográfica realizada no âmbito da produção de tecnologias cardíacas observei que essas esferas estão entrelaçadas. Além disso, é necessário considerar que a formação do campo, procedimento que será explorado aqui, bem como os demais procedimentos de higiene não são apenas rituais para manter afastados os micro-organismos, mas também fazem parte do condicionamento do “corpo do cirurgião”. Cirurgias são procedimentos arriscados, que demandam o desenvolvimento de técnicas para evitar a contaminação por agentes microscópicos, mas também de envolvimento improdutivo. A ameaça de envolvimento indesejado, demasiado, fora de medida, prenuncia o desenvolvimento de habilidades que permitem instituir uma “boa participação”. A etnografia também permitiu iluminar, que em contraste com as cirurgias performadas em humanos nos centros cirúrgicos, os procedimentos em animais realizados no âmbito dos testes in vivo evidenciam que o processo de “despersonalização”, ou seja, o apagamento do sujeito por meio do campo cirúrgico, na cirurgia experimental tem o efeito de naturalizar os animais não-humanos, instituindo-os como substitutos dos humanos, o que demanda um jogo de aproximação e manutenção da diferença. Em linhas gerais, o intuito é descrever e analisar os aspectos técnicos-ritualísticos que compõem as intervenções cardiológicas e fundamentam a instituição do campo cirúrgico, buscando diluir a dicotomia instituída nas ciências sociais entre um polo técnico-funcional e outro ritual-simbólico.

Palavras-chave: técnica e ritual; corpo; campo cirúrgico; despersonalização.

Unproductive Participation and Protection Against Germs: Technical-Ritualistic Practices in Heart Surgery

Marisol Marini

Introduction

The present article is rooted in ethnographic research regarding the production of medical technologies known as “artificial hearts”.¹ Although my research was not conducted in one single institution, but rather among a network of researchers and cardiac devices, the data presented below was primarily collected in a Brazilian hospital, located in the city of São Paulo that specializes in cardiology. This hospital contains a bioengineering laboratory in which artificial hearts and other medical artefacts are designed. “Artificial heart” is something of an “umbrella category” that refers to a series of technologies, among them *ventricular assist devices* (VADs), total artificial hearts, and temporary circulatory support mechanisms utilized during surgeries, among many other devices.

The possibility of directly studying the processes related to experimental surgery performed on non-human animals and the surgeries conducted with human patients took me by surprise during my research. This question first raised its head when, after accompanying laboratory activities (*in vitro* tests, also known as “bench tests”), I was invited by some of my interlocutors to observe the *in vivo* tests of the VAD that I had watched being developed in the lab. After observing the VAD being implanted in pigs, I was invited to accompany the re-evaluation of another device that had been developed at the same institution: a temporary pump. This would take me into an operating theater where this equipment would be evaluated in humans, the third stage of research in the production of artificial hearts, which only takes place after *in vitro* and *in vivo* testing.²

In the material presented below, I aim to describe and analyze technical-ritualistic aspects that are part of the cardiac interventions I witnessed and that I believe underlie the “surgical field”.³ Here, I seek to destabilize the dichotomy established in the social sciences between that which is understood to be technical-functional and what is considered to be ritual-symbolic. To this end, the present article will be divided into three parts. The first section will cover the training, education, and conditioning of surgeons, and it will include a reflection on “technique”. Utilizing reports on the training and education of researchers produced by American anthropologist Rachel Prentice (2007, 2013) in her ethnographic research into anatomical and surgical education, I endeavor to show that the supposed opposition between ritual and technical practices,

1 This research was part of my doctorate undertaken at Programa de Pós-graduação em Antropologia Social da Universidade de São Paulo (USP), under the mentorship of Professors Heloísa Buarque de Almeida and Stelio Alessandro Marras. This research received financing from the Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP – processo nº 2013/02389-2). Due to a post-doctoral scholarship, also from FAPESP (processo nº 2018/22183-3), I have been able to produce and translate the present article.

2 I ethnographically observed three surgical procedures performed on humans and six conducted on pigs. I also interviewed one of the surgeons who conducted some of these procedures. The interviews ended in the operating room, where I could follow the surgeon’s work. All of these experiences underpin the analysis presented below.

3 “Surgical field” is a category that will be referred to and explained throughout the present article. I opt to not use quotation marks or highlighting for the term, from this moment on, in order to not visually pollute the text, as this term will repeatedly show up throughout the article. The same goes for the term “technique”. It is worth noting that emic or analytical terms that are originally presented in quotation marks may no longer be so indicated throughout the text, once they are properly explored and/or ethnographically deconstructed.

(the latter being those practices undertaken exclusively due to their practical/material effectiveness), presented during the education of surgeons and throughout the development of their surgical skillset, does not adequately describe practical relationships as they are really lived in the surgical field.

Part two of the article draws on my own ethnography in order to describe the formation of the surgical field itself, investigating its potential as a technical-ritualistic practice that prevents the invasion of potentially dangerous agents and microorganisms while it simultaneously impedes unproductive involvement between the subjects, actants, tools, medical team, and “patient” (the body/person/subject/object/substance that is presupposed and at the same time abstracted in the surgical field). The threat of unwanted, excessive involvement, demands the development of skills that enable the surgeon’s correct and adequate participation in the surgical process. I have borrowed the term “unproductive involvement” from the work of Brazilian anthropologist Stelio Marras (2019), who has reviewed the classic notion of exchange and its (re)connection to participation in order to fuse contract and contact. Marras does this by following a lineage of theoretical texts and formulations including (but not limited to) the works of Marcel Mauss, Claude Lévi-Strauss, and Lévy-Bruhl. Marras suggests that the pragmatic existence of things and people is created through participation, which (like exchange) must include nonhumans (who are judged as natural). Thought of as reciprocal links and as relations of continuity, participation illuminates the “participationist” character of the presuppositions underpinning the surgical field in such a way that agents, actants, subjects, tools, and objects can be characterized as “participation networks” that create themselves and set themselves in motion. Looking at “involvement” in terms of participation allows us to reshape it, understanding it as co-involvement, while simultaneously noting the not quite voluntary or intentional participation of the “involved”. Given the comparison between modes of participation and the supposed radical difference between Us and Them, one might suppose that the relations and entities on display in the operating room could be characterized as non-participatory, if we were to frame them within the order of a naturalistic cosmology. However, the relationships established in the surgical field – as well as the actions, techniques and skills developed there – are indeed extremely participatory. Because of this, the mechanisms of purification of the effects of participation do not seem to account for the ontological separations between things, people, humans, and nonhuman others (LATOURE, 1991). What happens in the operating room is therefore the participation of – and association between – beings of the most heterogeneous sorts (Marras, 2018). The forces that emerge from these relationships are thus found neither in human nor in things, but in the very interaction between them (MARRAS, 2018; BAILÃO et al, 2018).

The hypothesis of depersonalization, seen as an effect of the institutionalization of the surgical field itself, will also be discussed here, but is mostly taken up in the article’s third section, in dialogue with the social sciences literature regarding the subject (Katz, 1981; Rawlings, 1989; Hirschauer, 1991; Fox, 1994; Collins, 1994; Goodwin, 2008; Tanchou, 2014). These authors represent two strands of understanding regarding depersonalization. The first that argues for its ritual-symbolic character while the second ascribes a technical effectiveness to the phenomenon. This is not about relativizing the existence of microbes, as Josiane Carine Tanchou (2014) seems to do, when she addresses trivialized space while observing non-compliance with certain hygienic procedures that blurs the boundaries between operating room and the surrounding world. Rather, it recognizes that the formation of the surgical field and its hygienic procedures are not merely strategies to keep unwanted microorganisms at bay: they are also part of a surgical conditioning. This must lead us to reconsider the very notion of the effectiveness of the ritualized practices themselves.

Surgical skills as conditioning: what does it mean to say that surgeons are technicians?

A technician. A kind of robot. Someone who develops the techniques for which he has been trained and which are improved throughout his life. Someone who only knows how to do things according to said techniques. This is how surgeon Achilles defined himself, much to my surprise and that of some of my bioengineering interlocutors, who – like me – seemed uninformed about surgery in the field of biomedicine.⁴ Achilles' definition seems to mirror common sense regarding surgeons, who are viewed as “cold” professionals, little involved with and indifferent to their patients.

This is a necessary distancing, however, built according to certain conditions that Achilles revealed, when I ask him what he usually knows about a patient before operating:

Achilles - Here the patients are discussed in a clinical meeting including everyone engaged in the case, and minutes are taken down. This patient is often operated on only 6 months later. So I have to look at the minutes, which are all on paper, to remember which patient it is. So before surgery I look at the minutes.

Marisol - Do you know the full history of the disease?

Achilles - Yes, all the exams are there. There is a very well developed discussion of its course. So I look at that and come in to work.

Marisol - So you know the whole medical history [of the patient]? Is that what you know about the patient? You do not know their name or personal data?

Achilles - I usually joke that I'm a technician. I do not talk to the patient. I just go in there and solve the problem. And it's one after another. Ideally, there should be more interactivity. But I think it's good, because this way doesn't create interpersonal relationships. The clinician has a relationship. I cannot have pity. If I have pity, I don't operate.

Marisol - Is it a defense strategy?

Achilles - Yes. Because sometimes I have to do something very risky and if I start thinking about the child's mother, the child, I don't do it. So I do what has to be done without blinking. If I have to cut something and that has some risk, I'll cut it. And then I'll fix it.

Regarding his distancing from patients, Achilles reveals that personal information and interpersonal relationships, besides being useless, might compromise a surgeon's “courage”. He thinks the ideal would be for more “interactivity” to occur between patient and surgeon, but over the years he has come to keep less and less track of his patients in the intensive care unit (ICU), although he understands that having *feed back* from patients is critical in order to improve surgical outcomes. Interactions with the patient after the procedure, however, refers to the case and exams, in which Achilles can view and evaluate the “outcome” of the surgery.

At the beginning of his career, Achilles would talk to family members after surgery. There were situations, however, when he “wasn't in the mood.” The difficulty surgeons encounter in giving some feedback to the family (especially when news about the patient is negative) involves the responsibility not only of the surgeons themselves, but also that attributed to the family. Even if the patient was very ill before surgery, dying on the operating table implies a burden: a responsibility for a decision that may have culminated in the ending of that life. At the moment of his career when I interviewed him, if Achilles did not talk to the family himself, he would delegate this task to his assistant. Dodging interaction with the family reveals that this kind of

⁴ Achilles defined himself as a technician at the time when I had interviewed him, but he repeated this definition in a public debate involving bioengineering researchers. In that second situation, I noticed that some of my bioengineer colleagues were also surprised by his words. It might seem more likely for bioengineering researchers to recognize themselves as a “technician” - at least a certain type of technician - given that patients (the potential users of the technologies the engineers develop) are largely abstractions to the engineers, usually represented by numbers, data, graphs, and so on.

participation/relationship demands an emotional burden on the surgeon. Saving yourself from this friction is the act of someone who understands, through long experience, the proper level of such interactions necessary to both reassure/inform the family and protect the surgeon from emotional stress. By delegating this task to his assistant, Achilles demonstrates that he feels the task of informing the family is a critical part of learning, conditioning, and educating a surgeon, by teaching him or her to measure the proper level of participation.

Achilles' comments regarding the effectiveness of his surgical skills demonstrates that distancing is also something that is cultivated through a conditioning process: the more technically he acts, the better a surgeon will be and his patients will have more favorable outcomes. We need to qualify your understanding of what it means to be a surgical technician here. My suggestion is that the technical character of his work refers to an intertwining of embodied technical-ritual skills and dispositions via a long apprenticeship involving education through conditioning, which is part of a series of relationships established between different entities in an environment in which there is active engagement between human and nonhuman actors.

According to Rachel Prentice (2013), surgery is a medical specialty that has historically been related to manual labor and artisanal skills, given the "physical techniques" employed by surgeons and other members of medical teams. The definition of the word "surgeon" emphasizes the connection of practice to a craft by combining the Greek terms *cheir* (hand) and *ergon* (work). The term captures the deep connection of surgery to physical activity, although the emphasis on hands may have the effect of ignoring the rest of the surgeon's (extended) body and its participation in the operating room. The hands should be understood as only one part of a larger scheme, in conjunction with other actions and skills that include (embodied) decision-making capacity. The "body" itself, for example, might be seen as an integrated unit, with a limiting, organizing boundary provided by its skin. Its limits, however, must be extrapolated to take in the "surgeon's aggregate body" (Hirschauer, 1991). Hirschauer highlights the coordination of the various hands and eyes present in the surgical field and, in particular, in the operating room, where they are guided by gestures and words. These belong to different people who, nevertheless, make up the "body of the surgeon". By investigating the process of the (trans)shaping the surgeon's body into an instrument – that is, by demonstrating how the surgeon's body and skills are extended to instruments and to the hands of assistant surgeons and nurses, Hirschauer allow us to move forward in our understanding of technique and its relationship to the body.

Hirschauer suggests that we consider the body as extended through instruments and added to other bodies, objects, and actants. This view of things is close to French archaeologist and paleoanthropologist André Leroi-Gourhan's idea of "externalization", which refers to the transfer of technique to instruments and the technical externalization of the body through objects and tools. In suggesting that the "hand is to the tool as language is to the face; these are two poles of the same device" (Leroi-Gourhan, 1985, p. 27), one must remember the driving argument of Leroi-Gourhan's work, which concerns the way in which technique and language have evolved in parallel, co-producing one another. For Leroi-Gourhan, the hand frees the word in an evolutionary sense, evidencing a coupling between technique and language as constitutive of the human being itself. The utensils, tools, and objects humans produced can be thought of as "bodily secretions". Everything happens as if the act of using hands has allowed humans to imagine instruments, which Leroi-Gourhan names "artificial organs". In his proposition, the social body prolongs the anatomical body (1985, p.27). We can question whether this division is productive, to what extent it is sustained, and whether it is possible to speak of the anatomical body, because – as Ingold (2000) suggests – the idea of the "anatomically modern" human is an analytical fiction. However, following Leroi-Gourhan, we believe that instruments should not be considered as prostheses: instead they are constitutive. They emerge together with bodies, informing ways of being and relating to the world.

Surgical skills are – and have always been – dependent on a tool use, so such discussions contribute to the understanding of the relationships established in the surgical field between surgeons and the instruments they employ.

Since the early twentieth century, according to Prentice, surgery has been described as one of the most technological specialties of medicine. Deeply associated with the use of tools and devices, modern surgery is dependent on innovations for its maintenance and improvement. It is a roiling, constantly evolving field, whose purpose is to find answers to the challenges posed by and facilitate the execution of medical procedures, as well as extend the life expectancy of patients and improve the conditions of their recovery. This, in turn, leads to a search for “less invasive” procedures.

According to Achilles, the constant emergence of new technologies and surgical techniques implies increasingly greater surgical specialization. At the age of 63, Achilles was a super-specialist, since the pediatric cardiac surgery that is his *forte* is considered a subspecialty of cardiac surgery. He revealed that only after he achieved this degree of specialization that he really began to master his specialty – a statement that was followed by a firm comment that not everyone can dominate their specialty all the time. In any case, Achilles believes that, at the present stage of his career, he has a “baggage” that allows him to “operate with tranquility”.

Achilles’ need to conduct or observe surgeries and daily practice his learned techniques is related to the imperative of his embodiment of surgical skills, as Prentice emphasizes (2013). By making the embodiment of medical techniques a central part of her analysis, Prentice shows how practices in specific sociotechnical environments accumulate in order to remake medical residents’ bodies, allowing the emergence of unique dispositions with regards to acting, relating, believing, and feeling.

The complexity of surgical procedures and activities requires long involvement and highly specialized training, as Achilles’ words and Prentice’s ethnographic analysis show. Risks require courage. After all, surgical procedures require cutting, breaking, or mutilating parts of the body and its organs. Outside the surgical context, this would be understood as unacceptable “aggression”. Courage, however, must be seen as a disposition, a skill that is also embodied throughout extensive training. As Prentice suggests (2013), surgical education is not only about learning manual skills and specific surgical actions, such as sewing or tying knots, which she describes as traditional bodily techniques, following the understanding of French sociologist Marcel Mauss.⁵ Unlike the formal, programmatic knowledge that residents are expected to absorb, the surgical learning involves the adoption of values, practices, styles, decision making, and techniques that are rarely invoked objective and explicit elements of the residents’ medical educational curriculum. Among these skills, one finds the surgeon’s association with tools and instruments, the “secretions” that eventually enlarge and distribute the “surgeon’s body”.

Following Mauss’s (2003b) clue that it is a mistake to suppose technique exists only when an instrument is present, British anthropologist Tim Ingold (2000) questions the existence (in both anthropological and common sense) of a perception in popular Western discourse that technical activity is based upon the use of tools. In groping for a definition of “technique”, Ingold suggests that tools themselves are nothing; that they carry no property in and of themselves, but are objects that instead *become* tools by promoting an active and intentional engagement between agents and their environment. In this view of things, one should not think of the use of tools as something that happens when two initially separate things are put together: instead, tool use should be understood as the primary condition of involvement between the agent/craftsman, his tools, the raw material at hand, and an environment. Here, technique is thought of mainly in opposition to the understanding of technology as currently defined in the West: something fixed in a polarity between society and nature.

⁵ In Mauss’s (2003b) pioneering analysis, one finds the view that body techniques comprise bio-psycho-social arrangements. Mauss considered the body to be a social apparatus and he sought to legitimize it as an object of social scientific investigation, rejecting the idea that the body was simply biological data. In addition, Mauss did not treat bodily techniques as individual arrangements: he highlighted the importance of imitation in the transmission of those techniques that enjoyed social recognition.

The view of technique as an inventory of instrumental objects results from the fusion of the technician and the mechanic, typically associated with the modern concept of technology. In this fusion, technology consists of the application of operating principles and rules that are independent of users' experience. According to Ingold, however, technique is dependent on intuition. Skill is not the application of knowledge, but an act in the world. Skill is thus a form of practical knowledge (or informed practice) in the sense that it is both a practice and a knowledge related to one's own actions in the world; to one's engagement with the environment.

Bringing us back to Mauss's proposition that bodily techniques are the ways in which individuals make use of their bodies, this implies recognizing the ways in which bodies are shaped in socio-physiological terms – co-produced by their environment, as it were. It thus becomes necessary for us to consider how bodies and environments intertwine in order for skills to be enacted, as Ingold proposes. Technique is thus to be understood as a property of skilled subjects; ability is incorporated and inseparable from a particular subject's experience. Moreover, in Ingold's elaboration, the skill involved in action emanates not only from one's anatomical body, but from one's extended body, and is related to perceptual and motor properties (Sauthuck, 2007).

For our purpose here (that is, for an in-depth understanding of Achilles' formulation of the "technical" character of surgical activity), employing Ingold's understanding of "skill" allows us to escape the *a priori* divisions between knowledge and practice, body and mind, material/manual and cognitive activities. Another concept that allows us to better understand the actions undertaken in the operating room in all their complexity derives from Latour's proposition that "technique" refers to an adjective, a chain of gestures, a *modus operandi*, and also a designation of "the subordinate role of people, skills, or objects that occupy this secondary function of being present, indispensable, but invisible" (1994a, p.43).

In his work, Latour (1994a, 1994b, 2000) describes a symmetry between actants, forcing us to abandon the object/subject dichotomy. The very use of the term "actant" in place of "agent", "actor", or "subject" (terms generally not used to refer to nonhumans) highlights his choice of considering action from a non-anthropocentric point of view. For Latour, mediation is created by composition, so that action cannot be considered as a property of humans, but rather of an association of actants.

Such a distribution of actions and skills puts before us the problem of agency, which, as Ingold (2012) suggests, can be understood as an attempt to revive a world of things already dead or rendered inert by interrupting the flows of substance that give it life.⁶ Ingold questions the idea of the "object", proposing instead that we understand it as a "thing" defined as an aggregation of vital threads that trace creative paths, an impromptu gathering of formative processes. In Ingold's understanding, an object is not simply a discrete, finished phenomenon. For him, to understand the life of things according to their capacity for agency is to produce a double reduction: from things to objects and from life to agency.

We need to clarify what it means to say that nonhumans have agency, participate in relationships, or act in the world. To do justice to the way nonhumans compose surgical skills, we must consider that it is only possible to address the agency of a particular nonhuman if we ignore humans and nonhumans in line with said agency (Sayes, 2014).

⁶ Regarding criticisms of the concept of agency, Sayes points out: "ANT, in fact, attempts to pluralize what it means to speak of agency. As has already been noted, agency is decoupled from the criteria of intentionality, subjectivity, and free will. (...) Thus understood, ANT adopts a complicated but nonetheless minimal conception of agency. It is minimal because it catches every entity that makes or promotes a difference in another entity or in a network. Latour (2005: 71) maintains that one need only ask of an entity '[d]oes it make a difference in the course of some other agent's action or not? Is there some trial that allows someone to detect this difference?' If we can answer yes to these two questions, then we have an actor that is exercising agency – whether this actor is nonhuman or otherwise. It is thus not the case, as Khong (2003: 73) suggests, that the human becomes the 'standard measure' of agency, but that the 'standard measure' of agency becomes dehumanized: the ability to make a difference" (Sayes, 2014, p. 141).

In investigating how to include nonhumans in politics, Stengers (2010) considers that part of the problem concerns our inability to properly define nonhumans⁷, which involves a risk of losing the very definition of what is human. She suggests that we should not regard humans as a hollow generality as thinking beings, but instead as speakers. In this view of things, what makes us human is not our properties, but the relationships we are able to create/host with things that we have not created. The idea of a drastic opposition between humans and nonhumans is understood here as an expression of the power unleashed by the (nonhuman) idea that has made us human, which allows us to claim exceptionality by claiming the existence of a drastic cut between “beings who have ideas” and all the rest of the universe. We thus believe we should eschew a radical distancing between humans and nonhumans, not to claim that the two are the same, but to consider Latour’s proposal (highlighted by Stengers) that we should treat humans (as well as nonhumans) as experimental scientists treat nonhumans. This implies learning from their typical recalcitrance, understanding that to capture them is an event, a veritable feat. This is not a matter of considering humans and non-humans to be similar or of abandoning distinctions between the two, but of symmetrizing them and thus escaping from our anthropocentric starting point. It is a matter of recognizing that nonhumans are the conditions of possibility for the formation of human societies, the solidity of which is guaranteed by artifacts (Latour, 1991). Or, as Serres suggests, object are what stabilize our relations and what differentiate our society from the arrangements of other species: “(...) our relationships, social bonds, would be as airy as clouds were there only contracts between subjects” (apud Ingold, 2012b).

Such approaches make untenable – or at the very least destabilize – the radical distinction between human and nonhuman, nature and culture, subject and object, material and cognitive, body and mind, objective and subjective, technical and symbolic. In the surgical field, skills as well as responsibilities are shared among diverse entities. Technique refers to the socialization of nonhumans (Latour, 1994a), so that in defining himself as a technician, Achilles is also referring to the intertwining of forces that make up embodied abilities, instituted in the relationship between human and non-human actants. This is a form of conditioning that allows for arrangements between distinct bodies that are not understood as ready-made, discrete, and separate entities, but rather as networks through which new entities and actions emerge.

The execution of cuts, clampings, stiches, the implantation of artifacts, the relationship with (and between) blood, instruments, tweezers, scissors, gauze, threads, various materials, diverse hands, numerous eyes, technological apparatuses and so on imply, from Achilles’ point of view that “the awareness, in the surgical field, that there is a patient with a history and with a family” must be placed on stand by. Remembering this fact can interfere with one’s performance and the courage needed to do risky things. Therefore, the effectiveness of the skills required to perform surgical procedures relies on the embodiment of “good participation”, which is cultivated through aseptic techniques that, according to Achilles, allow the surgeon to be transported to “another world”:

One day, I arrived with my normal glasses on. My wife, who is also a surgeon, was preparing the organ, and when I looked at it through my normal glasses, I was shocked by its size. I said: ‘Wow, that’s small!’ So there is all this conditioning [one needs to have] to enter that world... This work requires making stitches in very small structures. It has to be very accurate; one has to have a whole lot of training and conditioning.

⁷ Edwin Sayes (2014) points out that the term “nonhuman” corresponds to a dissatisfaction with the use of “object” in the philosophical tradition, as something automatically opposed to “subject” and which is thus treated radically differently. Sayes lists a number of uses and suggests that “nonhuman” is used as an umbrella term to denote diverse entities such as animals, natural phenomena, artifacts, texts, and so on. However, Sayes believes the term must be distinguished from others that are used to designate similar dissatisfactions, such as actor, actant, and monad.

Training also means being able to get in and out of this world. When it's okay, you hand it over to the co-pilot [previously he had made an analogy between surgery and flying a plane]. Let the assistant finish, close up, but wait around to see if you need to go back in. So there's an entrance and an exit from this world. When you have the confirmation that you are done, you forget that world.

In defining himself, the surgeon, as a technician, Achilles does not refer to the execution of mechanical activities, much less coldness, insensitivity, or indifference towards the patient.⁸ His distancing is directly related to his commitment to the patient and the successful conclusion of his task. The technical character of his work refers to the conditioned embodiment of surgical skills, a process that transforms surgeon's (physiological) bodies, giving them extensions and the skills to relate to the numerous tools, technologies, and human and non-human agents that participate in the surgical field.

These skills are difficult to embody, but are extremely necessary, given the instability of the conditions established in surgical procedures, which gives rise to chains of human and non-human associations. Surgical procedures, especially those considered invasive (such as the cardiac interventions studied here, which require organ paralysis and the use of cardiopulmonary bypass – i.e. the temporary replacement of heart functions by a technological apparatus) institute new bodies. Some of these are ephemeral, lasting only as long as surgical procedure itself. Others are more durable, such as when a body is coupled to an artificial heart for longer temporary period (as a transplantation bridge, when the patient is waiting for a transplant), or for permanent use. The procedures that constitute these new entities involve an assembly of humans and nonhumans, whose ontological definitions become unstable as they become practically indistinguishable from each other (Latour, 1994a, 2000).

This is not a technical activity in the sense that it is mechanical. If that were the case the “rituals” of being transport to “another world” would not be necessary. It is technical activity in the sense that it is an embodied skill, deeply intertwined with tools and instruments as well as technological apparatuses – a skill that is acquired through observation, imitation, and practical engagement, which involves the embodiment not only of gestures but of the ability to make decisions and to act with courage. Moreover, as we will see below, this conditioning allows one to measure the distance of participation in the process, allowing one to avoid undesirable, contaminating participation. Skill, therefore, also refers to the institution of good participation: distant enough not to lose courage, but close enough to be committed to the life at stake.

Thus informed by the relevant social scientific conceptions about relations, the distribution of agencies, the formation of bodies, the performance of tools, technologies, materials, and the organization of spaces⁹ – and critically considering the limits of such approaches – I suggest that we now think about the formation and development of surgical skills in terms of practical-ritualistic conditioning. It should be emphasized that I do not pretend here to solve all the problems posed in the relations established in operating rooms. I merely intend to create an explanation that dissolves the technical-ritual dichotomy regarding the effects of practices. In the wake of the effort to develop a principle of “causality that places the relationship between humans and matter as an act of production” (Mura, 2011, p. 96), using technique as an approach allows us to reconsider the notion of effectiveness, given that the skills instituted by conditioning refer to a practical-ritualistic engagement with the world.

8 Renzo Taddei suggests that this technical relationship be thought of in terms of the “banality of the technician”, in reference to Hannah Arendt's “banality of evil” thesis.

9 For detailed descriptions and analyses of the spatial distribution and organization of the operating room, see Katz (1981, 1999) and Tanchou (2014). For an understanding of spaces as circuits of hygiene, composing the backdrop of the surgical drama see Fox (1997). For an understanding of space in mutual relationship with activities, that is, for a description of surgical interventions as events occurring in spaces, different topologies that are characterized in four ways (region, network, fluid, and fire) that correspond to intersecting monads - created by the interrelationship between topologies and a monadological dynamic that organizes events, see Moreira (2004).

Techniques are acts (Mauss, 2003b; Sigaut, 2003) and building artifacts and relationships is characterized as a technical activity. Meanwhile, technical activities are skills that do not undergo rationalization, which are not reduced to the use of tools, which do not refer to the mechanical application of rules or articulation of principles, which are incorporated and inseparable from the experience of subjects in the formation of certain things (Ingold, 2000). These skills are shared, constituted, and distributed among different actors (Latour, 1991, 1994b). Understanding this allows us to recognize the deep understanding made possible by the attention given to the techniques and skills emerging in the operating room and their effectiveness in preventing the threat of contamination from materializing.

The surgical field: environment and effective skills to ward off the outbreak of unwanted participation

Scene 1: We enter the surgical center and cross a wide, busy corridor, full of people. There are bodies moving and bodies lying about. Bare and protected feet. Bodies that drag equipment and carry devices, artifacts that carry and drag humans. Surgical instruments, medicines, equipment, machines are all about. In the corridor are several doors, of which I will enter two: a storage and equipment preparation room and an operating room. Completely attired – that is, wearing the proper “costumes” (sterile clothes, cap, mask and foot protector) – I walk through the operating room door. Some professionals (including nurses, the instrumentalist, and the anesthetist) are already at their duties. The patient is already on the table, probably anesthetized or pre-anesthetized. He is a young, thin, small boy. I have difficulty staring at the exposed, naked, and apparently vulnerable body. The assistant surgeon is inserting things into the boy’s body. I can recognize some of the actions that I have previously seen in experimental procedures on pigs, so I know that those needles, dressings, bandages, and tubes were mediations: channels through which liquids would flow in and out; through which medicine would enter the bloodstream and internal fluids (mainly blood) would be extracted to perform measurements that allow the patient’s condition to be monitored. This is not a mediation between the body’s exterior and interior, however. If we take seriously Donna Haraway’s (1991) view that our bodies should not be bound by our skin, these accesses can be seen as evidence of our “open” (or not limited) condition. The way we experience the body/world is thus not limited by the boundaries of our skin, although reiterating the skin as a boundary is pragmatic in biomedical discourses/practices. If conceiving of the body in an environment allows us to dissolve the supposed limit imposed by the skin, the establishment of the surgical field – the process being described here – allows other limits to be transgressed.

The sleeping naked body is covered by green sheets¹⁰, forming the surgical field that creates and isolates the opening through which the body’s organs will be accessed. Disappearing from my field of view, the body is hooded, and the field is set up. The naked body becomes transformed into a covered area: open and exposed, but isolated. The boy’s head is covered and isolated, making it accessible/visible only to the anesthetist and to me, positioned in the non-sterile area located behind the tissue that separates the head from the surgical field. Now the scenario is composed of green tissues, tweezers, instruments, wires, tubes, serum bottle, medicines, equipment, monitors that measure signals, and a hole that demarcates the region of surgical intervention. The “field” category I employ here refers to both the sterile fabrics that make up the scenario and

¹⁰ These are sterile disposable fabrics, which are green or blue not by chance, but because these colors are the opposite of red. Unlike clinical practice, associated with white clothing, green and blue are considered the most comfortable colors for surgeons in operating rooms because red is a constant for them. White became established as a norm in the late nineteenth century, with the emergence of ideas about asepsis and the view that many diseases resulted from poor hygiene in hospitals. According to Stefan Cunha Ujvari and Tarso Adoni, in “The History of the Twentieth Century for the Discoveries of Medicine”, green and blue garments began to be used in operating rooms in the early twentieth century as part of the innovations of modern surgery. After a long time of looking at the surgical field, where red predominates, when you raise your head or blur your eyes, green and blue spots may appear in when contrasted with a white background. That is why green and blue are the colors recommended for operating room clothing.

the covered and insulated hole in the body itself. At this point, from the back of the room where I am sitting, behind the tissue, still without a glimpse of the surgical field freshly established, I begin to smell the characteristic scent of flesh burned by an electric scalpel, an artifact that simultaneously cuts and cauterizes. The smell allows me to identify the opening of the hole – perhaps the most dramatic moment of the formation of the surgical field in the case of cardiac surgeries¹¹. Next, the bones of the sternum are sawed apart and spread by retractors, an instrument that forces apart the ribs and keeps them open, thus allowing access to the organ. For a lay observer like me, the smells, sounds and performance of the instruments are quite impressive. It has been over an hour since I entered the room and found people already engaged in their tasks and the heart has not yet entered the scene. With the rupture of the pericardium – the membrane that protects the organ – the heart becomes exposed. The field is now ready for the intervention to begin and the primary surgeon enters the scene. It will still take more than half an hour to ready the new body/apparatus arrangement which will permit the extracorporeal circulation of the patient’s blood, replacing heart and lung functions during surgery and allowing the organ currently in the boy’s body to be paralyzed and manipulated.

Scene 2: In the midst of an interview lasting about 1h20min and which is interrupted by the noise of our surroundings, Achilles invites me to accompany him to the operating room to watch the procedure he would soon perform. He had previously explained to me that he generally scheduled meetings and activities before his daily surgeries, which usually took place around 10 AM. We go through the bioengineering section, chat for a bit, and head to the operating room. On the way he asks if I “know how to get dressed” and began to tell me about the procedure he would perform that morning. “I’ll have to make 2 or 3 stitches to close up again.” The patient had been operated on four or five days ago, but after the procedure, the “echo” (trans-esophageal echocardiogram) revealed a problem: the hole had opened again. According to Achilles, the procedure had been successful, but the “correction” could have “torn” because the heart beats continuously and may break the stitches’ thread.

We head for the different locker rooms and Achilles suggests we meet on the other side¹², in the waiting room next to the operating theaters. A little lost, I am trying to find the sterile clothes in the locker room when a nurse approaches and said that Achilles had asked her to help me. After being dressed, I am led by the nurse to the professional waiting room, where two young men are talking and using their cell phones. The nurse offers me coffee, water and suggests that I wait for the surgeon. While I am having coffee, Achilles appears. We talk for a while and he suggests we go into the operating room. There, he quickly introduces me to the team, but the anesthetist suggests that I come back later to follow the procedure from the time of the surgeon’s entry. According to her, the situation was currently a little tense. I caught a glimpse of the patient: a small baby, naked on the stretcher. Achilles and I head back to the waiting room. We talk. Later, I don’t remember exactly about what, but I remember that we discussed more philosophical themes in which we were not exactly personally involved. We are nervous. At least I am, and I feel that he is in a different state from when we were talking earlier. After a while (I don’t know how many minutes), Achilles invites me into the operating room once again. We enter and he suggests that I stay in the same non-sterile zone occupied by the anesthetist behind the patient’s head. Achilles then withdraws again, possibly to scrub his hands and arms. Upon his return, Achilles dons a sterile blue cloak with the help of a nurse.

11 There is a debate in the social sciences about the importance of the first cut. In this regard, Hirschauer (1991), Fox (1994), and Collins (1994) consider that Katz (1981) was mistaken in placing so much emphasis on the importance of the “border crossing” represented by the first incision. Collins recounts his frustrations as an observer, where he several times “missed” the first incision, showing how non-dramatic it often is. In heart surgery, the first incision in the organ occurs much later and much less dramatically (and aggressively) than the first opening of the body, which when sternum’s bones are cut with saws and opened with retractors.

12 Changing rooms are passageways to isolated areas of the hospital, accessed only by authorized people. It is not possible to reach the operating room by any means other than through the intermediate environment of the changing rooms. The changing rooms are divided by gender, so it was not possible for Achilles to help me, indicating where I could find the clothes and all the necessary equipment to enter the operating room.

It overlays standard green clothing worn by all the people present: the closer one is to the field, the greater the need for protective equipment (in this case sterilized, as he would be directly engaging in the surgical field). Achilles puts on his surgical glasses, equipped with a magnifying glass that widens his vision. The nurse helps him perform a little ballet in order to don his gloves¹³, and Achilles becomes integrated into the surgical field.

The purpose of these ethnographic descriptions (aside from presenting a narrative description of the procedures involved in forming the surgical field and preparing for the procedure) is to contrast two different experiences. In the first, I was able to personally follow the formation of the surgical field while in the second, I followed the surgeon's trajectory inside the hospital, as he prowled around the margins of the formation of the field at a distance. The point here is to use these contrasting experiences to show that when a surgeon encounters an already established surgical field, he is spared visual contact of the patient's body. The patient as subject is erased by the field and, following the opening of the patient, his body materializes as an abstraction. Arriving at the end of the surgical field's preparation, the surgeon avoids witnessing the process of erasure of the patient's body, allowing the abstraction of the surgical field to take place.

The formation of the surgical field removes the body from the scene except for the region to be manipulated, which, in the field, is characterized as an open hole in which the heart and other anatomical structures that accompany it can be found. The field transforms the abstracted part of the body into a kind of bench, covered with sheets, instruments, scissors and thread. Its purpose is to isolate the region being operated upon, protecting it from contaminations that (as I will argue) are of two different orders. The first potential contaminants are bacteria and microscopic agents that may enter into the patient's body through the new, artificially created opening, which needs to be controlled with strategies of asepsis. The second contamination is the unwanted and unproductive involvement of the surgeon responsible for the main intervention, whose participation requires a certain amount of distance.

In an operating room, actants, instruments, and materials are classified as sterile or non-sterile. In order to remain sterile, they must only establish contact or relationships with other sterile actants: otherwise they will be considered to be contaminated. When not sterile they can be classified as: clean, dirty or contaminated – denominations that take on different meanings according to the different stages of the operation (Katz, 1981). The sterility and cleaning fields within the operating room are well mapped out and everyone in the operating room knows their limits.

The formation of the surgical field follows other procedures, such as the practice of scrubbing down that, besides preventing contamination, "takes the surgeon into another world", as Achilles revealed to us. Scrubbing is the procedure of washing one's hands and lower arms for a specified amount time with specific movements. The purpose of scrubbing is to remove as much bacteria as possible from one's fingers, nails, hands, arms, and elbows. It is a procedure intended for surgeons who will effectively act or directly assist in surgery. Katz (1981) provides a rich description of the scrubbing procedure:

¹³ I characterize donning gloves as a ballet in reference to the detailed description of the complete procedure that must be performed in order to wear the lab coat and gloves without touching the sterile parts. As Katz describes it, "After scrubbing, the surgeon and his assistant(s) enter the operating room by pushing the door with their hips. They hold their lower arms and hands in an upright position, away from the rest of their bodies. They are forbidden to allow their scrubbed hands and arms to come into contact with any object or person. The scrub nurse hands them a sterile towel to dry their hands. They dry each finger separately and throw the towel into a container on the floor. The scrub nurse holds the outside, sterile part of a green gown for the surgeon and his assistant(s) to wear. They insert their hands through the sleeves, without allowing their hands to touch the outside of the gown. At this point, their hands, although scrubbed and clean, are not sterile. But the outside of the gown is sterile. After their arms pass through the sleeves, the scrub nurse holds their sterile gloves in place with the open side facing their hands. The surgeon, followed by his assistant, thrusts one hand at a time into each glove. They accomplish this in one quick movement, in which a hand is brought down from its upward position, thrust forward inside the glove and snapped in place over the sleeve. When only one glove is on, the surgeon is not permitted to adjust it with the other hand. However, when the second glove is on, he can adjust his glove and the sleeve of his gown and any other part of the front of the gown." (Katz, 1981, p. 338)

Before a person begins scrubbing he checks the clock in order to time the seven-minute procedure. He turns on the water by pushing a button with his hip, and reaches for a package which contains a nail file, a brush and sponge which is saturated with an antiseptic solution. For two minutes he cleans under each of his nails with the nail file. For two-and-a-half minutes, he scrubs his fingers, hands and arms to his elbows, intermittently wetting the sponge and brush with running water. Using elbows, intermittently wetting the sponge and brush with running water. Using a circular motion he scrubs all of the surfaces of his fingers on one hand, his hand, and, finally, his arm to the elbow. After rinsing that arm thoroughly under running water, he repeats the procedure for two-and-a-half minutes on his second hand. After having scrubbed for seven minutes, he discards the sponge, brush, file, and paper, and turns off the tap water by pressing a button on the sink with his hip. (Katz, 1981, p. 338)

Field formation and scrubbing are considered aseptic techniques/skills whose practical-ritualistic character fits the Maussian description (Mauss, 2003c) of technique and ritual as total social fact. Their effects integrate protection against the entry of pathogenic germs and unproductive involvement. They would not be imperative if their efficacy operated only to limit the intrusion of undesirable agents. In other words, such measures are not only aimed at ensuring the survival and full recovery of the subjects being operated on. In the case of experimental surgeries in which non-human animals are euthanized at the end of the procedure, concern with postoperative recovery is not necessary. Maintaining the life of these subjects after surgery is not imperative, so hygienic strategies would not need to be performed if we consider that their effectiveness is limited to containing microbes and pathogens that can cause infections.

However, experimental surgeries aim to validate the technologies under development – i.e., test their functionality, but also train surgeons and medical teams and institute the new surgical techniques required for the participation of a new artifact. They should thus mimic the procedures performed on humans. In this sense, it is necessary to consider the complexity of the effectiveness of the techniques being employed. Thus, to advance against this unwarranted dichotomy, which fixes these techniques in separate poles, it is necessary to (re)qualify the notion of the techniques' effectiveness, disconnecting them from utilitarianism. If to be "effective" is to produce an expected effect (Sigaut, 2003), the mimicry of procedures performed on humans in experimental surgeries is part of the effective conditioning of the surgeons, who, as Achilles suggests, do not know how to otherwise operate.

When I questioned him why aseptic measures were used in experimental surgeries on nonhuman animals that would be killed post-surgery and therefore would not need to recover after the procedure, Achilles argued that an acute infection could interfere with the procedure, preventing its completion. But he had barely finished his explanation when he already countered it, by suggesting that in a procedure in which a device is implanted and kept in a living animal for only a few hours, after which the animal is euthanized, there would be no time for the development of an infection that compromises the progress of the procedure. Achilles then had to confront the fact that "we are very conditioned" and that the institution of the surgical field is part of this conditioning. Therefore, according to Achilles, it was necessary to perform "the whole ritual as if it were a sterile procedure", even when the patient was a non-human animal expected to die shortly afterwards.

Thus, in the experimental procedure, the non-human animals go through the same process of *depersonalization* which humans are subjected to in the operating theater. This shows that the subject covered by the surgical field is presupposed (it is not just a hole, but a person there), but that the status of personhood (Mauss, 2003c) varies: that is, there are subjects that arouse greater identification and to whom the status of humanity is guaranteed. With nonhuman animals, depersonalization is an effect of the mimicry of human procedures required by the conditioning of surgical skills. Everything happens as if depersonalization – that is, the deletion of the subject by the surgical field – in experimental surgery has the effect of naturalizing nonhuman animals, bringing them closer to humans, as they are submitted to the same procedures: field formation, abstracting the subject, and naturalizing the organs highlighted in/by the surgical field.

Achilles not only corroborated this conception of depersonalization of the subject, but he also suggests that a transformation of the surgeon takes place in these procedures.

As one assistant surgeon (whom I accompanied during an experimental procedure) pointed out: “As you may have noticed, I have no visual access to the patient’s head. It helps me focus on the procedure, forgetting the person behind the surgical field”. Not only does this comment highlight the strategy of depersonalization, but the assistant’s choice of words allows us to see that this tool is thought of in relation to humans, even though it is also used on nonhuman animals in experimental surgeries. Animals are not patients. They are research objects/subjects. Even so, they are described as persons although in the end they will be subject to euthanasia.

Although they mimic procedures performed on humans, in which the atmosphere is permeated by informal and playful conversation, experimental surgeries on non-human animals contain a sort of exaggerated solemnity, as if the seriousness at stake in experimental surgeries procedures is performative. This does not mean that there is no strain involved in experimental procedures, let alone no commitment to, say, a pig’s life. But in contrast to the atmosphere that usually exists in operating rooms where human subjects are on the table, where there is a greater oscillation between moments of tension and relaxation and in which even music can be essential (Marini, 2018), the mood in the experimental operating room is a conditioned formality. There is respect for the life of nonhuman animals, but according to Achilles¹⁴:

Achilles - If the animal dies, it won’t matter as much. Now if the child [patient] dies, it will be very important.

Marisol - It will not matter much to whom if the animal dies?

Achilles - To the animal’s family [embarrassed laughter]. Because I won’t have to go to the animal’s family and say, “Oh, your son died”.

From Achilles’ argument, we can infer that different levels of responsibility require distinct forms of participation. In this sense, the more valuable the life is from the surgeon’s point of view, the greater the need for a distancing strategy. That is, in Achilles’ understanding, in experimental (live) animal surgery “there is a medium level responsibility, whereas working with operating models [usually dead animal organs] involves minimal responsibility. Meanwhile in simulation, there is zero involvement”. On this scale of involvement, procedures on human procedures involve the highest degree of responsibility and, consequently, surgeon involvement.¹⁵

At its limits, the surgical field can erase the distinction between human and nonhuman animals. What happens in *in vivo* testing, however, is an approximation/naturalization that establishes relationships of participation and identification, producing companion species (Haraway, 2008, 2011). Such an approximation and the consequent threat of mixing/contamination requires the enactment of protection strategies. In experimental surgeries, these are expressed mainly in terms of a staged formality. This ritualized respect is a protective mechanism against the threat of (non-productive) participation, but it is also a strategy of separation, set against the threat of interspecies mixing.

The institution of the surgical field operates as a strategy of practical-ritualistic protection. The resemblance of the techniques performed in experimental procedures to the practices employed in operating rooms makes it clear that these are not strategies whose effectiveness can be reduced to the prevention of contamination by microorganisms. These processes seem designed to manage the uncontrolled forces produced by identification that potentially lurk in the complex relationships established in the surgical field.

¹⁴ It should be noted that Achilles was not referring here to the procedures with pigs cited above (which were not performed by him), but to his own experimental animal research, especially that which he conducted in his formative years.

¹⁵ Achilles refers here not only to his experience, but also to residents and students in training with whom he accompanied.

The depersonalization thesis: conditioning, skills, and (re)considering the notion of effectiveness for a review of the technical-ritual dichotomy

The central aspects of the social scientific debate regarding ways of understanding space, relationships, hygiene and sterilization procedures, as well as the establishment of the surgical field, have been merely introduced above. Looking deeper into the disputes around the notion of depersonalization and analyzing the oppositions presented in the literature, however, will reinforce the argument I am developing here regarding technical-ritual entanglement, wherein technique and ritual become conceptually unsustainable as discrete and separate phenomena. I believe that it is better to treat them as practical-ritualistic techniques by unpacking conditioning and understanding the surgeon's development of operating skills and the formation of the surgical field as forms of sensitive engagement with the environment (Ingold, 2000) and as properties of the relationships between instruments, materials, tools, artifacts, human actants and also many non-humans (Latour, 1994a, 1994b, 2000).

The depersonalization thesis was originally proposed by German sociologist Stefan Hirschauer (1991), who produced a detailed narrative on "body making" in surgical procedures. Previous ethnography by American anthropologist Pearl Katz (1981) had primarily investigated the "ritualistic character" of behavior in operating theaters.¹⁶ Katz's work ran contrary to the classical definitions of ritual studies, in which the behaviors performed in surgical procedures in modern hospitals could not be defined as ritual, but rather predominantly as "technical", "rational", or "scientific". In short, Katz suggested that rituals are an integral part of surgical procedures and that most of them symbolize the separation of areas containing microorganisms from areas that should avoid them, separating cleaned (sterile, asepsis) and polluted (non-sterile, contaminated) domains. In their conception, these rituals work to avoid confusion by defining categorical boundaries and establishing limits between states and conditions that need to be very clear and defined.

A decade later, Hirschauer (1991) focused his interest on the composition of the body, suggesting that what was happening in the surgical field was the meeting of two distinct and disciplined bodies: the patient's body-made parts, and the aggregate body of countless professionals who cooperate in order to compose the "body of the surgeon". By investigating the process of bodily (trans)formation – of creation of the surgeon and the team as the instrument and the patient as the object, whose personhood disappears in the formation of the surgical field – Hirschauer's depersonalization thesis gained significant weight and seems to mirror, in a way, part of the symbolic dimension explored by Katz in her ethnographic (re)shaping of the relationship between "ritual" and "practice."

Hirschauer (1991) points out that a consequence of the preparation of the patient's body for surgery is the disappearance of the everyday body, which is covered and isolated. This implies the patient's anonymity and the disappearance of their personhood and with this, bodies are distanced from people. The patient's head disappears behind a curtain/sheet, so that her/his face, perhaps a person's most potent visual marker, becomes invisible.

British sociologist Harry Collins (1994) reduces the purely symbolic-ritualistic character of the depersonalization hypothesis, however, by suggesting we reconsider the interpretation of antiseptic procedures as a way of objectifying the surgeon-patient relationship. Committing himself to the surgeons' experience and point of view, Collins questions what makes us so ready to accept what we see in the operating room as a process

¹⁶ Katz was not alone in treating "technical" procedures as "rituals", citing at least two other contemporary works that also considered secular ceremonies as rituals (Firth, 1972; Moore and Myerhoff, 1977 apud, Hirschauer, 1991). What leads her to consider that behaviors in the operating room could be understood as rituals is a proposal to broaden the use of the term. Katz proposes that rituals can be found in any society in situations where categories are not clearly defined and the limits are not known. The role of rituals, in this sense, is precisely to proclaim that something is in one category and not in another. They define passages such as time, seasons, life stages, status changes, and so on. Unlike the rituals described by most anthropologists in sacred contexts that express values and are linked to institutions of daily life, however, operating room rituals demarcate a discontinuity with everyday life and with the values or categories of thinking that lay outside the medical field.

of depersonalization. For this author, we, the readers, share with Hirschauer the experience of being surgical laymen and this is what makes depersonalization an attractive thesis. In this sense, much of the persuasive weight of Hirschauer's argument comes from our sharing not in the social life of surgeons, but in the social life of naive surgery observers. For Collins, explaining surgical field formation, sterilization procedures, and green sheets as depersonalizing says more about analysts – lay observers or uninitiated observers – than it does about surgeons themselves. This is not to say that surgeons do not depersonalize their patients, but only that they do not need antiseptic paraphernalia to do so, in his understanding.

By reducing the debate about the roles of the surgical field and sterilization procedures to a methodological issue, Collins seeks to de-legitimize Hirschauer's thesis regarding surgical field formation as a depersonalization procedure. It should be noted that Collins article is entitled "Dissecting Surgery: Forms of Life Depersonalized", which demonstrates the importance of the depersonalization thesis in his analysis, although he is questioning it. In Collins's reading, these procedures operate as an instrumental ("symbolic") discourse on antiseptic function that does not correspond to the experience of surgeons, for whom the coverings forming the surgical field are related to "technical" issues. Collins argues that it is very difficult to kill all of the germs on the human skin, which requires shaving the patient, then scrubbing down the skin more than once while applying strong antiseptics. This takes a long time and is only feasible for small areas of the body. The covering avoid the necessity of carrying out this procedure over the patient's entire body. According to Collins, there is another "technical" convenience in the surgical field that is established by sterile green sheets: in addition to controlling germs, it forms a workbench and a conveniently absorbent surface. In this sense, the larger the patient's covered surface, the less the surgeon has to worry about not touching impure things during the course of the operation – in other words, the more the patient is covered, the greater the surgeon's freedom of movement. Collins compiles a series of arguments reducing them to antiseptics, separating possible "symbolic", "ritual" or "affective" aspects.

Collins' co-optation of the debate on depersonalization by the greater clash over postmodernism has contributed very little to our understanding of the complexity of the relationships established in the operating room. To reduce these to a methodological dispute is an impossibility because, as Nick Fox (1994) suggests, Collins's argument and claims simply replace one fabrication with another. Moreover, the vocabulary used by Collins suggests the apparent authenticity of the reality mapping analysis methodologies, which, in Fox's understanding, is something that contributes to the myth that sociology is not a fiction but an attempt to transparently report a transparent world, as if reality were something to be revealed.

In her formulations (the purpose of which was to broaden our understanding of the actions and practices performed in the operating room), Katz considers that operating room "rituals" contribute to the efficiency of "technical-scientific" activity, allowing the participants autonomy and permitting them to work under ambiguous circumstances. In this sense, they can be seen as an arrangement between technique and ritual, although still belong to different universes in Katz's analysis.

The main surgical challenge is to keep microorganisms at bay and not make the patient any sicker than she/he already is. This is a critical situation. Therefore, Fox (1994) proposes that movements in the *hygiene circuit* should be understood as a set of rules that must be understood as a pact; an alliance between the various professionals and patients in the operating room, created so that the procedure can occur in relative safety. The rhetorical markers that signal the *hygiene circuit* are valuable precisely because surgery is a risky endeavor.

The "ritualistic" hypothesis regarding these practices is mirrored in Achilles' words. This surgeon obviously understands the hygienic functions of procedures performed in the operating room, which are undoubtedly recognized in the field of biomedicine and modern surgery in general (Rawlings, 1989). However, Achilles intertwines/incorporates symbolic and ritualistic senses with technique in a way that Collins would deny occurs.

Considering such practices as a “total social fact” (Mauss, 2003a) thus implies recognizing their pragmatic-ritualistic character. Understanding technique in terms of a “total social fact” returns it to Leroi-Gourhan’s analysis, where there is an intrinsic relationship between humans and technique, which makes Leroi-Gourhan understand the “gesture” as our primary unit of analysis (Sautchuk, 2007).

In addition to preventing contamination, scrubbing down is a technique that “takes the surgeon to another world,” as Achilles reveals. “When you start scrubbing, you are already moving to another plane of conditioning. These rituals put you somewhere else.” Considering sterility practices as strategies to build “good distance” does not imply that the surgical field is established solely to protect the surgeon from unwanted participation: it provides multiple conveniences. There is a lot at stake in the surgical field. Lives, reputations, relationships, as well as risks of contagion, contamination, involvement, and unproductive interference. To meet these challenges, any protection strategy is welcome.

Final considerations

In conclusion, I would like to turn to a scene described by Donald McRae (2009) in his narrative about the race for the first heart transplant in the 1960s. This refers to the time when one of the teams seeking to undertake a successful heart transplant in humans found a suitable candidate for organ donation. One of the major difficulties in performing heart transplants was precisely the availability of organs, given that the legislation then in force considered the heartbeat to be an indicator of life. This meant that the transplantation of organs was conditional upon complete termination of cardiac activity, which had serious implications for the quality of the organ which was to be transplanted. One of the teams was treating a very serious case: a dying baby patient. In an effort to save him, they decided to announce in all US hospitals that they needed an organ from a baby born with microcephaly, a condition in which the newborn lives for a short time. The inevitable death of this sort of baby would make it easier to prepare it for the organ removal procedure. Some time later, just such a baby arrived at the hospital from another state. He became a donor with the consent of his family. The transplantation teams then prepared two operating rooms for the removal and implantation of the organ. The nurses preparing the donor baby’s body covered his head so that he would not have to face his deformation. Throughout the procedure the surgeon uncovered the baby’s head, arguing that the team should look at the baby’s face as a way of honoring his life. One of the team members, after some time, covered the face up again.

It can be argued that the discomfort regarding the display of the baby’s head was associated with its deformity (the baby being microcephalic). The scene shows, however, the interference caused by the explicit face/disfigurement, which the professionals who performed the heart operation could not just “blank out”. The contamination and involvement caused by the display of the face is unquestionable, either in the refusal of those who covered it or in the reaffirmation of the one who exhibited it for the purpose of honoring that life.

By comparing this with the two scenes presented above – the formation of the surgical field, and the surgeon’s arrival situation with the field already established – it becomes clear that said field protects the principal surgeon from (visual) contact with the patient. Preparing the patient’s body is a long procedure, involving a series of interventions that make accessible the organ to be operated on while they simultaneously abstract and depersonalize the body on the table. Given the imperative to “get it out of your head” that there is a person on the table who, in fact, has as family outside that is anxiously waiting for news, (as surgeon Achilles put it) one cannot disregard the convenience of the surgical field’s hiding the patient’s face and body. It is necessary to recognize the practical-ritual efficacy of the surgical field and its relevance, especially for the principal surgeon, as a strategy that is necessary to produce good participation.

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The Amazonian Cowboy's Ties

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This essay seeks to portray the different uses of the lasso in a cattle breeding context. The farms are located alongside the Araguari River, in the north-eastern part of the state of Amapá (Stoeckli, 2015). The region is marked by floodplains that are periodically flooded at certain times of the year and turn into large dry fields at others. These characteristics of the environment, added to the behaviour of the buffalo, which move as groups in search of better pastures, define the activities of the cowboys. Thus, they are daily going around different parts of the fields in order to search for and look after the cattle. Among the various technical elements that take part in the activity (Ingold, 2000), the Amazonian cowboys usually highlight the lasso as the most essential one. It is part of the cowboy's life even in the simplest activities in relation to the buffalo and horses. Thus, the lasso is used several times throughout the day of the cowboy, either to contain, to approximate, or even to control the distance of a buffalo or horse. Noteworthy, while it can keep the animals at a distance, it also connects the cowboy to the horse and the buffalo. This connection can be itself a potential danger to humans. Thus, the lasso can be understood as a form of extension of the motor action and strength of the cowboy, as well as the set formed by the cowboy and his horse. Similarly, the possibilities of action vary greatly whether the cowboy is mounted or on foot. The same can be said if the animals to be caught is cornered or in the open fields. Lastly, there is a great deal of difference between tamed animals and wilder ones.



Photo 1

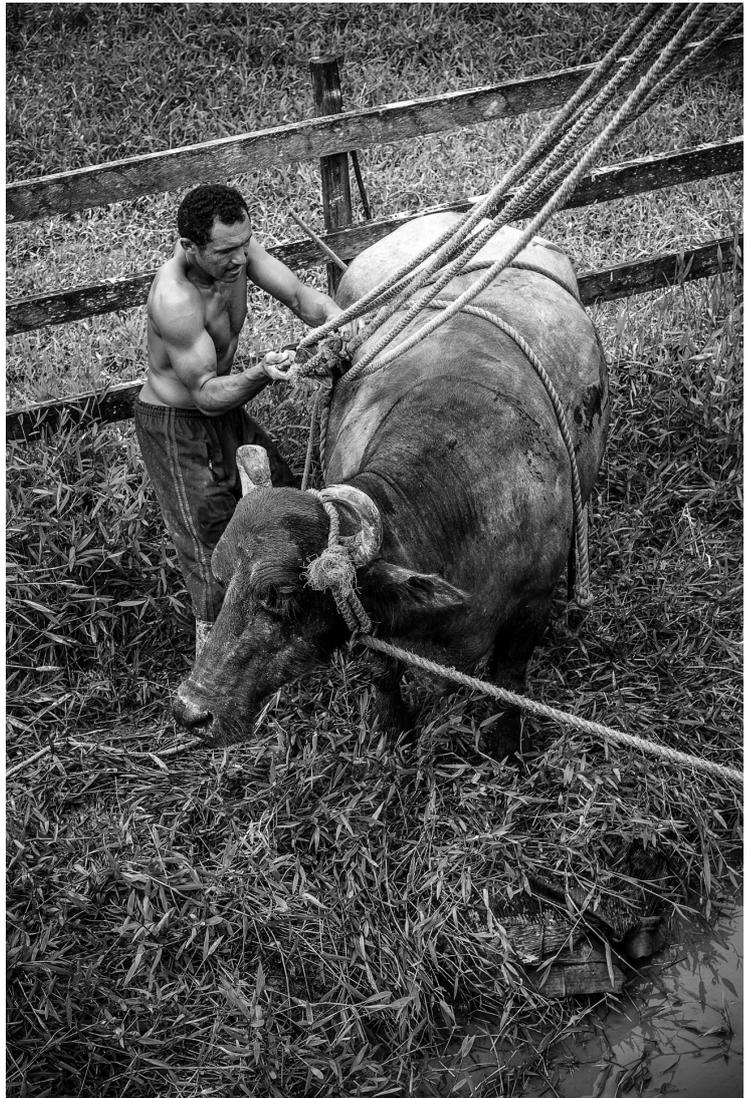


Photo 2



Photo 3

Photos 1 to 3 - Usually a rope is about 30 meters long and is braided by the cowboys themselves using the nylon of a thicker industrial rope. When dismounted and within a fenced area, the cowboy seeks to position himself in the middle of the group of animals, who move to avoid him and gradually lose their herd formation. He then rotates his lasso a few times before it and capturing the animal. In photo 1, the occasion was the boarding of buffalo on to a ferry, destined for slaughter. In the second picture, the cowboy tied a buffalo, preparing it to be hoisted into the raft. Photo 3 shows a milking situation inside a corral when the cow is tied so as not to struggle.

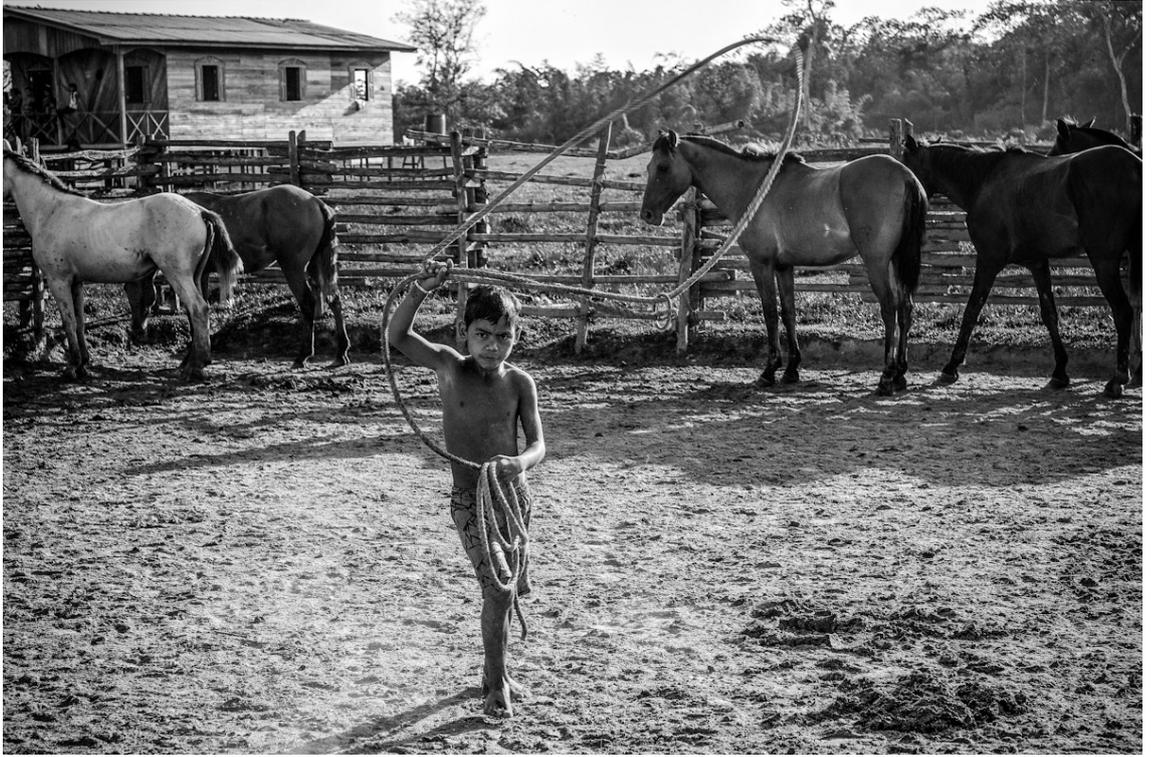


Photo 4



Photo 5



Photo 6

Photos 4 to 6 - When cowboys are asked how they have learned their skills, they often answer that they learned them as children by mimicking the movement of adults and practicing with smaller ties in corrals. The first exercises are to catch still objects, such as fences, or small animals. Gradually they move on to catch larger animals. Apart from the rope, Amazonian cowboys also need horses to work with cattle. The process of taming a horse is time consuming and laborious. Thus, the cowboys work with different types of ties to tame the animals.



Photo 7

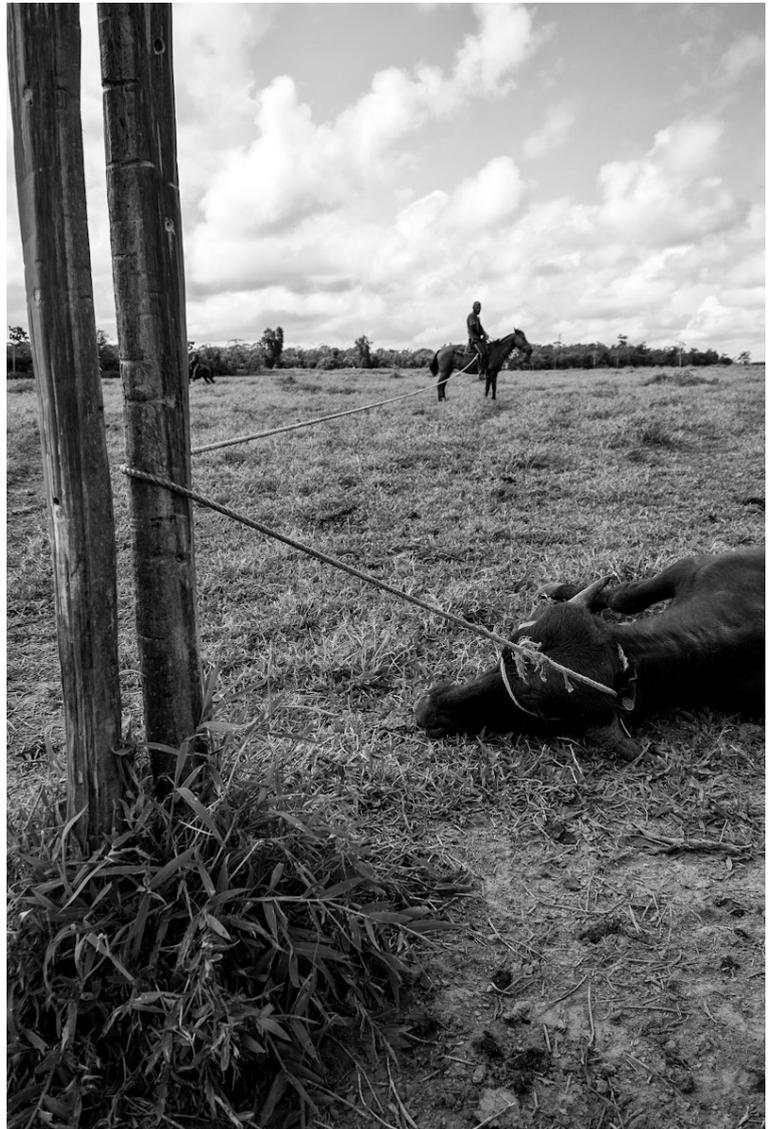


Photo 8

Photos 7 and 8 - Some actions with younger buffalo, such as vaccinations and castrations, are performed in the open rather than in corrals. The dynamic is to pre-assemble the animals and group them into a large but enclosed area. Groups of two or three horse-riding cowboys are formed to pursue the cattle. They start by selecting a calf to set it apart from the others. When detached from the group, the calf runs across the field and the cowboys begin their chase on horseback. Sometimes the calf gets some advantage by making a sudden turn or braking, but the result inevitably is that the calf has no chance against the coordinated pursuit of cowboys and their horses, who chase the calves in the open field until they tire. Usually one cowboy laces the calf by its neck or horns, while the other laces it by its legs. Finally, the young buffalo is knocked down and, exhausted, offers little resistance to the cowboy who will vaccinate him.



Photo 9

Photo 9 - An “ox horse”, which is a buffalo selected and trained for daily work with the cowboy, mainly as a pack animal. The cowboys explain that every farm should have an ox horse for everyday tasks. The driving techniques of a trained horse ox use rings and ropes that pass through its muzzle, face and horns. For this reason, cowboys do not usually cut the horns of these animals, keeping them with what some call their “weapons.”

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Anthropology in times of intolerance:
challenges facing neoconservatism

Presentation

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Throughout the contemporary world, a new “conservative wave” has been producing diverse social and political impacts and generating new forms of subjectivity and intolerance. What we have seen, in the largest sense, is growing revival of conservatism and intolerance that not only threatens the democratic order and moral values, but – above all else – human rights. The post-WWII period has been a fertile field for international alliances for peace and human rights (Alves, 1994), for the growth of social movements that seek to expand rights, for independence of colonies, and for the growth of narratives that favor democracy. The initial decades of the 21st Century, however, has seen a conservative reaction to all of these things.

Democracies have not been left unscarred in the battle between pro-democracy/pro-human rights narratives and their conservative opponents. If there have been positive transformations on the one hand (with some democracies becoming more inclusive through the conquests made by civil rights and identity politics movements), on the other hand, we can clearly ascertain a retrograde movement that is now taking place (Levitsky e Ziblatt, 2018).

In the global geopolitical context, we can say that these changes coincide with the crisis and decline of social-liberal democracies and are associated with the emergence of neoliberalism as a hegemonic political and economic model. This has also been linked to the ascension of authoritarian regimes and extreme right wing parties throughout the world.

Conservatism, authoritarianism and intolerance are becoming increasingly visible on the world stage. The new conservative wave is associated with the approval of Brexit in England and Donald Trump’s rise to power in the United States in 2016 (Bianchi, 2018). These events were largely made possible through the use of social networks that sought to increase nationalist feelings, seeking to produce the feeling that the Other – those who are different – is threatening. These mobilizations provoked and strengthened xenophobic, homophobic, sexist, racist, and fundamentalist discourses. Fear and hatred were the emotions cultivated in conservative political campaigns in order to consolidate their constituents and gain undecided voters. These discourses not only violate the principles of the rights and fundamental guarantees of democratic states, but also stimulate and feed back into the narrative construction of supposed and potential “enemies” of world governance.

This kind of conservative insurgency has echoed across several countries while manifesting similar tendencies, some of them driven by authoritarian thinking with explicit neofascist references. The new conservative wave already has many fans around the world, such as in Austria, Czechoslovakia, Turkey, Hungary, Italy, Brazil, and other Latin American countries.

Though these social forces identify as conservative (Almeida e Toniol, 2019), they are better understood as “neoconservative” in that they do not just seek the continuity of conservative thinking, but rather struggle to recover and promote old discourses of “morals”, “traditions” and “proper behavior”. This is a new form of organization among conservative forces, which aim to confront and block the recognition of the new social subjects who became widely established and consolidated throughout the world in the period following World War II. Neoconservatives use innovative technologies and digital social networks to reach and seduce potential followers through the employment of psycho-socio-cultural profiles. They thus broaden their political foundations and seek to counteract the expansion of new social subjects and new lifestyles. Ultimately, they seek to undermine democratic achievements and reverse the last half century of civil and social rights victories.

The so-called “right-wing populism” that is one of the facets of neoconservatism needs to address subjectivities in order to reorient them towards “tradition” by inciting fear and hatred towards those who are considered “Others.” In a “mass society” with digital technologies, these subjectivities are directly accessible through digital media on social networks.

Ultimately, the neoconservative movement is a reaction against the democratic achievements and fundamental rights victories that have gained strength since the second half of the last century. Strategically, one of the strengths of this neoconservative offensive has been the spread of narratives constructed as a counterpoint to progressive forces.

What are the challenges for anthropology posed by this neoconservative wave?

Diversity lies at the heart of anthropology as knowledge produced from Otherness, in all its forms of expression: cultural and social, distant and close. Therefore, the anthropologist’s ethical and political commitment to sociocultural plurality constitutes an important reference of anthropological practice, often allying itself with the goals of the groups anthropologists study.

When pro-democratic narratives are hegemonic, anthropological respect for cultural diversity can develop without threats. The positive valuation of cultural diversity and tolerance of differences is a key component of democratic regime, which hold the principles of plurality and divergence as two of its main premises. The social production of the narratives of multiculturalism and interculturality that took place during the second half of the last century strongly contributed to the valorization diversity. Democratic narratives thus do not confront the values of cultural and social diversity present in anthropological practice.

In different contexts of world geopolitics, anthropology has been able to critically position itself in human rights-related situations (An-Na’im, 1991; Wilson, 1997), seeking (as far as possible) to contribute to the understanding of social phenomena related to social inequalities and violence, gender, ethnic, racial, territorial, and religious conflicts based on culturally instituted practices.

Since the end of the second half of the last century, anthropology has been rethinking and expanding its research object and, as a challenge, has embraced the contemporary and its transformations in the production of the social. Thus, anthropology has focused on the emergence of new sociopolitical phenomena that articulate to different changes and temporalities, as a perspective to be taken over by empirical research.

Especially since the 1980s, one of the characteristics that has marked anthropology has been the overcoming of a structural conception of social life. This has been replaced by a perspective in which subjects, in their total social (and not just ethnic) diversity, are seen as the producers of the social and the political, as well as the new meanings attributed to these phenomena.

This dossier is published in this context of debates regarding the challenges anthropology faces in the 21st century in relation to neoconservatism. It aims to reflect upon, deepen discourses regarding, and discuss the challenges presented to anthropology in Brazil in the face of the current neoconservative offensive.

In today's Brazilian political conjuncture, marked by the setback and dismantling of the hitherto existing (but fragile) state of social welfare, anthropology has become vulnerable to frequent attacks aimed at depreciating and disqualifying its scientific production of academic knowledge. In the field of Brazilian anthropology, there is a strong relationship between research and the context from which its practice derives, which has often led many anthropologists to reconcile the production of scientific knowledge with action: that is, with the restitution of their research to the groups they study. This has especially been the case when the groups being studied are the new rights-bearing subjects who emerged on the national scene and who became protagonists of sociopolitical changes in the national public sphere over the past several decades.

The Brazilian Association of Anthropology (ABA) has been strongly in favor of its commitment to defending the rights that preserve, protect, and promote sociocultural diversity, as well as racial and gender equality in Brazil. To this end, it has been regularly promoting activities related to this theme, through its national anthropology meetings, tables, working groups, and forums. In 2017 and 2018, during the two Meetings of the National Association of Postgraduate Studies and Research in Social Sciences (ANPOCS), two Brazilian Symposiums were organized by the Brazilian Association of Anthropology (ABA). They sought to reflect on the ideological attacks of the current government on the work of anthropologists associated with ABA. In 2018, during the 18th International Union of Anthropological and Ethnic Sciences (IUAES), ABA organized several activities, including a special symposium dedicated to the challenges of anthropology in the 21st century. Other similar activities were performed during the 31st Brazilian Anthropology Meeting (RBA), held in December 2018.

The works gathered in the present volume reflect such concerns, having as their guiding thread reflections on different themes and research contexts that are pressing issues facing Brazilian anthropology in the current political context. The *Anthropology in Times of Intolerance* dossier will be published in two parts. The first part, which make available to the reader in this issue of *Vibrant*, is organized as follows:

The opening section, entitled "Debates", aims to engage in a broad discussion about anthropology in the contemporary world and the challenges facing radical change in different research contexts. Ruben Oliven's contribution to the debate discusses some issues facing anthropology in view of its commitment to the rights of the groups it studies and, above all, the theoretical task of offering interpretations of the social phenomena that the world faces. The questions posed by Alejandro Grimson are directed towards thinking of an anthropology that is politically committed to everyday and transformative alterities, made in and thought about from the South, and the commitment of this anthropology to the ideals of a participatory and radical democracy.

The article section includes Lia Zanotta Machado and Antonio Motta's contribution, "Brazilian Anthropology in Times of Intolerance: Challenges in the Face of Neoconservatism". This article analyzes the new context of political confrontation and traces the profile of the current political conjuncture, marked by regression, intolerance, repression and censorship. Indigenous and *Quilombola* territorial rights and rights to sexual and gender diversity are the main targets of regression and censorship, manifest in the particularly anti-indigenous and sexist language employed by many of Brazil's current governing class. In presenting the objective and subjective dilemmas experienced by anthropologists, Machado and Motta propose an intransigent defense of anthropological production and the ethnographic method as a means of avoiding a possible "(social) sacrifice of the intellect" and as a way of counteracting the threat of destitution of the new social subjects, either through the elimination of their territories or lifestyles.

The remaining texts of the Articles section will be available in the next issue of *Vibrant*, in early 2020. The authors' ability to perceive and ways of looking, gathered in this dossier, allow us to peer into a multifaceted field of thematic interests, combining different types of experiences developed in the current political context of Brazil. For the authors, the greatest challenge has been the creation of an emergency anthropology that reflects the dilemmas set forth here. The continuation of this dossier will be published in the next issue of *Vibrant*, addressing other themes related to Brazilian anthropology in times of intolerance and neoconservatism.

Translated by Thaddeus Blanchette

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Anthropology in times of intolerance:
challenges facing neoconservatism - Debates

How will anthropology cope with the challenges of a changing world?¹

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Abstract

The world has gone through many changes since the beginning of Anthropology and during the current century we will see many other changes that are impossible to predict. This article discusses what sort of theories and methodologies Anthropology will have to develop in order to understand what is going on in the world today. One of the challenges of Anthropology will be both to remain committed to rights of the groups that represent cultural diversity and to the theoretical task of offering interpretations of the social phenomena with which the world is faced.

Key words: Challenges of Anthropology; 21st. Century; Social changes, Brazil.

Como a antropologia vai lidar com os desafios de um mundo em transformação?

Resumo

O mundo passou por muitas mudanças desde o início da Antropologia e durante o século atual veremos várias outras mudanças impossíveis de serem previstas. Este artigo discute que tipo de teorias e metodologias a Antropologia precisa desenvolver para entender o que está acontecendo com o mundo atualmente. Um dos desafios da Antropologia será simultaneamente se manter comprometida com os direitos dos grupos que representam a diversidade cultural e com a tarefa intelectual de oferecer interpretações dos fenômenos sociais com o qual o mundo se depara.

Palavras-chave: Desafios da Antropologia; Século XXI; Mudanças Sociais; Brasil.

¹ Paper presented at the Symposium “Challenges and Perspectives of Anthropology in the 21st Century” held at the 18th World Congress of the International Union of Anthropological and Ethnological Sciences. Florianópolis, Brazil, July 18, 2018.



How will anthropology cope with the challenges of a changing world?

Ruben George Oliven

I am aware of the risks entailed in the title I chose to give to this symposium. Imagine if in 1918 we asked Malinowski to give a paper about the challenges and perspectives of Anthropology in the 20th Century. World War I was just ending. No one could guess that barely 21 years later a new world war would ensue. The world was ravaged by a flu epidemic that killed more people than the war. There were no antibiotics. Colonialism still dominated the world, but the Soviet Revolution had just happened. How could anybody guess that during the rest of the century there would be heart transplants, computers, the Aids epidemic and so many other things that happened? And what about Anthropology? Think about the Anthropology Malinowski developed and the different trends that came after him like postmodern Anthropology, Feminist Anthropology, Anthropology of the Cyberspace, Perspectivism (Grimshaw & Hart 1994; Borofsky 2019). How could anybody imagine this would take place?

Difficulties aside, the exercise of thinking about the future of our profession is still very relevant. And since I and most of the people who are attending this conference probably will not be alive at the end of the 21st century, we can discuss this topic without too many fears.

I will of course not make any prophecy about how the world will be in the year 2100. But there are two points I want to stress as being cornerstones of Anthropology. The first has to do with the moral engagement and commitment of Anthropology towards the groups that have traditionally been excluded of what is called modernity but have suffered its consequences. The obligation we feel towards those groups has a moral dimension and is based on the idea of the richness of cultural diversity and the need to respect and preserve it (Narotsky 2016; Pickering 2017).

In this sense, Brazilian Anthropology is in a privileged position. Since its inception it has been committed with the native societies of the country and more recently with the maroons, the descendants of slave communities. A great part of the political work of the Brazilian Anthropological Association (ABA), one of the oldest Brazilian scientific societies, created in 1955 and one of the largest Anthropological Associations with over 1.000 members, has precisely to do with natives and maroons. During the military dictatorship, ABA did not shy away from defending them. When the military regime ended, ABA lobbied for the rights of natives during the drafting of our Constitution of 1988 and was able to help to secure 12,5% of Brazilian territory for them. In the same sense, the rights to land for communities descending from ex-slaves was also inscribed in our Constitution. Since then, ABA has fought in different arenas to ensure that the lands that belong by law to those two groups be assured and that they are given legal titles to them. ABA has signed an agreement with the Brazilian Prosecutor-General Office whereby we appoint one of our members as expert witness whenever there is a dispute about lands of those communities.

Unlike other countries, in Brazil it is difficult to make a distinction between academic and public intellectuals. If you are in the social sciences, mainly as an anthropologist you end up becoming a public intellectual because the challenges facing Brazil - such as social inequality, racial discrimination, gender inequalities, homophobia - are so big that you are drawn into the debates about those issues and ways of solving them (Lima, Beltrão, Lobo, Castilho, Lacerda & Osório 2018).

Originally, Anthropology was practiced mostly by white European men who studied natives in their colonies. Things are changing, and we are starting to have anthropologists who are natives. In this sense, all graduate programs of Brazilian public universities are having affirmative action measures and quotas for natives and African-Brazilians. That means that we will soon have natives that are anthropologists, thus broadening the anthropological perspective.

The second point I would like to stress has to do with the intellectual practice of Anthropology. Whatever the differences between the existing and the future schools and theories of Anthropology, our science has to do with interpreting social and cultural phenomena. Inasmuch Anthropology deals with very different societies, what we try to do is to understand what those phenomena mean for the groups that practice them and what is the logic beneath them. No matter how different anthropological theories can be, there is no way they can shy away of trying to explain cultural and social phenomena.

Formerly the others were called natives and they were not only geographical removed, but they were very different from the societies from where the anthropologists came from. Nowadays, the natives can be very close to us or can be ourselves. Still, we must explain why they or we do certain things and what is the logic of their behavior. In this sense what Malinowski wrote in *Argonauts of the Western Pacific* stills holds, when he stated that the goal of the anthropologist, or ethnographer, is: “to grasp the native’s point of view, his relation to life, to realize *his* vision of *his* world” (Malinowski 1961: 25.)

Anthropology started with the study of the so-called primitive societies. That is what informed anthropological theories from its beginning. But nowadays, although anthropologist still do field work in simple societies, they tend increasingly to turn to their own societies. Can anthropology explain what is going on in the world today? What sort of theories and methodologies do we need to face the challenges that present themselves in the 21st century? (Koizumi 2016).

Anthropology has always given important contributions to the understanding of the world we live in. Through detailed ethnographic research it has shown how different ways of life and meanings can be. Nowadays, anthropologists study not only simple societies but also phenomena that are happening in more complex societies (Ingold 2014). Thus, we have anthropological studies of the stock market, the cyberspace, communities living in megalopolis, etc. Although anthropologists tend to carry out detailed studies of specific phenomena, they do not shy away from offering broader interpretations of what is happening with the world at large. Anthropologists do not just look at the microprocess of phenomena but also the macro perspective and its implications (Ribeiro 2014).

We are currently experiencing a century that is changing in an unprecedented speed. Just to name some of the changes we are facing: new technologies, vast migrations from one continent to the other, revival of nationalism combined with global processes. It is difficult to forecast what will happen in the next 82 years, but it is important to discuss the challenges and perspectives Anthropology will face in the rest of the 21st century.

Traditionally anthropological theory has been produced in the global North. Anthropologists from the global South are now starting to develop their own theories. This has already begun in the study of natives with the development of Perspectivism (Viveiros de Castro 2012, Ramos 2012). But I would like to argue that in order to explain what is going on in the world today we need more voices from the South. I am thinking particularly about migration, ethnicity and the rise of populism and conservatism. During a long period of time we heard theories that emphasized how globalization was homogenizing cultures. Without denying that there are products of mass culture that can be found everywhere, what we actually see is the return of the repressed, namely localism. This can be found in a healthy way with the revival of traditions and local cultures. But it can also be found in conservative waves, in the return of ethnic conflicts (remember the dismembering of Yugoslavia in the heart of Europe), in reactions to immigrants in Europe and the United States, and in Brexit, etc.

Migration is perhaps one of the crucial questions of the 21st Century. People from poorer countries or of countries fraught with conflicts are trying to settle in richer countries where they have more opportunities. Those countries need the immigrants to perform activities that the local population is not willing to engage in. Think for example about the agriculture of California, one of the richest of the world. It would not be feasible without the labor of the undocumented Mexican workers. But although countries like the United States were formed by immigrants, these are no longer welcome.

Ethnicity plays a central role in this type of situation. A conservative wave is taking place in different countries. It is based on the dislike for the unlike and is frequently promoted by populist politicians who paint the other as dangerous and threatening to the purity of the nation. It exploits the fear of those who have lost with economic changes brought about by globalization. It is relatively easy to convince unemployed people to blame the immigrants for the loss of their jobs. We have seen similar things in other periods of history.

The fact is however that the ethnic composition of central countries is rapidly changing. In the same sense as the United States is no longer demographically WASP due to the influx of immigrants, many countries in Europe are becoming less white and Christian. This brings about a series of issues about which Anthropology is well equipped to interpret.

Similar things can be said about countries like Brazil (Souza Lima 2016, Simião & Feldman-Bianco 2018). If for a long time, Brazil saw itself and was seen as a mestizo nation where racial democracy prevailed, today there is a growing awareness that this is not so. In fact, many people now speak about what is called “cordial racism,” which begins with the cultural difficulty of acknowledging that Brazil has prejudice, discrimination, and racial inequality. This is clear in official statistics that show that blacks are worse off on any social indicator, including education, income, literacy, infantile mortality, and life expectancy. Traditionally social scientists and the population in general believed that Brazilian nonwhites were worse off because they were part of the poorer sectors of the population. Recent data and interpretations show that in fact they are doubly discriminated against: for being poor and for being black.

Our last census has shown that demographically whites no longer are the majority of the population, although they dominate society. A similar trend is happening with religion. Brazil has always been a country of deeply rooted religiosity, traditionally Catholic, albeit with very particular and popular forms of that religion. Although Brazil still is the largest Catholic country in the world, the panorama is quickly changing with the growth of Pentecostalism and Afro-Brazilian religions. Pentecostalism has grown at an impressive speed and is now the second-largest religion in Brazil. It is not only a religious enterprise but also a political and economic one. Many pastors have been elected to Congress, where they form a group that votes together whenever a religious issue is at stake (abortion, religious education, etc.). The Universal Church of the Kingdom of God, established in Brazil in 1977, has churches in approximately 120 other countries, including North America and the European Union, mobilizing millions of faithful followers and large sums of money. Its founder is the owner Brazil’s second-largest television network.

During the rest of the 21st Century we will certainly see many other changes that are impossible to predict now. The challenge of Anthropology will be both to remain committed to rights of the groups that represent cultural diversity and to the theoretical task of offering interpretations of the social phenomena the world is faced with.

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Anthropology in times of intolerance:
challenges facing neoconservatism - Debates

La antropología latinoamericana ante la violencia de la incomprensión

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Resumen

Cuando nuevos autoritarismos con claros rasgos fascistas ascienden, la antropología asume nuevos desafíos: reponer las heterogeneidades constitutivas, sus historias peculiares, sus puntos de vista y sus entramados relacionales. No se trata sólo de las alteridades radicales. También son las alteridades vividas e impensadas del día a día, donde la territorialidad, la etnicidad, la racialidad, el género y la clase operan de modos multidimensionales. Necesitamos una antropología desde y del sur con la potencialidad de comprender sociedades con perspectivas múltiples y que contribuya a deshacer suturas hegemónicas. Esos senderos indican la necesidad de la etnografía, del descentramiento y, en fin, de la propia antropología para una democracia radical.

Palabras claves: antropología; nuevos autoritarismos; desafíos; América Latina.

A antropologia latinoamericana diante da violência da incompreensão

Resumo

Quando crescem novos autoritarismos com claras características fascistas, a antropologia assume novos desafios: repor as heterogeneidades constitutivas, suas histórias peculiares, seus pontos de vista e suas tramas relacionais. Não se trata apenas de alteridades radicais. São também as alteridades vividas e impensadas da vida cotidiana, onde territorialidade, etnia, racialidade, gênero e classe operam de maneiras multidimensionais. Precisamos de uma antropologia a partir do sul e para o sul com o potencial de entender sociedades com múltiplas perspectivas e que contribuam para desfazer suturas hegemônicas. Esses caminhos indicam a necessidade da etnografia, do descentramento e, finalmente, da própria antropologia para uma democracia radical.

Palavras-chave: antropología; novos autoritarismos; desafíos; América Latina.

Latin American anthropology in the face of the violence of incomprehension

Abstract

When new authoritarianisms grow with clear fascist characteristics, anthropology assumes new challenges: restore the constitutive heterogeneities, their singular histories, their points of view and relational webs. It is not only a question of radical alterities, but also of the lived and unthought alterities of everyday life, in which territoriality, ethnicity, raciality, gender and class operate in multidimensional forms. We need an anthropology produced from the South and for the South with the potential to understand societies from multiple perspectives that help unravel hegemonic sutures. These paths indicate the need for ethnography, decentring and, finally, anthropology itself for a radical democracy.

Keywords: anthropology, new authoritarianisms, challenges, Latin America.

La antropología latinoamericana ante la violencia de la incompreensión

Alejandro Grimson

Cuando nuevos autoritarismos con claros rasgos fascistas ascienden, la antropología no puede continuar su trabajo impávida. En las sociedades contemporáneas, la antropología tiene desafío de reponer las heterogeneidades constitutivas, sus historias peculiares, sus puntos de vista y sus entramados relacionales. No se trata sólo de las alteridades radicales. También son las alteridades vividas e impensadas del día a día, donde la territorialidad, la etnicidad, la racialidad, el género y la clase operan de modos multidimensionales.

Necesitamos una antropología desde y del sur, una antropología comprometida con el conocimiento, con la comprensión, con la familiarización de las alteridades, con la desnaturalización y exotización de nuestro sentido común (Comaroff y Comaroff, 2014). Es decir, comprometida con las sociedades en que esa antropología se produce. Un conocimiento antropológico que puede contribuir a una crítica de las relaciones de poder social y culturalmente instituidas.

Desde el sur, debemos leer de modo peculiar la historia de la antropología con fines de apropiación y construcción de linajes. Es imposible exagerar la relevancia epistemológica y política de buscar comprender a las sociedades no occidentales, ampliar los puntos de vista sobre el mundo, multiplicar los mundos humanos, transformar las ideas establecidas (Grimson, 2017). Pero más allá de las historias de colonialismo, cualquier descontextualización del conocimiento plantea serios problemas políticos y epistemológicos (Chakrabarty, 2008).

Una antropología desde el sur requiere construir y consolidar sus propios modelos de producción y legitimación antropológica, resquebrajando todas las lógicas de la escritura y publicación *mainstream*, habilitando otros modos de conocimiento. Para una antropología comprometida con el conocimiento, con la comprensión, con la familiarización de las alteridades, con la desnaturalización y exotización de nuestro sentido común. Es decir, comprometida con las sociedades en que esa antropología se produce.

Una antropología comprometida es una formulación a la vez precisa e intencionalmente ambigua. Ambigua porque no pretendemos proponer ninguna receta peculiar acerca de dicho compromiso. Se trata de un compromiso en preguntarse acerca de cómo el conocimiento antropológico puede contribuir a una crítica de las relaciones de poder. Una antropología que sabe, reconoce y respeta que hay muchos otros desarrollos disciplinares, pero que también desea ser respetada en sus opciones. Opciones que por otra parte son diversas y divergentes, en largas tradiciones con los pueblos indígenas, con los afroamericanos, con los movimientos sociales, con los sectores populares. Divergentes porque no ha habido ni podrá haber una caracterización homogénea de las relaciones sociales y culturales, ya sea en el espacio del Cono Sur o en América Latina.

Uno de los elementos conceptuales en los que hemos avanzado durante este siglo ha sido justamente el reconocimiento de la heterogeneidad social, cultural y política de América Latina. Cada país abordó de maneras diferentes los vínculos estado-sociedad, sus territorios, las relaciones entre los blancos y los no-blancos, las desigualdades de género y de clase, los lenguajes del conflicto social.

La necesidad de articulaciones políticas en procesos de regionalización como Mercosur o UNASUR no se deriva de algún sustrato cultural o esencia latinoamericana (Grimson, 2011). Más bien, se deriva del reconocimiento de posiciones relativamente equivalentes ante el desigual proceso de globalización. La exigencia de contextualización se realiza o puede realizarse en escalas distintas (Grossberg, 2012). Todas esas escalas, sin embargo, son históricas, conflictivas, relacionales, con tramas de heterogeneidad y desigualdad, con disputas de poder.

Dos situaciones históricas

Quisiera detenerme en dos casos de esta convergencia divergente. Me refiero a las transformaciones macropolíticas vividas en este siglo en varios países de Sudamérica. A inicios de siglo, con el llamado “giro a la izquierda”; y, posteriormente, en el cambio vertiginoso que se está viviendo actualmente. En ambos casos las situaciones locales y nacionales son realmente muy distintas y cambiantes, por ejemplo en Venezuela, Uruguay, Ecuador, Chile, Bolivia, Argentina o Brasil.

A grandes rasgos, la mayor parte de la primera década del siglo XXI revirtió la célebre tesis de Prebisch sobre el constante deterioro de los términos de intercambio. El aumento de los precios de los productos que América Latina exporta implicó por una parte un incremento cualitativo de las producciones de soja, de los proyectos mineros o petroleros. Los diferentes estados, en función de sus políticas, se apropiaron más, menos o nada de esas nuevas rentas, las controlaron más, menos o nada y actuaron más, menos o nada en términos redistributivos. Eso generó nuevas configuraciones políticas en varios países, que muchos sintetizaron con el término “populismo”, otros autores refirieron a partir de la idea del “consenso de las commodities” (Svampa, 2013) o “neextractivismo”. Como tendencia general, se redujo la pobreza, hubo procesos de inclusión social, se redujeron algunas desigualdades y se ampliaron ciertos derechos, todo lo cual fue muy cambiante entre países.

Sin embargo, hace ya unos años comenzaron a deteriorarse nuevamente los términos del intercambio y caer los precios de la soja, los minerales o el petróleo, afectando a las economías y estados latinoamericanos. No hubo una reacción homogénea ante esta nueva situación, pero esos gobiernos atravesaron situaciones críticas. Los oficialismos perdieron elecciones presidenciales en Argentina y en Chile, la destitución ilegítima de Dilma Rouseff, el encarcelamiento de Lula y el surgimiento del bolsonarismo en Brasil, la derrota del gobierno en el referéndum en Bolivia en 2016, el “neoliberalismo por sorpresa” de Ecuador y la crisis de Venezuela.

Se han planteado diversas tesis acerca de la crisis de esos gobiernos. La primera alude a las denuncias de corrupción o los problemas de gestión. Es razonable preguntarse, sin embargo, si ese tipo de denuncias o problemas tienen el mismo impacto en la sociedad en contextos de crecimiento y procesos redistributivos, o en contextos de relativo estancamiento. También se atribuyó ese debilitamiento con las campañas de los medios de comunicación o manipulación judicial. Y es parte de la realidad. Sin embargo, esto no responde la pregunta acerca de por qué en determinados contextos esas acciones resultan efectivas y en otros no, o en todo caso resultan bastante poco efectivas. Por ejemplo, la derrota electoral de Macri en 2019 en Argentina se da con los grandes medios oficialistas y con fuerte persecución judicial. Sólo pretendo señalar que hay otros factores, específicamente subjetivos, que no se han considerado en toda su relevancia. Por eso, los nuevos desafíos políticos tornarán aún más relevantes los aportes antropológicos.

El surgimiento de la fuerza social y política que se expresa en Brasil en el bolsonarismo no debe comprenderse en absoluto como un fenómeno localizado ni pasajero. Algo se está resquebrajando con tiempos dispares en distintos países de América Latina y en el mundo. El triunfo del uribismo en Colombia y sus crecientes amenazas para cualquier hipótesis de paz es otro hecho crucial. En otros países las derechas pretendidamente “modernas” fracasan. Especialmente, las amenazas de reediciones del fujimorismo y los resultados prácticos de todas las dinámicas de alta polarización, han planteado un *in crescendo* de violencias.

Las derechas se encuentran en proceso de mutación. Si bien sus avances han sido muy fuertes desde 2015 no logran por ahora estabilizar un plan ni generar hegemonías perdurables, como correspondería a una etapa consolidada. En diferentes países se agudiza la polarización. Y aunque haya países donde símiles del bolsonarismo o del uribismo puedan ser electoralmente derrotados, estos no son fenómenos fugaces. Más bien, el ascenso y la presencia de una “nueva derecha” parece ser un rasgo de esta etapa histórica, vinculado incluso a fuerzas sociales fuertemente enraizadas en sectores de la sociedad.

Incluso en países donde se habían presentado con un rostro moderno y democrático es urgente abrir las preguntas acerca de las dinámicas que produce la crisis social y la polarización política. Cuando azusan los estereotipos, cuando construyen a sus adversarios como enemigos, cuando creen que su única chance es la guerra discursiva, sólo se encuentran en el escalón previo a la ya presente represión focalizada y violación por parte del Estado de los derechos humanos.

Judicialización de la política, politización de la justicia, presos políticos, persecución a opositores, impunidad de “fuerzas de seguridad”, actos de censura, cercenamiento de espacios de comunicación críticos, ataques a universidades públicas, represión de movimientos sociales van configurando un panorama que no puede ser pasado por alto.

En el sentido común de minorías intensas de varios países latinoamericanos ha sido persistente la legitimación de desigualdades de clase, de etnicidad y raza, de género y orientación sexual, territoriales y de generación. El clasismo, racismo, sexismo, centralismo y el desprecio tanto hacia los jóvenes como a los ancianos ha estado presente. Sin embargo, ahora amenaza con incrementar su intensidad, tanto de la violencia social como política, y convertirse en hegemónico en varios países. Analizar cómo se generaron estos fenómenos y qué responsabilidad han tenido las diversas fuerzas sociales y políticas, es una tarea pendiente.

Antropología y democratización

Los antropólogos, como todos los ciudadanos, han tenido visiones más esperanzadas y más críticas durante el “giro a la izquierda”, más vinculadas a apoyar medidas que generaron más igualdad, más reconocimiento, más democracia, y otras que han colocado el énfasis en el apoyo de movimientos sociales que tensionaron o se opusieron a procesos neodesarrollistas o neoextractivistas, o a la seducción de las formas neoliberales del multiculturalismo (Hall, 2010; Laclau, 1996).

Dichos debates políticos son especialmente interesantes y necesarios. Obviamente el papel de la disciplina no tiene nada que ver con saldarlos o resolverlos. En cambio sí tiene que ver con contribuir a comprender cada uno de los puntos de vista. Sobre todo, comprender las lógicas de constitución de los puntos de vista. Las perspectivas no derivan de alguna naturaleza cultural, sino que son nodos de tramas sociales y de subjetividades.

Allí hay un anudamiento crucial entre etnografía y democratización. Más reconocimiento, más pluralidad, mayor perspectiva para entender las relacionalidades entre las demandas, sus historias, los sentidos prácticos de reclamos simbólicos, la construcción histórica de intereses, requiere de una multiplicación de las etnografías en nuestros países.

Esa comprensión de los puntos de vista complejamente entrelazados requiere, además, incluir el estudio de la dinámica de los puntos de vista. Es decir, el estudio de las subjetividades sociales y sus procesos de transformación. Porque, de hecho, a inicios de esta década podía haber diferentes posiciones políticas en contextos de libertad de expresión. Pero no había pronósticos de que las incomprensiones persistentes, anudadas a las desigualdades también duraderas, pudieran adquirir la deriva que tuvieron al final de la década.

Es difícil imaginar un mundo con mayor incomprensión que el actual, sociedades con mayor distanciamiento entre grupos que se perciben mutuamente como otros peligrosos. El socavamiento del proceso de paz en Colombia, los procesos de persecución y proscripción política en varios países, el crecimiento de la xenofobia y el racismo, los alardes de misoginia y homofobia sistemática, el combate contra la “ideología de género” como “subversión cultural”, las amenazas de destrucción física de opositores (a veces ya concretadas), dan cuenta de un cambio cultural y político de grandes proporciones. Crecen las intolerancias, estigmas, estereotipos y las prácticas derivadas de ellos. Crecen los obstáculos a la convivencia democrática. Hay fenómenos sociales y políticos en América del Sur con claros rasgos fascistas, y otros que podrían tener esa misma deriva en el futuro.

A primera vista, estas cuestiones parecieran propias de la ciencia política o la sociología política. Mi argumento es que son también temas muy caros a las tradiciones antropológicas latinoamericanas. Para asumirlos como tales es necesario analizar la trama de nuestras disciplinas y no sólo los estudios particulares. Las tradiciones etnográficas nos han permitido comprender un sinnúmero de situaciones locales o de grupos, ya sean indígenas, afro, sectores populares, desigualdades de género y más recientemente también de las elites y del Estado. Todos ellos se basan no sólo en el trabajo etnográfico, sino también el requisito antropológico del descentramiento (Grimson, Merenson y Noel, 2012).

Sin embargo, hay procesos políticos y procesos de conocimiento que actúan en la dirección opuesta. Sin tradiciones etnográficas, sin renovaciones y reinenciones etnográficas el mundo real sería incluso más segregante y violento que el actual. Por eso, si la antropología no existiera habría que inventarla. Y esto que parece trivial, no lo es en América Latina para muchos de nuestros países donde esa tradición es frágil y donde nuestras disciplinas están aún en ciernes.

Por ello, hay objetivos inherentes a la antropología que han cobrado una enorme relevancia social y política en estos años. Me refiero a la búsqueda constante de comprensión, de descentramiento, de desplazamientos anti-etnocéntricos, de crítica implacable de los modos de estigmatización cultural, exclusión social y cerrazón política.

Desafíos

Por ello, otro de los desafíos cruciales para las antropologías desde el sur es incrementar los procesos de agregación de estudios y de generalización. Si no hacemos esto, permaneceremos en buenos estudios localizados, que amplíen los horizontes de diversidad del mundo o también permitan refutar las generalizaciones con pretensiones de trascendentalidad realizadas desde otras disciplinas. El problema es que dichas generalizaciones no antropológicas, a veces agudas y a veces no tanto, no se sustentan en el principio del descentramiento y por lo tanto realizan contribuciones que nosotros podemos, al menos, complementar.

Por dar un ejemplo sencillo, la antropología nunca podría afirmar que los triunfos o derrotas de los llamados “populismos” o “antipopulismos” se explican por generalidades como el clientelismo, los medios, el autoritarismo, la economía u otras palabras similares. Las razones son sencillas. Primero, sabemos que hay hechos cuyo significado pretende ser clausurado con estos y otros términos. Segundo, sabemos que tantos los hechos como esas palabras están sujetos a procesos de interpretación vinculados a la multiplicidad de puntos de vista. Tercero, sabemos que los puntos de vista no son lugares fijos, inmutables o puros, sino que son cambiantes y están entremezclados los unos con los otros. Por todo ello, la tarea antropológica comienza por deshacer sentidos comunes, por colocar en entredicho a los supuestos generalizantes, por comprender las explicaciones como constitutivas de una disputa de interpretaciones.

En efecto, si pensamos las sociedades como convergencias contingentes de puntos de vista, como construcción de sentidos comunes que suturan diferencias sociales y culturales, como resultado de fabricaciones hegemónicas que muchas veces ocultan los espacios de divergencia, entonces la tarea de agregación y generalización excéntrica resulta crucial. Tanto en términos epistemológicos como políticos. Podemos debatir en términos políticos si entendemos esa tarea centrada en empoderar movimientos en favor o de reclamo ante los gobiernos llamados “populistas” o de “izquierda”, si buscamos ampliar los horizontes de dichos procesos contemporáneos o si asumimos otra posición. Mi punto aquí es que más allá de esas diferencias, que no sólo son diferencias de punto de vista, sino también tradiciones distintas respecto de cómo pensar los avances democráticos e igualitarios, la antropología tiene una tarea crucial como aporte al conocimiento y como aporte a las estrategias políticas en distintos niveles.

¿Por qué sufrió hace ya varios años una derrota completa la promesa de un cambio en el Paraguay? ¿Por qué sufrió derrotas electorales el kirchnerismo en la Argentina? ¿Cómo ha sido posible la dinámica política de Brasil? ¿Por qué se alcanzaron los niveles de disputa y complejidad de la situación venezolana? ¿Qué relación tiene esto con la alternancia que hubo en Chile? ¿A qué se debe la fragilidad de la izquierda o del populismo o de ambos, en los contextos peruanos y colombianos? Allí donde no hubo derrotas, ¿significa que no hay problemas?

Aquello que se ha dado en llamar “el giro a la izquierda en América Latina”, alude a fenómenos muy diferentes cuando son analizados país por país. En algunos casos, hubo rupturas en sistemas bipartidistas, en otros casos la emergencia de fuerzas políticas después de veinte años de derrotas electorales, en otros casos consecuencias inesperadas de grandes crisis de la etapa final del neoliberalismo clásico.

Es cierto que ha habido numerosas contemporaneidades en América Latina. Cierta cercanía temporal de los llamados populismos clásicos, tanto de aquellos que fueron gobierno como aquellos que no pudieron alcanzarlo. Hubo cierta simultaneidad en las dictaduras, en particular en el Cono Sur. También en los regresos a los regímenes constitucionales. Hubo simultaneidades bastante fuertes en la hegemonía de las políticas neoliberales. También en gobiernos posneoliberales, populistas, de izquierda o como se los quiera llamar.

Sin embargo, en cualquiera de las etapas mencionadas, muchos países no participaron de la tendencia general. Por otro lado, considerar que Bolivia y Paraguay, que Evo Morales y Lugo, fueron parte de la misma tendencia, puede resultar un abuso tipológico.

Desde el punto de vista de los especialistas nacionales, provinciales o de grupos, el objeto que analizan constituye una excepción: un caso único. En realidad, todos los casos son únicos. La pregunta no es esa, sino por la historia y las contingencias anudadas en esa especificidad. Y sobre qué procesos generales nos habla un caso. Es decir, por qué constituye efectivamente un caso y, además, un caso de qué. ¿Un caso de gobierno de izquierda, de gobierno populista, de triunfo, de derrota, de reducción de desigualdades, etcétera?

¿Cómo definimos los problemas? Por supuesto, necesitamos un relativismo metodológico para escapar a los modos dominantes en el debate político y mediático en cada uno de los países. El aporte antropológico no consiste en mostrar que “el problema” es que el gobierno no gobernó tal como yo hubiese deseado. O en negar la existencia de problemas porque sí lo habría hecho. Por ejemplo, si en varios de esos gobiernos ha habido y hay tensiones entre modelos neodesarrollistas y otros que apuntan a una visión menos economicista del desarrollo, más integral, no necesariamente las pérdidas de legitimidad se han originado en el énfasis en el camino neodesarrollista. De hecho, la perspectiva crítica al neoextractivismo y al neodesarrollismo no ha logrado construir opciones políticas electoralmente viables en ninguno de los países.

Se trata de considerar a la sociedad como un conglomerado indigesto y dinámico de puntos de vista, de modos de sentir, de vivir, de mirar, de significar. Modos atravesados por las historias subalternas y hegemónicas, por las historias nacionales de inclusiones y exclusiones, por regímenes de visibilidad cambiantes en el tiempo, historizaciones de clasificaciones de clase, étnicas, raciales, de género, territoriales. Historizaciones del Estado (Frederic, 2013). Y de sus ausencias. Historizaciones de la violencia. Social y política. Micro y macro. Doméstica y pública.

Formas de percepción sedimentadas. Cosmologías no reconocidas como tales. Experiencias locales, nacionales e internacionales desigualmente vividas. Diferencialmente sentidas. Perspectivas híbridas, retornos -estratégicos o no- al pasado vivido o imaginado. Celebraciones, alegrías, angustias, miedos, tristezas incorporadas. Hechas cuerpo.

Nosotros, los antropólogos, estudiamos generalmente fracciones, mundos o submundos. Periferias de las periferias. Pero la antropología asume y debe asumir que en cada detalle, en cada microcosmos, hay destellos de totalidades. Totalidades contingentes. Porque también las sociedades han atravesado y atravesarán vivencias de sutura de sus propias multiplicidades. Y experiencias de ausencia sistemática de ciertas suturas. Anudamientos

y desanudamientos, escasos territorios vírgenes, territorios penetrados, estatal y masculinamente, blanco-céntricos y a veces mestizo-céntricos. Con nociones hegemónicas acerca de la raza, la nación, la política, el estado, el poder, la democracia. Nociones que tienden a obliterar justamente la multiplicidad de puntos de vista. Que tienden a juzgar la diferencia a través de autorreferencialidades no pocas veces europeísticamente centradas.

Esta concepción de la potencialidad política de nuestro trabajo, nos impulsa a postular esa relación entre etnografía, descentramiento y construcción de una democracia radical. Se trata de comprender, con relativismo metodológico, para deshacer articulaciones hegemónicas. Se trata de deshacer para transformar.

¿Hasta qué punto será eficaz una deconstrucción activa de esos significantes que buscan ir instituyendo las fronteras de la hegemonía? Nuevamente, las opiniones políticas serán divergentes. Pero desde el punto de vista de una política de devenir mayorías, no hay forma de no abordar simultáneamente disputas políticas por las significaciones y por las expectativas de la sociedad. No hay forma de escapar a las exigencias ciudadanas, no resulta factible sustituir procesos distributivos por de niveles de eficacia, de transparencia y de lucha contra la corrupción. Y viceversa.

No hay una antropología políticamente comprometida posible si no realiza una exotización de su propia sociedad. Exotización y descentramiento como caminos específicamente antropológicos hacia un análisis crítico. Crítico no sólo de las antiguas formas hegemónicas, sino también de las limitaciones y carencias de cualquier proceso alternativo.

Comprender heterogeneidades sociales es un objetivo para una antropología comprometida con los sufrimientos y padecimientos de las mayorías. La condición de ese devenir es el compromiso con la sutura entre los ideales democráticos con las formas de percepción extendidas entre los sectores populares. Con sus perspectivas, sus vivencias, sus modos de significación.

La antropología desde el sur tiene la potencialidad de comprender sociedades con perspectivas múltiples y puede por ello contribuir a deshacer suturas hegemónicas. Al hacerlo revela una condición *sine qua non* de una política de mayorías. Esos senderos indican la necesidad de la etnografía, del descentramiento y, en fin, de la propia antropología para una democracia radical.

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Brazilian Anthropology in times of intolerance: The challenges of confronting neoconservatism

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Abstract

The present article analyzes the challenges Brazilian anthropology faces in the current political context, marked by setbacks, intolerance, repression, and censorship relative to previously achieved democratic advances. Here, we reflect upon different dynamics in the field of anthropology in diverse political conjunctures in Brazil over the last five decades. The first section of the article analyzes the historical context in which Brazilian anthropology became institutionalized, during the military dictatorship. We then highlight the social engagement of anthropologists in the struggle for human rights during the re-democratization of Brazil in the 1980s and anthropologists' participation (together with the groups they study) in the gradual implementation of "identity policies". The second section evaluates the impact of these changes in the field of anthropology and the dilemmas experienced by anthropologists in the new context of political confrontation. The concluding section analyzes and interprets the neoconservative movement and the strategies and challenges anthropology faces in contemporary Brazil.

Keywords: Brazilian anthropology; public intellectual; human rights; neoconservatism; intolerance.

Antropologia Brasileira em tempos de intolerância: Desafios diante do neoconservadorismo

Resumo

Este artigo se propõe analisar os desafios da antropologia brasileira diante do contexto político atual, marcado pelo retrocesso, intolerância, repressão e censura diante de avanços democráticos anteriormente conquistados. Para isso reflete sobre diferentes dinâmicas no campo da antropologia, em diferentes conjunturas políticas no Brasil, nas últimas cinco décadas. Na primeira parte, empreende uma análise do contexto histórico em que a antropologia brasileira se institucionaliza em plena época da ditadura militar. Em seguida destaca o engajamento social de antropólogo(a)s na luta pelos Direitos Humanos, no momento de redemocratização do país, na década de 1980, e a implantação gradativa das “políticas de identidades” com a participação de antropólogo(a)s junto aos grupos que estudam. Na segunda parte, busca avaliar o impacto dessas mudanças no campo da antropologia e os dilemas vividos pelos antropólogo(a)s no novo contexto de enfrentamento político. A última parte analisa e interpreta a movimentação neoconservadora e as estratégias e desafios para antropologia no Brasil contemporâneo.

Palavras-chave: Antropologia brasileira; intelectual público; direitos humanos; neoconservadorismo, intolerância.

Brazilian Anthropology in times of intolerance: The challenges of confronting neoconservatism

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The 1988 Citizen Constitution inaugurated a democratic system in Brazil, guaranteeing individual and social rights. Changes and achievements were achieved in subsequent years, generally due to the struggles of movements composed of the new subjects of rights. At the end of August 2016, a new disruption of democratic institutionality in Brazil began in the form of the impeachment of President Dilma Rousseff. Following this, anthropology has become especially haunted by the specter of censorship that has settled over Brazil. This is due to the fact that Brazilian anthropologists have been systematically producing important scientific knowledge regarding the new subjects of law that emerged on the national scene in the last half century. In this specific way, Brazilian anthropologists they carried out a long-standing national disciplinary tradition of seeking to understand social diversity by encountering ethnic and social alterities in their own country.

Anthropology was institutionalized at the multinational level in the 19th century, when Brazil was still largely in a colonial context. The world's first anthropologists set out to encounter distant alterities in order to understand and commit to the groups they studied. In the Brazilian context, however, these alterities were often not distant, but literally “right next door” – making up, in fact, the body of the nation that Brazilian national elites sought to construct. In other words, from the beginning of anthropology in Brazil, the understanding, incorporation, and protection of the “Other” has been a political and national question.

Although anthropologists' views, interests, and fields of research have changed in Brazil over time, some guiding principles of anthropology can be taken as *longue durée* references. Among these has been an ethical and moral commitment and engagement with the sociocultural diversity of peoples present in Brazil. Perhaps because of this, anthropology has always been susceptible to tensions and threats related to the practice of anthropological research in contexts where democratic freedom becomes vulnerable.

There are several historical cases of anthropologists being targeted for political persecution in their countries of origin (and/or practice) for defending rights that supported and promoted sociocultural diversity. Although they were still in their respective phases of academic institutionalization, Spanish anthropology during the Franco dictatorship and Portuguese anthropology during the Salazar regime serve as important historical references that mark a period of intellectual repression of anthropological research and data. Even the United States saw a drawn-out politicized struggle between Boasian anthropology and Madison Grant's racist eugenics during the first decades of the twentieth century – a struggle that had concrete consequences for Boas and his supporters (Spiro, 2009). There are several examples in Latin America of anthropology suffering different forms of control and attack. This happened with the social sciences in Brazil in 1964, during the period of military dictatorship and, more recently, after the democratic rupture that began in 2016.

In Brazil, the violent repression that occurred in the years following 1964 was the reflection of an authoritarian state that, among other coercive actions, persecuted and dismantled important academic centers in which the social sciences had gained prestige and visibility. This led to the interruption of important research projects, as well as the persecution and criminalization of some of Brazil's best professors. This situation culminated even more violently with Institutional Act 5, issued on December 13, 1968, which caused the removal of several professors across the country through compulsory retirement or forced exile (Motta, 2013: 23-58).

On the other hand, it was also during this most critical period of the military regime, with the full force of AI 5 pressing down on Brazilian intellectual life, that Brazilian anthropology became institutionalized and gained prestige in the academic field. The first graduate programs (masters and doctorate) were created during these years, first at the National Museum in Rio in 1968, followed by USP in 1970, Unicamp in 1971, and UNB in 1972. Other, similar, programs were created after 1975. It should be noted that this institutionalization of anthropology in academia occurred in spite all the difficulties imposed on the pursuit of university activities and the exile of some of the country's primary anthropologists, particularly those most engaged in the struggle against the dictatorship, such as anthropologist Darcy Ribeiro, an activist and Minister of Education for a short period during President João Goulart's ousted government in 1964.

Even in the midst of the military regime, Brazilian anthropology had already created its own academic lexicon in the first decade of 1970, setting it apart from sociology and other related fields. It also defined a field of research that encompassed different fractions of national society. It was during this period that the first Brazilian anthropologists, newly graduated from the country's main universities, systematically became interested in the "oppressed" and "excluded" Other as an object of investigation (Corrêa, 1987: 6). In this way, the legitimacy of anthropological research began to be based on an anthropologist's ability to interpret rural or urban ethnic groups or social minorities while playing a relevant political role, as public intellectuals, in the defense of these populations.

With the end of the military dictatorship in the 1980s, new scenarios for research and the performance of anthropologists in the public sphere became established. This was the moment of the re-democratization of Brazil and most anthropologists were mobilized in the role of public intellectuals engaged in the struggle for human rights, actively participating in discussions aimed at building a public agenda for diversity to be incorporated. Many of insights and demands of anthropologists and the groups they worked with ended up being incorporated into the new Brazilian Federal Constitution of 1988.

When called upon by the Brazilian Anthropological Association (ABA), some anthropologists became interlocutors within the Constituent Assembly, particularly in the discussions surrounding indigenous rights, *quilombolas*¹, traditional populations, differentiated education, cultural heritage, etc. In the production of this new agenda of rights, cultural differences began to guide narrative constructions about the new notions of citizenship being claimed and negotiated by social movements with State and Brazil's various governments.

Also beginning with the 1988 Constitution, many anthropologists began to devote themselves to promoting and defending the rights won by the groups they studies while, at the same time, expanding their investigations into sociocultural diversity. Different types of claims in the field of rights thus began to mobilize the new social actors, who soon saw in public policies opportunities for the affirmation of particular political identities and consequent social gains. Many anthropologists began to address these struggles in the face of the different demands of the social groups they were researching (Palmeira, 1989; Oliveira (ed.), 1998; Arantes et al. (eds.), 1992; Lima, 2001 and 2005; Novaes & Lima, 2001; Grossi et al., 2006; Fonseca et al., 2016; Eilbaum et al., 2017).

In Brazil, these conceptual changes operated in the field of culturally differentiated rights and identity policies and were associated with processes of democratic construction implemented mainly during the period stretching from 2003 to 2015. This coincided with the arrival of a President of the Republic (in 2003) who belonged to a political party that had its historical roots and ideological basis in the country's social movements.²

1 Article 68 of the 1988 Constitution of Brazil granted the remaining quilombos the collective ownership of the lands they had occupied since colonial times. A **quilombo** is a Brazilian hinterland settlement founded by people of African origin: the quilombolas, or maroons (as called in Central America). The inhabitants of *quilombos* (called *quilombolas*) were escaped slaves or resistant ancient slaves who achieved to maintain their settlements.

2 The Lula government began on January 1st, 2003, when Luiz Inácio Lula da Silva assumed the presidency of Brazil. It ended on January 1st, 2011, when the presidency was transferred to Dilma Rousseff, who remained in office until August 31st, 2016, when the Senate decided to impeach her, with then-Vice President Michel Temer taking over the post of President of Brazil.

Within these academic debates, one of the recurring emphases was the questioning of some of the principles of liberal universalism, particularly those which take as their premise the contractual equality between individuals. In these debates, the symbolic efficacy of liberal universalism was never denied. The idea of diversity as an obstacle to the universalizing and homogenizing logic of the so-called nation-building was heavily critiqued, however. This is because since the late nineteenth century on, the political project of the creation of a “truly Brazilian” national ethnic unit has produced mono-ethnic and monocultural representations of Brazil and Brazilian life with the specific and stated aim of erasing any sub-national cultural differences.

During the late 19th and early 20th centuries, this project sought to actively eliminate such differences, primarily through the construction of a hegemonic image of Brasil as a mestizo nation. Following re-democratization, however – and particularly during the years of the Workers’ Party governments – discourse shifted to the appreciation of these differences, which were legitimized under the tutelage of public policies implemented by the State. In this way, the right to difference gained prominence and visibility in the (inter)national political imagination. This, in turn, has given rise to new strategies of social and political mobilization in the search for the recognition and guarantee of rights.

From this struggle emerged various political demands in the public sphere, translated by the growing and complex plurality of civil society. These had diverse intersections mobilized around diverse markers of identity, such as race, ethnicity, gender, sex, and sexual orientation, among others.

New legal subjects originating in these varied social movements have risen in the public scene and have become spokesmen for the claims of indigenous peoples, blacks, Afro-descendants, *quilombolas*, rural populations, urban youth, white women, black women, lesbian, gay, transgender, *travestis*, the homeless, and “landless”, among other minorities. The rhetoric of identity and diversity thus became an important discursive and practical category, employed to influence public policy agendas in Brazil.³

In addition to resignifying the meanings of social inequality, the new identity policies also challenged law and governance mechanisms and agents in general, pushing them to deal with other kinds of claims, whose common denominators were not just the old antagonism between social classes, inspired by the Marxism that had predominated academic debate of the 1960s and 1970s.

The years that followed the Constituent Assembly were thus auspicious in terms of social conquests, the expansion of rights, and the politicization of citizenship as a way to reestablish social ties. In terms of economic policy, especially during the period from 2003 to 2011, there were significant changes in the fight against social inequality. Redistributive and income transfer policies were implemented, particularly the Bolsa Família Program.⁴ There was also a considerable increase in labor formalization and significant increases in the minimum wage, among other social inclusion measures. In the sphere of education, the expansion and creation of new higher education institutions throughout Brazil also opened opportunities for the inclusion of vulnerable young people in public universities, including large numbers of Brazil’s black youth through affirmative actions that implemented racial quotas⁵ in universities.

3 For a recent review of anthropological production in Brazil see Souza Lima, Antonio Carlos de (org.). 2018. *A antropologia e a esfera pública no Brasil : perspectivas e prospectivas sobre a Associação Brasileira de Antropologia no seu 60º aniversário*. See also Trajano Filho et al., 2004; Feldman-Bianco (ed.) 2013 and Simião et al., 2018.

4 The *Bolsa Família* was the main income transfer program of the Lula government. This initiative aimed to lift families out of extreme poverty through a monthly cash transfer.

5 The expansion of new federal universities was the result of the Federal Government Program to Support the Restructuring and Expansion Plans of Brazilian Federal Public Universities, which was part of a series of Federal Government actions in the Ministry of Education’s Development Plan, implemented during the Lula da Silva administration. Racial quotas for university entrance exams were gradually implemented through the initiative of the various higher education institutions and through the mobilization of teachers and students, being implemented in both undergraduate and graduate programs. This was a result of pressures from the growing racial identity movement in Brazil.

In part, all of this was due to the idea of a participatory democracy that was intended to be the model of state political organization and which, in the national public sphere, left an important constitutional legacy, especially as it managed to expand the existing spaces for social participation while creating new spaces for more inclusive public policy formulation.

It was in order to meet the demands for participation of social and ethnic-racial collectives in the construction of public policies that the rights of ethnic populations were recognized. This resulted in the demarcation of indigenous lands and *quilombola* territories through procedures of formalized land regulation. ABA-associated anthropologists provided important legal support for this process through the Committee on Anthropological Reports, employing methodologies and theories suitable for the identification and delimitation indigenous and quilombola lands, as well as in the preparation of expert opinions regarding territorial, environmental, criminal, adoption and guardianship issues, etc. (Leite (ed.), 2005; Oliveira et al., 2015; Oliveira et al., 2016, Andrade, 2017; O'Dwyer, 2002 e 2018.)

From 2003 on, the government initiated a broad dialogue with Brazil's social movements, contemplating both those identified with the struggles for recognition and guarantees of fundamental rights (the feminist and LGBT movements, etc.), as well as trade unions, and the landless workers' movement (MST), among others. Special ministries and secretariats focused on the promotion of human rights in different segments of Brazilian society were created: Secretariats for Policies for Women, Sexual Diversity, the Promotion of Racial Equality, as well as other spaces accessible to a more inclusive dialogue.

Within the scope of the Ministry of Culture's (MinC) actions, the notion of *culture*, as understood by anthropology, became a key reference point for the public policies that highlighted the demands of the historically different disqualified social actors. Among other actions taken by the Ministry were the Plural Brazil, Living Culture and Culture Points Programs, launched by the MinC in 2004. It is important to highlight that, in the context of building a new democratic agenda in Brazil, culture and cultural heritage were converted into passports for the achievement of rights, as well for participation in the construction and management of public entities such as the National Historical and Artistic Heritage Institute (IPHAN), particularly in the formulation of its cultural heritage policies. Additionally, cultural demands allowed participation in several newly created sectoral Collegiate Councils of the National Council on Cultural Policy (CNPC) (Motta, 2018).

Democratic ideals and cultural pluralism were thus combined into a discursive, multicultural political formula (Taylor, 1994), often used by marginalized social groups⁶ as a strategy to oppose an exclusionary and unequal model of civil society that denied the rights of those who recognized themselves culturally different (Fraser and Honneth, 2003).

The Return of Intolerance and Academic Censorship

With the new rupture of democratic institutions in Brazil in August 2016, a cycle ended; a cycle begun by the so-called "Citizens' Constitution" of 1988. Another cycle has now been set in action, marked by regression, intolerance, repression, and censorship.

Political discourse in this new context has been authoritarian and restrictive, targeting all previous advances, especially with regard to rights. In particular, it targets the logic of identity policies, which until now has defined the post-1988 agenda of public debate. The ideological basis adopted by the present government is extremely reactionary and has produced censorship of anthropological knowledge.

⁶ Anthropological production is part of listening to and studying the new subjects of rights. Anthropology and Human Rights was the name given to seven (7) volumes published by the Brazilian Association of Anthropology, some of which are listed in the bibliography section of the present article. Characterizing cultural diversity and thinking about its relationship with legal rights has become an anthropological and interdisciplinary concern.

To a great degree, this is because anthropologists have systematically produced important scientific knowledge about the new legal subjects that emerged on the national scene over the last 30 years, employing analytical categories – such as gender – that do not fit the political perspective of the current regime. It is worth remembering that since 2005 (Machado, 2017), although more forcefully since 2015, conservative segments of the Brazilian Parliament have been anticipating and paving the way for a forceful reaction against the new subjects of rights and to anthropological and social scientific knowledge in general.

As is well known, the kind of knowledge produced by anthropology, as well as the particularities of its ethnographic method, has always created a critical examination of power relationships in the process of knowledge production. Thus, the displacement of the subjects studied by anthropologists tends to intensify the reflexive character proper the disciplinary field itself. In this sense, it is important to emphasize that the involvement between subject and object in anthropology derives from the zeal with which anthropologists in general tend to deal with social relations and the intricate processes in which their research themes are immersed. Furthermore, contemporary anthropological methodology always analyzes – and often seeks to question – the relationships between subject and object in the production of knowledge.

With the intensification of the repressive process in Brazil, counter-narratives began to be built regarding rights in general and identity policies in particular. Anthropologists thus became the target of frequent attacks that threaten the exercise of their academic and professional activities.

As evidence of this, from the end of 2015 until the first half of 2017, in surprisingly arbitrary fashion, the Brazilian Anthropological Association (ABA) was asked to explain and defend itself in front two Parliamentary Committees of Inquiry (CPIs): the National Indian Foundation (FUNAI) and Institute of Colonization and Agrarian Reform (INCRA) CPIs. The reason stated for this was unfounded accusations about the supposed ideological content attributed to the technical studies and expert reports carried out by specialized anthropologists involved in the delimitation and demarcation of indigenous lands and quilombola territories⁷, reports frequently requested by the Federal Public Prosecutor and other competent federal agencies to supplement the technical information underlying procedural instructions (Machado, Motta, Facchini 2018: 17).

Installed through an initiative of the Parliamentary Agricultural Front (FPA – also known as the “ruralist caucus”), the two CPIs were conducted under the pretext of investigating alleged frauds and deviations occurring in the processes of land demarcation taking place under the responsibility of FUNAI and INCRA (Câmara dos Deputados, 2017a). Acting with the due bias of those who put their own interests ahead of those of the *res publica*, the arguments presented by the ruralist caucus intended to criminalize indigenous peoples, *quilombolas* and – above all – the anthropologists involved in the demarcation of these peoples’ lands.⁸

It is no coincidence that the ruralist caucus represents the specific interests of landowners and farmers, reacting to any environmental preservation measures while advocating for the expansion of legal deforestation limits. Additionally, it is possible that this group is linked to the recent burnings taking place in the Amazon rainforest, as it is also responsible for the uncontrolled release of pesticides with the support of the current regime.

7 See ABA, 2015: PROTOCOLO DE BRASÍLIA. Laudos antropológicos: condições para o exercício de um trabalho científico. Brasília: Associação Brasileira de Antropologia.

8 Through its Presidency and its Coordinating Committee on Indigenous Affairs, ABA contributed to the drafting of the CPI FUNAI INCRA 2 Parallel Report (on ABA and anthropologists), which subsidized the separate vote of the members opposed to the votes of the majority (Câmara dos Deputados, 2017b). The wording of the arguments against the CPI’s accusations was based on the entire history of the Association and the historical contributions of its members.

This involvement of one of the oldest Brazilian scientific associations as an accused party in a CPI reflects not only a disrespect for national scientific production, but also a frontal assault on the fundamental rights guaranteed by the Federal Constitution. It is worth remembering that more recently, Brazil's Executive and Legislative bodies – whose current composition is mostly ultra-conservative – have been committed to not only to promoting institutional reforms seeking to suppress rights based on the notion of a pluralist society, but also to the erosion of the Brazilian State and the curtailing of federal resources.

Non-compliance with existing legislation, often with the collusion of the judiciary, has not only been limited to the territorial rights of indigenous and *quilombola* peoples. The same lack of commitment can be seen with regards to environmental rights. A series of environmental disasters have been occurring in Brazil and the government and its agents seem unable to find the causes or the culprits, nor take precautionary measures to solve the problems.

The first of these occurred in 2015 with the rupture of the Samarco mining company tailings dam in Minas Gerais, resulting in a public calamity unprecedented in the country's history. The following January 2019 rupture of the Brumadinho tailings dam, located in the same state, also caused a major environmental disaster. Adding to the panorama of environmental catastrophes in Brazil, we've seen the uncontrolled forest fires in the Amazon, which have mobilized national and international attention in view of the extent of the destruction and global environmental impacts this causes. Although the highest incidence and proportion of the burnings is found in the northern region of the country (known as the Legal Amazon) fire outbreaks were recorded throughout practically all of Brazil in 2019, occurring in 27 different federal units.

It is important to emphasize in this context that the current President of the Republic of Brazil already publicly declared his intention to change Brazil's environmental laws even before being sworn in. His declared intention was to change environmental laws and to make environmental licensing processes more flexible and his day-to-day practices in the current political management of these issues – while not actually supported by law—have been proving to be dizzying in their capacity to promote misrule.

In this regard, it should be noted that the National Institute for Space Research (Instituto Nacional de Pesquisas Espaciais INPE), which since 2015 has been receiving real-time deforestation data through satellite monitoring, recently warned the world of the existence of fires in the Amazon region and the dangers presented by these fires. The INPE's warning was based on statistical criteria and scientific evidence and was made through a note published on the website of the Brazilian Environmental Institute (Instituto Brasileiro de Meio-Ambiente IBAMA), which the President has also threatened with extinction.

The release of INPE's warning, however, provoked the current President's indignation, as well as that of the Minister of the Environment. Both men contested the veracity of INPE's information, saying that the Institute was lying and constructing counter-narratives to disqualify its findings. In retaliation, the President summarily dismissed the renowned Brazilian physicist who was the director of INPE's research body. Scientific groups throughout Brazil (including the Brazilian Society for the Progress of Science (SBPC)) protested this arbitrary behavior, but the Minister of Science and Technology remained silent and continues to do so in the face of the dismantling of the sciences in Brazil.

Environmental licensing is extremely important for the preservation of the Brazilian environmental heritage, allowing the nation to safeguard traditional populations from large infrastructural projects and environmental impacts.⁹ The Brazilian Anthropological Association (ABA), together with the association's Committee on Traditional Peoples, Environment, and Large Projects has actively participated in government discussions and organized forums, together with representatives of civil society and indigenous and traditional peoples who are engaged in the struggles to preserve indigenous rights and the environment.

⁹ Environmental licensing is an administrative procedure by which the environmental agency (federal, state, or municipal) authorizes the installation and operation of potentially polluting projects or activities. It was subject to control and oversight by previous governments.

In addition, many anthropologists have developed important projects and research related to environmental impacts and their effects on traditional and indigenous populations.¹⁰

In this context, so adverse to the recognition of rights, violence against indigenous peoples, *quilombolas*, members of the landless movements, peasant leaders, and etc. is increasing. In addition to frequent raids on already demarcated indigenous and *quilombola* lands – usually undertaken for logging and mining – there indigenous and *quilombola* leaders are being slaughtered at the behest of landowners and squatter in regions where land disputes flourish and economic interests are at stake.

The wave of violence and crime is also growing alarmingly in the country's main urban centers. In the city of Rio de Janeiro, for example, in the face of the rise in street and organized crime in recent years, parallel and illegal police forces, better known as “militias”, have begun organizing the security of residents of peripheral urban communities and slums against drug traffickers and criminals in general.¹¹ It should be noted that this *modus operandi* is being replicated in other urban centers across Brazil, everywhere populations are vulnerable to violence and the presence of State public security is practically non-existent. The current government's push for the liberation of private firearm ownership (currently restricted among the general population) is often reinforced by the appearance of government representatives in the media who profer grotesque allusions which incite gun violence in civil society. One of the most obvious side effects of this has been the extermination of civilians, in some cases supported by the State, as has been happening in Rio de Janeiro.

At all levels of government, alliances are being woven with business sectors linked to commodity exports and the financial capital of private banks, with the objective of financing the electoral campaigns by representatives of agribusiness, mining, “militia”, and evangelical parliamentarians, such as occurred during the last election for the national Congress and Senate. Congressional caucuses have also been organized that act around common goals and interests that are embedded in corporate strategies.

It is notable that even under the previous government, needed to establish ambiguous alliances with conservative and evangelical forces in order to stay in power. Now strengthened under the current regime, one of the focal points of the so-called evangelical caucus (allied with conservative Catholic segments in the National Congress) has been frequent attacks on the recognition of reproductive rights. A bill is currently in front of Congress that threatens legal guarantees for abortion in the case of rape, risks to the mother's life, and fetal malformation. This bill would even criminalize pregnancy prevention in the case of rape (Machado, 2016). Conservative political forces in have been organizing themselves in the Brazilian legislature (Almeida, 2017) since at least 2005 seeking to regulate public morality and attack policies of gender and sexual diversity (Machado, 2017). The intolerance and prejudice of these groups has only now fully been made public, however, and on the floor of Congress, as they fight against all previous advances in the fields of sexual and gender equality.¹²

This position has been clearly expressed through the pronouncements of the current minister (an evangelical pastor politically conservative) who occupies the newly created Ministry of Women, Family, and Human Rights. Among her recurrent themes are the fight against feminism, the criminalization of abortion, the elimination of supposed “gender ideology” in schools, and a series of other moral positions that, in her public narratives, become immutable values based on religious conversion. The Minister sees all of her beliefs as a base for applying public policies contrary to diversity.

¹⁰ See, among others: Zhouri et al, 2018; Beltrão and Lacerda, 2017; Oliveira and Cohn, 2014; Zhouri, 2012; Cunha and Almeida, M.2009, Almeida, W., 2008, Santilli, 1997 and Sigaud, 1988.

¹¹ Militias are armed groups that co-opt members and former members of State security forces, such as police, firefighters, and correctional officers. Usually these groups are maintained with financial resources received from extortion of vulnerable populations in areas where there is no State-directed public security.

¹² Anthropological works based on the analysis of the intersections of race, gender, and sexuality illustrate these new social subjects and point to the strength of the new lifestyles and rights that were built over the past several decades. They show the distance of “lived life” from the narrative imposed by conservative morality. See among others, Lima, 2018; Carrarra, France and Simões, 2018; Carrara, 2016; Silva and Blanchette, 2017.

There is no doubt that such a setback in the name of moral and religious conservative values has directly affected the work done by anthropologists, especially in the public sphere, and particularly in the face of astonishing evidence that the current context is leading directly to increased violence against women, violence and death by homophobia, death through criminalized backstreet abortions, and etc. A moral panic has been created by the accusatory category of “gender ideology” and this panic is being used to advance and symbolically effective counter-narratives that are used to disqualify the work of anthropologists and social scientists who research this theme.

On the other hand, it is important to note that gender studies in Brazil are expanding and attracting more and more university students, not only in the field of anthropology, but also in the social sciences in general. This fact highlights the importance of this field of research and the performance of anthropologists in different fields, who are being asked to position themselves in different public spaces by giving conferences, interviews in newspapers, making television appearances and dialoguing with the media in general. As we’ve mentioned above, anthropologists have also been called upon by the Executive Branch to consult on public policy guiding plans, especially during the past government where the politics of diversity gained importance in the State. Such visibility, however, has resulted in intolerance in the current context and is encouraged at all levels of government, most visibly in the prohibition of any reference to gender and sexuality in the National Education Plan (PNE), sanctioned in 2016.

The field of education does not differ from the panorama described above. With Proposed Constitutional Amendment 55 (PEC), which freezes funds for education for a period of 20 years, the conditions of labor in public universities have been drastically affected. In recent months, this situation has become even more critical due to new budget cuts by the Ministry of Education in public higher education institutions, threatening the closure of many of them, as well as serious damage to ongoing research while hindering future prospects in the field of scientific production. Radical budget cuts also threaten the National Council for Scientific and Technological Development (CNPq), one of the main federal agencies responsible for funding research in the national university system, and the Higher Education Personnel Improvement Coordinating Body (CAPES), an institution linked to the Ministry of Education that expands and consolidates graduate studies (masters and doctorates) throughout Brazil.

Education has also been impacted by the curtailment of freedom of expression and violation of rights. This has been reinforced by the current Minister of Education, who has turned his policies into persecutory instruments, both in relation to teachers and students and, in particular, with respect to any kind of knowledge production that does not correspond to the ideologies advocated by the current government.

Among the existing counter-narratives is “school without parties”, an ideological movement inaugurated in 2004, which has been gaining greater visibility since 2014, but only achieved notoriety during the current political conjuncture. Its members preach the end of an alleged leftist “indoctrination” within the schools and universities that is supposedly associated with “communism” and “gender ideology”. The ideological accusations the movement attributes to intellectual and educational activities are varied and proportional in intensity to the objectives the movement seeks to achieve, denigrating the scientific reputation of public universities and the image of their professors. The “school without parties” movement gained the support of catholic, evangelical, and fundamentalist groups, achieving greater media visibility in the current political landscape and producing a moral panic in different cultural sectors. Its attempts to regulate public morality and customs have also reached into the arts, museums, cinema, music industry, and other cultural areas.

The general conservative scenario that Brazil is currently undergoing has thus also reached the field of culture. One of the current government’s first measures was the abolition of the Ministry of Culture (MinC), which was incorporated into the newly created Ministry of Citizenship. This new ministry absorbed two organs previously linked to the MinC: the National Institute of Historical and Artistic Heritage (IPHAN) and

the Brazilian Institute of Museums (IBRAM). Cultural policies aimed at promoting cultural diversity have been paralyzed while there has been a violent dismantling of cultural heritage that has heavily affected IPHAN.

Political discourse in this new conservative and authoritarian context consistently misrepresents the importance of culture, science, and technology. It is especially present, however, in its accusations against anthropology, seeking to penalize the so-called “social actors of diversity” that emerged on the national scene from social movements that fought for recognition of differentiated rights in the 1980s and ‘90s.

When fundamental rights cease to exist, hope in the inventive capacity of new solutions is lost. The collective and democratic dimension of culture begins to disappear.

Neoconservative times and the challenges to anthropological practices

The setbacks, intolerance, repression, and censorship of the current political moment consolidate a hegemonic conservative narrative. We must thus ask whether or not are we facing the reappearance or resurgence of a long-term permanence of conservative and religious thought in contemporary times?

More must be asked, however. Are the forces that support the conservative thought the same? We prefer to call them as neoconservative¹³ forces. An analysis of the neoconservative forces in play shows that they do not represent the mere permanence of conservative and religious impulses. Faced with the strong progressive narrative of human rights and new social subjects, conservative forces needed to reorganize themselves as ostensible social movements in order to confront the human rights of legitimate social subjects, both in Brazil and in many other countries throughout the world.

Unlike the previous conservative narratives, neoconservatism – as it stands in Brazil from the Dilma government on – does not claim to speak for an explicitly political position (whether this be conceived of as right-wing or neoliberal) or in the name of a given religion. It does not deny its right-wing impulses, economic neoliberalism, or conservative Christian religiosity, but it does not construct its main narrative around these arguments. Although it clearly admits its antagonism to the Brazilian “left”, it claims to speak in the name of an objective “truth” while it accuses the left of holding “ideological” positions.

Neo-conservatism as an organized movement in social networks and Christian religious spaces has been consolidated by the organization and strengthening of conservative congressional caucuses: the evangelical caucus (for the traditional family, against homosexuality rights, and against abortion), the ruralist caucus (for the expansion of agribusiness and against indigenous and *quilombola* rights to land), and the weapons liberation caucus (for greater flexibility in the laws regulating the possession and use of firearms and against disarmament). The success of the election campaign of the current President, who as a former congressman and as a candidate defended and advanced the proposals of these three caucuses, sharpened and strengthened the neoconservative narrative by transforming it into a governmental narrative. By taking over the governmental, this movement has also gained the power of censorship and, by being based on social segments beholden to social networks and religious groups (especially evangelicals), it could become a proponent and propagator of eliminating rights and spreading intolerance.

Claiming to speak in the name of “truth”, this movement means to say that politics is or should be “neutral”. The term “ideology” has thus come to be used negatively, associated with the “left”, both with the political parties that define themselves as leftist and with the governments of Lula and Dilma. It was not enough, however, for this movement to simply criticize leftist positions in Brazilian politics: to affirm that politics should be neutral and that the new heralds of the right were themselves truth-tellers required an attack on the Brazilian social sciences.

¹³ Regarding the pressures of neoconservative forces and the neoconservative movement against the legalization of abortion, see Machado, Lia, 2017.

Since the 1970s, Brazilian anthropology, sociology, and political science have played an important role in the construction and evaluation of social public policies. In addition to teaching and researching, they have stood for the defense of human rights, of indigenous peoples, *quilombolas*, family farmers, urban and rural policies that decrease social inequality, environmental protection, integral and public healthcare, public security policies, and the defense of gender equality and sexual diversity.

According to the neoconservative political narrative, the Brazilian social sciences are putting themselves in an ideological position and the social sciences supposedly do not produce science but ideology. The Brazilian neoconservative attack on science is not restricted to the social sciences. Neoconservatives don't recognize research that points to global warming and often remark on social networks that they are against biological evolutionism and the belief that the earth revolves around the sun. The principal political target of the movement, however, has been the humanities and especially the social sciences.

Arendt (2007) recalls that the art of politics often demands "untruth" as a "justifiable means in political affairs" (Arendt, 2007: 8-9). The particular untruth we are dealing with here (i.e., the belief that it is right-wing politicians who are speaking "the truth") is part of the political scene, like any other untruth. Politics is inevitably grounded in debates and conflicts over interests and power struggled and, therefore, one can never politically speak in the name of an undisputed and neutral universal truth.

If politics is not neutral, is or should the social sciences be neutral? Our practices as social scientists necessarily imply disciplinary procedures and methodologies which underpins the scientific view. However, methodological reflection requires reflection on the subject's place within knowledge production and, thus, their social position.

The "axiological neutrality" proposed by Weber (1864/1920) for knowledge creation within the human sciences seeks to remove the researcher from a commitment to "value judgments", but does not remove the researcher's responsibility to reflect on the scientist's insertion in the world of socially and politically constructed meaning. This insertion in the world of meanings, in relation to values, is fundamental to the objectivity of research itself. Without it, there can be no knowledge. (Weber, 1999: 109). Weber's axiological neutrality eschews value judgements as guiding lights for scientific production. It states, however, that it is not possible to do science without recognizing the scientist's prior insertion in the world of culturally constructed meaning. Social science deciphers the social senses but always inserted in them. It is thus through constructed methodologies that can be reconstituted by other social scientists that the objectivity of the social sciences is achieved.

Starting from an understanding that the social sciences are ideological, the "school without parties" movement wants to prohibit any "moral education" in the educational system that is not "in accordance with the beliefs of students' parents". The movement would thus ban all references to "gender theory or ideology", the "sexual options", and the "promotion of teachers' political beliefs" (House of Representatives Bill 867 and Senate Bill 193 2016. See respectively Câmara dos Deputados, 2015 e Senado, 2016) . The movement embodies distrust and aversion towards the knowledge generated by the social sciences and would remove the teaching of the social sciences from the educational system, especially regarding politics, religion, gender theory, and sexuality.

Ironically, the movement's website makes use of Weber in presenting "school without parties"¹⁴ arguments:

¹⁴ The official website of the movement known previously as- <http://www.escolasempartido.org/> - appears in beginning of 2019 as currently suspended with the notice "under renewal", but in October, 2016, Weber's citation was there. Although Paulo Nagib, its forerunner, has deactivated his Facebook page profile, the website <https://escolasempartido.org/> in this format is again active. New bills are currently being filed in the Federal Chamber of Deputies and at the municipal and state levels. Semis points out how these new projects follow the same proposals and arguments as the early ones (Semis, Lais, 2019). Another new website is also being producing and available: <https://escolaeducacao.com.br/escola-sem-partido/>

In a classroom, the teacher has the word and students are doomed to silence. (...) It is unforgivable for a teacher to use this situation to seek to instill in his disciples his own political conceptions, instead of being useful to them, as is his duty, through the transmission of scientific knowledge and experience (Weber: 1967: 39 and 40).

The author of the site have apparently read very little Weber because they have completely inverted his thinking. While it is true that Weber was a critic of university professors who relied solely on conviction and not disciplinary knowledge, he was equally critical of teachers who were self-styled prophetic religious saviors. Weber was the German thinker who perceived the “disenchantment of the world” as stemming from both the growth of scientific and rational thought and in the decline of religion.

To those unable to endure the destiny of our time (the disenchantment of the world) in virile fashion, it is only possible to give the following advice: return in silence (...) to the open arms (...) of the old churches.... Either way, the returnee will inevitably be compelled to “sacrifice the intellect.”... Let’s learn the lesson! Nothing has so far been accomplished based solely on fervor and expectation (...) (Weber 1967: 50, 51 and 52)

It was Weber who affirmed and defended the deep linkages between scientific knowledge and morality and denied morality’s imprisonment within religion. He stated in his essay “Science as Vocation”:

Scientists can and should show that any position they adopt logically and surely derives from the ultimate meaning of this or that ultimate and basic view of the world. (...) Thus, the scientist can clarify that a certain position derives from one conception and not from another.... If, therefore, we are up to our task as scientists (which, of course, must be assumed here), we may compel a person to realize the ultimate meaning of his own acts, or at least help them in that regard. It seems to me that this result is not negligible, even with regard to personal life. If a teacher achieves this result, I am inclined to say that he puts himself at the service of “moral” powers, that is, at the service of the duty to bring clarity and a sense of responsibility into the souls of others (Weber: 1967: 46).

Weber is as far as one can be from the revindications of the “school without parties” movement that moral education should be banned and that school education should be restricted to “instruction in skills” (we must ask ourselves what this would be?). Weber understands that the teaching of the social sciences allows us to establish knowledge about social relations of meaning and that it allows the teaching of individual responsibility in the face of many varied and possible social meanings.

Habermas (1989: 43) does not propose axiological neutrality and understands the social sciences as producers of an “always contextualized truth”. Impartiality, in this sense, can only be understood in the context of a contextualized, non-abstract “truth” that depends on the conditions of knowledge production.

Haraway goes farther still, conceptualizing the objectivity of the humanities as partial and based upon “situated knowledge” or “localized knowledge” (taking up here once considerations made in Machado, Motta and Facchini, 2018). The term “partial” is not to be understood as an antonym of “impartial”, as it is used in the judicial system. In its legal meaning, the term “partial” is used to criticize taking sides with one or another of the parties in a dispute without analyzing the evidence. “Objectivity”, in the social scientific tradition being described here, means that knowledge is localized, specific, particular, an inevitably approached from a partial perspective. There is no knowledge without mediation: there is no knowledge that is not woven into a set of social relationships.

The “situated knowledge” of this social scientific position is an epistemological stance taken against the assumption of scientific neutrality. As Haraway affirms : “The only position from which objectivity could not possibly be practised and honoured is the standpoint of the master, the Man, the One God, whose Eye produces, appropriates, and orders all difference.” (1991:193). Haraway argues against an image of knowledge from above (which she considers to be almost an appropriation of a godly point of view) and remarks:

“Vision is always a question of the power to see - and perhaps of the violence implicit in our visualizing practices. With whose blood were my eyes crafted?” (1991:192).

Consistent with this position of situated knowledge, social science knowledge presents (or must present) the conflicts between social knowledge arising from different social positions and situations. Conflicts must always appear and cannot be ignored or glossed over.

Referring to Despret’s conferences, Arendt and Moraes, (2016) state that the social sciences should not avoid controversy as they are premised upon a higher criterion and accept controversial coexistence: “Not to interpret the hunter or the vegetarian is not to judge them by a criterion superior to both, which would resolve the conflict and avoid controversy. Accepting their controversial coexistence resists the temptation to resolve their contradictory truths” (Arendt and Moraes, 2016: 13).

This is not just the mere acceptance of polemics or controversies however: it is the understanding that there are conflicts between social positions linked to social meanings that are in dispute. The social sciences can and should – indeed, must – make conflicts and contradictions visible if it is to achieve any claim at all to “objective” truth (in Weber’s sense of axiological neutrality) or to “objective knowledge” in Haraway’s sense of partial connection.

Above all, rational knowledge does not pretend to disengagement: to be from everywhere and so from nowhere, to be free from interpretation, from being represented, to be fully self-contained or fully formalizable. Rational knowledge is a process of ongoing critical interpretation among “fields” of interpreters and decoders. (Haraway,1991:196)

Ethnography is necessarily based upon dialogue with the community or people studied and it is a crucial part of the anthropological method. Without dialogue with the subject of research there is no objectivity or understanding of social meanings. If the self identity of the subject does not, by itself, produce science, methodological instruments that mediate standpoints of view do. A critical positioning must be capable to see the plural and contradictory world of human created meanings. It is precisely this condition of dialogue, inherent in anthropological scientific practice, that the CPI FUNAI-INCRA seeks to mischaracterize as a “fraudulent method”, labeling it “collusion”. In this accusation, the deep knowledge forged by interactions between researchers and research subjects (indigenous and *quilombola* peoples, in this case) supposedly blinds researchers to the perspectives of subjects with adverse interests.

The proposers of the CPI FUNAI-INCRA employ a misunderstanding of “neutrality” in their requests and in their Final Report in order to attempt to interdict the work of anthropologists who carry out land and territory demarcation reports with indigenous groups and *quilombola* groups, who share time and housing in the communities they study. It is precisely the long or medium duration of these stays among the groups being studied that allow anthropologists to comprehend these groups’ ways of living and of organizing themselves in the territories they occupy and thus allow anthropologists to become specialists with regards to the analyzed groups’ habits and beliefs.

From the point of view of the CPI investigators, it would probably not be possible to maintain the methodological tradition of anthropological ethnography anywhere in the world. They also omitted from the CPI’s Final Report the fact that anthropologists, in addition to face-to-face ethnography, include historical data and diverse secondary sources as well as a review of the available literature on the group studied when making their reports.

In the production of anthropological reports on indigenous lands and *quilombola* territories, conflicts and disputes over the territory appear: they are not covered up or ignored. Disputes over land are not glossed or dismissed in partisan fashion: the meanings given by traditional peoples to their way of living, organizing, and feeling are analyzed as to whether these can be said to encompass rights to territory as provided for by the Constitution.

Request 86/2016 of Nilson Leitão and others involved in the CPI FUNAI-INCRA 2 states on page 1 that the “Brazilian Anthropological Association has penetrated into and is equipping organs and entities of the Brazilian state with complacency towards – not to say complicity with – anthropologists who ‘pray from their Bible’” (Câmara dos Deputados, 2016:1). Other unfounded statements appear in the Report, such as that on page 13: “Thus, ‘engaged’ anthropologists are being guided and even forced to always conclude in favor of traditional occupation of the territory, (...) which would entail a series of frauds” (Câmara dos Deputados, 2016:13).

When, through scientific and ethnographic procedures, an anthropologist concludes that the conditions of territoriality of a given traditional or autochthonous people are met, as required by the Federal Constitution, then that anthropologist must take a position. This is not a subordination of anthropological inquiry to the goals of the peoples and communities with which anthropologists work, as members of the CPI FUNAI-INCRA accuse: this is recognition by anthropologists of the rights to territoriality as enshrined by Brazil’s prevailing legal order.

If scientific knowledge must be based on methodological foundations in order to produce knowledge, it is also a necessary for it to insert itself into the symbolic world in order to construct the various positions of meaning given by the social subjects and present the evidence for said positions. The objectivity and impartiality sustained by situated knowledge imply the maximum inclusion of divergent positions in the social context under analysis and in the clarification of the position of the subjects producing this knowledge. This thus requires the “interpretation and analysis of a whole set of social subjects and their relationships within a complex system of social relations, including contexts, circumstances, symbolic meanings, and material relations” (Machado, Motta and Facchini, 2018: 23).

It is up to anthropology and the social sciences to counteract common sense and neoconservative positions that do not recognize the social sciences and the knowledge they produce. There is no “neutrality” in the production of scientific knowledge about social and cultural worlds. However, because this production starts from a clearly stated point of view, the knowledge produced will be impartial (in the sense that it will present evidence and not false statements), indicating the system of social relations where a given point of view fits in. It is based on an explicit methodology and conducted according to rational disciplinary criteria. It is, in short, the production of scientific knowledge.

In times of intolerance, it is the duty of the social sciences to point out the misconceptions of political speech which claims to be true in the name of a non-existent political neutrality, to confront political speech that does not respect scientific knowledge or, indeed, produce knowledge. We must stand up to a neoconservative political speech that presumes the “sacrifice of the intellect” of which Weber speaks. Or, as proposed by moral philosopher Harry Frankfurt, we must reject and combat the sort of emotionally appealing discourse that intentionally confuses substantiated and unsubstantiated statements, which he labels “bullshit” (Frankfurt, 2005).

In times when the social sciences are accused of being ideological, it is up to social scientists to continually affirm that if the construction of scientific methodology cannot presume to do without a point of view (because we are inserted in a world of meanings), it is not *reduced* to said point of view because it obeys rational and rigorous methodological procedures, built into the field of research itself.

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