De)Securitizing collectives of the Brazilian Cerrado and the implementation of an agribusiness complex*

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Abstract

The Cerrado biome has been intentionally unregulated. For this reason we understand it as a space of (in)security, this has allowed for the implementation of an agribusiness complex that has resulted in the rapid expansion of the agricultural frontier at the cost of devastating its native landscape. Yet, the academic literature is lacking in a geopolitical appraisal of the biome. In this paper, we discuss the actor-networks present within the securitizing/desecuritizing dispute for space in the Cerrado, through a more-than-huma-geopolitics. For this we make use of the Actor-Network-Theory (ANT) as a way to contemplate both human and non-human actants. In order to present a historical construction of the Brazilian Cerrado as a space of security and (in)security; seeking to understand how different actor-networks strive to (de)securitize it as a means to establish agribusiness in the region. Thus arriving at the understanding that the contention to (re)frame the Cerrado articulates traditional and capitalist production with a plethora of non-humans, therefore, the agency of collectives of humans and non-humans involves a semiology and practices that stabilize or destabilize this collective.

Keywords: Cerrado; geopolitics; agribusiness; ANT; securitization.

Coletivos (de)securitizantes do Cerrado Brasileiro e a implementação de um complexo do agronegócio

Resumo

O bioma do Cerrado tem sido intencionalmente não regulado. Por essa razão, nós o entendemos como um espaço de (in)segurança, o que permitiu a implantação de um complexo agroindustrial que resultou na rápida expansão da fronteira agrícola às custas da devastação da sua paisagem nativa. A literatura acadêmica ainda é ausente em relação à apreciação da geopolítica do bioma. Neste artigo, discutimos por meio da geopolítica mais-do-que-humana os atores-rede presentes na disputa securitizante/desecuritizante pelo espaço no Cerrado. Usando a Teoria-do-Ator-Rede (ANT), como forma de contemplar atuantes humanos e não-humanos, nós apresentamos uma construção histórica do Cerrado brasileiro como um espaço de segurança e de (in)segurança a fim de compreender como diferentes atores-redes esforçam-

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se para (de)securitizá-lo como um meio de estabelecer o agronegócio na região. Assim, ao alcançar-nos o entendimento de que a disputa para (re)enquadrar o Cerrado articula a produção tradicional e capitalista com uma infinidade de não-humanos, portanto, a agência de coletivos de humanos e não-humanos envolve uma semiologia e práticas que estabiliza ou desestabiliza esse coletivo.

**Palavras-chave:** Cerrado; geopolítica; agronegócio; ANT; securitização.

**Colectivos (de)securitizantes del Cerrado Brasileño e la implementación de un complejo del agronegocio**

**Resumen**

El bioma Cerrado ha sido intencionalmente no regulado. Por lo tanto, lo entendemos como un espacio de (in)seguridad, lo que permitió la construcción de un complejo del agronegocio que dio lugar a la rápida expansión de la frontera agrícola a expensas de la devastación de su paisaje nativo. En la literatura académica hace falta una evaluación geopolítica de este bioma. En este artículo, se discuten por medio de la geopolítica más-que-humana los actores-rede presentes en la disputa securtitizante/desecuritizante por espacio en el Cerrado. Utilizando la Teoría-del-Actor-Red (ANT) como una forma de contemplar la agencia de humanos y no-humanos, presentamos una construcción histórica del Cerrado brasileño como un espacio de seguridad y (in)seguridad con el fin de entender cómo los diferentes actores-rede se esfuerzan para (de)securitizar-lo como un medio para establecer la agroindustria en la región. Por lo tanto, para llegar a la comprensión de que la controversia a (re)enmarcar el Cerrado articula la producción tradicional y capitalista con una multitud de no-humanos, una vez que la agencia de los colectivos humana y no-humanos implica una semiótica y prácticas que se estabiliza o desestabiliza este colectivo.

**Palabras-clave:** Cerrado; geopolítica; agronegocio; ANT; securitizacion.

**Introduction**

Food is understood as one of the most relevant issues of the contemporary international agenda; however, only the surface of its human dimensions have been explored; with many questions surrounding its political aspects remaining to be answered. In the last two decades, free trade has greatly impacted food systems altering the way we comprehend food, and thus how we produce and consequently consume it (BARBOSA JÚNIOR; COCA, 2015b). Capitalist agriculture has been responsible for transitioning our perception of food from a social good to a merchandise that can be mass-produced and traded as any other (DE SCHUTTER, 2015).

It is known that the expansion of industrial agriculture is responsible for the devastation of the Brazilian Cerrado (FERREIRA et al., 2013), the second largest biome in the country and one of the most diverse in the planet (RATTER; RIBEIRO; BRIDGEWATER, 1997). Little
explored, however, is what strategic framework has become implemented that allows this to take place, as well as which practices allows this process to be perceived as legitimate. In this paper, we present and explore the concept that the Cerrado is strategically a space of (in)security and discuss the genetic resource dispute that is situated with it.

When it comes to food, it all starts in the seed. They are the initial source of transferable genetic knowledge that has existed since long before biotechnology turned them into something that could become hybrid or genetically modified (GM). Since the beginning of agriculture, native food plants where adapted, enhanced and breed, their seeds representing the traditional ancient knowledges that compose them (MAZOYER; ROUDART, 2006). Nevertheless, these seeds are disappearing, as modern farming has largely become about the resulting profits and not about the sustenance of those who live off the land.

This problem pertains to International Relations (IR) (LIMA, 2014), and is better explored through the international lens of securitization. It is important to be looked at by IR because, globalization, as a process and its internationalized market, does not accommodate difference, variety, non-uniformity, or non-conformity. It is the homonizing project, of an already hegemonic market, that dictates acceptable practices. Hence, the study of how food is produced and consumed allows us to shine light upon a somewhat neglected circumstance.

Inayatullah and Blaney (2004) proposes a re-imagining of IR, understanding that the discipline is situated in a unique position that allows for the study of differences. For them, these are organized explicitly around the exploration of the relation of wholes and parts and sameness and difference – and always the one in relation to the other. While some recent efforts have been giving to this approach by studying the difference of humans, there have been scarce attempts at discussing the difference of non-humans or how this pertains to human culture. For that reason, in this work we explore the verity of agrifood and describe how this diversity is under treat, specifically we look at seeds as non-human actants. For example, the current diet in Brazil – currently the second largest food exporter in the world, soon to be number one (OECD; FAO, 2015) – is based primarily on food items that are not originally from the region. The space given to these items are at the cost of traditional local food varieties, whose place has become even more restricted with the preference given the production of commodities. Soy for instance is the most abundant culture in the Cerrado, much of which ends up being exported to China, the country where it is originally from.

As can be seen, locally varied food systems are under threat, including the traditional knowledge, culture and skills that surround them; this is a danger to genetic variability. As variability promotes more resilience and food is an indispensable necessity, this is a question of
international security. The United Nations’ Food and Agriculture Organization (FAO) (2004) identifies two causes for the genetic erosion of agrobiodiversity: i) the rapid expansion of industrial and Green Revolution agriculture and ii) globalization of the food system and marketing. Based on these indications, the perspective IR offers and its multidimensional methodology becomes essential to analyse the Cerrado. Making it ideal to research the dynamics that occur within while simultaneously understanding how it pertains to what goes on externally.

Thus, it becomes evident that studying food through IR is not only contemporary, but also indispensable. As states are not black boxes, but situated within a dense and complex web that connects its many actors, reason for applying the Actor-Network-Theory (ANT) approach. In turn, the associations of models of production and consumption that occurs within Brazil, as in other countries, being a reflection of what occurs internationally. Before, the actors within the studies of IR were set, with states as protagonist; nonetheless, the recent literature clearly demonstrates the emergence and centrality of new actors, such as social movements (FOMINAYA, 2014).

Early agriculture was the element that enabled us to settle down and evolve as a species (ACEMOGLU; ROBINSON, 2012; MAZOYER; ROUDART, 2006). This practice is closely linked to genetic markers, and it is this, that allows us to conceptualize future food production. However, since the process of industrialization the new capitalist agriculture has begun to alter genetic traits in a way that has had many negative impacts, namely the standardization of diets (STÉDILE, 2013), the farmers loss of sovereignty (SHIVA, 2001), health concerns (MAHGARR; ARDEKANI, 2011), the loss of biodiversity (TOURANGEAU; SMITH, 2015), amongst others (ETC GROUP, 2014; MOTTA, 2014). Nevertheless, there are initiatives that have been working towards giving new emphasis to the use of native seeds, drawing attention to the idea that there is need for an alternative model that differs GM monocrops, and proposing a means to do so.

We aim to understand how security and insecurity collectives were mobilized in order to render the Brazilian Cerrado as a space for an agribusiness complex. The answer to this question offers a subsidy to comprehend the current processes and actors involved in the genetic resources dispute in the Cerrado, and how this implies in a dispute over the manipulation of life amongst various actor networks that assemble human and non-human global and local actants. That is to say, we will depart from a more-then-human-geopolitics approach (MÜLLER, 2012, 2015).
Our main objective, consist in mapping out the actants joined in the actor networks involved in this dispute. Secondarily, we wish to i) analyse the historical construction of the Brazilian Cerrado as a space of security and (in)security; in order to ii) understand how different actor-networks strive to securitize and (de)securitize it as a means to establish agribusiness in the region.

There are two different development models for the Brazilian countryside, understood generally as agribusiness and family farming. This paper describes the two groups of actor networks that articulates within the Cerrado situated within these models, specifically as it pertains to the natural resource of life. We built upon works that have identified the substitution of a diversity of food crops with monocrops that are not meant to be eaten, by analysing the way the Cerrado has become a space of (in)security allowing this to take place.

This paper is sectioned into three parts, along with this introduction and final considerations. Initially we establish a framework for the genetic resources dispute in the Cerrado. Then, we demonstrate how the Brazilian Cerrado was strategically (de)securitized as a way to establish an agribusiness complex. Lastly, we map out the actants involved in the controversy over the co-construction of the Central Brazil’s capitalist agriculture.

A framework for the genetic resource dispute in the Cerrado

The dispute between capitalist and traditional agriculture plays out on all levels, international, national, regional and local. While the polarities are clearly established, the dynamics of each dispute are distinct and alters in accordance with the particularity of the scale in question. Internationally, it positions itself as a neoliberal-WTO regulated corporate-controlled global food system, with the transnational social movement La Via Campesina, and its food sovereignty flag offering opposition (BARBOSA JÚNIOR; COCA, 2015b). When it comes to the national level, in Brazil this dispute is a multifaceted, nonetheless, it can be generally understood based on the distinction between agribusiness and family farming, the two development models for the countryside. This distinction materializes even as a ministerial peculiarity within Brazil, being the only country to have two ministries to promote rural development represented respectively as Ministério da Agricultura, Pecuária e Abastecimento (MAPA) and Ministério do Desenvolvimento Agrário (MDA) (BARBOSA JÚNIOR; COCA, 2015a).

As our purpose in this paper is to analyse the Cerrado biome, we will continue to explore the dynamic of this dispute on the regional level. To do this, however, there is need for a multilevel approach considering the before mentioned arrangements. To be more direct, we will
approach the regional level as a consequence of the relation between the national and a the collective of localities situated within – see Chart 01.

**Chart 01 – Levels established**

<table>
<thead>
<tr>
<th>Level</th>
<th>Overview</th>
</tr>
</thead>
<tbody>
<tr>
<td>International</td>
<td>corporate regulated food regime vs. food sovereignty movement</td>
</tr>
<tr>
<td>National</td>
<td>agribusiness / monocrop / GM</td>
</tr>
<tr>
<td>Regional</td>
<td>dispute between national and local</td>
</tr>
<tr>
<td>Local</td>
<td>family farming / agroecology / the use of traditional seeds</td>
</tr>
</tbody>
</table>

Pfrimer and Barbosa Júnior (2016)

Today the global food system as a whole – as well as the specific food systems around the world that together compose it – are largely privatised, but the actual farming is still done mainly by family farmers who occupy over 98% of farms globally (GRAEUB et al., 2015). Therefore, even in the context of farming, that is not directly under the control of a large corporation, these still control the most basic resource of food production, the genetic material, in a significant way. Genetic resource is the basis of all agriculture, placing it amongst the most vital of all our resources. FAO (1999) estimated that from 1990 to 2000 75 percent of plant genetic diversity had been lost, as farmers worldwide left their multiple local varieties for genetically uniform cash crops. By directing the international market and by stimulating global food consumption trends these corporations have simplified consumer diets, paving way for monocrop production.

As capitalist agriculture expanded, it needed to incorporate the rural population into its dynamic. This was carried out by promoting a process that transformed sustenance farming to a sales oriented production model. While today we understand organic as an alternative type of production, it was originally the only one. However, when farmers started to wholesale, the need to meet new parameters was put in place. The market established constraints, and to see to its demands, farmers had to adhere to a model of production that offered more predictability and uniformity. The understanding was that the rising urban population, that was no longer growing their own food, demanded consistency in their food items. Regardless the authenticity of this argument one thing is very true, the diets of urban dwellers became significantly more standardized (STÉDILE, 2013). Consequently, this meant less agrifood diversity for both food consumers and producers.
This represented the establishment of what we now understand as conventional agriculture, and the bases of what latter became industrial agriculture. The first, uses technology and produces for the market, and the second is even more technologically intense – particularly with mechanisation – and the production is oriented towards the demands of the global market. Accordingly, this created a need for larger extensions of land to accommodate these production models. A context that removed many of the tradition occupants of small rural proprieties intensifying the problems relating to land holdings that date back to the colonial period (GUIMARÃES, 1981; MARTINS, 1979, 1995).

This transition also occurs in relation to the distance between where food is produced and consumed (KNEEN, 1995). At first these where indistinguishable within sustenance farming, as very little of what was produced was commercialised and most proprieties were self-sustaining. In a second moment, urban centers started to be maintained by local agricultural production, but these distances still remained relatively short. However, in the current logic of international neoliberal free trade, this process is planned based on the lowest cost of production, which ultimately means that food is grown where the conditions to produce – especially labor – is cheapest as well as least regulated. Occasioning in both large trajectories amid where food is grown and eaten and the consequent resulting distancing between those who grow and eat it (CLAPP, 2014).

The directive elements established in these distinct paradigms is a result of the motivational factors behind them. While the original occupants who worked the land had their own livelihoods and the biological metabolism of their family and themselves as a primary concern, the arduous appetite of the global market was much greater. The principal motivation of corporations in agricultural being profit and their modus operandi a direct result of this device. With such a simplistic objective, modern agriculture has a limited value perspective, different from traditional agriculture, and the new alternative models that are concerned not only with the economic aspect but also the social and environmental ones (KORTHALS, 2015).

Industrialization allowed manufactures to be mass-produced in urban centers the same way it enabled food to be produced industrially in the countryside. Via an intensified process that extracted added value from labor with the use of technology, reducing production time. In other words, this is what Castree (2009) calls the time of the clock where time is thought of as time of production, to be manipulated and reduced to render larger output. This is in contradiction with the temporality of the traditional farmers’ agriculture, which takes longer; for it is based on natural processes and a result by lived factors (e.g. the workday being determined by the available sunlight).
This distinction in production model ultimately resulted in a dissimilarity of the resulting yield, while agricultural outputs mass-produced for the international markets are seen as merchandise and offered in limited verity and great uniformity, thus called commodities. Small-scale farmers consider the food they grow to be much more than that, while it can also be a tradable good it holds further significance as a social good. In addition to shaping the predestined consumer market, with the former being projected for export and the latter intended towards satisfying the national supply (LOTTI, 2010).

Capitalist agriculture is much more than the mere growing of food, with this economic dimension present not only in the commercialization of the end product, but also in the way it's produced. Thus, the whole cost of production is high as there are many market oriented actants present in its production chain, reason for the use of the term agribusiness. The notion of agribusiness was conceptualized originally by Davis and Goldberg (1957) that coined the term to describe the complex systems relating agriculture, industry, market, capital and labor. This was used to characterize the way capitalism took control of agriculture in the 1950s in the United States. Nevertheless, capitalism has impacted in the same manner even the traditional famers whom have this system imposed upon them, reason for the term family farmers to be primordially used to describe a type of farming that was once called peasant1. In general terms, these are the issues of contention in the dispute between agribusiness and family farming – see Chart 02.

### Chart 02 – Issues of contention within the agribusiness and family farming dispute

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Agribusiness</th>
<th>Family Farming</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protagonist</td>
<td>corporations</td>
<td>family farmers</td>
</tr>
<tr>
<td>Diversity</td>
<td>monocrop (homogenous)</td>
<td>agrobiodiversity (diverse)</td>
</tr>
<tr>
<td>Agricultural Model</td>
<td>industrial/conventional</td>
<td>conventional/agroecological</td>
</tr>
<tr>
<td>Land Holdings</td>
<td>large</td>
<td>small</td>
</tr>
<tr>
<td>Distances</td>
<td>long</td>
<td>short</td>
</tr>
<tr>
<td>Primary Value</td>
<td>profit</td>
<td>substance</td>
</tr>
<tr>
<td>Temporality</td>
<td>clock/production/short</td>
<td>lived/natural/long</td>
</tr>
<tr>
<td>Resulting Production</td>
<td>commodities (tradable good)</td>
<td>food (social good)</td>
</tr>
<tr>
<td>Output Destination</td>
<td>international market</td>
<td>national supply</td>
</tr>
</tbody>
</table>

1 It is important to note that there are those who use the term for political-ideological reasons, as it remits to the struggle of those who resist the neoliberal model of agriculture that created large masses of dispossessed in the countryside (CARVALHO, 2012).
These points are essential to be able to apprehend the key aspects of the genetic resource dispute that occurs in the Cerrado and the networks situated amongst them. The constitution of a pluriversal world involves multiple articulations and the mobilization of various non-humans, symbols and places. As even family farming has been entangled with science and technological objects and knowledges, both actants propose different versions of the process of co-constituting the Brazilian Cerrado as a space of (de)securitization practices, a fact that ends up becoming a strategy for fostering multiple interests as the network advances in multiple circumstances and articulations among actants. For a further understanding of this process, in the next session we explore the precarious construction of this biome as a *security dispositif*.

**The (de)securitization of the Brazilian Cerrado as a strategy to establish an agribusiness complex**

In this second part of the exert we intend to appraise the historical construction of the Brazilian Cerrado as a space of (in)security and how the rationale of security was mobilized to render this biome a space for the implementation and expansion of an agribusiness complex (WOLFORD, 2008). If in the context of securitization, the purpose was to establish control over the territory and the construction of a territorial grid and partition, in the following context of (de)securitization the resolve was that of a controlled liberalization. In order to allow the logistic of flows to open avenues that connects the region with the international commodity market, it was not by mere chance that agriculture production in the Brazilian Cerrado became one of the most yielding in the world.

The idea to consider the Brazilian Cerrado as a space of (in)security is foregrounded in the precarious construction of declaring spaces, places, subjects and even bodies as issues of security or insecurity. As such, the Brazilian Cerrado went through different entitlements, in the mid-fifties as a space of security and after the downturn of the Brazilian military regime as desecuritized space that was to become private. This initial discussion intends to contextualize the power relations amongst different actor-networks during the process of securitizing and desecuritizing the Brazilian Cerrado.

As highlighted by Wæver (1998), security is a discursive practice. The process of securitization encompasses the very act of turning an issue of *normal politics* into one of *high politics*. Hence, becomes a theme to be treated upon the basis of secrecy, urgency and
cautiousness. It is the authoritative position socially occupied by some securitizing actors that allows them to characterize a subject as so while dealing with the security agenda. However, this process is not mechanically given, since the performativity of the securitizing actors turns a subject into a securitized issue.

The Brazilian Cerrado was characterized in geomorphological terms as an area of transition. Located in the Midwest plateaus of Brazilian territory, it was envisioned, since the 30’s, as an ideal area to foster national integration. As most of the Brazilian geopolitical tradition stands out for the use of organic analogy grounded on physiographic characteristics, this biome was seen as the axis of national integration.

The strategy of occupying lands in the far west region of Brazil was a concern since the colonial times. Particularly, due to the quest of legalizing most of the countries national borders, Brazilian geopoliticians turned their focus towards the matter of occupying and prizing the areas not well connected to the more dynamic regions of the country. In this perspective, Brazil’s Midwest domains were of the utmost importance in order to carry out the plans to integrate the Brazilian Amazon to the rest of the country.

Departing from this perspective, most of the Brazilian geopolitical thought envisioned the “march to the west” and the Brazilian Cerrado as an endeavor to establish a de facto maneuver to guarantee a legal status to the national border on the premise of the principle of utti possedetis (RICARDO, 1970). It is worthy of note that in this period there was intent to recreate and apply a national project of (re)founding the Brazilian state. In this scheme, the geopolitical method was amongst the main rationale for proposing such a plot, reason that most of the geopoliticians have a background in the Armed Forces. At that moment, the Vargas Regime, better well known as Estado Novo was already in place.

According to the postulates of this national project, Brazilian territorial integration would be achieved through the colonization of vast areas in the Midwest region, which would be turned into a strategic center in a scramble for the Amazon. Following the tenets of this plot, the Brazilian Cerrado was seen as a space of security during a 50 years span. The symbols of these imaginaries were: i) the geopolitical discourses based on the national security doctrine; ii) the construction of the new capital in the Midwest region in addition to the consequent reconfiguration of the territorial grid; and; iii) the assembly of a set of infrastructure networks turning the Brazilian Cerrado as the bulk of the national infrastructure.

The Brazilian military doctrines assert that areas of the Brazilian Cerrado located in the States of Mato Grosso and Mato Grosso do Sul were part of the South American Heartland, a strategic area allowing for the control over the whole South American Subcontinent (PFRIMER,
This geopolitical imaginary was initially created by General Mario Travassos, followed by influential military officers and political figures such as Golbery do Couto e Silva and Carlos de Meira Matos.

As envisioned by General Golbery do Couto e Silva (1955); the States of Mato Grosso and Mato Grosso do Sul along with the Paraguayan territory constituted what he so-called the South American Welding Zone. In other words, a strategic area for integrating the whole set of South American regions and therefore guaranteeing the political supremacy over the subcontinent (COUTO E SILVA, 1955; KELLY, 1997). Another relevant event was the upsurge of a socialist guerilla on the riverbank of the Araguaia River, which entailed a long and bloody conflict between the guerrillas and the military forces (CAMPOS FILHO, 2014). This juncture was the precedent for creating a plethora of National Security Areas in the Brazilian Cerrado. In other words, this meant the construction of various spaces that would be under direct jurisdiction of Central Government and treated as strategic spaces.

Amongst the important measures that corroborated these discourses were the transfer of the National Capital from Rio de Janeiro to the newly built city of Brasilia. This measure entangled the relocation of a whole set of new bodies to the Midwest of Brazil, such as the Armed Forces, think tanks, embassies and science and technology research institutes. Furthermore, in a normative perspective, these procedures gave way to the transformation of the territorial organization, since thousands of districts and municipalities were created in a matter of years (MONNIER; CLAVAL, 2006; VESENTINI, 1986). For instance, the increase in the number of municipalities in the state of Goiás and Mato Grosso were respectively 289% and 189%, from 1946 to 1964 (IBGE, various years apud Cataia 2006). Another meaningful action was the creation of the Central Brazil Foundation with the aim of financing new settlements and expeditions in the Midwest territory, one of the better known were the ones carried out by the Villas Boás brothers.

After 1964 and during most of the dictatorship in Brazil, the new territorial grid was administrated under the jurisdiction of the military regime. Therefore, in a certain manner, this territorial maneuver was a way to transform the national territorial arrangements in order to create a new space of security, centralized under the control of the military regime. Once the national capital was relocated, the new spatiality of power changed and its focus was set on replenishing the central areas surrounding the new city with a completely new set of bodies. In this sense, the national security and geopolitical gaze was diverted to the Brazilian Midwest.

On one hand, if the securitization of the Midwest territory meant the creation of new municipalities under the direct control of the military government, since local administrators were
directly select by the regime (CATAIA, 2006); on the other hand, the process of securitization allowed a diverse collective of actor networks to expand their territorialities to previously unoccupied regions. This was mostly done through the incentives offered by the government at the time, specially by offering rural subsidies and credits such as POLOCENTRO (Cerrado Development Program) which accounted for 467 million dollars from 1975 to 1982. Out of which 94% were deployed in the Midwest region of Brazil (GALINDO; SANTOS, 1995; MACHADO, 1995).

From 1975 on, incentives for the establishment of big transnational companies were offered, within a perspective of developing agribusiness enterprises in the region. At that time, the military regime was in retreat and the national (re)democratization process was already underway. Institutionally, this meant the alteration of many laws and norms, whereas economically, the process of (re)democratization led to implementation of neoliberal reforms, both of which set the stage for the advance of agribusiness in the Brazilian Cerrado.

First and foremost, there was the approval of the new Constitution in 1988, which in its article 225, paragraph 4, does not mention the Brazilian Cerrado as a biome of national heritage. Interestingly, all other Brazilian biomes were protected by the same constitutional passage except the Caatinga and Pampas (BRASIL, 1988). As highlighted during the Earth Summit, biological resources were declared as national heritage of the state, which (re)estates the sovereign right of the countries to explore their own resources (Becker 2009). However, such an account cannot be applied to the resources in the Brazilian Cerrado, given that the constitutional text portrayed what could be seemingly understood as a lack of interest. Henceforth, in a certain respect expressing the idea that that biome had less to offer – when compared to others such as the Amazon Forest, for example – which entitled it to be exploited by the agribusiness sector.

One important feature of this episode is that at the time, there was an enormous concern with the devastation of the Amazon Forest already in course, only possible due to the demographic expansion to the Midwest area. On one hand, there was paramount international pressure over the Brazilian State grounded on the idea that the Amazon Forest was “the world’s lungs”. On the other hand, there was an astounding political maneuver set by an actor-network composed by transnational companies, large landholders, and conservative political parties, among others. The main aim of this network was to reframe new territorialities for the expansion of agribusiness. In order to settle this dilemma, the government at the time decided to preserve the Amazon Forest at the behest of the Brazilian Cerrado, which was blatantly claimed to be a space for agribusiness expansion. A process where one was politicized and thus securitized, at the cost of the other, that was not politically recognized and thus desecuritized.
This process of (de)securitization and economic liberalization was remarked upon by Bertha Becker (2007) while analyzing the occupation and expansion of large agribusiness corporation in Midwest areas of the Brazilian Cerrado. According to her, the period between 1979 and 1985 was the founding stage for the implantation of the corporate transnational capital in the agribusiness sector of the Midwest regions. The opening of a pioneer fringes under the interests of corporations such as Cargyll, Ceval, Seabra and Sadia was the cornerstone for the modernization of the countryside by situating agroindustrial districts in a posterior process of intensive modernization (Becker 2007, p. 120). In the following years, the expansion of agribusiness attracted many other economic sectors to the region which culminated in a posterior effort to aggregate value to the agriculture storage (COSTA, 2007). As highlighted by Arrais (2013), if in the 70’s the idea of national integration was associated with a center-periphery relation regarding the expansion towards the Midwest, nowadays the economic liberalization made a direct articulation of interior regions with the international market possible.

In this perspective, the establishing of various techno-scientific objects during the process of the modernization of the countryside also gave way to a greater range of possibilities for alternative movements of resistance. It is noticeable that a substantial part of the communicational and logistical infrastructure also allowed for the construction of new relationships among these networks, which ensues high territorial density formations. Since the family famers’ – as well as other traditional farmers’ – resistance movements, are well organized and articulated with other global networks of resistance, e.g. La Via Campesina. This, in turn, constitutes a complex set of articulations that can be realized by an intricate spatial dispute and encounters among various divergent actors.

In an upshot of the process appraised up to this point, the Brazilian Cerrado was considered in a first moment as a securitized space. In other words, we are referring to the fact that the region was considered as a question to be treated only by a restrict group of individuals pertaining to the core of the military regime, wherefrom most of the strategic decisions were taken. The authoritative position to perform a securitizing movement was hence held by the military leaders at those circumstances.

In a posterior context, during the process of (re)democratization, the primacy of this decision was conceded to actors pertaining to the political realm, that is to say, to the political representatives elected by the citizens. However, a network of multiple actors aligning conservative political parties, large landholders, international conservationists movements and NGO’s were able to approve a Constitution not mentioning the Brazilian Cerrado as a place of national heritage, and therefore, not as a subject of the public domain. Consequently, this
situation ends up transforming the biome into a private domain, forgotten by the public sphere, and therefore as Shiva (2001) puts it as a *terra nullius*. In other words, the discursive approach of not naming it as national heritage encompasses not only linguistic consequences, but, more significantly, practical ones. Since, the politics of naming render words into action by upholding interests and opening avenues for legitimating projects and actions. In this respect, not naming this biome as public property constructs the scheme of note, drawing attention to an area of disputes amongst multifarious networks (LACLAU; MOUFFE, 1985; MÜLLER, 2008). Concluding, this gave way for the establishment of an area to become an exerting power, and not only territorial power but also other domains of power, such as the control of time and life.

The process described afore set the stage for the implementation of Agribusiness in the Brazilian Cerrado, which attracted foreign investments in areas such as biotechnology, science and technology. In a matter of years, large extensions of land were occupied by transnational corporations and were turned into spaces of intensive agriculture. With subsidies and fiscal incentives being offered by the government. Biotechnology was one of the key factors of this plot, since this expertise was the main tool for adapting life of seeds to the environment of Brazilian Cerrado. Science and technology research has been carried out by public agricultural research institutions, in this case mostly by The Brazilian Agricultural Research Corporation (Embrapa) (NEHRING, 2016). The Biotechnological revolution thus was one of the main mechanisms for manipulating the vitality of seeds in order to allow the commodification of life. This historical process engendered a contentious encounter among traditional farmers and agribusiness enterprises, which will be further explored in the following session.

**To be or not to be securitized: the space for an agribusiness collective in Central Brazil**

While considering the controversy over the co-constitution of the Brazilian Cerrado as a space desecuritized for agriculture purpose, it is essential to map out the actor-networks involved in the process of stabilizing it as a collective. As we have emphasized earlier, it is a precarious construction whether some actants will be able to stabilize this biome as a securitized or desecuritized space. This political maneuver of ontological politics involves multiple performativities, discourses, practices. That are in play with an objective of maintaining the Cerrado as a space designated, or not, for agribusiness practices. Therefore, the exercise of securitizing, or not, translates the conception of a space destined either for agribusiness or for
small landholders into reality. In this sense, a state managerial process involves a geography of humans and non-humans.

Originally, the Cerrado was constituted as a space occupied by settlers and small landholders. The main national plot for that region was of occupying it, so as not to lose part of the territory to other countries. For this range, mobilizing flows of humans and non-humans was in the very nature of statecraft. In this scheme, even foreign settlers received incentives to move towards the central region of the country. Diverting migrant flows to particular places implies in mobilizing multiple objects such as the building of infra-structures, creating institutions and offering various supply chains. From this perspective, the Cerrado was not simply a space covered with a particular vegetation and physiography, but rather a set of networks articulating humans and non-humans.

In a more recent moment of Brazilian political history, the move towards the desecuritization of Brazilian Cerrado was a process of rearranging the grid and networks conformed by various set of humans, such as migration flows, a labor force, engineers, scientists, farmers, foreign investors; and non-humans, such as grain stores, technology, biotechnology, investment flows and laws. This rearrangement of the collective web entailed a “wired geopolitics” between actor-networks. In this session of the article, we wish to understand the co-constitution of the Brazilian Cerrado’s changing nature and its relation with technology as material to force that interpellates multiple process and events. This relation implies in a range of disputes.

The introduction of the Green Revolution and particularly of the Biotechnological Revolution in Cerrado was a major breakthrough. The implementation of a number of laboratories, institutions and investments set alignment of actants in order to transform a space considered undeveloped into a new area for large-scale agricultural production. In this respect, technical devices such as biotechnology, GM seeds and institutional bodies were articulated, resulting the creation of Embrapa (NEHRING, 2016). The infusion of biotechnological practices in the Cerrado involved a series of foreign investments, which induced the taxation of agricultural exports in 2% at the time in order to support The Brazilian Agricultural Research Corporation (CABRAL, 2005).

The infusion of assemblages of production systems in Central Brazil established a new program of action for the collective, since the possibility of high yielding agriculture production, which instigated the agency of foreign investor and transnational corporations to install their activities in such biome. Hence, the articulation of land, fertilizes, pest/herbicides, economic incentives, agribusiness transnational corporations and government bodies created this new
dynamic concerning the changing of the Cerrado’s nature. However, the articulation of this collective was still not completely aligned, since the norms and laws were not yet desecuritizing the Cerrado biome. On the other side of the controversy it is possible to see that family farmers, traditional communities, laws, creole seeds, among others were in contention with the idea of the introduction of an agribusiness complex.

After the Federal Constitution was approved, the Brazilian Cerrado was thus formally desecuritized, becoming tacitly considered as a biome not worthy of the national heritage status (BRASIL, 1988), setting the stage for the expansion of the agribusiness industry. The adaptation of the legal position regarding the environmental protection expressed a biome of neglect. This process is represented by intentionally leaving the Cerrado out of the legislation in a way that converted it into “a blank space” allowing for it to be privatized. If on one hand, even while the biome was presented in some of the inscription (maps, environmental tables, geographical archives), it was still not mentioned in the legislation and lacked normative protections. Therefore, in a jurisdictional sense, the afore-mentioned biome did not gain expression, but was represented by exclusion as an area not to be preserved. The collective of agribusiness industry, large farmers, biotechnology, ranchers, lobbyists, and others, thus mobilized the new Constitution. Hence, its approval was able to subvert most of the understanding of humans on the nature of that biome.

However, the fabrication of the Cerrado as a territory to be exploited is a precarious construction. The initial stabilization of the collective was not straightforwardly followed. In 1995, a Constitutional Amendment Proposal (PEC) number 115/95 was sent to the Congress and since then, there has been several unsuccessful attempts to modify the Constitution in a way that incorporates the Cerrado. The most recent one, the PEC number. 504/10 is at the present time still halted in Congress (NASCIMENTO, 2015). In 1995, the articulation among settlers and labor unionists reinforced the stakes in the struggle for access to land. Massive manifestations on the countryside drew attention to the agrarian question in Brazil. Even abroad, protests were organized demanding measures to curb violence and impunity on the Brazilian countryside (ASSIS, 2009; PEREIRA, 2009). This move called attention to the transformation of the Brazilian Cerrado into a space of (in)security since conflicts were on the rise over privatization of the huge extensions of land.

Furthermore, an effort to destabilize the Brazilian Cerrado as a collective is also carried out by the political practices of statecraft. If the law had already passed, the strategy thus should change in order to affect the execution of government policies, agencies and bodies. In this respect ministries are, as Latour (1999) entitles, centers of calculations. In 1996, the Eldorado
dos Carajás, massacre of the members of the Landless Workers Movement (MST), impinged on the government a response to that event. The official report based a video tape recorded with multiple frames of the conflict showed, contrary to initial allegations, that members of the Police force were the first to fire against the landless workers and ultimately the ones responsible for perpetuating the massacre. In this sense, a single videotape enabled the agency of humans, particularly the prosecutors and the media. Soon a collective articulating the media, prosecutors, guns and even a videotape in an official report infringed a response of the Brazilian government (SIMAS FILHO; RODRIGUES, 2000).

At the time, the government restored the deactivated Ministry of Agrarian Reform and Development (MIRADE), and thus the MDA we know today came to be. Thus, objects such as events, facts and relations contain scripts that articulates the human program of action (LATOUR, 1999). In this perspective, a single fact, or the use of guns in armed violence against the MST, changed the government’s previous course of action regarding the agrarian question. Particularly, by realizing that MAPA was created in 1860 and from the discussed event continuously, had to deal with its re-established counterpart.

The MDA’s creation represented the articulation of small farmers, landless workers, creole seeds and traditional agriculture practices to the collective of the previous stabilized actor-network. The Cerrado, as the main productive area for agribusiness investments, is also a space for the development of small farmers and traditional communities. This assertion does not mean that the networks are plainly stabilized once more, since the contention among actants is remarkable. In the last year MDA had a budget of 28,9 billion reais whereas MAPA received 187,7 billion reais, which in absolute terms means that it has a budget 6.5 times larger (BARBOSA JÚNIOR; COCA, 2015a). Both Ministries articulate with Embrapa, the technological supplier of both bodies. In this perspective, the constitution of the Brazilian Cerrado as an area of preservation is expressed not in jurisdictional terms, but rather inscribed in budgetary terms. This contention is also being inscripted in the realm of biotechnology, since creole seeds are seen as a symbol of seed sovereignty whereas GM’s seeds assembled in Embrapa’s labs are being mobilized as a way to produce capitalist agriculture practices in order to export following the standards of the international market. Interestingly, Embrapa is also responsible for the storage of many creole seeds in its seed banks. Nevertheless, here these are not valued for the use in promoting a culture of food but rather as containing future commercial value.

In summary, the contention to constitute the Cerrado, whether as a biome or as a blank space, articulates traditional and agribusiness production with a plethora of non-humans, such as biotechnology, storages containers, seeds, the Constitutional text, logistical systems,
institutional bodies, budgets, maps, numbers and even the use of guns. Therefore, the agency of collectives of humans and non-humans involves a dimension of semiology and practice that stabilizes or destabilizes this collective. In this sense, the objects also instigates action while articulated with humans.

**Final considerations**

As we have argued, non-humans are key to understanding the multifaceted dynamics of social relations. This is particularly true when it comes to the study of genetic resources in agriculture (BUSCH; JUSKA, 1997). As the agency of these are not only in themselves expressed as the key factor in the culture, but also the series of collectives that mobilize in order to modify it in accordance to capitalist rationale though biotechnology (CLAPP; DESMARAIS; MARGULIS, 2015), along with the discourses, processes and performativities that go into framing the commodification of life as legitimate (MOTTA, 2014).

While agribusiness is external, based on GM crops and backed by big business, family farming is established as traditional offering opposition to this process. In our work we characterize the dispute between a hegemonic privatized agrifood corporations that operates on an international level present in the region and how local groups have been contesting this order that largely impacted their livelihoods by utilizing traditional seeds as an act of resistance.

Interestingly, the network was completely modified and transformed during the contentious context in which agribusiness and traditional farmers compete in the politics of ontological construction. Small farmers, social movements, NGOs, academics and others as actants have been making an effort in order to avoid the expansion of agribusiness production in the Brazilian Cerrado. This effort is grounded on the assumption that acts, such as the altering of the Constitution for example, would allow for that course of action.

This work has two general purposes. First, we wish to address the gap in scholarly literature that does not analyze the Cerrado geopolitically, and second to act as a platform from which further works that explores a similar dimension can build off of. Thus, we ascertain the following themes to be explored by posterior research: i) on the geopolitics of the Cerrado or agriculture generally; ii) that wishes to explore how the control over biotechnology and genetic resources effect agricultural practices; and iii) with the aim of mapping out the ever-growing initiatives surrounding the use of creole seeds. With hopes that a more-than-human-geopolitics will become more widely contemplated, we also intend to stimulate the debate over this theme, particularly in Brazil.
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