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# Brasília's natural capital: denaturalizing nature and the imagination of socio-environmental transitions

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## Abstract

This paper aims to deconstruct the design approach and the cognitive paradigms used in the landscape design of the city of Brasília and explore new interventions in its landscape. That aims to enable the conception of a decolonial approach for the imagination of socio-environmental transitions. Brasília was supposedly conceived as a city immersed in nature and, yet, its original ecosystem – the Cerrado – was erased in a *tabula rasa* to give place for romantic woods with exotic species. We argue that a regressive-progressive historical analysis of the modes of valuing nature is an important step to conceiving new socio-environmental innovation strategies. For that, we will approach the city landscape as the result of both nature (what there is) and capital (intellectual and physical labour). This allows to build a critique of the local political economy of nature, i.e. a denaturalization of the ideas of nature. The investigation shows that the landscape today is formed of historical intertwining layers of different approaches to nature, interlacing natural elements with conflicts, insurgences and violence. This analysis shows that the applied ideas of nature engraved different social perspectives in the landscape. Furthermore, we will investigate how new experiments in landscape design for the Cerrado ecosystems in Brasília are able to develop changes in subjectivities and in the aesthetics of these spaces. Arguably, a process of decolonization of nature is both a theoretical and pragmatical challenge for building innovative transition models for the natural capital of this city and others.

**Keywords:** urban theory, environment, social practices.

## 1 | Tabula Rasa and Colonial Imagination Heritage

The city of Brasília was conceived to be immersed in nature and, yet, its original ecosystem – the Cerrado – was erased in a *tabula rasa* to give place for romantic woods with exotic species (see image 1). Arguably that can only have happened because a very peculiar conception of nature was in place. We aim here to take some steps towards the deconstruction of the landscape conceptions of the city in order to build a decolonial approach to nature (i.e. denaturalizing nature).

Henri Lefebvre (2003a: 111-120) developed a regressive-progressive method based on a two-fold contradictions and dialectics: the horizontal one, where the antagonistic social and political phenomena interact to form a given historical moment; and a vertical complexity where one can trace the paradoxical juxtaposition of archaic and modern formations that are borne back at different moments in time. For approaching Brasília's landscape, we will explore the relations between social and natural ideas. We do not aim at investigating nature as an abstract ideal, but how it concretely performs social interactions. With that approach we wish to potentialize how radical ideas about nature could point out some blind fields of, and new possibilities for, our socio-environmental structure and its contradictions.

On the one hand, our main current social contradiction lies on the almost hegemonic common sense about the need of developing sustainable alternatives, in contrast to a social performance that is leading us to a catastrophic Anthropocene. This contradiction is deeply rooted in our modern epistemology, which performs by the domination and instrumentalization of nature, humans and non-humans, with a hard time dialoguing with what is outside its own logic. On the other hand, we suppose *ecosystems* to be a synonym of nature, but the two parts of that word is already full of social and cultural assumptions.

For Juan Martinez Alier (1988) the Greek root Oikos means the space of life, which encompasses community and its territory. It is also shared by economy, which could be the management of the space of

life. Therefore, the concept of ecology would be intricate with a political economy. In addition, *systems* are theoretical instruments. Adam Curtis' documentary *All Watched Over by Machines of Loving Grace* charmingly captures how the systems' theory prevail in contemporary culture, mainly through a specific branch of ecological thinking. The 1972 Club of Rome report titled *Limits to Growth* was based on a cybernetic-system model composed of 1,000 equations aimed at helping to view all mankind's issues as an interconnected system. System are theoretical frameworks, they are a way of seeing reality as a set of interdependent elements, among which one finds a set of dynamic relationships that altogether form the whole. Therefore, systems might be helpful, but they are a way of seeing, not a thing-in-itself.



*Image 1* | Aerial view of the construction of Brasília.

Source: Arquivo Gabriel Gondim, in: Wesely and Kim (2010) *Arquivo Brasília*. São Paulo: Cosac Naify.

History is full of these complex interactions between nature and artificiality. In addition, this dialectic between what we see of nature and social structures have a history in itself. Yi-fu Tuan (1984) in a classic book argued that the idea of nature have had a dialectical relation with societies. The predictability of the Nile River cyclical floods intertwined with the ancient Egyptian society based on the eternal extension of the present with monuments connecting earth and cosmos. Ancient China embodied the cult to the individual wanderer immerse in great wild landscapes as a way of escaping the rigid society and city culture. The Roman Empire built a hierarchical relation to nature based on the conquest, control and domination. In contrast, in the pre-doric Greece nature was a source and transmitted virtue and power, where buildings such as the Acropolis had a dialectical relationship with the locus, reinforcing its intrinsic potentials. In the Catholic tradition, there was two attitudes towards nature. On the one hand, wild nature was associated with untamed diabolic forces, on the other hand, as a contemplation of the great work of God, natural divine gifts to man (such as fruits and herbs) were organized in internal court as Gardens of Eden, where nature could be seen as spiritual truths. In the Renaissance and Barroque, nature became a controlled object, shaped into human abstract forms, such as squares, lines and circles. The colonization of Earth by civilization was justified by the superiority of man over nature, therefore the control of nature was not only the control of an outside object, it was the means of colonization itself.

## 2 | Intertwining Layers

Brasília is quite elucidative example of how the history of landscape is a history of contradictory approaches to nature that, precisely because it mixes different ways of seeing nature. The superblocks were conceived to be formed of floating house blocks that Lúcio Costa conceived as a city immersed in perfect harmony with nature. Nonetheless, the original Cerrado biome - the Brazilian Savanna - has vanished from the city inner spaces. This original ecosystem was removed to create a tabula rasa where extensive lawns and exotic trees composed perfectly romantic scenarios for leisure. There, nature was conceived in a specific and functional way, and it is completely different from the original local nature. Cerrado remnants were enclosed in distant parks under minimum human activity, turning such spaces into outdoor museums to be contemplated with detachment. Arguably, this builds a intricate dialectics of contradictions and mutual determination, making Brasília a complex structure of intertwined layers. And that is truth since the first conception of the city.

Arguably, Lucio Costa's conception has three different layers of ideas about nature: a geomorphological sensibility; an argument for the place value for being the future capital; and representation of society and the city in different landscape compositions. Lucio Costa's project finds great interest in a geomorphological analysis of the landscape. He fits the city to the topography and relates its spaces to the surrounding landscape. In addition, a public campaign, to convince people to bring the capital here, aimed to reinforce the value of the place as formed of a mild climate and vegetation, where the new lake would help reinforcing that. Glaziou, one of the responsible for finding the place for the future capital, said: «All these elements [relief, vegetation, climate] whose arrangement could be attributed to the inspiration of a sublime artist, give the landscape the most pleasant aspect and of which there is nothing comparable, except in miniature the old English parks, designed by Le Notre or Paxton» (Glaziou, 1896).

Finally, the conception of nature in public spaces has two different scales. While most of the criticism against the tabula rasa easily fits the monumental spaces, within the superblocks one can observe a certain dialog with the Cerrado vegetation. Although in the original plan Lucio Costa does not mention the Cerrado, soon latter (1974) he stated arguing that «It would be normal for the city center to be surrounded by urban areas. But the conception of Brasília was taken to the extreme of the urban composition [...] [by] accentuating the contrast of the civilized part, the Country's center of command, with the wild nature of the Cerrado... Here the Cerrado represents the people, the suffering mass, who would be there closer to the power of democracy offered to them.» In this later formula, although he includes the Cerrado, it is seen, alongside with the mass, as an untamed and rough force to be reeducated.

As in the case of other civilizations, history of landscape is a complex intertwin of ideas of nature and social structures going back in acient mind sets and means of the colonization of nature. Paulo Tavares, who is a professor at University of Brasília, has explored this colonial mind set during Brasília construction. According to him, the creation of this human environment encompassed both the recollection of mythological national identities and the silencing of marginalized stories (Tavares, 2020). An official iconology of city creation was produced so a dominant narrative of the city could be constructed. The famous photo of the cross mark of the two main roads was a catholic symbol to the process of taking possession of the land. Mimicking the mythology around the first Europeans who stepped on Brazilian soil, a "first mess" was enacted in the city as an inauguration of the territory. That helped erasing the fact that previous cultures and dwellers existed in the land, namely: indigenous and maroon communities.

In addition, also a narrative of a new democracy was built, with the depicting of a mass of poor immigrant attending the mass, hidden the fact that this population of builders lived in favelas outside the so-called "Pilot Plan". This process points out not only to the struggle for building narratives to signify and create sense out of the natural and built environments, but also how this territory colonization and its mind set highlights an political aesthetic dispute about the nature of the place, and about how one should understand it.

These contradictions continue today, in a highly segregated city with very conflicting images and narratives. On the one hand, the Pilot Plan has the highest Quality of Life Index and it is one of the safest places to live in Brazil, on the other hand, the so called "Entorno de Brasília" (the surroundings of the city in the neighbouring State) has the worst Quality of Life Index and it is the most dangerous place to live in Brazil. This highlights the radical contranst created by these colonial narratives. And that can be easily saw in the image 2, where the contrast between the constitutive nature of these two urban environments (with and without a right to nature), highlighting the intertwined layers of society and nature.



*Image 2* | The contrasting access to Nature in the “Plano Piloto” and the favela “Sol Nascente” (bellow).  
 Source: <https://www.instagram.com/raphaelsebba>

In addition, James Holston (1996) developed a famous anthropological critique of the project of Brasília, highlighting its modernist logic. His main critique is not about the image, but against its method: an all-powerful republican state; the imagination of a solid future in complete rupture with the past; the image of geniuses inventing a more truthfull and rational world; and the apolitical negation of context and tradition. In a different perspective, he shows how the history of the city was a history of conflicts. From the beggining the population who built the city inhabted against its hegemonic logic, in continuous rebellions and insurgent practices. He argues that the real politics of the city was developed in these other ways of producing its territory.

That does not mean that nature is equal to the basic mode of production. Unfortunately, some insightful research on bio-politics have tout-court defined the structural economic base as unique causal link to the social dynamics of environmental epistemologies (see Chandler, 2014; Groupe, 2015). Thus, Chandler and Groupe miss the dialectics and a step forward to propose alternative formulations, and others, such as Nelson (2014) are trapped in adjustment proposals. Similarly, although Environmental Justice paradigms have also taken important steps in acknowledging the social performance of nature, but this framework is more useful to criticize the current distributive justice, inequalities and rights, since it is closed within a reformist approach (Sikor, 2013) that has a hard time proposing innovation to ecological transition design – overall, the challenge of overcoming the theory of “closed systems” is a topic of its own (see De Lima Amaral, 2020). Furthermore, we want to explore bellow how new environmental imaginations can help us imagine outside the colonial approach to nature and reimagine it in a creative dialectic between naturality and artificialily.

### **3 | Wild Landscapes of Renewed Nature**

A wide range of researchers are investigating the Cerrado’s wild species potential for landscape design. For the past six decades, the landscape of the city decisevely ignored the potential of local plants, importing exotic species and principles of composition that are conceived for other climates. That resulted in a not only in a complete ignorance of the diferent types of plants, but also in how to seed and plant them. Therefore, a series of research is now investigating how to use this potential for landscape design (see Image 3). That is important not only for the resilience, adaptation to the climate and less use of fertilizers and water. But also it needs to change the way people see and value the natural landscape of the Cerrado.



*Image 3* | Experiments in a renewed Cerrado Landscape.  
Source: Julio Barea Pastore, 2023

A century ago when the renowned anthropologist Claude Lévi-Strauss (1961) visited the region, not even his acute sensibility could see beauty in this nature. He saw the Cerrado as a «desert» of «half dead ground, half battlefield [...] where nothing grew but rough grass and thorny shrubs». Therefore, to reimagine the landscape of the Cerrado is also to revalue it. It is an aesthetical procedure in the sense of Jacques Ranciere (2000): a political process of seeing this nature in a new way.

We can also see this, for instance, in a phenomenology of Brazilian landscape experience by the philosopher Vilém Flusser: «when the tourist leaves the beaches to penetrate the interior», the landscape becomes “terrible”, «inarticulate, with a maximum of five types of vegetation for a country the size of a continent, and most of it low-growing», turning him hostage to the «unbearable boredom of monotonous plains», and “inhumanly long distances.” For Flusser, «the Brazilian does not experience its nature as a Landscape» (Flusser, 1998: p. 62-64). The reported dissatisfaction exposes the contrast between the local reality and the archetype of imported landscape, which leads to the necessity to redevelop attention to landscape sensitivity, language and technique to fruitfully bridge landscape architecture and the local reality.

These “traditional” landscape architecture – i.e. landscape architecture not considering the specificities of Cerrado landscape and plants – is focused on plant cultivation industry and it is evidenced by stunted and little diversified gardens. Its image results from the use of exotic species from ecosystems with different soil and climate conditions. Additionally, in the current landscape practice, there is another aesthetic discontinuity, when stepping from the garden scale to the territory. They reflect the lack of viewing the landscape as a whole and viewing their users as inhabiting the region. That ultimately creates limitations for the hegemonic expressions and landscape approach.

In this sense, the perspective of what has been called the Cerrado landscape appropriation process might be considered an aesthetic and methodological alternative. Under this view, and based on references in Eric Dardel and Gernot Böhme, among others, the landscape dimension of the Cerrado is presented as a lived experience, «contributing to renew and update the cultural values of the previously constituted landscape» (Pastore, 2014: p. 238). In this sense, the landscape production is seen as a process of cultural production, not only as a witness, but also as a promoter. This is, necessarily, an enterprise of a wide and

varied character, guided both by strategies of research and prospection of plant species and the techniques for their cultivation, and by the effort of perception and aesthetic articulation of the Cerrado as a landscape, together with the development of related language and compositional techniques.

The Cerrado is the world's most biodiverse savannah, with more than 12,000 plant species, 35% of which are exclusive to the biome (IBGE, 2015) and whose richness is concentrated especially in the herbaceous layer with its grasses, forbs and shrubs. In Landscape architecture, the use of these plants is still at the very beginning. The challenge to include them into projects is not only technical, but also cultural: expanding the perception of the general public that these landscapes have ecological and aesthetic value and importance. This revaluation process also passes through recognition and valorization of the herbaceous stratum that forms the basis of the dominant Cerrado vegetation types.

Unfortunately, the debate about aesthetics is dominated by the concepts of design beauty and fruition, missing entirely the realm of political ecology (see Nassauer and Opdam, 2008), missing the point that what we see out of nature is a human creation, structuring in the landscape both subjectivities and nature. Alternatively, Jacques Racière (2000) took important steps towards envisioning the politics of the «distribution of the sensible». In this political aesthetics of reality, political dissensus is a conflict about how we see reality itself. In addition, Camillo Boano (2020) explored the idea of Arturo Escobar and asserted that inhabiting the world means *being in relation*; thus, the ability to set relationships is core condition not only between humans, but also between humans and non-humans and between non-humans. This radical form of existentialism highlights that nothing pre-exists the relationships that constitute it, i.e. nothing pre-exists the relationship between humans and nature.

Therefore, we should argue beyond nature as a simple social representation. Instead, we should argue that it is not simply the case that the idea of nature is socially produced, rather the performance of Nature is co-created in a copoiesis process between subjects and nature. It is in this sense that we should now talk about a *right to nature*. Just as Henri Lefebvre (2003b) defined his concept of «the right to the city» in an urban condition of diversity and metaphilosophy, where citizens could produce the city as artwork, we now need a metamorphological approach to nature, to think nature as a work of design.

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