

An essay on uneven geographical development and the regionalization of Brazilian territory

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An essay on uneven geographical development and the regionalization of Brazilian territory

Abstract

In this article we analyze the regionalization of Brazilian space based on the notion of uneven geographical development. We start from the assumption of different regionalization of Brazil, produced in different times and authors, based on different methodologies and from there, we analyzed the historical process of production of Brazilian space, considering the spatial legacies of this process. Notions of totality, space fragmentation and geographical configurations as well as the notions of Territorial Division of Labor, productive forces and production general conditions are central to the analysis here undertaken. Finally, we graphically overlapped information on the geographic distribution of the workforce in the country, the federal road network and an income indicator. The outcome is portrait in the Synthesis of Brazilian Space Regionalization's map.

Keywords: Production of space. Geographical configurations. Uneven geographical development. Regionalization. Brazil

Ensayo sobre la relación entre desarrollo geográfico desigual y regionalización del espacio brasileño

Resumen

En este artículo, analizamos la regionalización del espacio brasileño basándonos en la noción de desarrollo geográfico desigual. Partimos de regionalizaciones elaboradas en diferentes épocas y por distintos autores, cimentadas en diversas metodologías, y, a partir de ahí, observamos el proceso histórico de producción del espacio brasileño considerando sus legados espaciales. Las nociones de *totalidad*, *fragmentación del espacio* y *configuración geográfica* son esenciales para este análisis, así como las nociones de *división territorial del trabajo*, *fuerzas productivas*

y *condiciones generales de producción*. Al final, superponemos cartográficamente información sobre la distribución geográfica de la fuerza laboral en el país, la red vial federal y un indicador de ingresos, cuyo resultado se presenta en el Mapa de Síntesis de la Regionalización del Espacio Brasileño.

Palabras clave: Producción del espacio Configuraciones geográficas. Desarrollo geográfico desigual. Regionalización Brasil

Ensaio sobre a relação entre desenvolvimento geográfico desigual e regionalização do espaço brasileiro

Resumo

Neste artigo, analisamos a regionalização do espaço brasileiro com base na noção de desenvolvimento geográfico desigual. Partimos de regionalizações de diferentes épocas e autores, fundamentadas em metodologias também diferentes, e, a partir daí, dirigimos o olhar para o processo histórico de produção do espaço brasileiro considerando seus legados espaciais. As noções de *totalidade*, *fragmentação do espaço* e *configuração geográfica* são centrais para esta análise, assim como as noções de *divisão territorial do trabalho*, *forças produtivas* e *condições gerais de produção*. Ao final, sobrepomos cartograficamente informações acerca da distribuição geográfica da força de trabalho no país, a rede rodoviária federal e um indicador de renda, de que resulta um mapa síntese da regionalização do espaço brasileiro.

Palavras-chave: Produção do espaço. Configurações geográficas. Desenvolvimento geográfico desigual. Regionalização. Brasil.

Introduction

Space is a product of history, as something different and beyond the conventional definition of the term.

Henri Lefebvre, 2008

Regionalization proposals for Brazilian's space have been put forward since the mid-19th century¹, namely the didactic (such as the regional classification of Delgado de Carvalho, 1913) and the methodological ones, such as the divisions elaborated by Milton Santos, 1999, or Ruy Moreira, 2004, among others, each of them with different purposes, and, in the case of the official ones, the purpose of generating planning or territorial ordering statistics (such as the regional divisions of the 1939's Technical Council for Economics and Finance, or the ones of 1942, 1970 and 1990 produced by IBGE², for example).

The regionalizing effort, therefore, may not have an *a priori* practical application, as it is an intellectual exercise that only aims to compete for a better understanding of the social and territorial reality, which is the exact purpose here. As argued by Haesbaert (2014, p. 95), we would be taking the region as an artifice, that is, a methodological instrument, seeking to answer the analytical questions. There is no doubt that Brazilian territory in fact is characterized by a complex set of differences ranging from natural characteristics - the original material basis on which the history unfolds - to socio-spatial inequalities revealed in all the geographic scales analyzed.

In regard to nature, and in consideration to the macro-regional scale, these differences were objectively outlined by Aziz Ab'Saber in "Brazilian morphoclimatic domains" mapping, back to 1965, later also named "domains of nature" by the author himself. According to Ab'Saber, there would be six major domains in Brazil (the forested Amazonian lowlands, the domain of *chapadões* covered by *cerrado*, the forested "sea of hills", the semi-arid inter-plateau of Northeast or *caatinga*, the araucaria plateau and the prairies), mostly separated by belts of transition. Over time, the increasingly human produced landscapes were replacing this natural material substrate, originally mostly unchanged by the people who lived here at the onset of colonization. On the topic of colonization processes in general, Moraes (2008, p. 70) stated:

One can finally address colonization as a space valorization process, including all modalities mentioned before: natural means appropriation, transformation of such means into a second nature, appropriation of transformed natural means, production of spatial forms, and appropriation of the produced space.

The former or current importance of natural characteristics of the territory in the historically produced spatial arrangements is acknowledged, to somewhat differing degrees, by all those who set out to regionalize Brazil since the 19th century. When it comes to ideas, this process

1 According to Guimarães (1941), in 1843 Friedrich Phillip Von Martius proposed a pioneer Brazil's regional classification signaling the study of the country's history based on "regional groups".

2 Brazilian Institute of Geography and Statistics, for its acronym in Portuguese (I.B.G.E.).

reveals the long-term progressive importance of social and economic criteria for defining large Brazilian regions, unlike the first regionalizations (especially those from in the late 19th century and those in the early 20th's), substantially influenced by the positivist method and, consequently, by the greater importance given to nature in understanding socio-spatial arrangements in the territory.

We do not intend to imply that nature plays no role in defining uneven geographical development, but rather that it cannot be attributed to its existence only. Along with labor force value, the costs of intermediate inputs, effective demand levels, amongst other aspects put together, the “generosity of nature” directly influences the definition of the “locational advantages to the capitalist” (Harvey, 2013, p. 495). Nature alone, however, does not give us a sufficient explanation, as part of the general development of the productive forces (human labor force and means of production essentially) and finding in the general conditions of production³ an analytical tool that allows us to think your eventual “generosity” dialectically.

In the latter half of the 20th century, some readings of Brazilian territory, translated into a regionalization of its space, featured prominently (Maps I-A, I-B, I-C and I-D).

One of them, dated 1953, is the never mapped “two Brazils” of Jacques Lambert’s (1901-1991)⁴, an interpretation that acknowledges the deep inequality existing between the south-southeastern and north-northeastern parts of country. Eleven years later⁵, in 1964, Pedro Pinchas Geiger (1922-) goes on to defines three geo-economics regions, building on the history of territorial formation and “the effects of industrialization” in the Brazilian territory. Based on the notion of territorial division of labor (TDL), in 1989, Roberto Lobato Corrêa’s (1939-) regionalization proposal identified “three Brazils” (quite similarly to Geiger’s attempt, differing from the former in taking into account the state borders) (Corrêa, 1989). In 1999, Milton Santos (1926-2001) proposed the existence of “four Brazils”, taking in consideration the geography of technical-scientific-informational milieu by the different Brazilian regions defined by the IBGE (Santos; Silveira, 2001). At last, in 2004, Ruy Moreira (1941-) came to identify “regionalization trends”⁶ connected to TDL by breaking previous paradigms, disregarding state borders, but overlapping regions and defining other non-contiguous regions.

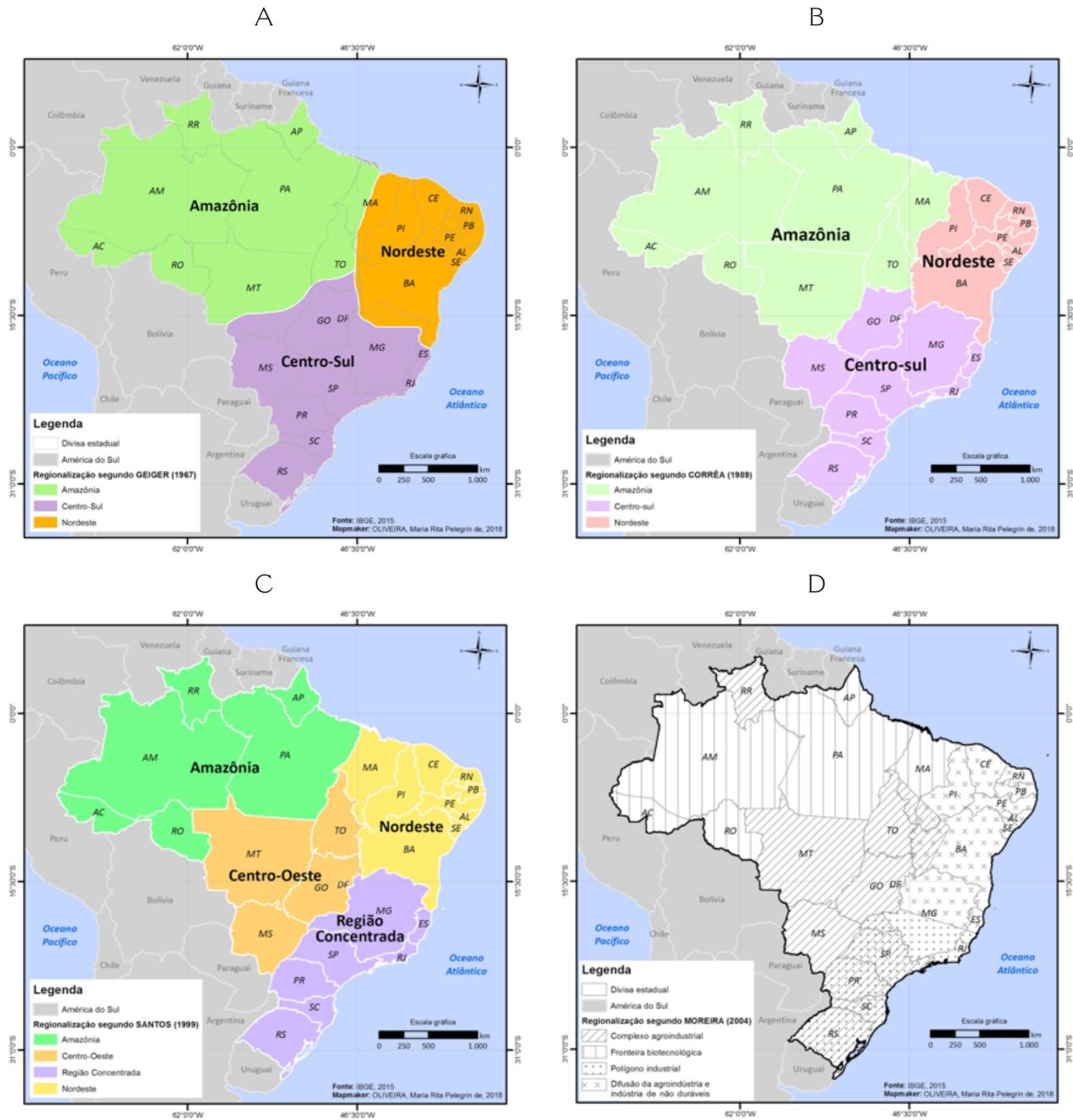
3 As Lencioni (2007, p. 5) states, the general conditions of production dovetails the particular to the general and can be grouped into two sets: “the first concerning those conditions that maintain direct connection with the production process” and circulation of capital (banks, some kind of services and material and immaterial circulation networks) and the second “relating to those conditions whose connection with the production and circulation process are indirect” (schools, hospitals and leisure, sports and cultural centers, for example).

4 *Os dois Brasís*, book from 1957, originally published in France in 1953 called *Le Brésil: structures sociales et institutions politiques*.

5 During the period when he worked at IBGE.

6 This proposed regionalization is originally found in *A nova divisão territorial do trabalho e as tendências de configuração do espaço brasileiro*, from the book *Brasil século XXI, por uma nova regionalização*, published by PPGEU-UFF in 2004. This article, however, was based on the chapter of the same name and also by Ruy Moreira (2014).

Map 1 - Regionalization of the Brazilian space according to (A) Pedro Pinchas Geiger (1964), (B) Roberto Lobato Corrêa (1989), (C) Milton Santos (1999) and (D) Ruy Moreira (2004)



Although none of them proposed to regionalize Brazil based on an uneven geographical development notion, it is evident that their regionalizations expressed, clearly, an understanding that inequalities were produced to some extent by the spatial socio-economic processes that affected Brazilian territory, processes that also emerge at a regional scale.

Theoretical and methodological propositions

In order to reach a plausible interpretation of the regionalization of the Brazilian space, the analysis relied on the notions of totality, uneven geographical development, space production

and geographic or spatial configuration. We propose to delimit our perspective that the Brazilian nation-state can be understood as a totality in itself at it is contained by the world-totality, both of them being open and in-movement totalities (Lefebvre, 1955; Lencioni, 2015b).

Now, a first methodological option is delimited by what we presented, avoiding metaphorical expressions such as two, three or four Brazils, which shed light on the profound differences that characterized the Brazilian nation, though it can overshadow the dialectical and contradictory dimensions that characterize it as an oneness totality. Naturally, the authors who proposed them were aware of this risk. Milton Santos and María Laura Silveira (2001, p. 268), for instance, state: “we could therefore, broadly - suggesting a debate - acknowledge the existence of four Brazils”.

By contrast, considering Brazil’s place in the movement of the totality-world and the relations between the global and nation-State scales, it is in the notion of uneven geographical development that we find a basis. Considering space as being socially and historically produced, following Lefebvre (2008, p. 55/57), which says that “we see in space the development of a social activity”, because “every society produces a space”, it is necessary to acknowledge that the contradictions of space would not come “from their rational form, as revealed in mathematics. These come from its practical and social content and, specifically, from the capitalist content”.

We also understand that, as proposed by Milton Santos (1997), the social and historical process of space production generate different *geographic or spatial configurations*. From time to time societies re-form these configurations, either in terms of their material existence perspective, or their uses, senses and their meanings. The geographical configurations are intrinsically bound to the geographies produced by the spatial process of productive forces and the general conditions of production in the territory. As stated Santos (1997, p. 2), “the significance of each place is always changing, thanks to the social movement: at every moment, the fractions of society that belong to it are not identical”.

Starting from Milton Santos’s assumption and employing it to the regional scale, we can say that all regionalization effort will always be an attempt to reflect a reality in permanent transformation, besides always being historically dated. For Harvey (2013, p. 479), “production of spatial configurations can then be treated as an “active moment” within the overall temporal dynamic of accumulation and social reproduction”. That is because the radical transformation of social relations, which come from the formal subordination of human activity to capital, has not progressed evenly. According to Harvey (2013, p. 477), “It has moved faster in some places than in others”, and “it has been strongly resisted in some places here and made more welcome in others”.

Thus, it is in the complex intertwining of totality-world in movement, uneven geographic development, production of space and geographical configurations on which we base our reflection, considering that it is from this very intertwining that fragmentations of Brazilian nation-state total space result, which have already been expressed through the regionalization proposals from Geiger, Corrêa, Santos and Moreira, among many others.

The Brazilian-style uneven geographical development

Since the beginning of the 20th century, thinkers like Lenin, Trotsky, Novack and Mandel, understood the uneven geographic development, on the one hand, as a determination of the

capitalist mode of production, but the space, on the other hand, cannot be considered as a container for human actions. Rather, there is a dialectical relationship between society and space, “one taking place in the other and through the other”, indicating the “production of space immanence in the process of constituting society” (Carlos, 2011, p. 53).

In this regard, besides the reference of an evident uneven geographical development in Brazil, we also shed light on a Brazilian-style uneven geographical development”, that is, characterized by particularities of space production process that make the uniqueness of Brazilian case, albeit deeply marked by past and present overall historical determinations.

The Brazilian socio-spatial formation, whose history refers to the very genesis of the capitalist mode of production, is a concrete expression of the political, economic, socio-cultural and spatial transformations that the world has undergone in the last five centuries, but it is also a unique self-portrait, as well as any other socio-spatial formation. Encompassing distant orders, the Brazilian territory continues to reveal its universal and particular internal contradictions.

When reflecting on the country’s colonial history, it is worth noting that “the colony corresponds to the metropolis’s existence”, on the one hand, and that “each colonizing country has its metropolitan geopolitics” (Moraes, 2008, p. 63-64), on the other. Furthermore, these geopolitics are not indifferent to colonized territories. Prado Jr. (2017, p. 15), instead, states that there is a certain “sense of colonization”, because “seen at a distance, all people have a certain ‘sense’ in their evolution”, which “is perceived not in the details of its history, but in the accumulation of essential facts and events that constitute it over a long period of time”.

As Moraes (1999, p. 31) puts it, “all the New World colonization flows were initiated from diffusion centers located on the coast, which articulated the explored hinterland with the oceanic routes that boosted such exploration”. The author argues that the Brazilian territorial formation has been typically a “repetition of this colonial pattern”. In a sense, Andrade (2004, p. 35) affirms the same: “The space was organized by the colonial system in such a way that exploitation was to be made of areas rich in commodities that were of direct interest to the European market, thus connecting these locations to ports that played the stage function between the hinterland and the metropolis”.

Moreira (2014, p. 32-33) proposes a “Brazilian accumulation model” that differs from the European one, since it relies upon “an agricultural system organized by and according to such a logic of the mode of production, the colonial agricultural exporting, consisting basically of two articulated sub-sectors: the large agro-commercial sector and the small subsistence farming”. Opposing this model to the classic one of accumulation, Moreira (2014, p. 37) claims that, as it is “a colonial economy of large agricultural exporting companies initially moved ahead by slavery, followed by a clientelist form of labor relation [...], the structural and conjunctural framework in which the urbanization and the industrialization evolves differs from the European one”.

However, over more than five centuries, Brazilian territory reconfiguration has been made between legacies from a remote past and other ones from more recent times, including the articulation of contemporary processes that are connected to the inner logic of uneven

geographical development, as described by Harvey and Smith. Maps 2, 3, 4-A, 4-B and 5 are an expression of these territorial legacies and consequent geographical configurations.

Territorial division of labor, uneven geographical development and geographical configurations

The municipalities-based organization of Brazilian territory indicates the profound difference between its western and eastern portions in terms of political-administrative division, the latter being much more sub-divided than the former. As one can notice from Map 2, it is remarkable that in the North and Center-West regions there are cities with significantly extensive territories in relation to the territorial dimensions of those located in the so-called “eastern portion of the country”. This political-administrative division also shows a territorial history marked by successive territorial divisions of labor and by uneven geographical development of general conditions of production, from which another spatial differences and geographical configurations derive.

It is important to notice that Brazil was under colonial exploitation for over than three centuries, and, like other colonies under the same condition, it provided the metropolis with “its dynamism to its accumulation possibilities” (Moraes, 2008, p. 67).

Map 2 - Brazil: municipal division



Source: Evolution of the municipal network ([2018?]).

The Northeastern forest area, due to the economic importance it had acquired through the sugarcane production, had early settlements compared to the rest of the colonial territory. It is in this way that certain activities in many colonial regions but fundamentally the gold mining

region of “Minas Geraes” and others destined for cattle raising, led to population settlement and the subsequent emergence of communities, often in condition of civil parishes and villages⁷, according to the territorial legislation in that period.

A second noteworthy feature of Brazilian territorial history lies in the extensive amount of land assigned to Portugal, between the imaginary line of Treaty of Tordesillas (1494) and the current Brazilian coast. As Prado Jr. (2017, p. 35) puts it, the dispersion of the colony settlement, looking for an efficient occupation and defense, pressed the colonists “to start colonization simultaneously in several different locations”, which explains the adoption of the hereditary captaincy system (from 1530), as it is known, originally formed by 15 strips of land drawn from the coast to the imaginary Tordesillas Line.

According to Moraes (2008, p. 69), “diffusion zones” generally were formed in the colonies, which were “core settlement nodes, that provides the basis for later expansive movements”. In the Brazilian case, these centers were primarily coastal; they reached the plateau back in the 16th century, as in the case of Vila de São Paulo de Piratinynga, founded in 1560, and then, overreaching the limits imposed by Tordesillas during the next centuries.

The extraverted economy that characterized the colony also favored coastal locations that functioned as ports, contributing to establish a spatial pattern of coastal territorial occupation. As a result, when 19th century started, the population was distributed in a very irregular way throughout the still colonial territory, as pointed out by Prado Jr. (2017, p. 34):

Nucleus only, some of which very dense, but separated from each other by wide vacuums of sparsely populated areas. Its general appearance, preserving due quantitative proportions, is basically the same as today. There is an apparent similarity between the settlement distribution of the early 19th century and the current one. Except for subsequent assemblage, the general structure of the settlement remains essentially the same; except for the reconstructing of the Southern and Center-Southern portions of the country, as well as this region of the high tributaries of Amazonian river, which nowadays form the territory of Acre, and which at the time not part of Brazil, and neither it was occupied.

The portrait of the territorial-demographic situation given above was not broken in the following centuries. Rather, it was reinforced by new economic processes of the Brazilian independent nation, with the increase of spatial concentration and capital centralization promoted by coffee production and by the industrialization process, benefiting states in current South and Southeast regions of Brazil. Although Prado Jr.’s original writings date back to the 1940s and notwithstanding the recent process of interiorization, the Brazilian population in general, and the labor force participation rate (LFPR), continues to be territorially distributed very irregularly, with an apparent concentration in the Eastern region (Maps 7 and 8).

⁷ Called, respectively, districts and municipalities, from 1891 onwards.

Map 3 - Brazil: demographic density – 2010



Source: Population density ([2012?]).

Regarding the geographic configurations themselves, we chose methodologically to address two features that we consider structuring: the spatial distribution of the industry and the circulation network.

As for the industry, our choice is justified by the importance of this economic activity in the organization of the Brazilian space since the late 19th century. In Moreira’s words (2014, p. 250), the industrialization process represented a “rupture in the historical form of the society-space relationship in Brazil” compared to the prior centuries. And beyond that, the industrialization process reorganized the country regionally. As the author states when referring to the 1950-70s, “[...] the Brazilian industrial revolution caused imbalance in the industrial structure favoring São Paulo, and additionally to the states of Rio de Janeiro and Minas Gerais [...]” (Moreira, 2014, p. 257).

In the following decades, notwithstanding the industrial restructuring process of the country, involving spatial deconcentration and the industry relative loss of importance in the national GDP composition (Lencioni, 2015a), the Southeast region industrial leading role is safeguarded both in terms of volume of production and the involved value, as well as the number of people employed.

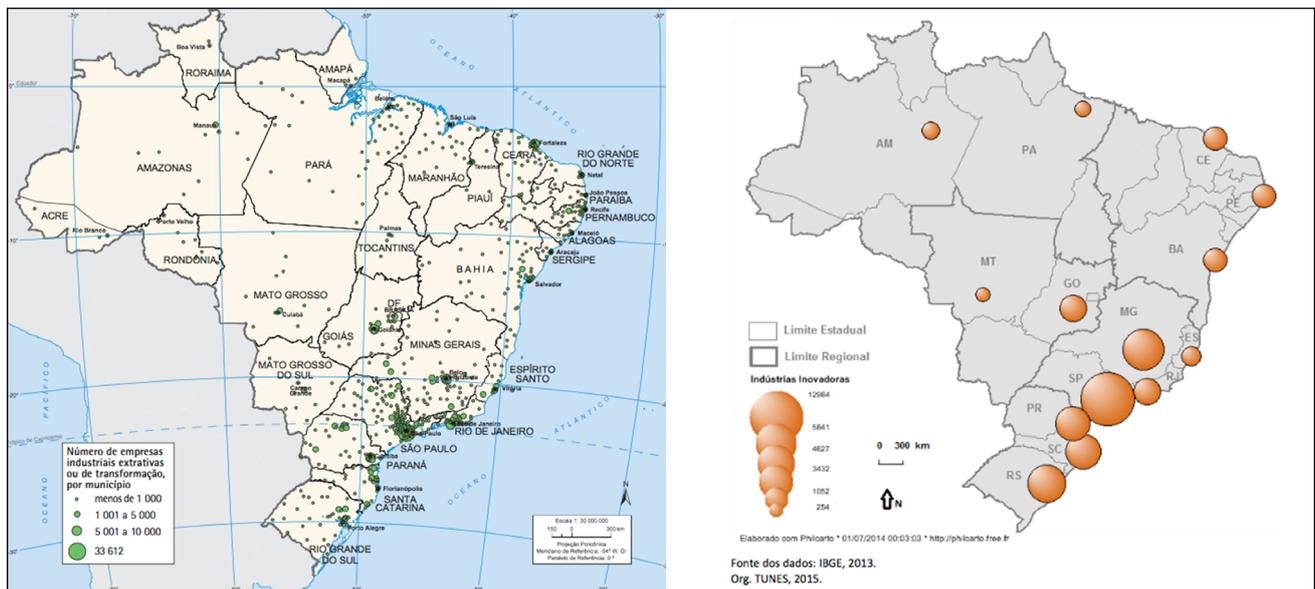
Analyzing “the industry’s new map” in Brazil at the beginning of the 21st century, Lencioni (2015a, p. 31) speaks about how important the innovation is in industrial activity and, among other conclusions, states that:

[...] industrial establishments that implemented innovation processes or created new products are concentrated notably in the South-Southeast of Brazil,

especially in the state of São Paulo. Thus, there are a great deal of inequality in the territorial distribution of innovative industries, those with better means of generating wealth. Especially because [...] since they are the largest ones. And it is also known that they have greater market potential. From the industrial innovation perspective, we are a highly unequal country.

Maps 4-A and 4-B show the concentration of both the overall industrial activities and knowledge-intensive activities in the eastern portion of the territory, ratifying Milton Santos’s argument about the existence of a “concentrated region”, formed by the South and Southeast.

Map 4 - Brazil: (A) industrial companies (2016) and (B) concentrated distribution of knowledge-intensive activities by state in 2009-2011



Source: Map 4-A: Industrial companies ([2008]); Map 4-B Tunes (2015)

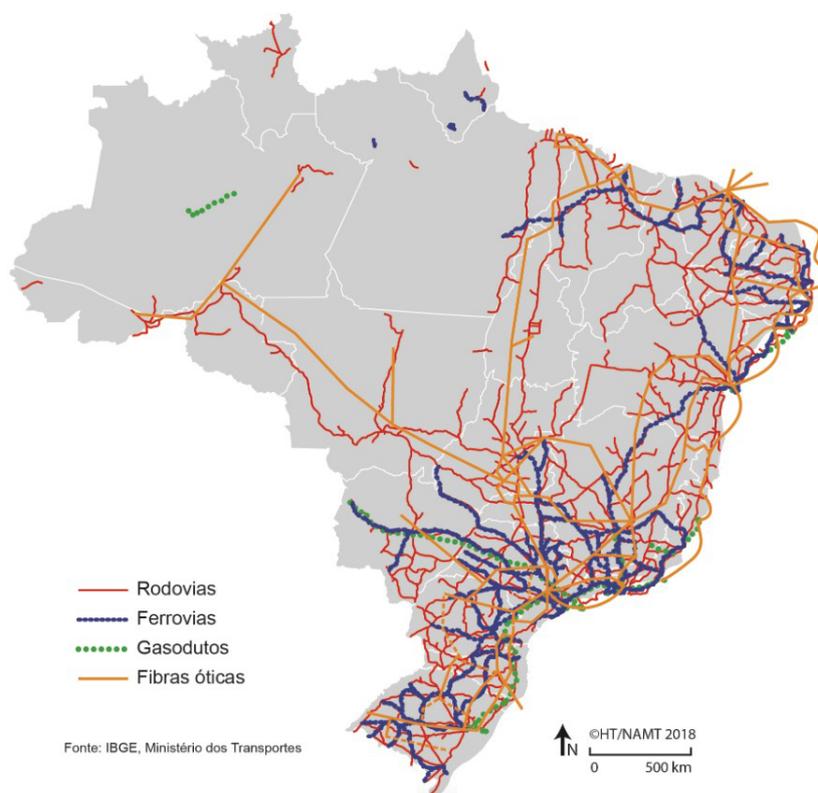
As for the circulation infrastructures, understood as an important part of the general conditions of production, Santos and Silveira (2001, p. 261) states that “producing is not enough today”, being imperative in the present moment “to create conditions that improve circulation of men, products, goods, money, information, orders, etc.”, which are translated in “the creation or improvement of engineering systems that facilitate movement”. According to Santos (1996, p. 219), “it is essential to get production in movement, as it is now circulation that presides production”.

Also, as stated by Santos and Silveira (2001, p. 261/262), the process of creating fluidity countries with greater territorial extension countries and with large regional and income disparities “is selective and not equitable”, and is guided, basically, by “Economic links, especially those of the international economy”.

The circulation infrastructures (of goods, people, information) follow the demographic, urban and industrial concentration that characterizes the Brazilian territory, as expressed in Map 5. These infrastructures form authentic technical networks (Santos, 1996), which, according to Arroyo (2015, p. 42), “while modern and complex engineering systems convey value to all

activities that draw benefit from them [...] the best equipped locations with these infrastructures will be more contested among the companies that enter the competition”.

Map - 5 Brazil: transport networks - 2014



Source: Theory; Mello-Théry (2018).

The geographical configurations by the circulation networks must therefore be understood, in addition to their simple materiality, as expressions, in the territory, of the power of companies and the State. As Arroyo says (2015, p. 42-3), “paths, railways, canals, dredged rivers are understood as lines of strategic power that configure territories”, with the State involvement in the design, construction and management of transport and communication infrastructure. For Lencioni (2007, p. 6), by enabling the circulation of commodity and, therefore, its realization in the market, the circulation networks in direct connection with the production process end up being a priority equipment to the detriment “of collective consumption equipment indirectly related to the production process”.

Naturally, the number of matters addressed in this section (municipal political-administrative division, demographic density, industry and circulation networks) are deeply interwoven, and can only be understood if one considers its conflictive and contradictory social and historical nature. Thus, the maps presented suggests the existence of “two Brazils”, not in Jacques Lambert’s terms, that pointed out a division between the economically less developed regions of north-northeast, and the more developed and prosperous south-south-east portion. Actually, what Maps 4-A, 4-B and 5 suggest, just like Maps 2 and 3, is the split in Brazil between an eastern portion, which concentrates the labor force, is better

equipped with technical objects related to industrial activity and the movement of people and goods, where productive forces and general conditions of production are, thus more dense, and another western portion, with a much less fragmented territory from the political-administrative perspective, less fluid (Santos; Silveira, 2001) and demographically less dense, as well as the presence of fixed capital of the industrial activities such as engineering systems that support circulation (where, consequently, the general conditions of production are least developed). Although not portrayed on the maps, the profound differences between the eastern and western portions of the country are well-known in terms of the structure of their urban network, given the strong demographic concentration in the eastern portion of the national territory.

Although the geographic configurations of the Brazilian territory suggest a longitudinal sense of its fragmentation, on the one hand, the analysis of socioeconomic aspects effectively points to another sense, latitudinal (as indicated by Lambert), in which the worse social indicators of the North and Northeast regions, in contrast with those presented by the Midwest, Southeast and Southeast leaps to the eye. This point will be discussed what we discuss in the next section.

Brazilian social and territorial inequality

Despite the seven decades between Jacques Lambert's analysis and the world today, and despite the distributive policies of wealth and income of the last decades, Brazil remains a very uneven country and the North-South social differences are reaffirmed by recent studies. In this sense, foremost, we need to demarcate, based on Arretche (2015, p. 194), that inequality is not restricted to income, since in the access to services, for example, "people with the same earnings can have very different living standards if they have different access".

According to Arretche (2015, p. 195), in the recent process (between 1970 and 2010) of expansion of access to essential services (water, sewage and electricity) in Brazil, there was a general improvement in the indicators. However, she emphasizes that "when the starting point is the very low rates [...] it may even incur in high inequality, if this expansion is concentrated in some jurisdictions and others are left behind".

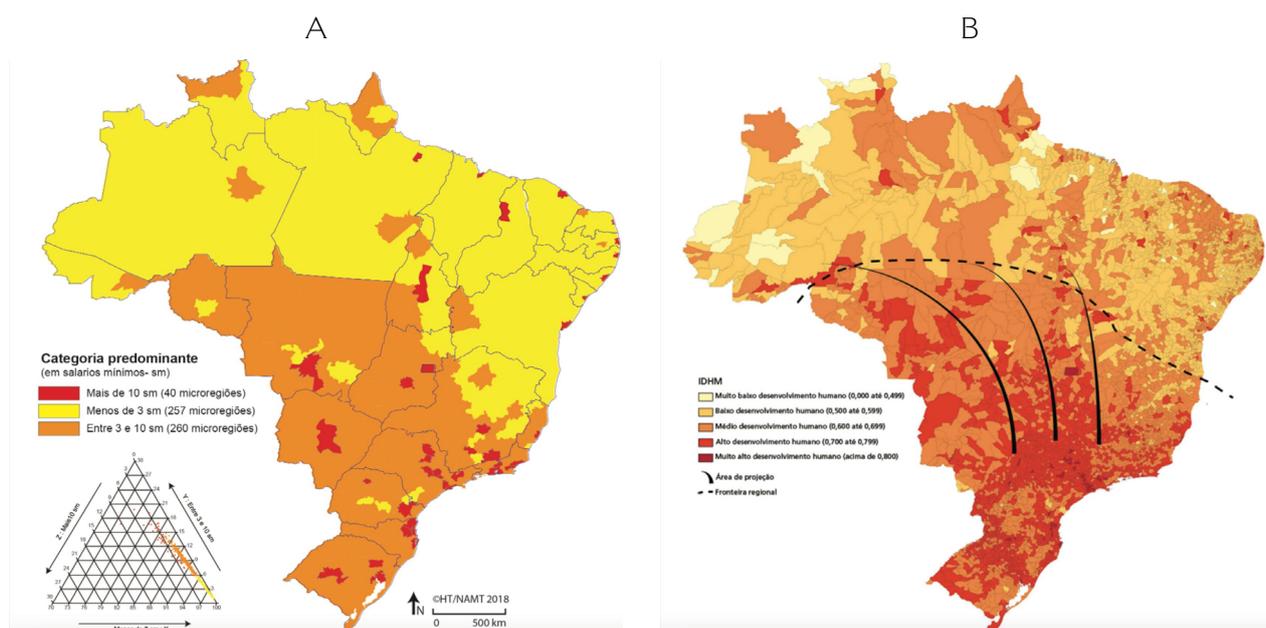
Despite the widespread improvement in inequality indicators for the period, wealth inequality, as measured by GDP *per capita*, "remained rigorous and outrageously stable". Furthermore, inequality between Brazilian municipalities has increased in terms of concentration of poverty, "measured by the percentage of people living on an income below half a minimum wage" (Arretche, 2015, p. 196).

Based on the 1970, 1980, 1991, 2000 and 2010 Demographic Censuses data, Arretche (2015, p. 201, emphasis added) concluded that "the reduction of poverty and income inequality had an *uneven territorial distribution*, increasing the distance between areas with lower and higher concentration of poverty". The highest poverty rates, as he points out, "are concentrated in the Northeast region and in part of the North and Southeast regions" and this geography reflects a "high territorial inequality" in the country (Arretche, 2015, p. 204).

Mapping done by Théry and Mello-Théry (2018) (Map 6-A) also accounts for a country split between north and south in terms of average nominal monthly income. According to Guerra, Pochmann and Silva (2014, p. 11), “in Brazil, as well as in Latin America, the 21st century’s first decade has brought with it the return of economic growth combined with the reduction of poverty and social inequality”. However, they add, “despite the region’s leading role, it still pursues old and modern ways of manifesting social exclusion” (Guerra; Pochmann; Silva, 2014, p. 12).

Grounded on the Human Development Atlas in Brazil, developed by the United Nations Development Program (UNDP), the Institute for Applied Economic Research (Ipea) and the João Pinheiro Foundation (FJP), Boscariol (2017) also identifies a certain regional border between a northern portion and a southern portion of the country, the latter having a better performance than the former in terms of the Municipal Human Development Index (HDI-M). This difference between territories more to the north and others to the south remains, despite the widespread growth of the HDI-M for almost all Brazilian municipalities and the reduction of intra and inter-regional differences between 2000 and 2010 (Boscariol, 2017).

Map 6 – Brazil: (A) value of the average monthly nominal income (2010) and (B) spatial distribution of the HDI-M in the national territory (2010)



Source: Map 6-A: Théry; Mello-Théry (2018); Mapa 6-B: Boscariol (2017)

It is also worth noting that the authors cited in this article are unanimous in acknowledging that social inequality in Brazil manifests itself at different scales, that is, the best indicators achieved by the South and Southeast do not erase a contradictory, intraregional reality, according to which, even where there are the best indicators of wealth and income, there are numerous situations of poverty or exclusion (Guerra; Pochmann; Silva, 2014).

On the other hand, the mapping of social exclusion in Brazil (Maps 6-A and 6-B), as well as the analyzes of different researchers organized by Arretche (2015), leave no doubt that Brazil

remains a divided country, regarding socioeconomic indicators, between a northern portion and a southern portion, in addition to the profound differences that distinguish internally each of these large portions of the national territory.

Uneven geographical development and regionalization of the Brazilian space

As explained above, the uneven geographic development in Brazilian territory manifests itself in different ways, among which we draw attention to, on the one hand, the geographical configurations, which mirror the uneven spatial distribution of general production conditions across the national territory, which, in turn, are the outcome of social relations of production in the course of historical, social and economic processes materialized in the territory. Furthermore, uneven geographic development cannot be detached from income inequality as a dimension of inequity in a broad sense.

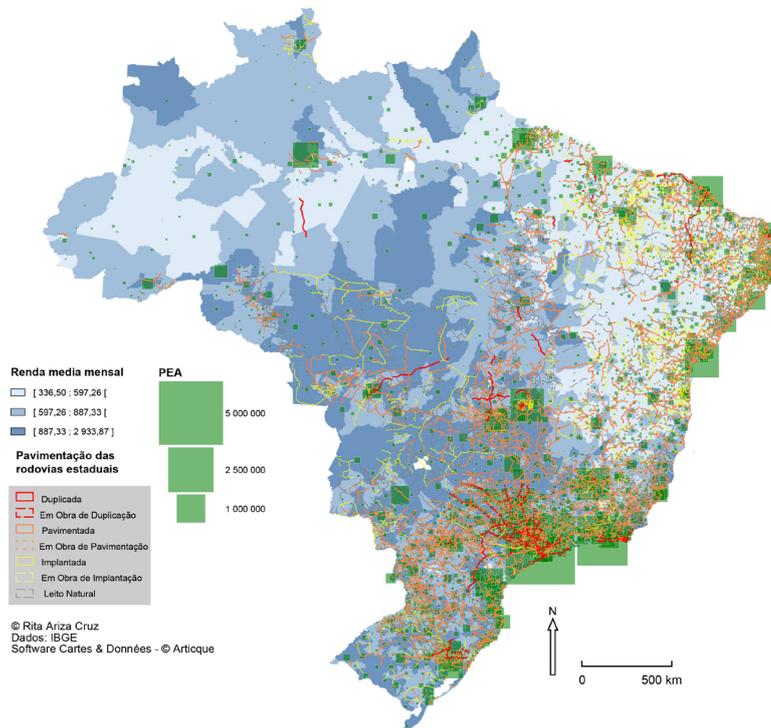
It is also important to notice that we understand that geographic configurations are not just marks of the past and present crystallized in space, since they represent future possibilities, by assuming the role of comparative advantages in the fierce dispute for investments.

Thus, we must consider the tangible and intangible dimensions of the uneven geographical development (spatial distribution of the population in general and the labor force, specifically, geographical configurations and income) in the historical process of space production in order to get the regionalization of Brazilian space, which helps us to better understand the acute contradictions that characterize our territorial history and that are explicit in the present moment. For that purpose, thematic mapping was fundamental, since, from it, we seek to superimpose fragmentarily information previously presented and analyzed.

In line with this methodological approach, we conceived and compared the Map 7, which brings together information on average monthly income/LFPR (in absolute numbers)/road system and Map 8, based on the clusters method and which brings a typology that employ size, average monthly income and activity rate as variables⁸

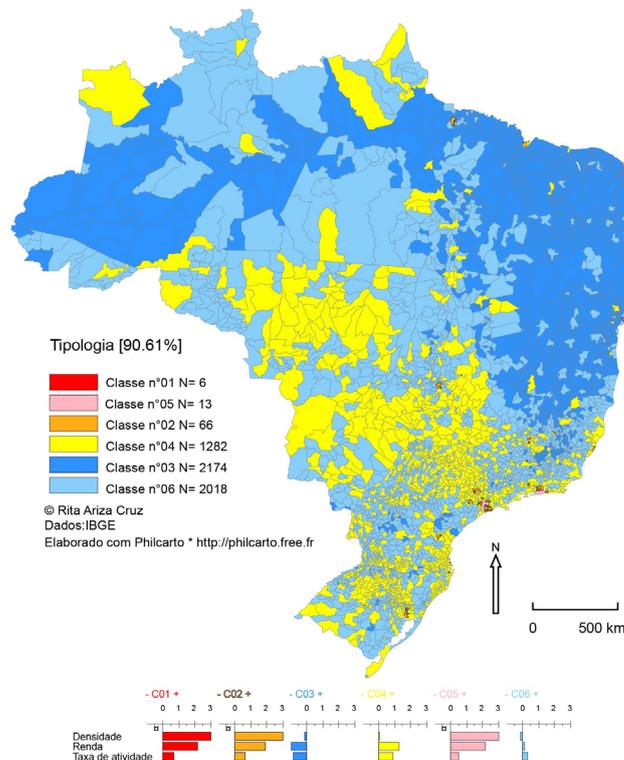
⁸ The bars width expresses the contour of each group: as variables, the right bars indicates that the group is above the average and the ones on the left below. N is the number of municipalities in each group.

Map 7 - Brazil: average monthly income, LFPR and road network (federal and state)



Elaboration: Hervé Théry (2020).

Map 8 - Brazil: average monthly income, LFPR and road network (federal, and state), typology



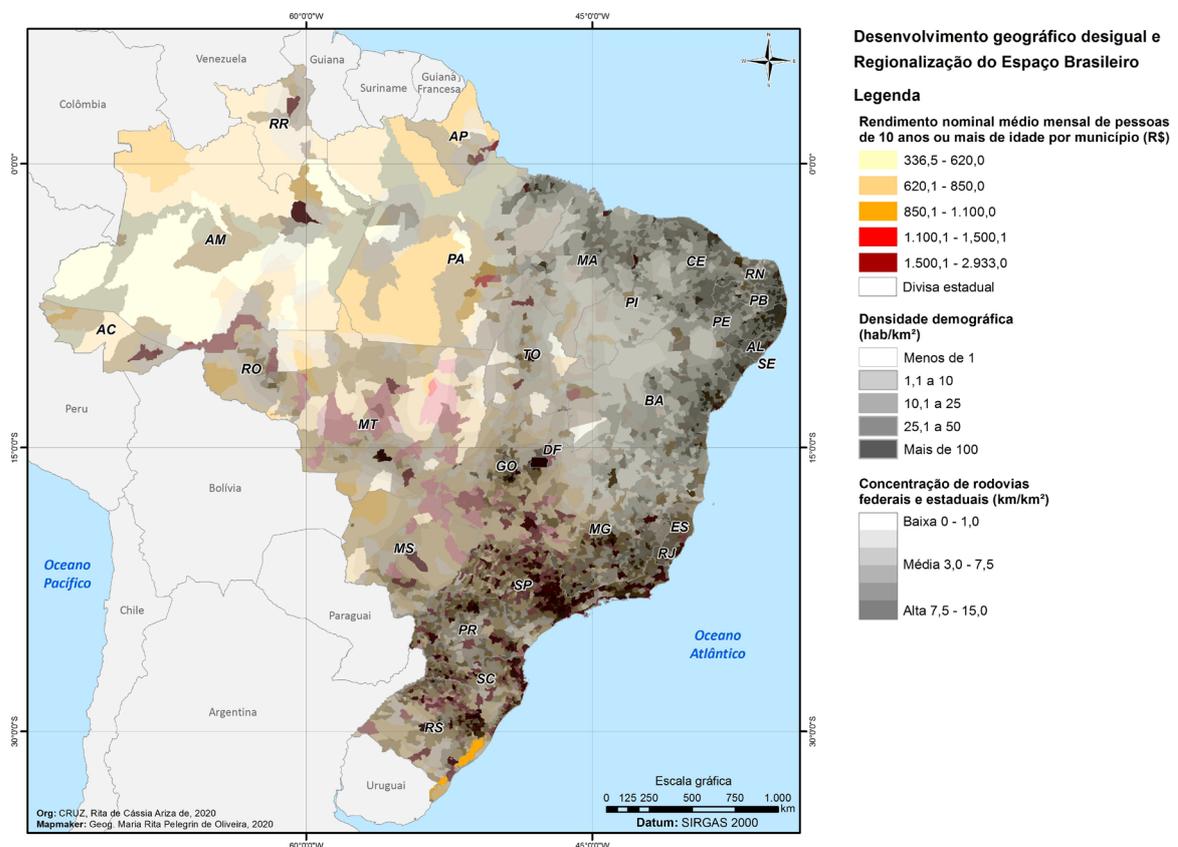
Elaboration: Hervé Théry (2020).

As seen above, Maps 7 and 8 gives a clear picture of the national territory spatial manifestation of inequality, considering the three initially overlapping variables. The strong concentration of the LFPR in metropolitan regions, especially in São Paulo and Rio de Janeiro, is also an expression of the overall demographic concentration and the income concentration in the country, as well as the existence of a strongly hierarchized urban network. Additionally, while Map 7 clearly underlines a space fragmentation on eastbound, Map 8 points aimed at the historical north-northeast and south-south-east division, which joins in this time, considering better social indicators, Central-West region.

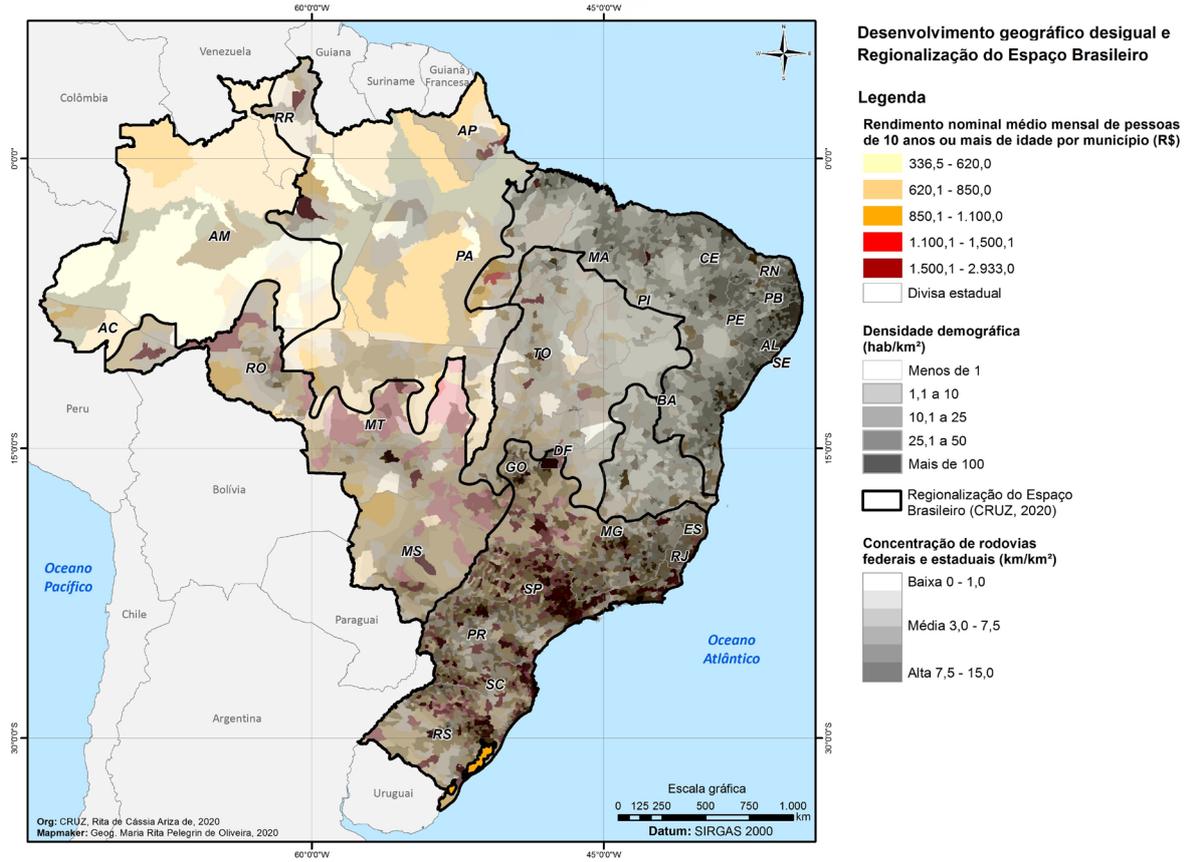
In this search for the uneven geographical development manifestation in the Brazilian territory, we conceived and elaborated one final map (from which maps 9 and 10 unfold) by using the choroplethic method, overlapping the demographic density, income and road density, which led us to a complementary vision of Maps 7 and 8, allowing us, based on the expressed “portraits” of the national territory in these ones and also in Maps 2, 3, 4-A, 4-B and 5, as well as in the bibliographical reference on which our argument are based, to come up with a regionalization proposal.

Uneven geographical development and regionalization of the Brazilian space

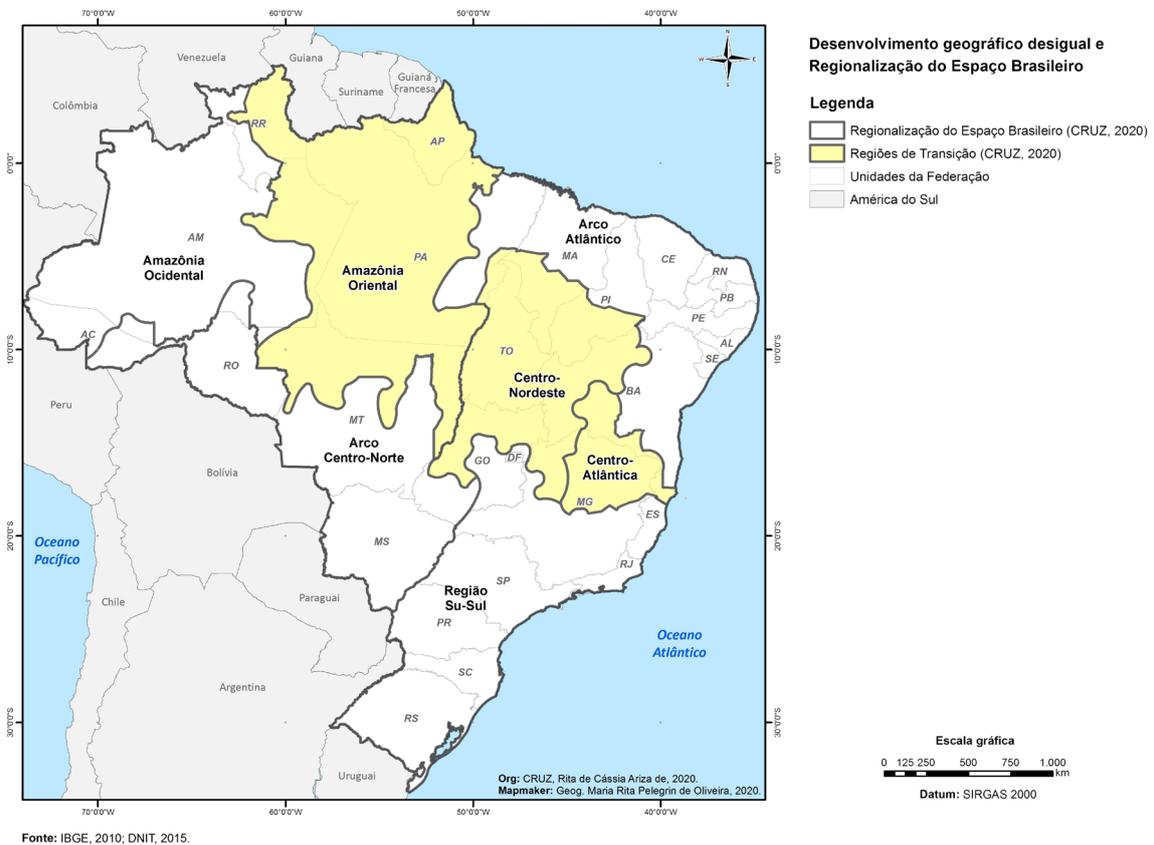
Map 9 – Base



Map 10 - Delimitation of regions



Map 11 - Synthesis of the Brazilian regional division



Unlike other regionalizations and borrowing the idea of “belts of transition” from Moacir Silva (1939)⁹ and Aziz Ab’ Saber (1965)¹⁰, we understand that when one discusses socio-historical-economic aspects the transition between regions is also seldom abrupt, especially in regarding to the macro-regional scale.

Therefore, we conclude that there is no such a thing like “two or four Brazils”, but seven large regions, which are fragments of one total space, an open, integral and contradictory totality in movement, including three transition regions that congregate characteristics of the other great regions which they border, without fully identifying themselves, according to the criteria adopted, with either.

It should be noted that we have not defined precise limits for each of them due to the possible detachment of municipal data. On the contrary, we consciously define these limits based on the synthetic maps built for this analysis made possible by visual interpretation of thematic mapping. The nomenclature is chosen to designate regions with names that refer mainly to their geographical position in the national territory, avoiding overestimating them by their respective qualities. An exception is made for Amazon, given the historical tenacity of that name. Finally, we emphasize that we are aware that any macro-regionalization of a territory with continental dimensions like Brazil implies a high level of generalization.

Although North and Northeast regions (according to official IBGE’s classification) share the worst indicators of Brazil’s income performances, there is an important difference of spatial distribution of the productive forces and the general conditions of production between them, being Northeast, more populous, more industrialized and better equipped with circulation infrastructures than the North is. Moreover, the regions harbor significant internal differences. Added to this the geographic configurations and income patterns that bring part of the state of Pará closer to the more dynamic portions of what we know as Northeast. Thus, we identified a kind of arc, a region that includes fragments from all northeastern states, besides part of Pará. We call this region the Atlantic Arc.

The Atlantic Arc harbors very old occupation portions of Brazilian geographic space (the closest locations of the coast date back to the 16th and 17th centuries), all metropolitan regions of the Northeast as well as the one of Belém, also highlighting a portion of the southeast of Pará that maintains a strong relationship with Maranhão, considering the export of iron through the Port of Madeira, as well as the refining, in the city of São Luís, of the bauxite extracted from mines in western Pará.

In contrast to a historical vision - since André Rebouças’s regionalization, from 1889 onwards -, in which the Amazon is recurrently conceived as homogeneous, we glimpse several Amazonies, such as Carlos Walter Porto-Gonçalves, even though the analytical approach assumed here is different from the one adopted by this author. It can be seen a Western Amazon (broadly, the western portion of Roraima, Acre and Amazonas states), less densely occupied, less equipped with road circulation infrastructures (it is important to stress the importance of watercourses for the intraregional circulation) and with worse indicators of income, with no relevant industrial activities in the structuring of regional space.

9 Moacir Silva (1939, p. 93) starts from the Delgado de Carvalho Brazil’s regionalization, who considers five regions and proposes the dismemberment of some states, understanding them as transition zones.

10 Among the nuclear areas of the morphoclimatic and phytogeographic domains, Aziz Ab’ Saber (2003, p. 23) has indicated the existence of “areas of contact and transition”.

On the other hand, we are faced with “the other Amazon”, fused with the so-called Midwest, encompassing fragments of Acre state (eastern portion), including the capital Rio Branco, the entire state of Rondônia and a small area to the south of Amazonas, microregion of Purus. The mining activity and industrialized agribusiness shapes the structure of this region, with higher demographic densities and better income indicators, although the territorial circulation has not achieved the same development as in the neighboring eastern region to date.

Even if its income indicator places it among the richest regions of the country¹¹, the Central-West region (according to IBGE) distances itself from the Southeast and South in terms of the concentration of LFPR (only about 7% in this region, against 43% and 7% in the Southeast and South, respectively)¹², territorial circulation networks (about 13.4% of the total length of the highways) and of spatial concentration of industrial companies (Maps 4-A and 4-B). Besides, it also distances itself from the Western Amazon, the Eastern Amazon and the Central-Northeast in the income indicator. Strongly influenced by the agribusiness development, this region is distinguished from its surroundings by the massive industrialization of the countryside, contradictorily accompanied by a “rickety urbanization” (as expressed by Milton Santos). We call this region the Central-North Arc.

Also in the Amazon, we find a transition region between the Western Amazon and the Atlantic Arc covering the entirety of Amapá state, some fragments east of Roraima (with the capital Boa Vista) and Amazon states (with the Metropolitan Region of Manaus), a large portion of Pará and a northern fringe of Mato Grosso. We call this region the Eastern Amazon. This portion of the vast Amazonian territory is geographically closer to the Northeast and Southeast (according to IBGE) and is better integrated into the national economy, particularly on agricultural and mining activities. As a “transition region”, one of its characteristics is the seemingly greater internal heterogeneity, with meaningful contrasts in demographic, infrastructure and circulation networks.

Transition regions draw attention to the plasticity of social processes, which contradict Euclidean limits and affect regional studies. In these regions, geographical configurations densities are, roughly, intermediate in relation to the regions that are close to them. This is also what we find between the regions of the Atlantic Arc and SE-South, both of which combine remarkable characteristics, such as average demographic indicators and a relative density of road circulation networks, in addition to more heterogeneous socioeconomic indicators than that surrounding it.

Such assumptions led us to identify two other transition regions: what we are calling Center-Northeast, which is quite extensive, encompassing the state of Tocantins and fragments to the south of Maranhão and Piauí states, Bahia’s west portion, Goiás and Mato-Grosso’s north portion; and what we call the Central-Atlantic, territorially smaller than the other two, located between the Atlantic Arc, the Center-Northeast and the SE-South.

The Central-Northeast region is characterized by having a minor development of productive forces in relation to the regions with which it borders (Atlantic Arc, Central-Atlantic and SE-South), with Eastern Amazon as an exception. The soy and cotton agribusiness has been

11 According to the Continuous National Household Sample Survey – PNAD, 2018, the real average monthly income of the resident population with income in the Midwest was R\$ 2,440.00, somewhat greater than the R\$ 2,401.00 of the South, and slightly smaller than in the Southeast, the largest in the country, with R\$ 2,563.00. North and Northeast had average income of R\$ 1,646.00 and R \$ 1,412.00, respectively.

12 Based on data from Rais (2015) (Fapespa, [2015]).

responsible for a quick and profound transformation of these regional portion, where, nonetheless, the income indicators and circulation infrastructures are still lower than those of adjacent regions. Palmas is the only state capital in this region.

The Central Atlantic region, by its turn, has a peculiar geographical location, in the eastern portion of the national territory and between the two best indicators of productive forces development considered in this analysis (labor force, inferred from demographic indicators, and road network), as well a better average monthly income. Although circulation conditions are good, income indicators are worse than those found in the Atlantic Arc and in the SE-South region.

Finally, we identified (as well as other authors) that part of the Southeast and the South regions (according to IBGE), together form a densely populated area, qualitatively much better equipped with road circulation networks than all other Brazilian's regions, besides housing the best income indicators. It is the most industrialized region in the country, which concentrates the high-tech industry (Map 4-B) and other knowledge-intensive activities. Much of it coincides with what Milton Santos named the Concentrated Region, but, as we understand it, it also encompasses part of the state of Goiás and the Federal District, given its density of the circulation networks and their income indicators, which make it closer to the South and Southeast states. It also partially coincides with the portion of the territory where, in Ruy Moreira's regionalization, the regions of the "Industrial Polygon" and the "Agroindustrial Complex" overlap. As previously stated, we are calling it the SE-South region, where the "SE" particle indicates southeast. The SE-South region houses what was identified by Lencioni as the only mega-region in the country (2015c, p. 11), composed of the metropolises of São Paulo and Rio de Janeiro, a "hybrid form of regional urbanization", "with intense productive integration, strong interaction with the global economy and high density of commuting". It is important to notice that the Rio de Janeiro-São Paulo mega-region largely organizes the entire SE-South region, even considering that its radius of influence extrapolates it a lot.

Concluding remarks

The different Brazilian regions, as understood in the light of the unequal geographic development, are the result of the social relations of production throughout historical time, including the present. Besides that, as we proposed here, they can be understood as fragments of a contradictory and in-movement totality, oneness and thus in permanent transformation.

As the objective dividing lines that distinguish each region must be taken as solely being imaginary, plastic and flexible, "the late territorial division of labor dismantles and reshapes the spatial organization and each step of social-spatial inequality is reshaped; regionalization is also reshaped, dismantling former regions that existed under other processes and other conditions" (Corrêa, 2001, p. 199).

At last, we underscore the importance of intellectual exercises of regionalization, which open perspectives to better understand the extensive Brazilian territory and its old and new contradictions, without closing the wide doors opened by all those who, before us, have endeavored this same challenge.

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