


# From cloud to national territory: a periodization of ridesharing platforms in Brazil

**Fabio Tozi**

Universidade Federal de Minas Gerais,

Belo Horizonte, MG, Brasil

fabio.tozi@gmail.com

 0000-0003-1448-8353

p. 487-507

revista

**Geo**   
**USP**  
espaço e tempo

Volume 24 • nº 3 (2020)

ISSN 2179-0892

## How to cite this article:

TOZI, F. From cloud to national territory: a periodization of ridesharing platforms in Brazil. **Geosp – Espaço e Tempo** (On-line), v. 24, n. 3, p. 487-507, dez. 2020. ISSN 2179-0892.

Available at: <https://www.revistas.usp.br/geosp/article/view/168573>. doi: <https://doi.org/10.11606/issn.2179-0892.geosp.2020.168573>.



Este artigo está licenciado sob a Creative Commons Attribution 4.0 Licence

# From cloud to national territory: a periodization of ridesharing platforms in Brazil<sup>1</sup>

---

## Abstract

This article seeks to understand the arrival and the territorial expansion of ride-sharing platforms in Brazil with a focus on the Uber company. First, we introduce the debate about the uberization of the economy. In this view, we aim to analyse the active role played by the space itself for the functioning of “digital platforms” which we assume as “territorial platforms”. Second, we advance a periodization of ridesharing platforms in Brazil. In doing so, we analyse how Uber uses the territory and investigate the conflicts between the company and policymakers as well as its competitors. Finally, the article proposes a debate about the strategic role of information (such as big data, algorithms, platforms, geolocation, and remote surveillance devices) as elements to be considered in a new corporate and algorithmic approach for the management of the territory.

**Keywords:** Digital platforms, Algorithms, Uberization, Shared economy, Uber.

---

## Da nuvem ao território nacional: uma periodização das empresas de transporte por aplicativo no Brasil

---

## Resumo

O artigo dedica-se a compreender a entrada e a expansão das plataformas de transporte privado por aplicativos no Brasil, especialmente a partir da chegada da Uber. Inicialmente, apresenta um debate acerca do processo de uberização da economia que propõe compreender o papel ativo do espaço para a realização concreta das “plataformas digitais”, aqui entendidas como “plataformas territoriais”. Em seguida, propõe uma periodização da estratégia territorial da Uber procurando

---

<sup>1</sup> This research was supported by the Ministério Público do Trabalho – 3ª Região (Public Ministry of Labor - 3rd Region), through an agreement signed with Federal University of Minas Gerais (UFMG) (ref. N. 078 / 19-00). Available in <https://continenteufmg.com/observatorio>.

analisar seu uso do território brasileiro, bem como os conflitos com os entes estatais e a relação com seus concorrentes diretos. Finalmente, discute o papel estratégico da informação (*big data*, algoritmos, plataformas, geolocalização e dispositivos de vigilância remota) como elementos para se pensar uma nova gestão corporativa e algorítmica do território nacional.

**Palavras-chave:** Plataformas digitais. Algoritmos. Uberização. Aplicativos de transporte privado. Uber.

---

## De la nube al territorio nacional: una periodización de las plataformas de transporte por aplicación en Brasil

---

### Resumen

El artículo tiene como objetivo comprender la llegada y la expansión territorial de las plataformas de viajes compartidos en Brasil, especialmente en base al estudio de caso de Uber. Primeramente, presentamos una discusión acerca de la uberización de la economía y proponemos comprender el papel activo del espacio para las “plataformas virtuales”, aquí reconocidas como “plataformas territoriales”. En segundo lugar, sugerimos una periodización de las plataformas de viaje compartidas en Brasil, buscando analizar su uso del territorio, así como los conflictos con las diversas entidades políticas. Finalmente, el texto presenta una explicación sobre el papel estratégico de la información (*big data*, algoritmos, plataformas, geolocalización y dispositivos de vigilancia remota) como elementos que deben considerarse en una nueva gestión algorítmica y corporativa del territorio.

**Palabras clave:** Plataformas virtuales. Algoritmos. Uberización. Aplicaciones de transporte. Uber.

---

### Computerization and uberization of work and the territory: an introduction

In recent years, the emergence and rapid expansion of companies based on platforms, applications and algorithms has been observed, a fact that has changed the form of organization of socio-spatial relations. Generally called “digital platforms” (Slee, 2015; Stone, 2017),

these companies lead the digitalization processes of society and the territory, revealing with primacy the transformation of ordinary information into strategic information (Silva, 2001), that is, making information a productive factor of the historic present. A means of production owned by the company, the platform operates by algorithms, which are the orders that enable strategic action through information technology. In an analogy with the mode of existence of technical objects, proposed by Simondon (1969 [1958]), if the platform were an engine, the algorithm would be the piston and the information, the fuel.

Hardt and Negri (2001) call attention to the central role of information in what they call *postmodern primitive accumulation*, and Srnicek (2016) even names the current phase of the production mode as *platform capitalism*. In fact, as Santos (1994) emphasized, thanks to their capacity for planetary action, corporations are the agents that flourish in the period of globalization, or *technical-scientific-informational period*, with its equivalent informational geographical environment.

In a particular aspect of this process, the phenomenon of the expansion of ridesharing platforms, although recent, has created important changes in the regulation and use of territories. The most notorious among them, Uber, ended up generating the neologism that many authors (Slee, 2015; Pochmann, 2016; Abílio, 2017; Antunes, 2018; Tozi, 2017, 2018) have used in an attempt to understand the ongoing process: *uberization of the economy*. In some of his readings, such as Stone (2017), uberization is seen as an inexorable and tendentially beneficial process of progressive digitalization of society in its most diverse aspects, while Rifkin (2014) sees an economy of sharing as the foundation of a post-capitalist society with zero marginal cost.

For our part, we argue that uberization is also the phenomenal expression of a new territorial division of labor driven by the computerization of social life: among the 20 largest information technology companies in market values in 2018, twelve were American and eight Chinese<sup>2</sup>. Other countries are seeking to consolidate themselves in the midst of this digital transition, such as France and its project to become a start-up nation, in the words of its president, for whom the state itself would be a platform for new information corporations.<sup>3</sup> This expression echoes the Israeli experience described by Senor and Singer (2009), also called a start-up nation, and is seen as a case of the creation of innovation ecosystem success.

A linguistic element of this emerging geopolitics is the adoption, in French-language literature, of the terms Gafam (acronym for Google, Apple, Facebook, Amazon and Microsoft) and Natu (acronym for Netflix, Airbnb, Tesla and Uber). This use is linked to opposition to the hegemonic action of the US corporations that lead the digital transition and have become dominant in the French market and in the European Union. These companies assume hegemony as they define the new standards of technical and computer systems, reaching a massive number of users and consumers.

---

2 According to Kleiner Perkins (2018), in 2013 were 13 American companies, 3 Chinese, 2 Japanese, 1 Russian and 1 South Korean.

3 Emmanuel Macron (La République en Marche), in a speech held at the VivaTech fair, in Paris, in 2017 (Thuillier, 2017).

Such corporations are multisectorial, that is, they do not operate in a specific branch or sector, but, on the contrary, they move on different fronts simultaneously, with a high capacity for flexibility. However, all of them form the creation of technologies that allow intercommunication between traditional economic sectors and technical telematic objects. In addition to the internet, they operate alone or through partnerships in the fields of telecommunications and information technology, general purchasing and delivery (logistics), health, energy and other public and private services, finance, media and entertainment, transport, travel and leisure, redefining both social values and forms of production, provision of services and trade.

In turn, Brazilian Social Science stands out in the critical reading of urberization, analyzing the process from the historical specificity of Brazilian socio-spatial formation and its participation in the international division of labor. In this direction, Pochmann (2016) argues that uberization would suppress wages as a fixed cost in labor relations, becoming a variable cost. Thus, the author asks whether the change of the concept of “worker” (in its Taylorism and Fordism sense) to “entrepreneur” would generate an ideological dispute: if the individual is no longer considered - and does not consider himself - a worker, collective struggles and laws guaranteeing workers’ rights would weaken. The consequences of these changes would be perverse, given the already great income inequality in the country.

The proposal of Antunes (2018) is to think about the metamorphoses of the world of work in the face of the process of technological change. For this purpose, the new category of workers in the service industry that has expanded in recent decades, relies on the notion of info proletariat. Roughly speaking, in spite of appearing freer than traditional forms, this new worker has little control over his working conditions, performs activities that require little creativity, is not linked to a professional career, nor does he have the prospect of maintaining employment, as in formal employment. Therefore, uberization would be an update of the typical relations of the 20th century with the technologies of the 21st century, leading to new forms of informal and precarious work.

In the same way, Abílio (2017) warns that uberization did not arise with the digitalization of the economy, since its bases would have been in formation for decades in the world of work. In its contemporary face, however, the author emphasizes the mechanisms of risk and cost transfer for a multitude of self-employed workers connected to the platforms. By standing out in this process, Uber gave visibility to a new step in the real subsumption of work, which, in the case of Brazil, would be, according to the author, a real subsumption of the “turning point” of the previous ways of survival for the most poor in the labor market.

This text argues for a geographic analysis that can contribute to critical readings of the uberization process. In this sense, we seek to show that digital platforms have an inalienable territorial dimension that bring essential elements for understanding economic and work relations. In fact, systematic knowledge of the territory, understood as the relationship between fixed and flows (Santos, 1994), is a condition for a corporate use of the territory that is progressively more effective. Empirically, an analysis of Uber is proposed, since it is the company that has driven and leads the changes in the private transport sector by application software and for its

hegemonic presence in the Brazilian territory<sup>4</sup>. The proposal for the analysis of the company's territorial operations considers, in addition to the new work relationships: (i) the central role of innovation, research and development (R&D) and intensive information work, (ii) information as a productive factor, (iii) the production and circulation of informational products, goods and services and (iv) the accurate and systematic knowledge of the territory, allowing for an instant update of the action.

Therefore, the debate is not just about the company, its economic sustainability and its eventual profits, even if the billions in losses are repeated.<sup>5</sup> Valued at \$ 76 billion in August 2018 (How Uber ..., 2018), it symbolizes and concretizes a sophisticated system of actions mediated by computer objects, that in turn, symbolize the informational phase of the capitalist mode of production. Therefore, despite its financial loss, it is the company's use of territory that needs to be understood. Its speed of simultaneous adaptation to an immeasurable set of concrete situations in different countries also includes dealing with local resistance. Thus, there is an organizational principle that considers the territory an asset and a productive factor.

In this sense, we insist on the idea that these companies are not just *digital platforms*, but *territorial platforms*, as it is the territory that presents itself, at the same time, as a basis for decision-making and a differential income resource, as will be discussed below. From Santos' analysis (1996, p. 197), it can be said that there would be a spatial or geographical productivity for digital platforms.

Therefore, without essential externalities such as vehicles (means of production), drivers (labor) and circulation on the streets of cities (urban infrastructure), applications would be just algorithms in the "cloud" of the internet. It is only in the territory that each part makes up the functioning as a whole. In this sense, the legal maneuver of declaring themselves as technology companies does not coincide with reality, as their existence is categorically dependent on the exploitation, via fees, of remunerated passenger transportation. Therefore, the company is linked to the transport sector and displacement of people, information and objects in the territory.<sup>6</sup>

Founded in 2009 in San Francisco, by Garrett Camp and Travis Kalanick, Uber was initially dedicated to rides with luxury vehicles, in an on-demand system via apps. In 2013, the company launched the UberX system, with cheaper trips for users and, especially, allowing the entry of third parties, with its own vehicle, in the condition of "driver-partners". This moment marked a change of corporate strategy, which previously competed directly with Lyft in local and regional markets in the USA. Since then, Uber has stood out for its rapid global expansion, often neglecting traffic, tax and labor laws<sup>7</sup> in the cities and countries where it is located.

---

4 The company has multiplied its activities by incorporating food delivery systems (Uber Eats), freight (Uber Freight), electric bicycles, scooters, vans and minibuses, with research into autonomous vehicles and urban air taxis. This text, however, is dedicated only to the transport of passengers by application.

5 The company's revenues more than doubled between 2016 and 2017, rising from US\$3.9 billion to US\$7.9 billion, and increased 42% between 2017 and 2018, reaching US\$11.3 billion. However, the company's costs were US\$14.3 billion in 2018, a loss of US\$3 billion, as had already occurred in the two previous years (UBER TECHNOLOGIES INC., 2019, p. 18).

6 In a decision of 2017, the Court of Justice of the European Union considered Uber to be a 'transport company' and not a 'digital platform', as it claimed. This allowed national, regional and municipal authorities to demand licenses such as those required from taxi professionals (Sentencia del Tribunal de Justicia, 2017).

7 Leme (2019) analyses Uber's strategic advocacy to prevent the formation of jurisprudence recognizing the employment link in Brazil.



Expanding quickly, in December 2018, the company operated in more than 700 cities in 63 countries (there were 544 cities in December 2016), making 14 million trips per day, of which 74% were already made outside the U.S. At the end of 2018, the company had 22,263 employees, of which 11,860 were in operation and support and 5,459 in research and development (Uber Technologies Inc., 2019), revealing the importance of intensive informational work in innovation and management. With 3.9 million active drivers on its platform, there are approximately 175 driver-partners for each employee.

There has been a continuous expansion of the company in Brazil, despite the inexistence of a national legal framework, which was only introduced in 2018, but helped by the economies of agglomeration, that is, in the concentration of population, infrastructure and income, deficiencies in the quality and quantity of public transport (extension and distribution of the networks) and traffic congestion. Currently, the US Uber shares the national market with the Spanish Cabify and the Chinese 99, which share both the territory as drivers, vehicles and consumers, creating territorial monopolies and oligopolies.

Brazil has become one of the central markets for Uber: in 2016, it was already the second most profitable country for the company, behind the USA, and the metropolitan areas of Rio de Janeiro and São Paulo concentrated the largest number of journeys in the world. A year later, five metropolitan areas accounted for about 25% of the total journeys: Los Angeles, New York, San Francisco, London and São Paulo, the last of which becoming the city with the highest volume of travel in the world (Uber Technologies Inc., 2019), revealing that despite the computing flexibility of its platform, territorial conditions determine the company's income.

Thus, it can be empirically proven that one of the seminal hypotheses about "The geography of Uber" (Lincoln, 2014) has not been fully proven. Contrary to what the author argued, for whom Uber would have less chance in cities like Rio de Janeiro and São Paulo, these cities are precisely responsible for the company's success, ensuring its profitability on a global scale. The author argued that, having informal and flexible transport systems that would already meet the needs of displacement - creating a local and regional market that would not follow the principles of the market economy -, Brazilian cities would establish a geographical barrier to innovation brought about by displacements via digital platforms, a factor also present in other countries with informal systems such as in India, Russia and China.

However, instead of eliminating existing informal systems, its prodigious expansion shows its capacity to "vampirize" the flexible forms of organization typical of the lower circuit of the urban economy, as proposed by Santos (1979 [1975]). Large national ridesharing companies have also formed in India (Grab), Russia (Yandex) and China (Didi), often maintaining cooperation agreements with Uber itself.

As we try to show below, the fact that a socio-spatial phenomenon is recent does not prevent thinking about its periodization, understood as a method path for a coherent analysis of the use of the territory by enterprises. The periodization proposed below seeks to contribute to the debate about the role of the territory as an active platform for virtual platforms, that is,

the actual functioning of the company and its profitability do not occur in an exclusively digital environment, as they are dependent on historical and geographical conditions of the different socio-spatial formations.

### **Periodization of ridesharing platforms in Brazil: an analytical proposal**

The speed and extent of the changes resulting from the arrival of ridesharing companies in Brazil allows us to propose time divisions, each containing its own analytical variables. We tried to operationalize Santos's proposal (1996, p. 46-49), according to which, each technique has different ages: (i) that of its invention, (ii) that in which it starts to influence the way of life of societies and (iii) that of the arrival at specific places of socio-spatial formations.

Methodologically, some reservations are necessary. Firstly, the choice of Uber is justified by its pioneering spirit and monopolistic tendency. This company, like its competitors, uses strategic information as a productive factor, so public data is scarce. Geographically, its business operation is undertaken in "cities", even though this category appears vague, as it homogenizes the different political-administrative divides in the countries where it operates: while in some of them the city assumes the administrative function, in Brazil, the city and municipal limits are different. In addition, empirical research (Tozi, 2017, 2018) has revealed a regional process, that is, the company defines an area of operation from a central city.

Periodization incorporates the different period of operation within the national territory while areas of contiguous urbanization, such as metropolitan areas, a geographical fact of collective life, gain relevance related to the municipal limits and impose themselves objectively on companies. Consequently, it is observed that regionalization takes on the function of an action tool, as Ribeiro argues (2004, p. 202), for whom corporations regionalize the territory in the "creation of market niches and the possibility of determining rules for the organization of work and consumption". As an example, when Uber announced its presence in São Paulo, it indicated a regional operation in that city, which, however, does not coincide with the limits of the respective Metropolitan Region.

Specifically, with regard to the operations of application software companies in Brazil, we propose to think about four periods: (i) start of operations and knowledge of the national territory: the metropolitan quadrilateral formed by Rio de Janeiro, São Paulo, Belo Horizonte and Brasília (2014), (ii) second phase of territorial expansion: beginning of a spread into the interior and increase of municipal resistance (2015-2016), (iii) accelerated spread into the interior (2016-2018) and (iv) creation of the new national legal framework and new municipal regulations. Let us look at how each one develops.

#### **(i) Start of operations and knowledge of the national territory: the metropolitan quadrilateral formed by Rio de Janeiro, São Paulo, Belo Horizonte and Brasília (2014)**

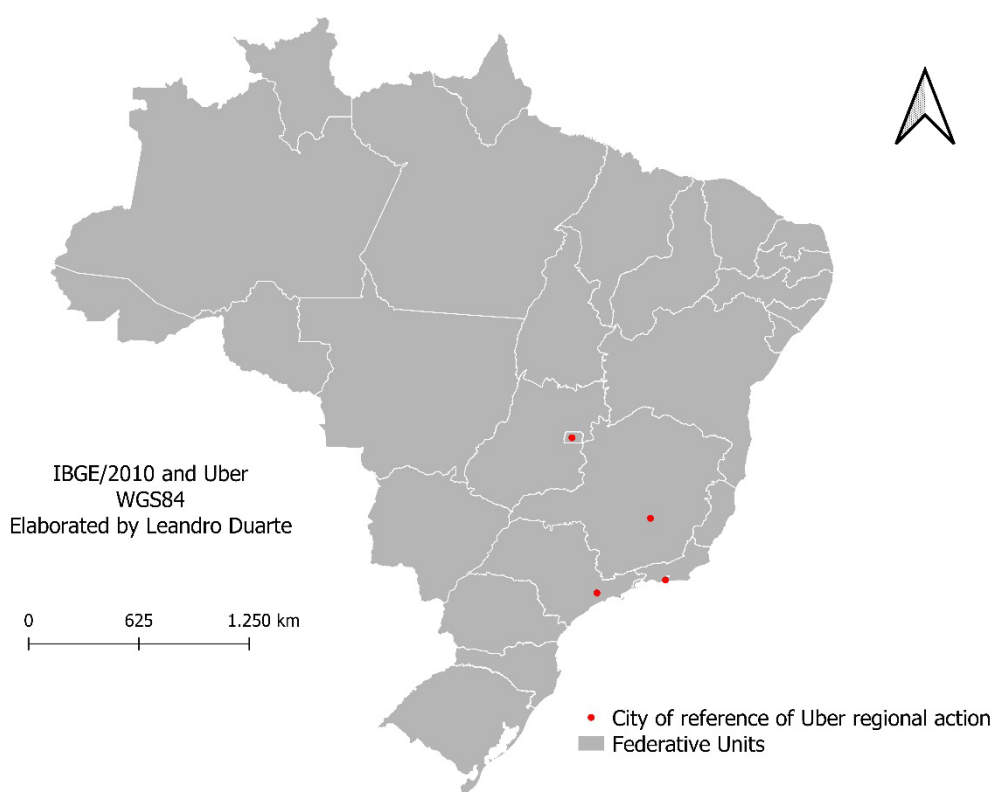
Just five years after its "social birth" in San Francisco, Uber is the first major application-based transportation company to operate in Brazil, overlapping with other smaller companies that started the so far incipient national market, still in partnership with taxi services, such as 99Taxis,



Easy Taxi, Vá de Táxi and Safer Taxi. Uber started operations in Rio de Janeiro on May 15, 2014, on the eve of the Brazilian World Cup.

The choice of the city (Rio de Janeiro) - one of the most international and touristic in the country - and hosting a global event, produced a unique synergy for the simultaneous renewal of the technosphere and the psychosphere, as defined by Santos (1994) and Kahil (2010): first, the city, whose territory was materially modernized for the World Cup and the Olympic Games (2016), welcomed, as an extension of this process, the new technology. Second, the influx of tourists and international professionals already used to using the application abroad; thirdly, by fostering the opposition between the “modernity of the digital platform” and the “archaism of taxi drivers”, a professional category that falls on value judgments, such as being the beneficiary of state privileges. In return, Uber would offer a new technical system in which the user, becoming an “involuntary inspector”, would accompany the commands issued by the company (fare and route) and the possibility of evaluating drivers. After settling in Rio de Janeiro, Uber started its activities in other national metropolises: São Paulo (June 2014), Belo Horizonte (September 2014) and Brasília (November 2014) (Figure 1).

**Figure 1 - Start of operations and formation of Uber’s metropolitan quadrangle (November 2014)**



Source: Own elaboration, based on data from Uber ([s.d.]).

In this period, the diffusion of innovation seems to follow the principles of what Hägerstrand (1965, p. 40) called a hierarchical effect, that is, it diffuses, in a new country, from the most relevant metropolises in the hierarchy, despite the distance between them. It is also argued that this period would be the beginning of the knowledge about the national territory

from its most cosmopolitan areas - those most integrated with the international economy -, creating a kind of “territorial reverse salient”<sup>8</sup>, that is, the improvement of the digital platform not only depends on developers and programmers in laboratories, as it demands its use in specific territories and societies.

The presence of Uber in the main cities of the country has spread the habit, previously scarce, of the use of transportation applications. Even without legal support, the company imposes its presence to build, for its benefit, a psychosphere of modernity, fomenting the discourse that, as new technology, it is inevitable, and therefore any attempt at constraint would be a denial of technical progress and “natural evolution” of the means of displacement.

However, while a national act of law on the subject was still under way, the São Paulo executive banned the paid transport of passengers mediated by applications (Law n. 16.279, of October 8, 2015). In the meantime, a direct action of unconstitutionality in November of the same year<sup>9</sup>, considered that the law violated the right to free initiative. A few months later, through Decree no. 56,981 (São Paulo, 2016), the Executive regulated the operation of Accredited Transport Technology Operators which, in addition to Uber and the like, provided for the system of paid rides and the circulation of autonomous vehicles.

Once the first regulation was instituted, a kind of “indirect jurisprudence” was created that made it possible to expand to other municipalities, given the role of leader played by São Paulo in the adoption of modernizations. However, the use and standardization of the territories do not coincide, and they respond differently to the arrival of platforms, a fact that is consolidated in the following phase.

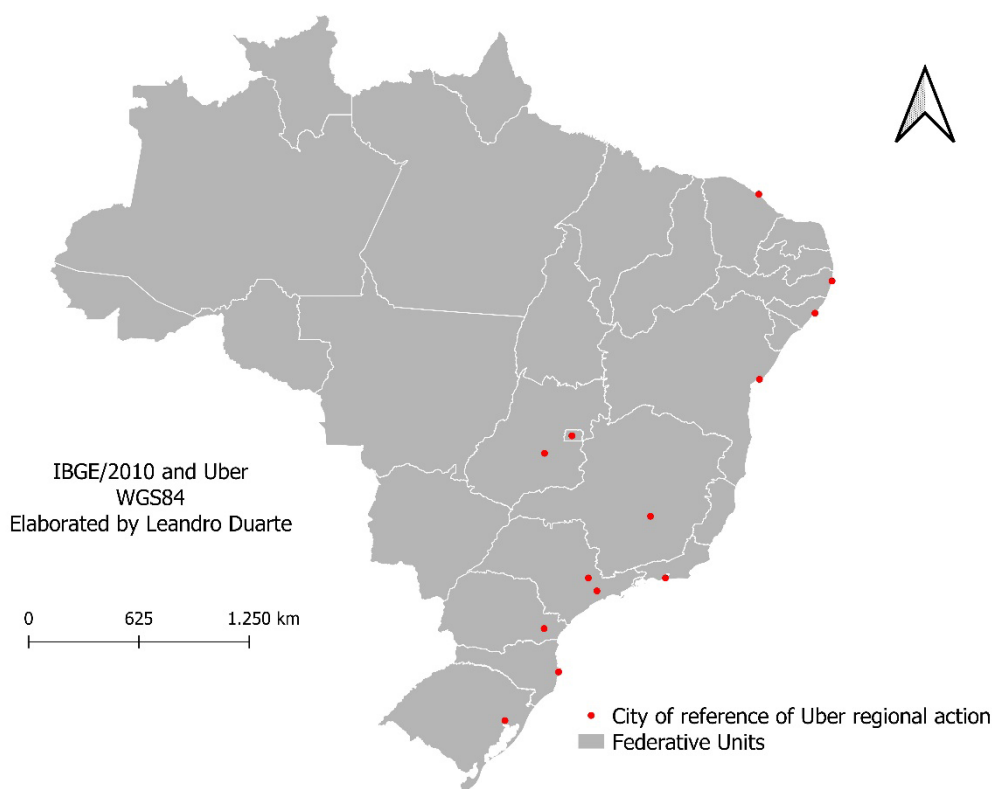
## **(ii) Second phase of territorial expansion: beginning of spread into the interior and increase of municipal resistance (2015-2016)**

One year after arriving in Brazil, Uber chooses Porto Alegre as the fifth city to settle in, in November 2015. Then, in January 2016, operations began in Campinas (SP). It is argued that this second phase marks the beginning of a change in the company’s territorial strategy, previously concentrated in four state capitals. The hypothesis about this new period is that the systematic knowledge of the territory obtained in the previous year led to improvements to the digital platform that allowed the territorial expansion of the company. The choice for Campinas, an intermediate city 100 km away from São Paulo, was not coincidental: it lies in part of the most dynamic and fluid area of the national territory, known as Macrometropolis Paulista (Souza, 1978, p. 25), and has a high concentration of income, people, means of transport and public and private infrastructure (Figure 2).

<sup>8</sup> This is a dialogue with the Hughes proposal (1983).

<sup>9</sup> TJ-SP - ADI: 22169010620158260000 SP 2216901-06.2015.8.26.0000, Reporting Judge: Francisco Casconi, Trial Date: 11/11/2015. Special Unit. Publication Date: 17/11/2015.

**Figure 2 - Second phase of territorial expansion and beginning of the spread into the interior (January 2016)**



Source: Own elaboration, based on data from Uber ([s.d.]).

Once again, we observe political resistance from municipal entities to the entry of global companies through laws that aimed at banning them and hampering the *laissez-faire* that the platforms themselves arrogated. Campinas invoked a 2010 law (Law No. 13,775, especially article 22) to consider Uber's service illegal and seize drivers' vehicles. The mayor of Rio de Janeiro sanctioned Law no. 6,106, of November 25, 2016, which prohibited the use of private vehicles for the paid transportation of people in the municipality, suspended by an injunction of the Court of Justice (TJ-RJ) in benefit of Uber a few hours after being sanctioned. Belo Horizonte, Law no. 10,900 (as of January 8, 2016) determined that companies and drivers should be registered with the Belo Horizonte Transport and Transit Company (BHTrans).

However, on the same day that the law was regulated by the city government, Uber released a note stating that it would continue to operate in the municipality (Law ..., 2016), that is, it would not comply with approved legislation. In fact, the company continued to operate illegally until obtaining court injunctions that authorized its operations in Belo Horizonte and Minas Gerais territories.<sup>10</sup> These judicial victories of global corporations reveal the rele-

<sup>10</sup> “[...] the service for transporting people offered through a mobile device application (cell phones, tablets, etc.), such as UBER, is part of the private transport contract modality, not to be confused with the public transport service provided by taxi drivers, with the permission of the public authorities”, according to: JUDICIAL POWER OF THE STATE OF MINAS GERAIS. Belo Horizonte County. 1st Court of Public Finance and Municipalities of the District of Belo Horizonte. Collective writ of mandamus. Process: 5014923-75.2016.8.13.0024, Belo Horizonte, 03/10/2016; COURT OF JUSTICE OF THE STATE OF MINAS GERAIS. 6th Court of Public Finance and Municipalities of the District of Belo Horizonte. Writ of mandamus. Process: 5117005-87.2016.8.13.0024, Belo Horizonte, 09/12/2016.

vance of the hypothesis of Morozov (2016), for whom the global expansion of Uber would represent a decrease in the power of local public entities. However, the process becomes more complex later on.

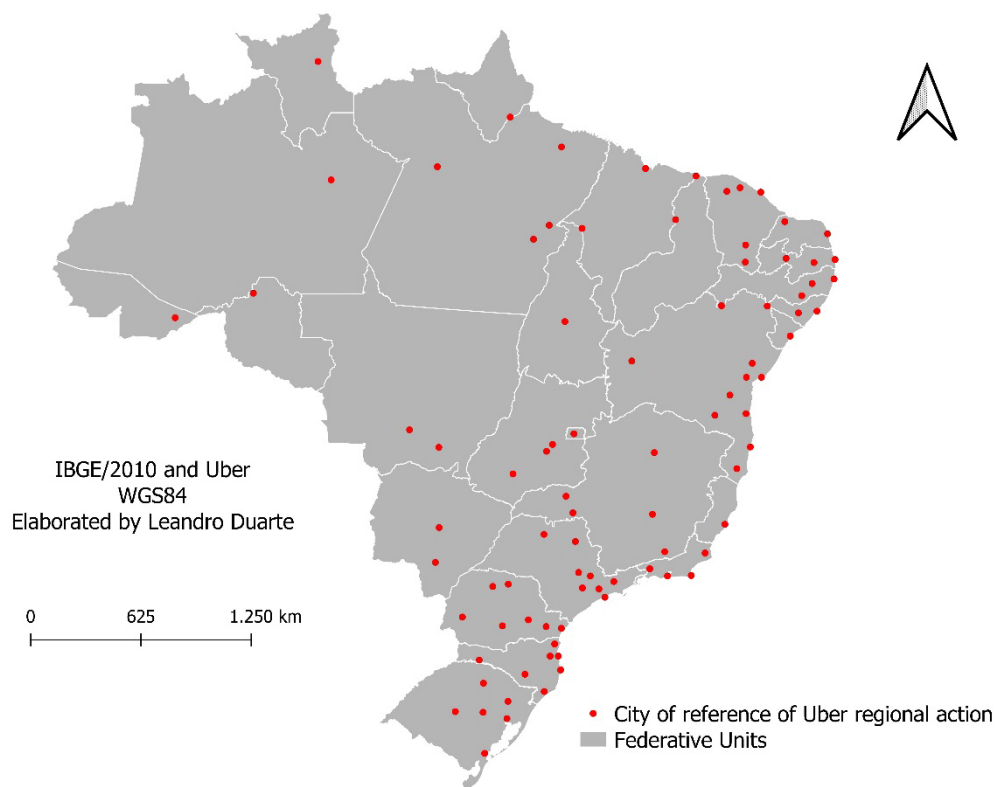
### **(iii) Accelerated spread into the interior (2016-2018)**

Whether by clients already used to using it, or supported by injunctions, Uber was already, at that time, inserted in the national territory. If until then the arrival in new cities had been slower, from 2016 other capitals and intermediate cities and their regions quickly became part of the company's territorial action strategy. In September 2016, the company operated from 12 cities which acted as models, including 11 capitals and Campinas; in December there were already 34 cities among the 67 in South and Central America and, in October 2017, that number almost tripled, reaching 90 cities (Uber, [s.d.]) (Figure 3).

This period marks the expansion of the company establishing in intermediate and smaller cities, and pioneering new fronts, since the markets in the capitals and large cities of the country were already secured, or, in a significant part of them, started to be disputed with their direct competitors (99 and Cabify). Thus, Uber became the most geographically dispersed company in the territory. The 99 ridesharing platform started operating with taxi drivers in São Paulo in 2016, and then launched the 99 Pop service for "driver-partners". In early 2017, 99 received US \$ 100 million in contributions from the Chinese Didi Chuxing and became Uber's main territorial competitor in the country, revealing a rapid turnaround in its policy of territory use, with the acceleration of its geographical dispersion: Rio de Janeiro was the second city chosen in March 2017, and in September and October of the same year, the operations began in Belo Horizonte and Brasília, respectively.

A year after capitalizing 99, Didi bought the company. This reveals the tendency towards the denationalization of companies, a step that is necessary for competition between a small number of large platforms that are supported by multinational geographic scales and the scope of millions of daily trips. It is important to note that the name 99 was maintained, probably due to its notoriety, while the company uses the name Didi for operations in other countries, including Latin America.

**Figure 3 – Ubers accelerated spread into the interior (October 2017)**



Source: Own elaboration, based on data from Uber ([s.d.]).

During this period, differentiation and adaptation strategies in different regions and cities, such as vehicle categories, were deepened: from UberX, with simpler vehicles, with up to eight years of use, present in all cities, up to the more expensive categories, like Comfort and Black, in intermediate cities and capitals, including specialized services in São Paulo and Brasília - UberPET, UberBike and UberBAG, for transporting animals, bicycles and luggage, respectively. The UberPOOL shared travel service, in which the algorithm directs a single vehicle to different users with origins and destinations in nearby areas, started its tests in São Paulo in 2016. After being renamed *Uber Juntos* (Uber Together, in free translation) in 2018, the option expanded to other cities.

In turn, the payment in cash directly to the driver started in 2016 in Recife, Fortaleza and Salvador and was later adopted throughout the country. Here, we can observe another adaptation of the digital platform to the territory, since the technology of digital transactions finds limits in an unequal socio-spatial formation, where there is a great circulation of physical money, in addition to significant rates of poverty, indebtedness or lack of credit cards.

#### **(iv) Creation of the new national legal framework and new municipal regulations. The consolidation of territorial oligopolies and monopolies (2018-present)**

As the country is a federal republic, each municipality began to regulate, at its discretion, the operation of the platforms. While this practice is commonplace, it would ultimately require corporations to negotiate with each municipality, while litigation would overburden the judicial

system. In this sense, a new national law was announced, that met common points related to this theme.

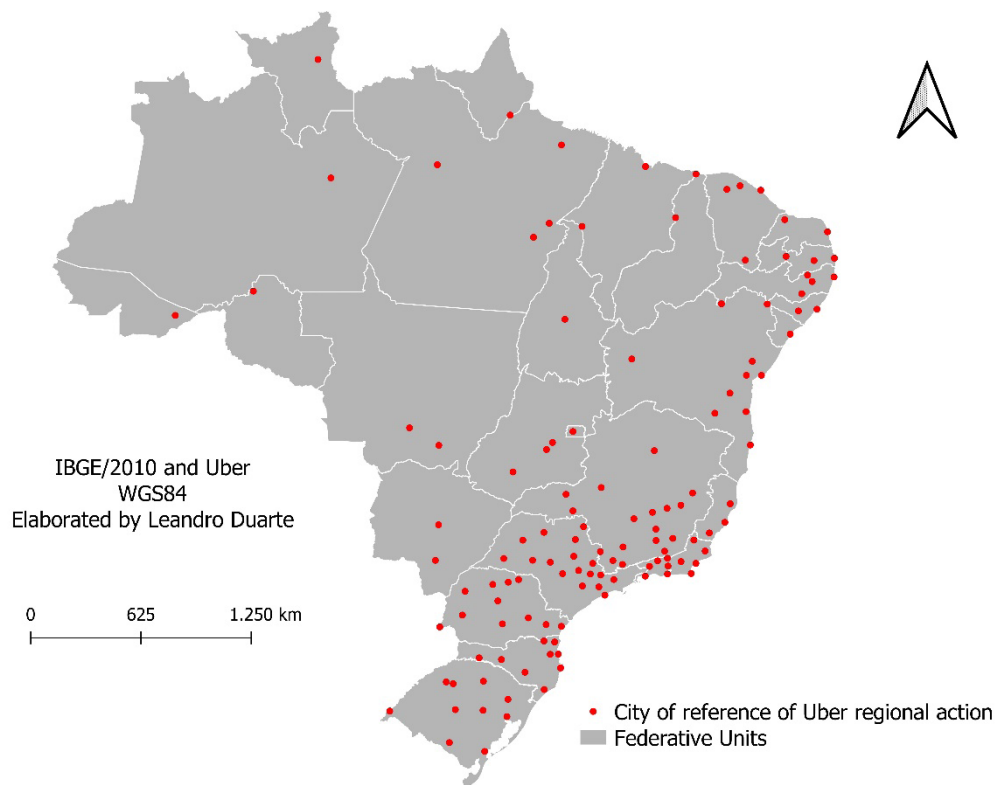
Thus, act of law no. 5,587 / 2016, authored by federal deputy Carlos Zarattini (PT-SP), was approved by the Chamber of Deputies on April 4, 2017. Then, there was a major advertising campaign that united companies against what they called “the law of retrogression”. In their vote in the Federal Senate (PLC No. 28/2017, approved on October 31, 2017, in a session personally accompanied by Uber CEO, Dara Khosrowshahi), many of the items previously approved in the Chamber were rejected or modified. Therefore, the legislation initially restrictive to the action of platform companies ended up being adapted to their interests. In the second vote of the chamber, the act modified by the senate was ratified, and Law no. 13,640 was sanctioned by the President of the Republic on March 26, 2018.

Among the items taken from the original project, two deserve to be highlighted: the removal of a significant part of the municipal autonomy in terms of planning and organization of traffic and the revocation of the companies’ obligation to provide travel and itinerary data to municipal government and traffic and mobility departments and authorities. The first point is central to the platforms, since their base of action, as we have already discussed, is not municipal, but regional, within the mobility dynamics that configure the great urban concentrations in Brazil. As for the second item, access to data would be essential for municipal government to know the changes in their territories brought by applications and to plan for them, while, for companies, this strategic information is where they start to have an exclusive systematic knowledge of displacements in real time. Based on this, they seek to become progressively more efficient than their competitors.

However, the situation is not completely harmonized, as the national federative system is full of different paths for the autonomy of municipal entities, especially with regard to new issues, on which legislation is not always completely defined. Furthermore, the arrival of new economic agents in the places is not without local resistance. This is, therefore, the present situation: after the approval of the national law, which provides the general framework, each municipality has begun to legislate and regulate specific elements, many of which were not previously foreseen, such as the age and configuration of vehicles, the drivers registration, identification tags, approval of activity and vehicle fees and inspection, licensing rules and limit on the number of vehicles, to name some of the most common items. These obstacles have not, however, prevented the consolidation of companies, especially Uber, now reaching 126 cities in the national territory (Figure 4).



**Figure 4 - Uber's consolidation in Brazil (September 2019)**



Source: Own elaboration, based on data from Uber ([s.d.]).

An example of this dispute between global corporations and municipalities occurs again in São Paulo. Through the Municipal Committee for Road Use, linked to the Municipal Mobility and Transport Department, at the center of the legal framework presented above, resolution no. 21, of March 28, 2019, resuming the obligation for operators to send reports with “information about the movement of rides for the purposes of analyzing the flow of vehicles and the use of urban roads”. This mega set of data should have detailed information on origin and destination (with latitude and longitude), as well as speed and distance traveled. In addition, §1 of art.7 informs that “the rides in this municipality will only be considered regular when carried out on licensed plates in the Municipality of São Paulo” (São Paulo, 2019).

Therefore, in a single resolution, the municipality recovered two central elements that had been removed from the original project that would become national law. The exclusivity of license plates was supported by a geographic principle of charges and bonuses: being the priority destination for metropolitan displacements, São Paulo would have many vehicles (private or rented) using its roads, although they were licensed in other municipalities, where, consequently, they paid taxes. However, these two elements of the resolution were suspended by court injunctions in favor of Uber.

In another example, Confins (MG), where the international airport serving the state is located, prevented, through Law no. 874, of May 14, 2018 (Confins, 2018), drivers from other municipalities driving passengers to the terminal from also starting rides at the airport, as is common with taxi drivers. Under the approved law, only vehicles registered in the municipality would have this right. In addition, a driver registration with the local government was required.

The law was suspended by a court injunction for usurping the competence of the union. A similar process occurred in Niterói (RJ) and Curitiba (PR), where the municipalities used decrees (Decree No. 12,977 / 2018 and Decree No. 1,302 / 2017, respectively) to equally prohibit the operation, in their territories, of vehicles licensed in other locations, as well as requiring access to the data of the journeys made. Both local governments then issued revocation decrees (Decree No. 13.314 / 2019 and Decree No. 1.229 / 2018, respectively).

It is observed, with these examples, among others not covered here, that new disputes are drawn between the municipalities and between municipalities and the corporations, based on the regulation of the ridesharing platforms. These disputes reveal, geographically, the primacy of strategic data and the regional scale for corporations, which are supported, in turn, by preexisting displacements in the territory, in addition to the fact that the number of drivers using rented vehicles is increasing, therefore, with license plates in a municipality other than the one in which it circulates. But, since their action is regional, the municipal regulations become a constraint to their territorial strategies based on a *laissez-passer* by the municipal limits, with a tendency to win when the judicial system is activated. The action of local government and city councils reveals, in turn, the persistence of local resistance.

Currently, we are witnessing the creation of oligopolies, duopolies and territorial monopolies between platforms. While Uber benefits from its pioneering expansion towards intermediate and smaller cities, creating monopolies,<sup>11</sup> the capitalized 99, continues with a vigorous expansion strategy *pari passu* to that of Uber, leading to the consequent formation of territorial duopolies. Spanish Cabify, in turn, adopts a territorially selective policy, restricting neighborhoods with higher incomes in Belo Horizonte, Brasília, Campinas, Curitiba, Porto Alegre, Rio de Janeiro, Santos and São Paulo (Em que cidades ... , 2019), and continues to charge higher prices, with newer vehicles of higher range.

In the areas where the three corporations operate, territorial oligopolies have been formed so far, while other global corporations arrive in the country and small local and regional companies maintain some market share.

## **Final notes: towards a corporate and algorithmic management of the territory?**

The idea of this text was not, as we pointed out, to make a synthesis of the new uses of the territory that are made from the trivialization of ridesharing companies. The idea is to contribute with a geographic reading of the processes in progress and with a proposal of incorporation of the territorial strategy of companies with platform action, particularly Uber. It is believed that the vast theoretical debate and empirical studies that Geography has produced on the role of technoscience and information collaborate in understanding the new uses of the territory. The algorithms, under the control of platform corporations, have created digital connections between place and world. In addition to what has been discussed, it is necessary to list

---

11 In a recent interview, the head of Uber Brazil said: “the challenge now is not to open more cities, but to maintain growth in a sustainable way” (Woods, 2019).

themes that emerge and pose themselves as analytical challenges based on the trivialization of the uberization process.

It should be noted that, despite the multiple resistance to Uber's action, its revenue in the country reached US \$ 959 million in 2018, an increase of more than 15% compared to the previous year, US \$ 831 million, which, in turn, represented a staggering 352% growth compared to 2016, whose revenue was \$ 236 million (Uber Technologies Inc., 2019). For three years in a row, the Brazilian market was the second most profitable for the company, behind only the US. Its hegemony as the most widespread application software transport company in the country, according to the periodization presented, corroborates the hypothesis that the corporation's great income potential is directly linked to its territorial strategies and to a methodical choice of the country's best suited cities. In summary, despite their apparent virtuality, externalities such as urban infrastructure are essential for platforms and algorithms, in addition to the already discussed essential externalities (vehicles and drivers).

It is also necessary to think about issues related to the local circulation of money, especially in situations of crisis and unemployment, such as the current one. The arrival of global corporations in the cities creates processes of "vampirization" of income that previously circulated in the lower circuit towards the upper circuit of the urban economy, according to Santos' proposal (1979 [1975]). The fees charged by the platforms, between 20% and 40% of the price of each trip, represent amounts that would feed more horizontal forms of economy (local and regional). In the case of Uber, the Netherlands takes on the role of financial hub for the triangulation between services provided in Brazil and the tax exemptions that country offers. For this reason, any attempt at comparison or "competition" between global ridesharing companies and local taxi drivers is wrong, if not misleading.

As for the debate about a possible improvement of the displacement systems in the territory or its greater efficiency thanks to applications, it is imperative to consider that corporations adopt GeoFencing, a type of virtual perimeter. This technical-geographic ban to the territory is called "virtual restriction of zones for passenger boarding" in the case of Uber. With this practice, the company assumes a political role in organizing the territory, defining, via GPS, areas that can be served and areas that can't, according to its criteria, under the claim of a lack of security. Effectively, this decision has left popular and peripheral areas outside its coverage area.

In Brazil, urban mobility is based on structural elements such as (i) the periphery processes, which impose displacements by the distance between home and work, (ii) the insufficiency (qualitative and quantitative) of the transport networks of different ages in all their configurations and capacities (buses, metropolitan, regional or long-distance trains, cycle paths, river systems), which stimulates the use of personal vehicles, and (iii) the tendency towards territorial fragmentation of activities, services (public and private), commerce and institutions.

Therefore, the promise of a new modal via ridesharing platforms is only truly realized in areas that already have a high density of public and private transport systems, thus reinforcing the concentration of supply where it is already proportionally favorable. This concentrating effect should also be considered in debates and research about the impact on traffic of tens of

thousands of vehicles circulating with reduced parking times. The lack of publicity about company data makes it more difficult to carry out more detailed research on this process.

Thus, rereading Santos debate (2017 [2000]), one could think that there is a potential or virtual fluidity created by applications, which, however, is only effective in places and for people selected by the corporate policies. The rejection of municipal service regulation policies only reinforces this process of territorial fragmentation, under the pretext of a freedom of private initiative that naturalizes socio-spatial inequalities. At the same time, however, it is observed that the habit of travelling via ridesharing platforms is becoming increasingly commonplace in Brazilian society as a whole, as evidenced by the proportion of spending on transport in the total consumption expenditure average of the Brazilian family: according to the IBGE (2019), 18.1% of the family budget is dedicated to “transportation”, behind only “housing”, with 36.6%, and more than “food”, with 17.5%, an unprecedented historical fact. The most recent “São Paulo Subway Origin and Destination” survey reveals that 362 thousand daily rides were made by application software in the Metropolitan Region, against 113 thousand taxi rides (Metrô, 2017).

The arrival of new global transport companies creates tension regarding the distribution of power among the federal entities in force since the 1988 Constitution, but at the same time, reinforces it. Municipal autonomy has proved to be an obstacle to an unimpeded expansion of these companies throughout Brazilian territory. As a result, as we have tried to present, companies create corporate regionalization of the territory as a strategic tool, that is, they act in subspaces where there is no constituted government.

In addition to these issues, disputes in the field of labor law also follow. Digital platform companies declare themselves only hired by drivers, who would be the service providers. This attempt to reverse the hierarchical relationship between those who define operating rules, routes, passengers, fares, fees and payment terms, the criteria for selecting and evaluating workers and vehicles, the goals, awards and ride acceptance rates has found support in many decisions, in different instances. For workers, in addition to fixed vehicle’s costs and strenuous working hours (reports of working hours over 12 hours a day are common); the topic of security is on the rise with both drivers and passengers, given the growing number of harassments, assaults and murders of drivers. As a result, new surveillance and control systems are demanded and added to applications, which increases the stress of workers exposed to such surveillance devices.

Finally, it is believed that Geography can contribute greatly to the understanding of ongoing processes, as information and technique are two central analytical categories in the discipline. Information proves to be a contemporary productive factor, and, consequently, the algorithm and the digital platform are not alien artifacts to society or the territory of the technical-scientific-informational period, but new mediators of action between global corporations and the (local, regional, national), territory performing a distant coordination of dispersed but integrated technical objects.

Although unintentionally, drivers, vehicles, smartphones and passengers have become new enumerators and sensors to capture information – this is a resource of the globalization era - creating an algorithmic management of the territory for corporate purposes. They provide

uninterrupted big data on the territory, traffic and displacement, creating gigantic databases on the functioning of social life. In isolation, this data is meaningless, but thanks to the ability to collect, organize, systematize and use them for their own benefit, this trivial data becomes strategic information and can even be marketed. What has been outlined, with clear nuances, is a algorithmic-corporate management of the territory.

## References

- ABÍLIO, L. C. Uberização do trabalho: subsunção real da viração. **Passa Palavra**, 2017. Available in: <http://passapalavra.info/2017/02/110685>. Accessed on 16 Oct. 2017.
- ANTUNES, R. **O privilégio da servidão: o novo proletariado de serviço na era digital**. São Paulo: Boitempo, 2018.
- CONFINS. Prefeitura Municipal de Confins. Lei n. 874, de 14 de maio de 2018. Dispõe sobre a regulamentação da prestação do Serviço de Transporte Individual Privado de Passageiros Baseado em Tecnologia de Comunicação Digital e dá outras providências. Available in: <https://leismunicipais.com.br/a/mg/c/confins/lei-ordinaria/2018/87/874/lei-ordinaria-n-874-2018-dispoe-sobre-a-regulamentacao-da-prestacao-do-servico-de-transporte-individual-privado-de-passageiros-baseado-em-tecnologia-de-comunicacao-digital-e-da-outras-providencias>. Accessed on 16 Aug. 2019.
- EM QUE CIDADES opera a Cabify? **Centro de Ajuda**. Available in: <https://help.cabify.com/hc/pt-br/articles/115000996089-Em-que-cidades-opera-a-Cabify->. Accessed on 15 Jan. 2019.
- HÄGERSTRAND, T. Aspects of the spatial structure of social communication and the diffusion of information. **Regional Science Association Papers**, v. 16, p. 27-42, 1965. doi: <https://doi.org/10.1007/BF01888934>.
- HARDT, M.; NEGRI, A. **Império**. Rio de Janeiro: Record, 2001.
- HOW UBER Could Justify A \$120 Billion Valuation. **Forbes**, 3 dez. 2018. Available in: <https://www.forbes.com/sites/greatspeculations/2018/12/03/how-uber-could-justify-a-120-billion-valuation/#21e6d1af7f9b>. Accessed on 14 Mar. 2019.
- HUGHES, T. P. **Networks of Power: Electrification in Western Society, 1880–1930**. Baltimore: Johns Hopkins University Press, 1983.
- IBGE. INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA. **Pesquisa de orçamentos familiares 2017–2018: primeiros resultados**. Rio de Janeiro: IBGE, 2019.
- KAHIL, S. P. Psicoesfera: uso corporativo da esfera técnica do território e o novo espírito do capitalismo. **Sociedade & Natureza**, Uberlândia, v. 22, n. 3, p. 475-485, 2010.
- KLEINER PERKINS. **Internet Trends Report 2018**. Available in: <https://www.kleinerperkins.com/perspectives/internet-trends-report-2018/>. Accessed on 12 Jun. 2018.



- LEME, A. C. R. P. **Da máquina à nuvem:** caminhos para o acesso à justiça pela via de direitos dos motoristas da Uber. São Paulo: LTr, 2019.
- LINCOLN, K. The geography of Uber. **Pacific Standard**, 11 set. 2014. Available in: <https://psmag.com/environment/transportation-geography-uber-silicon-valley-taxi-driving-smartphone-90446>. Accessed on 2 Oct. 2017.
- METRÔ. **Pesquisa Origem e Destino 2017**. Available in: <http://www.metro.sp.gov.br/pesquisa-od/>. Accessed on 14 Mar. 2019.
- MOROZOV, E. Cheap cab ride? You must have missed Uber's true cost, 2016. **The Guardian**, 3 jan. 2016. Available in: <https://www.theguardian.com/commentisfree/2016/jan/31/cheap-cab-ride-uber-true-cost-google-wealth-taxation>. Accessed on 1 Mar. 2016.
- POCHMANN, M. A uberização leva à intensificação do trabalho e da competição entre os trabalhadores. Entrevistador: André Antunes. **EPSJV-Fiocruz**, Rio de Janeiro, 2016. Available in: <http://www.epsjv.fiocruz.br/noticias/entrevista/a-uberizacao-leva-a-intensificacao-do-trabalho-e-da-competicao-entre-os>. Accessed on 21 Nov. 2016.
- RIBEIRO, A. C. T. Regionalização: fato e ferramenta. In: LIMONAD, E.; HAESBAERT, R.; MOREIRA, R. **Brasil, século XXI – por uma nova regionalização:** agentes, processos, escalas. São Paulo: CNPq/Max Limonad, 2004. p. 194-212.
- RIFKIN, J. **La nouvelle société du coût marginal zéro:** l'internet des objets, l'émergence des communaux collaboratifs et l'éclipse du capitalisme. Paris: Les Liens qui Libèrent, 2014.
- SANTOS, M. **Toward an Other Globalization:** From the Single Thought to Universal Conscience. Springer, 2017 [2000].
- SANTOS, M. **A natureza do espaço:** técnica e tempo, razão e emoção. São Paulo: Hucitec, 1996.
- SANTOS, M. **Técnica, espaço, tempo:** globalização e meio técnico-científico-informacional. São Paulo: Hucitec, 1994.
- SANTOS, M. **The shared space:** the two circuits of the urban economy and its spatial repercussions, Methuen, Londres, 1979 [1975].
- SÃO PAULO (Município). Secretaria Municipal de Mobilidade e Transportes – SMT/CMUV. Resolução n. 21, de 28 de março de 2019. Altera as Resoluções CMUV nº 01, de 12 de maio de 2016, e nº 16, de 07 de julho de 2017, e dá outras providências. Available in: <http://legislacao.prefeitura.sp.gov.br/leis/resolucao-secretaria-municipal-de-mobilidade-e-transportes-smt-cmu-21-de-28-de-marco-de-2019#anexos>. Accessed on 13 Aug. 2019.
- SÃO PAULO (Município). Decreto n. 56.981, de 10 de maio de 2016. Dispõe sobre o uso intensivo do viário urbano municipal para exploração de atividade econômica privada de transporte individual remunerado de passageiros de utilidade pública, o serviço de carona solidária e o compartilhamento de veículos sem condutor. Available in: <http://legislacao.prefeitura.sp.gov.br/leis/decreto-56981-de-10-de-maio-de-2016>. Accessed on 15 May 2016.



- SENOR, D.; SINGER, S. **Start-up Nation: The Story of Israel's Economic Miracle**. New York: Twelve, 2009.
- SENTENCIA DEL TRIBUNAL DE JUSTICIA (Gran Sala). En el asunto n. C-434/15, Asociación Profesional Elite Taxi contra Uber Systems Spain SL, de 20 de diciembre de 2017. Available in: <https://eur-lex.europa.eu/legal-content/ES/TXT/HTML/?uri=CELEX:62015CJ0434&from=EN>. Accessed on 15 Feb. 2018.
- SILVA, A. M. B. **A contemporaneidade de São Paulo: produção de informações e novo uso do território brasileiro**. Tese (Doutorado em Geografia Humana) – Faculdade de Filosofia, Letras e Ciências Humanas, Universidade de São Paulo, São Paulo, 2001.
- SIMONDON, G. **Du mode d'existence des objets techniques**. Paris: Aubier-Montaigne, 1969[1958].
- SLEE, T. **What's yours is mine: against the sharing economy**. New York/London: OR Books, 2015.
- SOBRE A LEI 10.900/2016. **Uber Blog**. Belo Horizonte, 3 abr. 2016. Available in: <https://newsroom.uber.com/brazil/sobre-a-lei-10-9002016/>. Accessed on 8 Sep. 2016.
- SOUZA, M. A. Cidades médias e desenvolvimento industrial: uma proposta de descentralização metropolitana. **Estudos e Pesquisas 17**, São Paulo: Secretaria de Economia e Planejamento do Estado de São Paulo, 1978.
- SRNICEK, N. **Platform Capitalism**. Cambridge: Polity, 2016.
- STONE, B. **The Upstarts: How Uber, Airbnb, and the killer companies of the Silicon Valley are changing the world**. New York: Little, Brown and Company, 2017.
- TOZI, F. As novas tecnologias da informação como suporte à ação territorial das empresas de transporte por aplicativo no Brasil. In: ZAAR, M.; CAPEL, H. (Org.). **Las ciencias sociales y la edificación de una sociedad post-capitalista**. Barcelona: Universidad de Barcelona/Geocrítica, 2018. v. 1. p. 172-187. Available in: <http://www.ub.edu/geocrit/XV-Coloquio/FabioTozi.pdf>
- TOZI, F. Uso do território brasileiro por empresas globais de transporte por aplicativos: as estratégias de ação da Uber e as tensões advindas das resistências locais e regionais. In: ENANPEGE, 12., 2017, Dourados. **Anais...** Dourados: UFGD, 2017. v. 1. p. 10270-10281. Available in: [https://www.enanpege2019.anpege.ggf.br/resources/anais/8/1562985376\\_ARQUIVO\\_ENANPEGE\\_Completo\\_Plataformas\\_Digitais\\_Territorio-recurso\\_TOZI\\_07\\_2019.pdf](https://www.enanpege2019.anpege.ggf.br/resources/anais/8/1562985376_ARQUIVO_ENANPEGE_Completo_Plataformas_Digitais_Territorio-recurso_TOZI_07_2019.pdf)
- THUILLIER, T. Viva Tech: Macron veut faire de la France une "start-up nation". **L'Express**, 15 jun. 2017. Available in: [https://lentreprise.lexpress.fr/international-export/viva-tech-macron-veut-faire-de-la-france-une-start-up-nation\\_1918278.html](https://lentreprise.lexpress.fr/international-export/viva-tech-macron-veut-faire-de-la-france-une-start-up-nation_1918278.html). Accessed on 27 Aug. 2019.
- UBER. Available in: <https://www.uber.com/pt-BR/cities/>. Accessed on 9 Dec. 2016.

UBER TECHNOLOGIES INC. Form S1 Registration Statement. United States Securities and Exchange Commission 2019. Available in: <https://www.sec.gov/Archives/edgar/data/1543151/000119312519103850/d647752dsl.htm>. Accessed on 29 Apr. 2019.

WOODS, C. Freia e acelera: chefe da Uber no Brasil vê empresa mais madura após crises, focada em segurança e no jeitinho brasileiro. Entrevistador: Gabriel Francisco Ribeiro. **Tilt-UOL**, 18 out. 2019. Available in: <https://www.uol.com.br/tilt/reportagens-especiais/entrevista-com-a-ceo-da-uber-no-brasil-claudia-woods/index.htm#novo-mantra-e-maturidade?cmpid=copiaecola>. Accessed on 2 Dec. 2019.