



TECHNOPOLITICS IN URBAN REGENERATION CO-CREATING PUBLIC SPACE

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Technopolitics in Urban Regeneration

Co-creating Public Spaces

24 JUN - 06 JUL / 2019

ISCTE-IUL + CM Cascais

SUBMISSION ABSTRACT: 31 MAY 2019

TITLE: The Map as a technopolitical tool and its role in the cartographic method of the Indisciplinar Group between 2012 and 2018

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TOPIC: Digital Cartographies / Technopolitics

KEYWORDS (4 words): Technopolitics; Cartography; IndAtlas Platform; Group Indisciplinar



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ABSTRACT

This paper proposes to investigate the role of maps as technopolitical devices (TORET, 2013) in the urban research projects developed by UFMG's – Federal University of Minas Gerais – Indisciplinar research group, between 2012 and 2018. Several projects will be addressed for which the development of collective mappings, through digital interfaces or not, played a fundamental role as devices of territorial interpretation and transformation, as well as for the articulation of social actors. It will also be examined how the conduct of such processes led to a research method that connects the territorial, temporal, social and communicational dimensions of the investigated phenomena (RENA *et al.*, 2016), culminating, finally, in the production of the digital platform IndAtlas (SÁ *et al.*, 2018), currently in development by Indisciplinar.

Indisciplinar is a multidisciplinary research group whose actions are focused on the investigation of contemporary space production, working together with various actors involved in urban dynamics, such as: social movements, other research and extension groups, members of organized civil society, public power etc. The aim is to demonstrate how the production of collective cartographies in its projects had an impact both for their academic results – contributing to the maturation of the group and its method of work –, as well as for the articulation of social actors entangled in the mentioned processes and the activation of new territorial dynamics

The article will be divided into two parts. The first one, with a more conceptual approach, will address the historical relationship between cartographic representation, territorial production and exercise of power. It is understood that the knowledge involved in elaborating and reading cartographic information was a resource intensely explored by dominant sectors at different times, leading to the construction of successive world images consonant with their interests (SÁ in RENA *et al.*, 2018, p.405). However, new possibilities open up in the contemporary world, with the emergence of concepts and practices such as *cartographic activism* (SANTOS, 2011), or *cartography in an extended field* (SPERLING, 2016). The advance and widespread dissemination



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of digital communication technologies contributes to the complexity of this controversy field (LATOURE, 2005), with an immense volume of spatial data being produced, accessed and shared by networked citizens, as well as feeding the production of easy-to-understand visualizations and manipulation by communities previously excluded from the cartographic language domain. While on the one hand such transformations have fostered intense debate about their democratizing potential, on the other hand there is also growing concern about the increasingly pervasive state and corporate surveillance mechanisms that can be supplied through the same technologies and databases (SÁ, *op. cit.*, pp. 10-11).

The second part of the article will be devoted to analyzing the importance and role of maps as a technopolitical tool in Indisciplinar's projects, be they physical or online mappings

2. Cartographies, technopolitics, geopolitics

Cartography as a concept has always played a fundamental role in Indisciplinar's production, both from a theoretical/philosophical point of view – from Deleuze and Guattari, cartography being one of the central principles to the concept of Rhizome, (DELEUZE; GUATTARI, 1995), understanding it "not only as a method of classical territorial geography, but as a daily micropolitical tactic composed of political action; insurgent, dynamic, always procedural and creative" (RENA et. al, 2015, p. 15) –; and for its traditional notion of territorial representation (map production), since this is one of the main resources explored in Indisciplinar's projects and actions. Both meanings are confused and constantly crossed in the production of the group, guiding our way of acting and relating to the subjects investigated: understanding ourselves not as external observers, but as one more networked actor, that affects the phenomena mapped, and is affected by them. At this point, however, we propose to shift the focus of the discussion from cartography as a philosophical



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concept, to place it on its controversial role as a tool for visualization and territorial representation.

Historically, cartography has played a central role in legitimizing and materializing relationships of knowledge and power, giving visibility or deliberately hiding strategic information, and helping to consolidate successive worldviews consonant with the interests of hegemonic groups (SÁ, 2018, p. 405). It is, therefore, an essential device for the geopolitical organization which, by setting up a technical language, dependent on specific knowledge, has remained for a long time accessible only to restricted groups.

An example of this is the importance of cartography for Portugal at the time of the great navigations, even resulting in espionage and bribery actions from people in search of access to geographic information. At the time of mine exploitation in colonial Brazil, areas where the Crown did not wish to occupy were intentionally suppressed from their maps to keep their location unknown (MORAES, 2005, pp. 66-109).

More recent initiatives, however, seek to expand reach and democratize access to cartographic practices and tools, subverting their traditional role and implementing counter-hegemonic processes: i.e. with minority groups, or in peripheral territories.

SANTOS (2012), points out some of the terms used to define these new practices, such as *new social cartographies*; *cartographies of action*, *counter mappings*, among others. They are characterized by the valorization of aspects made invisible by hegemonic spatial representation, by using collective production, by participatory dynamics, and by the break with cartographic conventions – resulting in the invention of new forms of territorial representation (idem, p.1):

The tension of the power relations they bring us appears in three central spheres: in the process of cartographic production, in which actors (social movements, public managers, cartographers, etc.) dispute the participation in elaborating the instruments of cartographic representation; in the cartographic object itself, in which one contests what is mapped and how it is mapped; in the use of cartography, which increasingly appears as an instrument of disadvantaged groups. (ibid., p. 2)



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The advance of digital communication technologies, coupled with new tools of visualization and simulation of spatial information – GIS –, has been contributing increasingly to disseminating these practices. Therefore, the distance between the ordinary citizen and the production and visualization of territorial information is reduced, from the daily use of platforms and applications such as Googlemaps, Open Street Maps, Waze, Uber etc. The spread of mobile devices connected to the Internet, such as smartphones and tablets, is another important factor for such process, mainly because of their mobility, enabling such technologies to be accessed and used in an associated way, or as mediators of the urban experience (SÁ, op. cit., p.406). Some authors even speak of the emergence of a *spatially capable citizen*: who would be able to "express himself, formalize, equip (technologically or cognitively) and, of course, activate and efficiently use – consciously or not – his spatial abilities" (ROCHE apud BORGES; ZYNGIER, 2015, p.89).

In this sense, the new cartographic dynamics mentioned can be seen as technopolitical practices (TORET, 2015), understood as the association between networks and collective action for political and social transformation:

The tactical and strategic use of digital tools for organization and communication, with collective action as a key concept. From the network-system perspective, technopolitics can be redescribed as the ability of connected multitudes, brains, and networked bodies to create and automate joint action. Technopolitics can embrace cyber-activism as it is confined to the digital sphere. Undoubtedly, in its full sense, technopolitics is the collective ability to use the network to invent ways of acting that can start from the digital universe, without, however, being exhausted in it (TORET; @DATANALYSIS 15M, 2015, sp trad.livre).

It is not without controversy, however, that such technological advances cross the territorial realm, opening space for new approaches of spatial representation, for an enlargement of who cartographs what and how. On the one hand, these new technologies do aid by infiltrating everyday life with geographical representation, by expanding the ability to interpret and read spatial visualizations, and by supporting collective and collaborative exercises for producing territorial knowledge. On the other hand, most of the most heavily



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used platforms are proprietary, and increasingly centralized in the hands of technology giants (Google, Facebook, Amazon etc.).

Avalanches of spatial data produced by the daily use of such tools are concentrated by these few companies, providing them with strategic territorial databases on the functioning and use of urban spaces, to which public power and inhabitants of the cities do not have access. In this way, the former geopolitical role of cartographic production as an instrument of domination and exerting power is rescued – which generally is paradoxically made feasible by the same tools that propose to expand and democratize access to the geographic information and representation of the territory.

Indisciplinary's cartographic production, therefore, is inserted precisely in this intricate field of disputes. Although aware of the contradictions present, but also of cartography's power to make visible the phenomena and social groups investigated – as a tool of representation, collective imagination and territorial proposition –, we sought to structure a set of guidelines for the cartographic method of the group. At that moment, the understanding of cartography as a philosophical concept is rescued to articulate the reflection on our way of acting and working, which also guides the territorial cartography. We add here the investigation of Bruno Latour's Actor Network Theory – ANT (2005), as another theoretical presupposition fundamental to our production, as we see in the cartography of the controversies a central aspect of this method of investigation:

1. To make–know–transform, cartographing reality and building new worlds;
2. To activate micro policies in a trans-scalar mode;
3. To constitute a process of political/academic research that does not separate theory from practice;
4. To use technopolitics devices that are both deconstructive and constituent, tactical and strategic;
5. To build research–intervention processes from experience in struggles;



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6. Unlike the traditional scientific method – Meta-Hodos – that is a way of proceeding to fulfill objectives, the cartography is a Hodos-Meta: it has its own path (process) as the main objective;

7. It is an investigation that is constructed by imbricating subject and object in the processes;

8. To act in the blind spots of the struggles, studying and translating in a synthetic way, the laws and official documents, for example;

9. To potentialize ubiquity using technopolitics (networks and streets);

10. To act in the real time of the struggles, with an open agenda, flexible and variable;

11. To work from bets rather than from scientific hypotheses;

12. To create an appropriate research environment for the academic performance of social movements/actors;

13. To act as parts of networks, with multiple actors (not as technical advisors).

We propose, next, to analyze this mapping from some projects and actions of Indisciplinar between the years of 2012 and 2018.

3. Indisciplinar's Cartographies 2012-2018

Figure 1 – Indisciplinar's technopolitic actions' timeline

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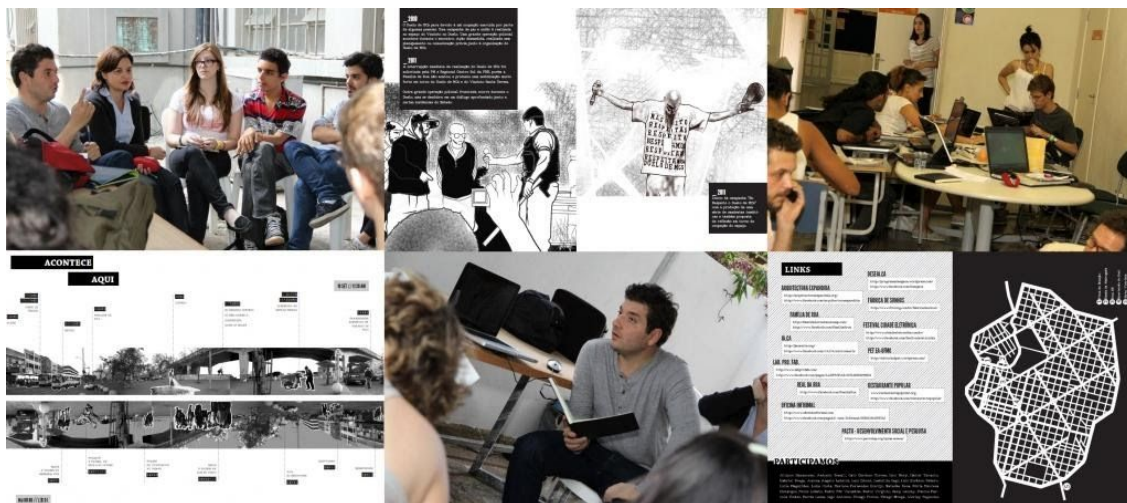
Atlas da Diversidade was a product of this workshop, in collaboration with the Real da Rua collective, and coordinated by the Colombian architect

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Antonio Yemail. The Atlas generated the fanzine *O que acontece aqui* 'what happens here', written by architecture students, artists and cultural movements linked to the Duelo. In addition to a cartography of the territory and of space practices promoted by the Duel, the fanzine brought the project of itinerant urban equipments for place appropriation – such as mobile skateboard obstacles, bleachers and modules with speakers for musical presentations, among others.

Figure 2 – Atlas da Diversidade workshop and fanzine



Source: Indisciplinar, 2019

This process of mapping territorial disputes in Belo Horizonte expanded, still focusing on cultural production, giving rise to the seminar "Right to the city: what we have in common", part of the program of the VAC – Verão Arte Contemporânea – annual festival. The seminar brought together artists, urban activists and researchers to discuss new ways of occupying the city, having the presence of several groups and movements that would later configure key cultural actors of the June 2013 Journeys, such as *Praia da Estação*, Street Carnival groups and the Duelo de Mc's itself.

Just when the Journeys started, Indisciplinar promoted the first version of the undergraduate module *Cartografias Emergentes*, at UFMG's Architecture



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course, which deepened the process of mapping movements and social groups that acted in the insurgent occupation of central Belo Horizonte. At this point, however, the group starts a search for investigating broader issues that go beyond local territorial struggles, covering large urban projects with regional and macro-regional scales.

An example of this was the *Operação Urbana Nova BH* (OUC Nova BH): an urban planning instrument that proposed a considerable expansion of the construction potential allowed by law in determined areas, in exchange for the purchase of Certificates from the municipal government (CEPACS - Additional Building Potential Certificates) – a mechanism with great gentrification potential for the mapped areas.

From this moment, the cartography carried out by the group starts a process of not only working in the microsphere, together with the multitudinous networks of struggle, but also trying to produce knowledge that is capable of relating the local performance with trans scalar analysis, helping resistances with information able to unfold the blind spot of the struggles: complex data on large urban projects and decisions in an enlarged sphere, which are often disregarded by groups operating at the microscale. This shift has brought the need to advance in collaborative cartography, bringing the group to bet in collective production of information, to be systematized and made visible via infographics, diagrams and graphs.

After this initial moment, Indisciplinar's cartographic activity can be summarized in a chronology of events, allying peaks of cartographic production to network and partnership's formation. We highlight here some of these actions that had relevance for \ the development of the cartographic method of the group:

- (i) In February 2014, the cultural and academic event *Cartografias Biopotent*, took place as part of the VAC festival / 2014: a series of workshops and seminars aimed at investigating ways of critically mapping the city and its territorial biopolitical dynamics. Were included in the event the *Mapping the Commons* Workshop, in partnership with Spanish researcher Pablo de Soto: a digital collective cartography



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focused on the target area of OUC Nova BH; the *Entre Muros* workshop, in the Santa Tereza neighborhood – a neighborhood of great importance for historical and cultural heritage, but also a focus of intense real estate speculation and gentrification processes; the *Vila Dias Affective Cartography*, aimed at a community in situation of great social vulnerability and imminent risk of expulsion for the execution of large urban projects; and finally the *Fazer-Trabalhar* workshop, with participation of Colombian digital artist and activist Gabriel Zea, which also produced a collaborative online map, with the territorial cut of the Santa Tereza Viaduct surroundings.

- (ii) As an outcome of VAC 2014 started the research project *Cartografias Emergentes* – The territorial distribution of cultural production in Belo Horizonte. Over the course of a year, several cartographic actions were produced in Belo Horizonte, seeking to cover both formal and institutionalized cultural activities and spaces, as well as emerging and peripheral cultural production, usually invisible by the hegemonic conception of Culture. The project involved two editions of the undergraduate module UNI 009 (first and second semesters of 2014), involving students, social movements, cultural collectives and local associations in the production of cartography. Its products were a technical report and the collaborative online map MapaCulturaBH,¹ hosted on the platform Crowdmap - Ushahidi. The production of this map was of great importance to advance further in the research on digital mapping platforms, and to begin to outline guidelines for the development of the group's own platform – IndAtlas, currently under development – based on the challenges and limitations encountered in available technology.
- (iii) Between July and August 2014, the *Cartografias do Comum* show in was held the UFMG Knowledge Space: an exhibition associated with debates, workshops, film screenings and seminars. The event was

¹ Available at: <culturabh.crowdmap.com>

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organized with horizontal participation of groups, collectives and social movements from Belo Horizonte that research and act in the construction of the common. *Cartografias do Comum* happened at a time when Brazil was hosting the Soccer World Cup, providing a space for critical reflection on the processes of territorial transformation leveraged by this type of great event. At that moment, the collaborative cartographic exercise (from the point of view of geographic representation) returns from the digital to the physical support, since the central point of the exhibition space was a large map of BH plotted on the floor and associated with a timeline, in the which visitors could intervene, mapping places and events that they considered pertinent to the proposed reflection.

Figure 3 – Cartografias do Comum exhibition space





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Source: Indisciplinar, 2019

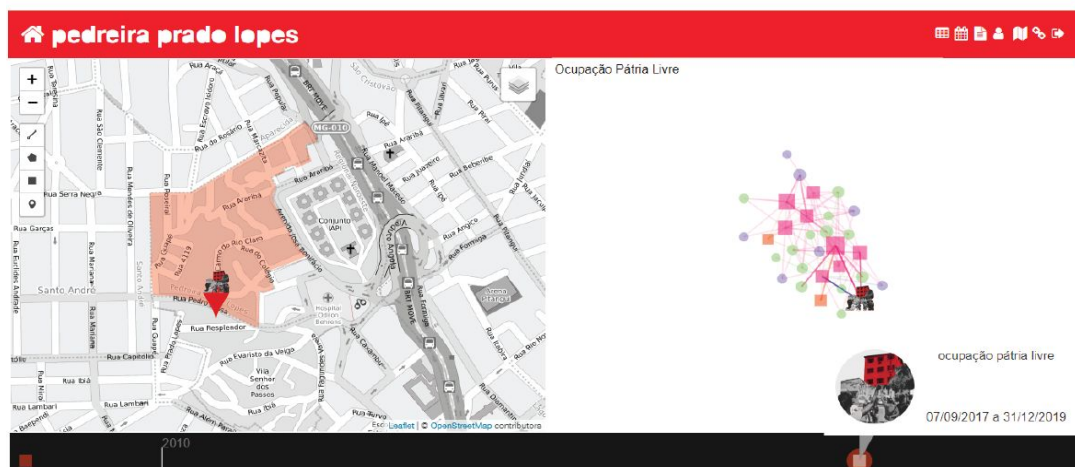
- (iv) Still in 2015, two projects involving collaborative digital cartography were of importance for advancing Indisciplinar's research. *Em Breve Aqui* – a digital mapping of urban voids in the central region of Belo Horizonte –, and *Natureza Urbana* – a mapping of aspects related to green areas or of environmental interest throughout the city. In *Em Breve Aqui*, the mapping process was done from a network of undergraduate courses in different architecture schools of Belo Horizonte (UFMG, Izabela Hendrix, etc.), associating the mapping of urban voids with project exercise proposals, constituting a cartography of urban ideas and possibilities. The cartographic exercise of *Natureza Urbana* was fed by the articulation of several actors related to the environmental struggles in the city, such as the movements *Fica Ficus*, *Parque Jardim América*, *Salve a Mata do Planalto*. *Natureza Urbana* unfolded in the event organized for the VAC 2016 festival, which consisted of a seminar and field visits to urban occupations close to areas of environmental interest, aiming to discuss the articulation between the struggles for housing and nature.

Beginning in 2017, the main efforts of the technopolitical production of Indisciplinar are focused on methodological research and tooling, to consolidate the working method, with the proposal of the guidelines mentioned, and to create an online platform of its own – IndAtlas – able to contemplate the main axes of analysis explored by the group. IndAtlas is, therefore, configured from the articulation between collaborative maps, production of time lines and graphs of networks of actors, connecting, then, data that we formerly analyzed in scattered platforms.

Figure 4 – IndAtlas' interface

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Source: Indisciplinar, 2019

Currently in the BETA version, IndAtlas is being submitted to the initial tests based on the research project Territórios Populares, coordinated by the LabCidade of FAU-USP and carried out in a network with groups from different parts of Brazil, among them INDISCIPLINAR. The projects purpose is to deepen the understanding of the forms of socio-territorial inequality engendered by processes of spatial restructuring associated with the interests of capital that, as a rule, provoke the expulsion of the poor population, changing their way of life and their forms of survival. In our case, we intend to map and make visible the controversies regarding the production of the space of the popular territories of central Belo Horizonte.

4. Final remarks

As we observe a clear evolution of Indisciplinar's cartographic production, we also recognize the necessity of deepening our investigations focusing on the trans scalar and geopolitical processes involving not only the territorial phenomena investigated, but the cartographic technopolitic production on its own. That is, to understand cartography not just as a means of working with the territorial struggles, but as a fundamental dispute field itself. We



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understand that the control of information, and of the tools and processes used for data production and analysis, as well as their territorial unfoldings, should be among the main political concerns of our times.

In this sense, methodological development seems as important to us in Indisciplinary, at this point, as technological advance.

As an agenda for our further steps, we suggest developing specific guidelines for conducting the work with technopolitical tools and networks, taking into consideration the issues such: discussing visibility and vigilancy problems with the social movements and groups that work with us; stablishing platforms and web applications that can or cannot be used in each circumstance and for each purpose; defining protocols for sharing data and results of the research produced etc.

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