



**TECHNOPOLITICS  
IN URBAN REGENERATION  
CO-CREATING PUBLIC SPACE**

**INTERNATIONAL CONFERENCE  
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## Technopolitics in Urban Regeneration

Co-creating Public Spaces

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TITLE: TECHNICAL ASSISTANCE IN SOCIAL CARTOGRAPHY FOR THE  
RIGHT TO THE CITY

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### ABSTRACT:

Social cartography is a relatively recent technique that opposes to traditional cartography, while this last one's purpose is to control the territory, social maps serves as instruments of counter-power, that is, it brings the tolls closer to the ones that normally wouldn't have access to it. Social mapping is an important mean in the defense of threatened territories, such as urban occupations, rural, indigenous and other traditional types of communities. Recently, in the face of the frequent threats of removal suffered by fragile communities, social cartography can be used as an instrument of resistance and strengthening by those living under such threats. From a problem that one wishes to solve, the community must come together and work in partnership with the technicians to build a social map that reflects their own reality. From a social cartography perspective, participation implies going above and beyond the local level of consultation, ensuring the involvement of social actors in the broader formal and informal decision-making process. This includes broadening the representativeness, strengthening it so that the residents of the community claim their rights in the decisions that affect their territory and their own lives. This article seeks to discuss the practice of social cartography, which was built mainly in the field of geography, and to dialogue with the practical experience of technical advisory in architecture and urbanism to communities at risk. The social cartography practice is here presented as an alternative instrument in the search of dialogue and representativeness in territorial decision-making, and it is here used especially by those who are often pushed aside and taken advantage of. Through workshops in vulnerable communities, efforts are being made to expand knowledge about social cartography to those groups that most need it. As a result of these workshops, it is hoped that the knowledge of this tool has empowered these people as to their right to produce their space over traditional means used by the government. It is not an easy alternative as a means of city production, but it is a democratic tool that should be known to these groups.



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### INTRODUCTION

Since the second half of the twentieth century, urban growth has been occurring in a disorderly way in most cities of Brazil. Housing production through the real estate market and public power does not keep pace with demand, and the State's lack of commitment to urban housing policies further aggravates territorial disputes. Within this scenario, access to decent housing and to the infrastructure of the city by the low-income population is further impaired. The problem of housing in Brazilian cities goes beyond the technical barrier, and begins to enter a political panorama. The population is always on the margins of formalization and subjected to a political scenario of extremely changeable interest. After the period of re-democratization of the country in 1945, from some more progressive municipalities, we have a legislative and institutional advance of the public policies in this scope. But at the end of the decade of the 1980s and the beginning of the 1990s, with the change of government, there is a dismantling of these initiatives, from then on begins a period when few and dispersed investments in housing occur (PEQUENO, 2018).

In recent years, new initiatives have emerged in the country through collectives, professional entities or private companies that propose to work with assistance or technical advice. In this context, occurs the creation of Taramela, a group of professionals and students in the area of Architecture and Urbanism, linked to activities in favor of the right to the city, with practices such as workshops, lectures, popular formations, projects, public policies with various entities, such as social movements, associations, universities, among others. In Fortaleza, the city in which Taramela was born, the housing problem and the incongruous answers of the State advance the problem of housing deficit and culminate in excessive population density, growth of the informal market and gentrification (PEQUENO, 2018). Given this context, the territorial struggles and the debates on public policies in the urban and housing field arise.



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In this article, the notions of social cartography are explored at first, with the purpose of conceptualizing the proposed action. In a second moment a brief diagnosis is made on the context of social inequality and housing precariousness of Fortaleza. In the final part of the article, Taramela's work is analyzed as a means to strengthen the references of national and local experiences, making use of social cartography as a tool in the fight for the right to housing and to the city.

### LITERATURE REVIEW

The first source reviewed was the book “Metrópoles brasileiras: síntese da transformação na ordem urbana 1980 a 2010” organized by Luiz Cesar de Queiros Ribeiro and Marcelo Gomes Ribeiro, this book aims to analyze and compare the urban transformations of the main metropolis of Brazil in the last thirty years. The book seeks to synthesize the local-national dynamics of convergence and divergence of the urban order of the main Brazilian metropolises. The chapter two of this book “Fortaleza: transformações na ordem urbana”, written by Renato Pequeno, is a detailed essay on the actors and producers of the urban space of Fortaleza, as well as a well illustrated description of how the development of the metropolitan region of Fortaleza has occurred in the last thirty years. In this article, the information on the development of the urban space of Fortaleza in chapter two of this book was used to describe the scenario in which Taramela is inserted and where social cartography practices were applied.

The second source reviewed was the book “Cidade Estado Capital: reestruturação urbana e resistências em Belo Horizonte, Fortaleza e São Paulo” organized by Raquel Rolnik, it shows how the growing association between state and private sector has caused changes in the urban space and its forms of government, with the weakening of democratic decision-making spaces. This publication intends to analyze and monitor public policies aimed at urban development in the cities of São Paulo, Belo Horizonte and Fortaleza, and their impacts on the processes and territories they intend to restructure. The forms of resistance to these processes present in these cities were also studied. The chapter written by researcher Valéria Pinheiro about the processes



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observed in Fortaleza, analyzes the different public policies, programs, projects and updated / modified laws of the municipality. The LEHAB UFC group, of which the author is part, also accompanied and participated in struggles and resistances in this city. Like the first book of this review, this one was also used in this article to describe the scenery of Fortaleza and to clarify the means of urban transformation and resistance that exist in the city.

Next, the two books organized by Henri Ascerald, “Cartografias sociais e território”, published in 2008, and “Cartografia social e dinâmicas territoriais: marcos para o debate”, published in 2010, were reviewed. Both of these books begin the discussion of cartographic production and social cartography. The first discusses the different subjects and the objectives of the use of mappings, also analyzes the power relations and territorial appropriation present in the elaboration of maps. The second enters more into the issue of the space producer and the symbolic struggles between groups with their own specific identity and the traditional space-producing state. In this article, both these books were used to better understand and describe the cartography process, as well as to begin the discussion about the production of social cartography.

Next, the book “Cartografia social e cidadania: experiências de mapeamento participativo dos territórios de comunidades urbanas e tradicionais”, organized by Adryane Gorayeb, Antonio Jeovah de Andrade Meireles and Edson Vicente da Silva, continues the discussion on social cartography. This book describes the context on which social cartography is necessary, as well as exemplifies the communities that take most advantages of the use of this representative tool. In this article, I make use of such examples to describe a scenery on which social cartography was a necessary tool of empowerment to a community in vulnerable situation.

The next article reviewed, “Maps of, by, and for the peoples of Latin America”, by Peter Herlihy and Gregory Knapp, is a collection of essays of different groups that make use of participatory mapping in Latin America. In the article, the methodology and the research of each group is described and discussed as a way of transformation of spatial knowledge into map and other descriptive



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forms. Here, in this article, I make use of the examples to better describe how the practice of social cartography first became known and with what purpose.

Finally, the article “Cartografia social dos povos e comunidades tradicionais no Paraná: novas perspectivas temáticas para a cartografia”, by authors Nilmar Pussini, Adriana Pidorodeski and Bruno Henrique Costa Toledo, was reviewed. The article review and describes the different forms and methodologies of cartography representation. In this article, I use this information to show how and for what reasons social cartography is a democratic representative tool to be known by vulnerable communities.

### METHODOLOGY

This article is structured in three steps:

Theoretical framework: reading and writing about the themes studied in the article (social cartography, social map, collective map). Looking to extract general guidelines from these readings.

Practical workshops: preparatory study workshops followed by field workshops, together with the communities where the social maps were developed.

Digitization: compilation of the data expressed in the social maps and digitization, using GIS software, to elaborate the social cartography. After the digitization step, the maps are returned to the communities.

### RESULTS

The two communities where the social cartography workshops took place presented two different results. The Presidente Vargas community, where the social cartography was developed as a tool to strengthen the land tenure process, presented a very positive result. The social cartography not only enriched the process to the eyes of the judges, but also brought the community together and empowered the residents to fight for their neighborhood.

The second workshop, held in the Verdes Mares community, while strengthened the community to fight together for their right to stay at their homes, it did not have the same positive outcome as the first one. The



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community continues to be threatened and effectively removed from their homes to make way for the major works of the municipality.

### THE IMPORTANCE OF SOCIAL CARTOGRAPHY IN URBAN MOVEMENTS

Maps are a representation of the world, or a fragment of the world. They could represent a country, a city, a neighborhood, etc. In the process of history, documentations are made by those who dominate, often with specific and unilateral goals. In this way we have the world map with deformations in which the countries of the Northern Hemisphere seem larger than the countries of the Southern Hemisphere. We also see that, for the most part, the European continent is positioned at the center of the map. We thus perceive that the colonizing countries take a central position in the cartographic imaginary (ASCERALD, 2008).

Social cartography appears in this context of territorial injustice. One of its most important characteristics is therefore the non-hierarchy in the construction of the map. It is from this horizontal knowledge exchange that it is possible to develop a collective understanding about a particular place. The information shared in this process is translated into a truly collective and participatory map: the social map. This map shows the different realities experienced by each participant in the process, and how they perceive their own space. Through the exchange of subjective perceptions and different experiences, as well as a process of sensitization and deep reflection, it is possible to understand and represent the different social dynamics, as well as the social disparities in a given territory. In that way, social cartography allows us to develop a new look at our territories (GORAYEB; MEIRELES; SILVA, 2015).

The first social mapping experiences were denominated “participatory mapping” in the international scenario. For Herlihy and Knapp, participatory mapping recognizes the spatial and environmental knowledge of local populations and inserts them into more conventional models of communication. Pioneering experiences in this field occurred in Alaska and in Canada in the 1960s, making use of participatory research methods combined with technologies such as GIS – Geographic Information Systems, Global Positioning Systems (GPS) and remote sensing were developed over two hundred maps of Eskimo subsistence



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seasonal activities in that area. This mapping resulted in the publication of the book *Maps and Dreams* and signaled the beginning of social cartography as we know it today (HERLIHY; KNAPP, 2003).

Starting in the 1990s, numerous social mapping experiences begin to appear in the world. In this way, residents of traditional communities or people occupying threatened territories increasingly began to produce their own maps that reflected their livelihoods, conflicts and resistance. Those groups saw in social cartography an opportunity to report abuse of authority and a way to assert territorial rights. In Brazil, social cartography was first used in the early 1990's in the Amazon with Professor Alfredo Wagner's New Social Cartography Project from the State University of Amazonas. This Amazonian territory would be demarcated and divided in a Cartesian manner, if not for the social maps that were made there to show that the diverse uses of that territory were not contained in exact limits, but instead were based on the collective and multifaceted use (GORAYEB; MEIRELES; SILVA, 2015). The demand for social mappings most often comes from contexts of conflict, such as territorial and environmental struggles, in which communities, feeling threatened, begin to construct their representation of the territory, which generally conflicts with the private territoriality or even the official demarcation by the State (ACSELRAD, 2010). According to Acselrad, in the period from 1992 to 2012, there were 284 experiences of social cartography or participatory mapping in Brazil. Most of them are linked to the struggle for territorial recognition (42%) and ethno-ecological or environmental management projects (38%). Most of the time, social mapping actors try to affirm identities and territories that are being threatened by major developmental and hegemonic projects.

The methodology applied by social cartography allows the participation and effective involvement of the community in the process of construction of the map (PUSSINI; PIDORODESKI; TOLEDO, 2012). The community itself decides what should be mapped, the symbolic and affective spaces, the way one works and lives in its territory, etc. Social cartography goes beyond the barriers of scientific methodology and inserts community participation in all its stages, so it carries within its structure territorial self-knowledge and community empowerment (ACSELRAD, 2010). As an alternative to traditional cartography,





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social cartography can be a means of political communication, making use of the graphic representation of maps that result from a political and social development process. Social cartography seeks to give voice and visibility to social movements and groups normally excluded from traditional decision-making processes, it is not different in Fortaleza.

### FORTALEZA: THE FIGHT FOR THE PRODUCTION OF A FAIR CITY

Fortaleza is the fifth most populous city of the country, in addition to having the larger demographic density between all the capitals, Fortaleza's metropolitan region is, in fact, one of the most populous of Brazil, and the first in the North and Northeast regions. It is the city with the biggest area of regional influence in the Northeast and has the third largest urban network of Brazil in population, behind only São Paulo and Rio de Janeiro. This population growth began in the 1950s due to the rural exodus. Today, its consequences are remarkable when one third of the population of the state of Ceará is concentrated in its metropolitan region (PEQUENO, 2018).

Since the 1990s, the Metropolitan Region of Fortaleza has expanded through the incorporation of new municipalities, the modernization of road, airport and port infrastructure, the emergence of other industrial axes, tourist coastal urbanization, deployment and production by the real estate. However, analyzing the socio-spatial typologies and the disparities related to housing conditions in the state of Ceará, we can see the clear presence of phenomena of differentiation, segmentation and segregation, which reveals the limited and selective scope of this development process and broaden the fragmentation of the socio-political space fabric (PEQUENO, 2018).

This situation is further aggravated by the high number of removals in the city. According to a study by the UFC's Housing Studies Laboratory (LEHAB), some 26,607 families were threatened or effectively removed between the years 2009 and 2016 in Fortaleza. Most of these removals are triggered by major urbanization projects, and the affected families are either indemnified with an amount up to three times lower than the fair or resettled in housing developments disconnected from the city and without any consolidated



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infrastructure (PINHEIRO, 2018). In this context, social cartography is a weapon used against excluding urban planning.

### THE INCIPIENT USE OF SOCIAL CARTOGRAPHY IN FORTALEZA

The Presidente Vargas community consists of a neighborhood in which the lands were almost entirely parceled out and sold to their residents by the deceased former owner. The residents, who live there for more than 40 years, did not receive the legal documents of ownership of the land at the time the purchase of the lots was effected. Today they face threats of expulsion from the heirs of the former owner, who want to sell the lots to a private developer for profit. The residents of President Vargas now have possession, but not ownership of their lands, and makes up a case of just possession, that is, has more than 10 years of occupation of the lots. Given this scenario, the Office of the Public Defender seeks to take action in defense of each of the families included in this matter. Through the Project “Defensoria em Movimento”, the demand for land regularization of some 400 families in the community was identified. At first, the Public Defender's Office distributed the first letter, necessary to start the process of usocaption, to 95 families. However, more than 150 families showed interest in participating in such a procedure.

The University was sought by the Public Defender's Office to work in the technical stage of the process, the elaboration of the plans together with a descriptive memorial of each dwelling. The UFC Housing Laboratory (LEHAB) indicated the demand to Canto, UFC's Model Architecture Office, and to Taramela, which were organized into two study groups with members of both Canto and Taramela in each: one to research and elaborate a survey model and descriptive memorial adequate to the process of usocaption, and another to study social cartography and collective mapping as a means both of empowering the community and of raising awareness of the judges who would take up this case.

The first study group elaborated a model questionnaire where the architects, together with the residents, must fill with reports and evidence that compose the descriptive memorial of each dwelling, attaching the most diverse documents for this, from fiscal notes to photographs that would enrich the memorial. After



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this definition, the architectural surveys and the descriptive memorials of each one of the 95 families were made. The final results were then presented both to the residents themselves and to the Office of the Public Defender.

The second group studied a large bibliography on social cartography and collective mapping to better understand the practice. It was defined that the purpose of social cartography in this case would be to generate one or more maps that expressed the history and the affective relations of the neighborhood. The basic principles of social cartography were passed on to the group through practical workshops held jointly with the Department of Geography of UFC. After these trainings, a base map was developed with GIS technology to be presented in the Presidente Vargas neighborhood in a workshop where the group reviewed the basic concepts of cartography and developed two maps, one of them expressing the temporality of the residents in the neighborhood, the other the important connections built throughout the years. In the second workshop, a relation of exchange was established with the residents, who stated the potentialities and problems they see in the neighborhood. From this conversation, a map legend was extracted and then used for the elaboration of a collaborative map showing these potentialities and problematic. In the third workshop, a map demonstrating interpersonal relationships among residents was made using pins and string. Where the pins demarcated the places where they have affective connections and the strings made the connections between them, thereby showing the network of interrelationships developed in the neighborhood and representing their strength.

In the Verdes Mares community, residents sought help from the Public Defender after receiving a series of threats from City Hall technicians to vacate their homes in exchange of an indemnity value up to four times lower than market value. According to the technicians, the 14-meter wide street in which 92 families live should give space for the extension of a collector road that would be part of a binary street expansion project. The alley at risk is called Beco da Galinha and is part of a bigger community in the Papicu neighborhood, which began to settle there in the mid-1960s, the Verdes Mares community. The first contact was made between the Public Defender and the Housing Laboratory of the UFC (LEHAB), which forwarded the request to Taramela. This demand was



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then subdivided into two work fronts: the elaboration of the counter project to the proposal of the City Hall, carried out in partnership with the offices Poro Arquitetura e Urbanismo and Grupo Ruma; the survey of the market value of the houses and the elaboration of a social cartography workshop alongside with Canto.

The first working front met to discuss viable alternatives to the binary that did not require the withdrawal of the families of Beco da Galinha. The idea was well celebrated by the residents, but was rejected by the City Hall in a letter sent to the Public Defender. The group reconvened to answer the letter and with the support of the UFC Department of Transportation, the group again requested, in a Public Hearing, that the City Council consider making an alternative proposal.

The second front would act as support in the fight for fair housing, developing the Social Cartography workshop where residents could mark at the base map of Google Earth, previously developed with GIS technology, everything they consider important in and around their territory. It is important to emphasize that the residents insisted on marking all the potential of the region, while they showed fear in pointing out problematic aspects. From this workshop, four maps of the Social Cartography were made: one that shows the Community of Verdes Mares and three that focus on Beco da Galinha, each one made by a different public: men, women and young people; and for that reason, they spontaneously presented different themes. The one made by the men was the one where they mostly pointed out all the problematic of the area; the women's map showed especially where they live, and where their friends and relatives' houses are; and the one developed by the young people focused on all the potentialities of the neighborhood. The four maps, the originals and the ones digitalized with GIS technology, were then attached to the letter sent by the Office of the Public Defender to the City Hall, with a request to suspend the work of the binary, until an agreement was reached with the Community.

### FINAL CONSIDERATIONS

Fortaleza, like the great majority of Brazilian capitals, still performs a deceitful urban planning, reflecting a neoliberal urban management that prioritizes the private real estate market. The lack of dialogue with the population is



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remarkable, as well as the lack of mitigating measures for the large part of the population that is impacted by government projects. Facing this scenario is that Taramela seeks to act in the construction of a socially fairer city, in partnership with other agents of resistance for the right to the city. One of the tools utilized to best effect this proposal is social cartography, often used in workshops done in partnership with different groups that have the same goal in common.

In Taramela's actions, practices that take the concept of social cartography in a broader way are identified, ranging from the right to stable tenure of land, as well as the right of social participation in urban planning, to the empowerment of people in relation to the territory in which they live. There is still a great difficulty in consolidating this performance as an alternative to more traditional methods, mainly due to the lack of dialogue between the State and the population, which find barriers to organize and strengthen themselves as associations or communities. Without organization, it is difficult to mobilize people for the workshops, and many of the participants do not understand how a map can be used to guarantee their rights, or why they should be the ones to do it in the first place. However, the group does not intend to assume tasks that should be carried out by the State, but it inserts itself in areas of claim and political debate, demonstrating through social cartography the need to effect this social right for all the population.

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