



Paraopeba, River Path!?: Pragmatism and right to the city in Brumadinho/MG

*Paraopeba, Rio Caminho!?:
Pragmatismo e Direito à cidade em Brumadinho/MG*

Lúcia Karine de Almeida¹ 
Armindo dos Santos de Sousa Teodósio² 

DOI: 10.22478/ufpb.2525-5584.2025v10n1.69757

Received: March 26, 2024.
Approved: February 08, 2025.

Abstract: The collapse of the mining tailings dam on January 25, 2019, in the municipality of Brumadinho/MG, was another event in the historic process of neglect by the government regarding territorial planning and management, in discontinuous and not-participatory processes. The tragedy-crime killed people and worsened the urban and socio-environmental crisis with the contamination of the Paraopeba River, which divides the city. Its bed was silted up by toxic and dense mud from tailings that degraded green areas, fauna, and inhabited areas of the central area. The theoretical contributions of pragmatic sociology and the concept of actor-network, through qualitative analysis and engaged research, constitute the theoretical basis of the article that problematizes the social protagonism of the river in communities affected by the overlapping impacts. The population is not on the margins and continues to fight for environmental justice and the right to the city. The dimensions of the river resist and signal paths for the necessary social transformations.

Keywords: Environmental Conflicts; Pragmatism; Disasters; Paraopeba River; Brumadinho.

Resumo: O rompimento da barragem de rejeitos de mineração, em 25 de janeiro de 2019, no município de Brumadinho/MG, foi mais um evento no

¹ Pontifical Catholic University of Minas Gerais – E-mail: arquitetaluciakarine@gmail.com

² Pontifical Catholic University of Minas Gerais – E-mail: armindo.teodosio@gmail.com

histórico processo de descaso do poder público com o planejamento e gestão do território, em processos descontínuos e pouco participativos. A tragédia-crime matou gente e agravou a crise urbana e socioambiental com a contaminação do rio Paraopeba, que divide a cidade. Seu leito foi assoreado pela lama tóxica e densa de rejeitos que degradou áreas verdes, a fauna e trechos habitados da área central. Os aportes teóricos da sociologia pragmática e o conceito de ator-rede, por meio da análise qualitativa e pesquisa engajada constituem a base teórica do artigo que problematiza o protagonismo social com o rio nas comunidades atingidas pela sobreposição de impactos. A população não está à margem e segue na luta por justiça ambiental e direito à cidade. As dimensões do rio resistem e sinalizam caminhos para as necessárias transformações sociais.

Palavras-chave: Conflitos Ambientais; Pragmatismo; Desastres; Rio Paraopeba; Brumadinho.

1. INTRODUCTION

The reality of territories that have extractive activities such as mining is marked by the overlapping of impacts that cause environmental, urban, and social conflicts, as well as economic mining dependence itself, as mentioned by Dias (2021). The worsening of crises resulting from the maximum exploitation of the territory can be seen mainly in contexts of criminal tragedies, as addressed by Teodósio (2019) when analyzing the one that occurred in Brumadinho on January 25, 2019. The rupture of the mining tailings dam left two hundred and seventy-two dead, in addition to intra-municipal impacts and other cities in the Paraopeba River basin. This is a vicious cycle because the very processes of attempting to regenerate the directly affected territory also promote new networks of impacts in the context of the tragedy industry, according to Quintão (2022, p.661).

The objective of this paper is to present the community protagonism of Brumadinho with the Paraopeba, given the impacts of the 2019 crime tragedy, which redefined it as an environmental, symbolic, and social element in a process of recovering old identities, neighborhood ties, territorial belonging and supporting role in the fight for rights and reparations for the impacts.

The article is structured in three parts and the first of them highlights the conceptual contributions that contribute to the understanding of the various dimensions of a river in urban spaces, based on the contextualization of the

territory. The conceptual contributions of the image of the city, sociomateriality and pragmatic sociology supported the research and analysis of the results. By using Lynch's (1970) concepts to defend the river element as a structuring axis of the image of the city, divided into territories on the left and right banks, in their possible dimensions, the various characteristics of the area subject to analysis were presented. Three communities in part of the city center of Brumadinho were analyzed, based on their experiences of the impacts of the passage of mud from the dam through the river, and the subsequent flooding of the Paraopeba River, in 2021 and 2022. It is believed that elements such as the natural relief of the territory, the presence of the river, and the conformation of the morphology of the urban occupation, predominantly single-family residential, interfere both in the degree of sociability of the communities analyzed and in the establishment of new networks of social resistance to the impacts of the tragedy-crime.

Included in the field of Social Management, research on innovation, sustainability, and the environment have a great interface with the multidisciplinary proposal of the article. In the search for a definition and understanding of the socio-environmental conflicts arising from the interfaces between the water element and the city space, some authors are presented, inspired by the concept of “political ecology” also from Alier (2007).

Studies that evoke the need to address socio-environmental conflicts have some interfaces with Pragmatic Sociology from the perspective of social innovation in the public sphere, as highlighted by Andion (2017), in the defense of democracy of access and possible public policies. In this case, the city is considered the prominent scenario of socio-spatial segregation and unequal incidences of environmental damage, which challenge the “ecological economy” defended by Alier (2007) for a better understanding of the relationship between the economy, the environment, and society.

The second part presents the methodological strategies for the development of qualitative and extensionist research, based on the field of critical and interpretative analysis, based on the studies of Pozzebon and Petrini (2013). The non-extractive nature of data from the communities involved

characterizes action research and its association with social and emancipatory transformation advocated by Zanon, Palassi, and Paes de Paula (2024), also based on the collective construction of knowledge, exchange of experiences, and constant feedback on the results achieved with the actors of the community involved.

In the third and final part, the first results of the analysis of community protagonism in a network with the Paraopeba River are presented in a territorialized manner. To understand the potential and social challenges, as well as to recognize the specificities of each community and the interfaces between them, the results achieved to date were presented. Social relations were drastically altered in the context of the tragedy-crime and the communities analyzed re-signified the river as an environmental, symbolic, and social element in a process of recovering old identities, neighborhood ties and territorial belonging, after the floods of 2021 and 2022. The threat of maintaining the degradation process of the river as a natural element integrated into the environments of daily social life, reactivated all its power as a supporting agent or network actor, in discussions about the right to a healthy and dignified environment for community life. As initial contributions, in addition to covering the river as an actor-network, based on the concepts of Latour (2012), integrated with its physical, symbolic, and cultural dimensions, the research evokes the need to re-discuss the concept of territory for the necessary redefinition of public policies focusing on the relationship between the social and environmental universes. It also highlights the importance of valuing and expanding participatory discussions to promote an integrated territorial vision and defend more sustainable, democratic, safe, socially fair, and river-friendly urban lifestyles.

2. CONCEPTUAL CONTRIBUTIONS

2.1 Looking at the River with some theoretical lenses

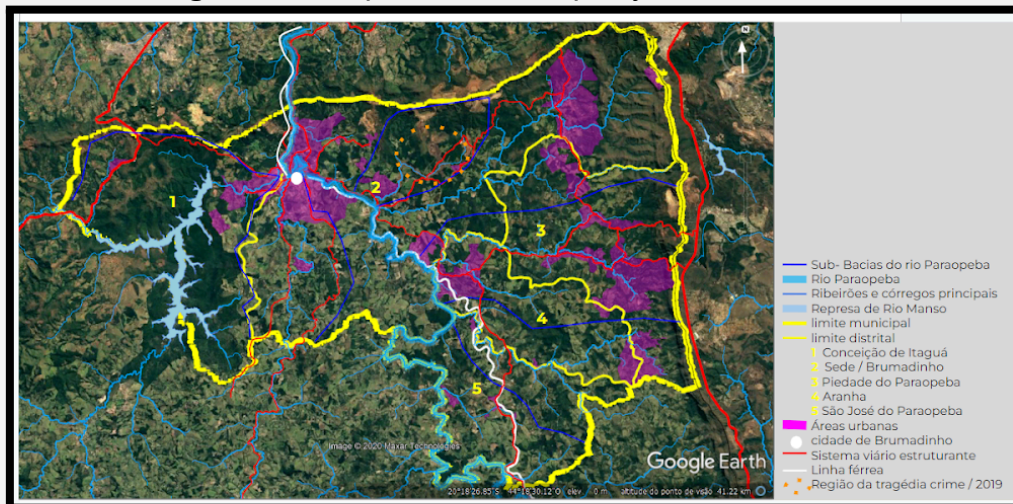
The municipality of Brumadinho has always been the scene of territorial, economic, and political disputes and social resistance (Dias, Quintão, Teodósio, 2021). Its privileged metropolitan location has in the geography of the relief constituted by mountain ranges, the conformation of the environmental and

Almeida & Teodósio. *Paraopeba, River Path!?: Pragmatism and right to the city in Brumadinho/MG*

official limits of a large part of the territory that houses a section of the Paraopeba River valley, in the middle portion of its hydrographic basin, as highlighted in Figure 01. The mineral and water abundance, the fertile soil, and areas suitable for occupation produce wealth and sociocultural diversity, but with unequal access.

Despite so much potential, the planning and management of municipal public policies are discontinuous and with limited institutionalized social participation. The history of outdated legislation also has an impact and, even after what happened in 2019, the review of the municipal Master Plan, initiated that same year at the request of the State Public Prosecutor's Office and approved in 2023, maintained the technocratic and authoritarian model, far from the requirement for participatory discussion of the right to the city, guaranteed by the Federal Constitution (1988) and the City Statute (2001). The reflection of this historical process can be observed in the socio-spatial segregation of land occupation and use, amplified by the economic dependence on mining that isolates traditional rural communities from public goods and services concentrated in the city and other urban centers (Dias, Quintão & Teodósio, 2021).

Figure 01: Map of the municipality of Brumadinho.



Source: Prepared by the authors using satellite image, Google Earth, 2023.

It can be said that Brumadinho repeats the facets of mining dependence also highlighted by Andrade (2020), which involve agents of mining enterprises, the State, and the affected community in the interrelation between the impacts and the false idea of development that involves the scenario of explored territories. Mining dependence spreads throughout the local economy and prevents the advancement of new and more sustainable and supportive economies, such as family farming. Areas with large rural territories are exploited and experience contexts of expansion of unplanned urbanized areas and promises of employment related to the mining enterprise and its network of interdependent businesses and services. In addition, local governments are also “captured” by the promises and profits of mining and become supporting actors in the perverse logic of false urban improvements in impact mitigation and compensation projects, without territorial planning plans or efficient legislation.

The infrastructure of public spaces in Brumadinho is considered to be of poor quality, as can be seen in the unplanned logic of the functioning of the urban road system and the connection between the district headquarters and the city. As the river cuts through its central area, where the terrain is flat and favorable to pedestrians, despite the great potential for the promotion of spaces for social interaction near the river and commercial activities, the inversion of priority emphasizes segregated spaces, far from the river and interconnected by the logic of highways and without planning of free areas for public use.

The city of Brumadinho is a hub of overlapping problems and is growing while hiding the river, which is polluted by mining, irregular sewage disposal, deforestation, and unregulated occupation of its banks. The river could not be forgotten by public policies and is also part of the cultural landscape of rural and urban social territories. Because it runs through the city center, the Paraopeba River constitutes a physical and symbolic landmark, frames landscape views, and constitutes the path of waters and the structuring environmental axis with the potential for urban crossings. And despite so many conflicts, the river imposes itself on the city's image, as part of the social spaces, even when flooding habitable and commercial areas.

By highlighting the importance of how cities and the natural and built elements that make them up are perceived by the people who live there, Lynch (1970) promotes a reflection on fundamental structural elements such as axes, landmarks, limits, paths, and urban nodes. In this case, the Paraopeba River could be understood as representing such elements and the node view would be specialized by the only bridge crossing, located in the central area. Reflection on the role of these elements, whether through physical or functional analysis or through recognition by the community itself, can promote discussions about the real sense of belonging to the territory and the social relations established therein. In this case, the necessary social transformations advocated by Lefebvre (1999, p.110) could also be reflected in the defense of centrality as a focal point of encounter, as “the essence of the urban phenomenon”.

The river is defended here in a dual way, both as an important element in the physical dimension of space and in fulfilling its roles as a potential environmental hub and connector for flows of passage and permanence of people, promoting places of symbolic reference and socio-environmental and urban experiences. The river could also be understood as a potential element for a new pedagogy based on the territory and people's life experiences. The new social practices that resignify the value of the river as a space for coexistence and maintenance of neighborhood ties, subsistence, health, leisure, and culture, based on the tragedy-crime, have the potential to promote the social innovation defended by Andion (2017) based on the discussion of the right to the city.

In addition to old problems, the expansion of mining activities and repair work sites generates more noise, dust and heavy truck traffic in the city center. The mental health of the population has been affected by the overlapping periods of mourning for the human losses in the crime-tragedy, followed by the losses during the Covid-19 pandemic, in addition to the constant fear of new victims of the impacts of mining and flooding in Paraopeba.

In parallel with the institutionalized model considered participatory by the government, new emergency demands for social articulation have emerged to

accompany the current fulfillment of compensation, counterparts, and indemnities for the repair actions. The objective of such actions would require prior participatory planning, but they occur in a complex way, concentrated in valued areas of the city, mainly due to real estate and political interests. Imposed, agile, and unequal processes in the application of resources that also cause environmental damage by the government still prevail. Contrary to the new and contemporary environmental and urban agendas, the works are making the soil more impermeable, channeling tributary streams of the Paraopeba, paving streets indiscriminately, and expanding urban perimeters that do not connect with the watercourses. All of these interventions accelerate the silting of the Paraopeba River, which increases the risk of urban flooding, especially in the central areas where all of the city's stormwater drainage flows.

The new visibility of the Paraopeba River promotes debates on the importance of people connecting with the river to defend the territory, confirmed in the defense of Latour (2012), when he questions the dichotomy between nature and culture, and criticizes the idea that science and technology are separate from society. By developing the theory of "network actors", this author defends the idea that humans and non-humans (such as objects, institutions, and technologies) should be considered equally important in the analysis of social relationship networks. The Paraopeba River, as a natural element, is defended as a non-human "network actor" and agent at the interface of the socio-environmental defenses of Brumadinho.

The river can be considered a path and basis for the construction of more collective and democratic discussions about social relationships and environmental justice. In this case, not only academic reflections on territorial, socio-environmental, and ecological conflicts, distributed in studies of society versus nature relations but also those with a political and activist focus defended by Political Ecology, contribute to the recognition of the cause both in the scientific scenario and in the "political struggle", defined by Alier (2007, p. 112). In addition to studies of the changing relations between social, economic, and political structures, as well as the exploitation of the environment, divisions of classes, income, and power are also considered, such as the gender division

of property, work, and knowledge, as evidenced by the socio-spatiality of damage.

In scenarios of democratic crises (Andion & Magalhães, 2021), it is understood that research into the role of the Paraopeba River as an actor-network can contribute to the process of restructuring the concept of territory, as well as to the future improvement of the socio-spatial articulation between its banks. This could be considered one of the legacies of Brumadinho in the post-tragedy-crime process, in the defense of a new approach to territorial planning and public policies focused on the defense of waters and a more ecological and collaborative economic practice. The expanded discussion of the “unequal incidence of environmental damage not only among other species or future generations of humans but in our own time”, understood as the environmentalism of the poor, according to (Alier, 2007, p.89) would be the bridge to critical analysis and an emancipatory vision. In this case, political ecology would underpin the power relations between human beings, as well as the relationship with other non-human beings, such as natural elements.

The logic of sharing codes and social interactions also contributes to the understanding of learning between people and the river as a process, as argued (Hall, 2016). For him, meaning is not in the object, in the person, or in the thing, and much less in the word. People fix a meaning so firmly that, after a while, it seems natural and inevitable (HALL, 2016, p.41). The resignification of the Paraopeba, after the overlapping of negative impacts, begins to enhance social arrangements in its defense. The river forgotten in the urban design and contaminated by mud, began to be valued by the most impacted communities, at the same time that its banks became a place of sadness and repulsion for the collective memory of the population that relives the “sea of mud” of the tragedy-crime. And if the meaning of the river is constructed by the system of representation, it can also be fixed by the social code of the fight for rights, which establishes the correlation between the conceptual system and the language system. To represent something is to describe or portray it, to bring it to the surface in the mind through description, model, or imagination; to produce a similarity of something in our mind or in our senses, or even to symbolize

something (Hall, 2016, p. 32). The constructivist representation presented by Hall (2016) as a social power can contribute to Paraopeba giving new meaning to life in all its physical, environmental, cultural and social dimensions.

In this way, its public and social character is recognized: the river is also an element of language and learning. The river and the people, by themselves, do not establish meanings, since the senses are constructed from representational systems of concepts and signs. In this case, it is understood that the valorization of experiences and recognition of individual and collective conflicts complement each other in resistance movements, and the common values and symbols of struggles give identity to the collective cause and create slogans of representation, such as the role of the river in the city. Furthermore, the very fact of recognizing and being recognized as an affected person and a member of an affected community already constitutes a path for the construction of defenses and future policies against the violation of common rights. Therefore, the power of communication and the exchange of collaborative experiences of resistance expand networks and promote social legacies.

2.2 Pragmatism and Community Protagonism

The pragmatic sociology approach also contributes to understanding the current challenges of former social leaders who stand out for strengthening their role in repairing damages in Brumadinho. Civil society, made up of non-governmental organizations, associations, social movements and engaged citizens, plays a fundamental role in identifying problems and seeking solutions to community needs together with the public authorities. The pragmatic perspective of French sociology is based on the appreciation of the synergy between civil society and social innovation in the public sphere as defined by (Andion & Magalhães, 2021). From the pragmatic perspective, hope focuses on new solutions that are attentive to real demands, practical evidence and approaches capable of promoting positive changes in society (Andion, Gonçalves, Moraes, Ranconi, Serafim; 2017), with a focus on “public action”, not attached to rigid and institutionalized ideologies.

In the context of social pragmatism, a strong emphasis is placed on action and active experience over abstract theory, where solutions and policies are considered successful if they can demonstrate concrete results and tangible benefits to the community. Related to the notion that theories and beliefs should be constantly evolving and adapting based on the changing needs of society, social pragmatism can also value practical utility, effective action and concrete solutions in the social and political sphere, by promoting a new logic of validation of positive and measurable impacts on people's lives as suggested by Fung (2007).

The continuity of social learning challenges slow and impractical policy models, plans and projects (Latour, 2012 and Andion, 2017) by valuing pilot actions that are flexible and constantly adapting. In this way, the current approach based on qualitative evidence from real cases allows for conceptual reflection and can reverberate positive social practices for society. In the case of the defense of the Paraopeba River and its role in the communities of the central area of Brumadinho, its new spatial representation is notable as an integral element of the sociopolitical defenses of the fight for the right to the city and political ecology. And to provide hope and innovation, the possible and powerful complementary contribution of pragmatism suggested by Drysek (2004) and Mendonça (2016) stands out as a bridge for understanding and improving local deliberative democracy, with a focus on communication and the exchange of plural experiences.

The theoretical basis of the research must also be based on the valorization of the protagonism, autonomy, and centrality of local actors in contexts marked by conflicts and environmental crimes to promote community engagement and social resistance. It is understood that the collaborative action of the directly affected population allows the most immediate demands for food, medicine, and shelter to be met, far from having perfect service, but sometimes better than what the government can offer. It is understood that the population also has responsibility in the individual actions or direct groups of civil society to contribute to solving the problems inherent to disasters and criminal tragedies. This engagement and proactivity of citizens is considered one of the central

dimensions in management oriented towards disaster prevention and repair and reconstruction of territories (Storr, Haeffele-Balch & Grube, 2015; Cefai, 2017; Andion & Magalhães, 2021).

This reflection also draws on Foucault's (1999) notion of biopolitics to understand Mbembe's (2011) applied concept of necropolitics, which highlights the unlimited power of the mining segment and its serial production of “disasters” that subject different forms of life and, more specifically, the “body-territory”, to the “power of death”. Within the scope of this bio(necro)politics of mining, as emphasized by Penido (2018), based on field experiences, it was possible to observe the worsening of all urban problems and direct impacts on people's health, such as mental disorders, respiratory and allergic diseases, and contamination, as well as an increase in the risk of urban flooding. In this way, the tragedy-crime is understood as an ongoing process, not limited to the event of the collapse, since the power relations and the responses given, in terms of damage management, contribute to prolonging and reproducing it in space-time and in the daily lives of those affected. The historical perpetuation of political discourses that validate the maintenance of economic, environmental and social problems is also observed.

By maintaining control of territorial administration, political power manages the lives of the population, since it directly manages public policies that interfere in community life, even without significant social participation. In this logic, zoning of land use and occupation contained in the Municipal Master Plan can also interfere in the definition of who should live and who should die, if there is no proper analysis of risks and political priorities. The city planning process obeys these structures of power and control of bodies, denying a portion of individuals, categorically selected, access to a safe environment. The housing deficit, the implementation of large-scale works and “developmentalist” projects, without considering the impact on the population, the facilitation of the implementation of activities for the accumulation of wealth, the lack of basic sanitation and treated sewage and the consequent exposure to environmental risks such as urban flooding, can be considered actions that allow the perpetuation of necropolitics.

3. METHODOLOGICAL STRATEGIES

Given the problems that this theme encompasses, it is necessary to contextualize environmental conflicts, resistance processes and social innovations in territories marked by tragedy-crime. The reflection provided by this work allows us to glimpse changes in the understanding and practice of knowledge production, based on a case study. It is argued that it is necessary to relearn the way of thinking and learning from reality that is “multidimensional” and requires new instruments of analysis and collaborative discussions. “Experiencing and coexisting” in the diversity of natural and social environments can promote knowledge based on “science awareness” and the ecology of knowledge”, as defended by Morin (1998). Based on the concept of “epistemology of the south” in Santos’ theory (2010), it becomes relevant to identify and validate knowledge born in social struggles against oppression, resulting from colonialist, capitalist and oppressive historical processes, which marginalized and/or made local knowledge invisible.

The methodology also adopts the stance called “environmental rationality” by Leff (2006) when calling for a new relationship between theory and practice for the social reappropriation of nature, and a new environmental rationality that can “transcend the instrumental predominance of reason”. The aim is to mobilize efforts to promote sustainability by rethinking the relationship between the real and the symbolic and the mediation between culture and nature to confront power structures that permeate the geopolitics of territories such as those marked by mining dependence.

The extensionist nature of the research is derived from a doctoral thesis in Administration, under development since 2022, and which has a record of data analyzed between 2019 and 2023. The inspiration for the theme comes from the authors' experience in the territory, both with family origins in the city of Brumadinho, where they were raised, in addition to the research trajectory based on experiences in the coordination of a university extension program and projects in Brumadinho, in the post-tragedy-crime context. Understanding the territory and the relationship with people makes all the difference in the

development of research by reducing communication barriers and expanding social ties, which also increases expectations and responsibilities in the face of community demands.

Qualitative research is also based on the field of critical and interpretative analysis, as advocated by Pozzebon and Petrini (2013), in which community practices favor the construction of a space for social interaction and knowledge sharing. The non-extractive nature of data from the communities involved deserves to be highlighted in action research because it is associated with the social and emancipatory transformation advocated by Zanon, Palassi, and Paes de Paula (2024). In the present investigation, community participation is understood as fundamental for the discussion of new concepts of territory based on the experiences lived there. And because it values the collective construction of knowledge, exchange of experiences, and constant feedback on the results achieved with the actors of the community involved, the research is also considered engaged, as advocated by Quintão (2023).

The tools for collaborative discussion exchange are carried out in the affected territory itself and through collaborative events held in public spaces near the banks of the Paraopeba River and in the three communities involved. These periodic meetings, called “Rio Circles”, always take place on Saturday afternoons and consist of discussion groups conducted using social cartography as a way of collectively constructing knowledge. Based on mental maps produced by community members, the themes and social demands related to the context of the river in the city, as well as the impacts of the tragedy-crime, are specialized in a symbolic and free way, but based on life experiences, feelings of belonging in the space and history, as well as social and emotional relationships between people, places of social and family coexistence, and the river. The marking of potentialities and conflicts on a model of the city's central area, highlighting the relief of the valley floor, habitable areas and the river, represent several aspects that also feed discussions related to community practices and memories. The value of knowledge production based on social maps as a collective product is considered flexible and under constant construction, as highlighted by Acselrad & Viégas, 2013; Almeida, 2013;

Pozzebon & Petrini, 2013; Tetamanti, 2018. Such tools, advocated here for studies in the area of Administration, are already widely used in the areas of Regional Studies, in the field of Geography, Architecture and Urbanism and Social Sciences.

Based on concepts from several authors, individual and collective transversal walks or “walking studies” and “walking ethnography” are defended by Lared & Oliveira, 2017, for the establishment of bodily interactions, in movement, and in the environment itself under debate, in defense of a new approach to environmental education. The “walking ethnography” methodology also considers the perspective of immersion of the researcher within the study event, and the idea of “influencing” the research context is challenged, assuming researcher and researched as participants in the investigation. The movement of walking in the living space activates the everyday accounts between humans and non-humans that can influence our ethical and political positions consistent with this relationship, which is close to the defenses of Latour (2004).

In the communities analyzed, the routes taken are called “Water Paths”, where residents, along the riverbanks, reveal sensory, phenomenological relationships loaded with individual and collective meanings. Qualitative interviews conducted with community leaders from the three communities also contributed to recording common demands, based on accounts of historical facts and which value the common interest in the river and in the defense of waters in the context of the dynamics of urban life in the city center.

The research also seeks to meet the validation criteria of engaged critical research, which are: authenticity, plausibility, criticality, reflexivity, mobilization of creativity and art, in addition to social validation. In the process of constant validation of results, the returns of the products achieved are always revisited and reinterpreted to generate new collaborative discussions. The holding of community events is also recorded in photographs, minutes and recordings of short testimonies that feed the database of the group or urban collective that called itself “Paraopeba em Rede” in the fight for the right to a clean river integrated into community living spaces. The products feed new discussion

groups, the registration of demands for emergency demands with public agencies, the production of articles, digital media to disseminate the theme in social groups on the internet and the content of the extension research itself.

The city space, the place where the river passes through and the path of the toxic mud from the dam, transported by its waters and reverberated in urban floods, mark the urban scenario of the tragedy-crime of the communities of the São Conrado neighborhood, Amianto Street, in the Center and Canto do Rio, in the Santo Antônio neighborhood. The criteria of location along the banks of the Paraopeba, the existence of flood-prone areas in the urban design, the maintenance of neighborhood ties and the struggle of the communities to defend the waters in the process of regeneration of the territory, with emphasis on the female protagonism, contributed to the definition of the areas of the three communities. In addition, the potential for overcoming the isolated struggle of the communities to a more collective and networked proposal with the river is highlighted.

4. DATA ANALYSIS: COMMUNITY PROTAGONISM

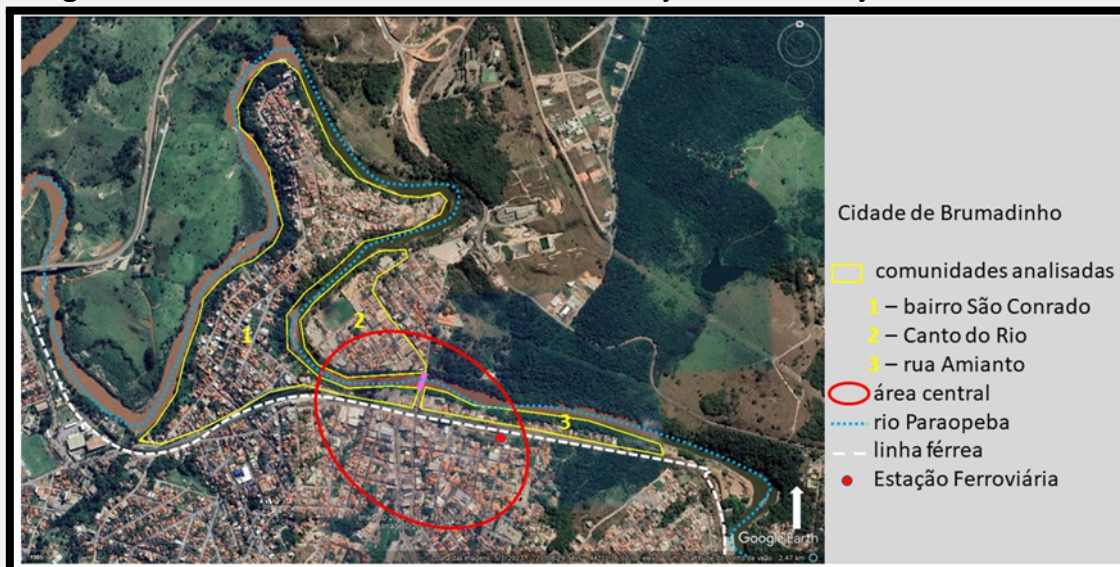
A river, a path: the Paraopeba in Brumadinho/MG

The research found an innovative and recent process of social actions in the communities analyzed, in the search for rights in the context of the impacts of post-crime tragedy. In addition to participation in the perspective of institutionalized governance, there is much learning contained in social practices that promote positive impacts and that need to be reverberated. Resistance and confrontation of urban problems increase social engagement through action and promote subsequent reflections. The emergency actions by social movements and female community leaders in the city center, based on the search for solutions to problems resulting from the flooding of the Paraopeba River, deserve to be highlighted. The organization of the results achieved is presented in two stages that summarize aspects of the visibility and invisibility of the Paraopeba, in the city of Brumadinho, with general and specific highlights of the communities involved, up to the current moment of the research.

4.1 A river runs through the middle of the city

The way of life of the communities of Amianto, Canto do Rio and São Conrado Streets is closely related to the history of the occupation and its interface with the Paraopeba River. The São Conrado neighborhood and the Amianto Street community are located on the left bank of the river and have greater identity with the central area of the city. The Canto do Rio community is part of the official neighborhood called Santo Antônio and corresponds to the occupied area on the right bank near the Canto do Rio Football Stadium – Figure 02. The communities of Amianto Street and the São Conrado neighborhood are directly connected by the road parallel to the railway line, formed by Amianto and Irineu Lamunié streets, respectively. The environmental landscape of the Environmental Preservation Area (APP) of the river, with its green areas and curves that frame the urban design of the city, are easily visualized in the satellite image, as shown in Figure 02.

Figure 02: Location of the communities analyzed in the city of Brumadinho.



Source: Prepared by the authors using satellite image, Google Earth, 2023.

The urban occupation of the three communities was not planned, and those on Amianto Street and Canto do Rio are the oldest, dating back to the time of the original occupation of the area around the Railway Station, around

the 1930s. Canto do Rio grew around the city's main entrance road, the MG-040. The community on Amianto Street has a peculiar occupation because it is home to old families and already in the third generation. The territories on Amianto Street and Canto do Rio were already considered susceptible to flooding, but this risk was greatly increased after the incident in 2019. The São Conrado neighborhood originated from the subdivision of a farm in the 1980s and is located in a territory of prominent importance in the city due to its hilltop shape surrounded by the river valley and its APP, in a kind of river peninsula, surrounded by the Paraopeba (Figure 02). The three communities, even in the surroundings of the central area, are predominantly single-family residential, concentrated in buildings of up to two stories.

Most of the houses have the Paraopeba APP as their backyard, except for part of the Canto do Rio community, where República do Chile Street borders the APP without the composition of lots along the right bank of the river – Figure 02. The APP of the Paraopeba River is fifty meters away from each bank and, in the city of Brumadinho, it still preserves significant riparian forest or green area, despite the finding of irregular occupation along its banks (Figure 02). The relationship of the occupied areas with the river, in the three communities, according to reports from residents, has always been related to “environmental legibility”, as an important element in daily life (Lynch, 1970), whether for the cultivation of vegetable gardens, orchards and raising of domestic animals in the backyards, access to the river for recreational fishing and the use of flat spaces of the APP for social interaction.

The bridge crossing the axis of Presidente Vargas Street, in addition to providing the only communication between the two sides of the city, also serves as a visual, landscape and urban reference point for residents. The pillars of the bridge serve as references for marking the water level of the river during rainy periods. Before the crime tragedy, its waters were clearer, and even with mining activity, fishing could be carried out, which was prohibited in 2019.

Other striking elements in the city's design and landscape that separate the living and social spaces, parallel to the axis of the river, in the east/west direction, are the railway line and the walls that delimit its access, on both sides.

The line and the Central Railway Station have symbolic and cultural references and maintain a direct relationship with the communities of Amianto Street and the São Conrado neighborhood. The original side walls served as support for the base of the line, but were extended in height in the 1990s, after a train accident with several victims in the city center. The higher wall increases spatial segregation and visibility of the railway line at the pedestrian level. After the crime-tragedy, the hidden railway line became the site of other tragedies related to theft, violence against women and suicides.

During the research, no written historical records were found about the communities, but old photographs and reports from residents contributed to the understanding of the evolution of the occupation and the history of struggles for rights. The São Conrado neighborhood has a neighborhood unit isolated from the rest of the city by both the relief and the river (Figure 02) and is home to the City Council headquarters, the only public Mental Health facility in the city and the city's main public events area, called the Parking Lot. Even though it is next to the center, the neighborhood has no commercial activities and depends exclusively on segmented access to the center, by vehicle and a pedestrian walkway over the railway line.

The Amianto Street community belongs to the Centro neighborhood and has a linear urban design, composed of residential buildings, mostly inserted in the Paraopeba APP, where the backs of the lots have direct access to the left bank of the river. The design of the Canto do Rio community, on the other hand, is more defined by the relief plain and constitutes the first area to be flooded in the city. The three communities have urban problems related to land regularization, poor basic sanitation, garbage collection, and insufficient maintenance of urban mobility infrastructure and public spaces.

Regarding the second wave of marginalization of the analyzed territories, relevant aspects stand out in relation to the historical neglect of these areas, especially in relation to the reparation of material damages after periods of flooding of the Paraopeba River. These are urban communities that have direct ties to the river and lose material assets year after year. The municipal public administration is complicit in not demanding strategic projects in these areas,

before, during, and after the flood periods. The fact is that, after the tragedy-crime, these areas became even more forgotten and in a situation of environmental and social vulnerability, even though they are not inhabited, predominantly by a population considered low-income. On the contrary, the Canto do Rio community has an active and valued commercial network, in relation to the other areas. There is widespread negligence on the part of the public authorities and the institutions that take care of the reparation of the damages caused by the tragedy-crime, since the removal of goods and cleaning of the properties is always the responsibility of the respective owners. This is clear evidence of territorial marginalization, especially when it comes to serious environmental impacts that directly affect people's health.

4.2 Social protagonism and the walls that scream: the river resists; we are not on the margins!

The negative impacts of the crime tragedy on the communities of Amianto Street, São Conrado neighborhood and Canto do Rio were serious and still do not have defined solutions, even though the river is silted up and the imminence of floods and inundations aggravated by climate events is a rule. During field visits and conversations with local leaders, there were several reports of complaints and requests for help from the municipal government and the company Vale S.A, both without much success so far. The floods of January 2021 and 2022 were the cause of the greatest destruction, as the heavy mud of 2019, which had not reached the occupied banks of the city and remained solidified at the bottom of the river and on its banks, was carried by the waters until it covered the lowest areas of Amianto Street, São Conrado neighborhood and Canto do Rio. Parts of the road that gives access to the entrance of the city and the center were also submerged and a large part of the population was stranded. The water level covered a large part of the single-story houses up to the roof, which damaged the building structures, movable material assets, sanitation infrastructure, roads, and goods and services. The environmental damage is also incalculable, as the APP areas lost specimens of native vegetation and fauna, and the relief of the natural slopes of the river banks was

Almeida & Teodósio. *Paraopeba, River Path!?: Pragmatism and right to the city in Brumadinho/MG*

also altered. In addition to the loss of improvements from the traditional uses of backyards, access to these areas remains unsuitable due to the risk of contamination by heavy metals present in the soil. On dry days, dust particles contaminate the air, and together with water and soil, create an unhealthy urban environment. The following photographs show the damage caused by the 2022 floods in the Amianto Street Community, as shown in Figure 03.

Figure 03: Socio-environmental and urban impacts of the 2022 floods on Amianto Street.



Source: Photos 01 and 02 – Records made by resident and leader of the Amianto community, Maria dos Anjos Alves da Silva, Jan. 2022.

The most relevant damage observed during the field visits, carried out in 2023, is social and mental. The conversations with residents and leaders are marked by sad testimonies and an emphasis on the social exhaustion of the isolated struggle, on the part of each community, which was treated differently in the amount of communities directly affected or not by the tragedy-crime. Perhaps this is the greatest feeling of individual and collective social insecurity because it contributes to divergences in the search for measurement of rights and socio-environmental compensation. Another complaint highlighted by the leaders was the urban cleaning of the areas flooded in 2022, initially carried out by the residents themselves and, until December 2023, little had been done by the city government and Vale. Many buildings on Amianto Street are closed, abandoned and covered in solidified mud and the river's APP cannot be used by its residents (Figure 03).

4.2.1 Community protagonism on Amianto Street

The research with the community of Amianto Street, during the first half of 2023, included field visits and conversations with residents and local leaders.

Revista Brasileira de Políticas Públicas e Internacionais, v. 10, n. 1, jan/jun, pp. 259-290.

Almeida & Teodósio. *Paraopeba, River Path!?: Pragmatism and right to the city in Brumadinho/MG*

The relevance of the social relationship with the river's APP was confirmed, in the use of backyards, in relation to the other two communities, which is mentioned emphatically by its residents who say they have lost contact with the party environment and weekend lunches, the space to care for plants and domestic animals, fishing and the children's play area. The occupation of Amianto Street, being older, has three generations of neighboring relatives who insist on living in the region that tells the story of the trajectory of the Silva family, who also suffered human losses in the tragedy-crime. Because they have no other place to live, maintaining the neighborhood relationship, family ties and the feeling of local belonging, keeps them united in the fight for rights. Female leaders stand out in the community for their actions in favor of greater social engagement, where they hold physical actions on Amianto Street and are active on social networks used by the population and those affected by the crime tragedy. In these public spaces and arenas, the problems of Amianto Street and pragmatic social achievements are widely publicized.

The community also has a relevant social project that aims to restore the value of caring for children, the relationship with the river and social participation, but the social space, still under construction and without support from the government, is unusable because of the mud. Social actions are also recorded in public meetings, but the most pragmatic corresponds to the urban art adjacent to the railway line and that borders Amianto Street. The mural serves as a kind of educational panel for environmental education, redefining Paraopeba as a place of socio-environmental memories and a new meaning for the fight for rights (Figure 04).

Figure 04: Urban art on the walls of Amianto Street.



Source: Photos 01 to 04 – Records made by the authors, June 2023.

The creation of the urban mural was a desire of the community to record how everything was before 2019, the year of the crime-tragedy and the impact of the 2022 floods. The Association of Victims and People Affected by the collapse of the Córrego do Feijão/Brumadinho Mine Dam (AVABRUM) also supported the creation of the mural. The visibility of urban art on the wall is more restricted because Amianto Street only connects the city center and the rural community called Pires. However, the wall that once divided the city now unites the community and cries out for justice.

4.2.2 Community Leadership in the São Conrado Neighborhood

In the São Conrado neighborhood, the results of the research were recorded between 2019 and 2021 to record its urban history and the social memories of its people with the Paraopeba River. Recovering the families' memories became the initial objective, in addition to the various conversation circles held before the social isolation of the Covid-19 Pandemic, which served as a kind of collective therapy. Social mourning was the greatest impact experienced in the neighborhood, much less physically affected by the mud on the riverbanks, but by experiencing the river in the peninsula's landscape on all sides and by watching the aerial rescue of the victims of the collapse. The

centrality of the neighborhood is located on top of a hill in relation to the riverbanks and the views of the city, the river and the APP are privileged. For this reason, dust from mining activities was also indicated as having an impact, since the neighborhood is on the route of the prevailing winds that carry dust from the Córrego do Feijão Mine and the areas of repair work. Another problem reported by residents is related to the urban fauna that has been altered on the riverbanks due to the sudden increase in the number of capybaras fleeing the contaminated and dense mud on the banks of the Paraopeba.

The community participation served as an example to confirm the importance of understanding social belonging in the neighborhood territory. The collaborative discussion on this scale demonstrated the importance of the role of leaders as articulators of discussions in the expanded contexts of the urban territory. The results of the extension actions in the neighborhood contributed to the elaboration of guidelines for reviewing the municipal PD. The results of the six collaborative meetings in the neighborhood recorded the history of environmental and urban problems aggravated by the crime tragedy, specialized in the social mapping produced by the residents. The Community Association of the São Conrado neighborhood – ASCON added the content produced to a preliminary neighborhood plan, based on pedestrian-friendly and river-friendly urbanism. At the time, community guidelines were presented to the city government, but were not included in the PD. In 2022, the Associação Amigos de Brumadinho contributed to the creation of urban art on the wall next to the railway line, at one of the entrances to the São Conrado neighborhood. The mural reflects the power of women in caring for water and endorses the old defenses of the neighborhood surrounded by the river and also affected by the 2022 floods (Figure 05).

Figura 05: Urban art on the wall of Irineu Lamunie Street, São Conrado neighborhood.



Source: Photos 01 and 02 – Records made by the authors, June 2023.

4.2.3 *Community Leadership in the Canto do Rio Community*

The research experience with the Canto do Rio community, part of the Santo Antônio neighborhood, included conversations with local leaders and field visits, carried out by the authors, in the first half of 2023. Several problems related to the 2022 floods were identified, such as the maintenance of dirt along República do Chile Street and the late implementation of public works, without the participation of the community in the discussion of their real demands. República do Chile Street borders the river's APP and its structure was damaged in 2022. Predominantly residential uses coexist with impactful uses of automotive service provision, mainly for trucks that transport ore. The streets of this entire part of the Santo Antônio neighborhood, called Canto do Rio due to its isolation, relationship with it and proximity to the Football Stadium of the same name, serve as parking and cleaning services for trucks. The river is heavily contaminated by the irregular disposal of sewage and waste from automotive activities. The vegetation and street furniture are in a state of disrepair, and the neighborhood's largest square has not yet recovered from the floods. All of these factors, combined with the lack of street lighting and proximity to the city's main access point, contribute to the feeling of insecurity among local residents, as shown in Figure 06.

Several buildings were damaged by the 2022 floods and cleaning the houses was prioritized by the residents themselves. Another factor that angered the community was the lack of maintenance of the neighborhood stadium that houses the Canto do Rio team. In addition, residents denounce the irregular

Almeida & Teodósio. *Paraopeba, River Path!?: Pragmatism and right to the city in Brumadinho/MG*

use of the space that has been abandoned by the government, a fact that generates outrage in the community.

Figure 06: Impacts of the 2022 floods in the Canto do Rio Community.



Source: Photos 01 to 03 - Records made by Canto do Rio resident, Beatriz Mello, Jan. 2022.

There are no records of urban murals in Canto do Rio. However, this region of the city hosts events in memory of the fatal victims, on the 25th of each month, and the bridge over the river and some public spaces reverberate the symbolism of the struggle in a kind of occasional memorial that is still being recorded by the research. The psychosocial damage resulting from the numerous attempts by the community to fight without much success with the government was also noted. Highlights in the vicinity of Canto do Rio include the public works carried out by the city government in 2022 and 2023, without social participation, for the construction of a square in memory of the victims of the crime tragedy, at the entrance to the city and next to the “Brumadinho” sign that is a symbol of the struggles of the grieving families and community associations. The works made a stream that flows directly from the right bank of the Paraopeba river impermeable, deforested the riparian forest, and the new space remains little used by the community.

When analyzing the case of Brumadinho, another factor that stood out in social protagonism was the relevance of female leadership, active and focused on caring for both the resident population and the public and private spaces that are connected to the riverbanks.

The personal and collective transformations in resistance movements are valuable because they record different moments of achievements and hardships, advances and constant social rearrangements. In the resistance in flood-prone areas, the predominant participation of adult women, who are emotionally exhausted, stands out in relation to the small participation of young people, which can be challenging for the movement. The stories of women affected and their resistance movements need to be recorded and disseminated. And even despite so much pain and illness, they did not stop. From the need to live and take care of their spaces in the house, from the backyard to the street, women gained space to fight for collective and individual rights, mainly with the expansion of reflection on the notion of labor exploitation and gender differences, to also act in the fight for health, family, community life, water, trees, leisure, culture, access to goods and services, income and a dignified life.

4.3 Initial reflections

During this phase of the research, it was observed that there is little integrated articulation between leaders in the search for rights and mitigation of the impacts caused by the tragedy-crime and consecutive floods of the river. The reverberation of community demands remains fragmented and more intense in the disseminations on virtual social networks than on institutionalized or non-institutionalized social networks. The urban murals are valid and permanent records of the resignification of the role of the Paraopeba River in the struggle of the communities, but they are located in places accessed more by the residents themselves or in places of passage, which records the symbolic value of the place for the communities and not for the entire population of the city. The dissemination of the murals is limited and has educational potential and for the continued use of the walls in an active way as an element of struggle and urban landscaping.

As reflections for the other stages of the research, it is necessary to understand the concept of riverside communities located in metropolitan urban centers, since this concept is more related to the analysis of experiences in

rural communities, without detriment to its value. Riverside communities have always been marginalized by territorial plans and need to redefine their role along the urban riverbanks as a space for healthy living. This would be the ideal scenario and the opposite of the marginalization process mentioned by Gaulejac (2006), when he highlights the way in which social assistance is administered and which can lead to increased stigmatization and perpetuation of feelings of inferiority in people in need, especially in scenarios such as Brumadinho.

The bureaucratic and rigorous control of discussions for the reparation of damages to the population, not yet considered directly affected by the tragedy-crime, such as that of the flood-prone areas of the city, promotes unequal treatment in the fight for rights and can generate humiliation and feelings of inferiority. Another relevant aspect is related to the participation of social actors involved in public arenas, the degree of cooperation and relevance of non-institutionalized social participation that is increasingly empowered and seeking space in institutionalized discussion, but without giving up the pragmatism of actions. In the case under analysis, the defense of the valorization of the Paraopeba urban APP as a space of community value can be considered a social innovation and has not yet achieved many results officially, together with the public authorities, but it already has great potential for the reverberation of social pragmatism and contributions to the inclusion of new actors and themes in participatory local planning agendas, in public policy councils and in committees of those affected by the tragedy-crime.

Does the river only teach when it is sick, when the water runs out or when it overflows and floods? Such reflection can anticipate possible social innovations for a new model of water-friendly urban environmental planning and, with a focus on the specificities of Brumadinho and its commitment to the Paraopeba river basin, the research aims to reverberate hopes. As an important result, it was found that the river teaches and serves as a path for social dialectics. The need to confront economic mining dependence, recorded in small and large social experiences, must be based on the search for new development alternatives that value water, in the face of the threats of urban

land use exploration, the maintenance of mining activities and climate events that can deepen urban flooding. The belief that moments of crisis promote individual and social revolutions, based on the cases analyzed, can inspire other resilient local actions and in communities that face similar problems or even to avoid them.

5. FINAL CONSIDERATIONS

The ideas presented are part of an effort to analyze the relationship between the territory of Brumadinho and the urban struggle, which evokes an educational experience where the city's territory became the stage for social actions considered more practical and of social representation. The analysis of the experiences lived between 2019 and 2023 in the communities of Rua Amianto, Canto do Rio and the São Conrado neighborhood contribute to the reflection on the possible contributions of social protagonism, even without directly influencing decision-making by the government or the formulation of new public policies. The pragmatic actions achieved in the living spaces of the communities themselves have already generated positive impacts in strengthening community engagement and in virtual social media of resistance, in addition to greater participation with the Independent Technical Advisory Boards and the State Public Prosecutor's Office, in the process of repairing the damages caused by the tragedy-crime.

A challenge for the continuation of the research is the difficulty in assessing the direct social impacts on the urban and family life microscopes. The social mapping process is in its initial phase to record the environmental perception of residents in the areas analyzed. Based on the results of the research, the aim is to expand the interface between the leaders of the communities involved in order to expand the network of actors engaged in the defense of safe housing and coexistence with the river, and to constantly question the public inertia and maintenance of necropolitics observed in vulnerable territories. The problems surrounding this topic deserve to be reflected in light of the emergence of urban improvements in communities that deal directly with the risk of losing housing and subsistence space, the risk of

diseases related to direct contact with water, soil and air contaminated by mud and toxic dust, the imminent risk of death from environmental disasters such as floods, and the risk of collective mental illness due to the overlapping of mourning for human and material losses.

It is also necessary to acknowledge the experiences, partnership and learning from the struggle with the leaders of the communities analyzed. In the belief that moments of crisis promote individual and social revolutions, the research seeks to inspire hope, based on the cases analyzed, for new developments in the networks of local social actors, based on practical experiences of resistance, as local inspiration and for many other communities that face similar problems.

REFERENCES

Acselrad, H.; Viégas, R. N. (2013) Social cartographies and territories: a Latin American dialogue. In: Acselrad, H. *Social cartography, land and territory*. 1. ed. Rio de Janeiro: IPPUR/UFRJ, cap. 1, p. 15-41.

Andion, C.; Gonçalves, A. K; Moraes, R. L.; Ranconi, L.; Serafim, L. B. (2017) Civil society and social innovation in the public sphere: a pragmatist perspective. Rio de Janeiro, *Journal of Public Administration*, v. 51(3):369-387.

_____.; Magalhães, T. (2021) (Re)approaching pragmatisms in the analysis of public policies. Experimentation and public investigation in a scenario of democratic crisis. *Journal of Society and State*, v. 2, n. 2, p. 36, n. 2

Andrade, J. (2020) The many resistances of women in conflict with the Minas-Rio enterprise. In: ALVES, Murilo et. All. (orgs.). *Mining: realities and resistances*. 1st ed. São Paulo: Exemplar Popular, chap. 7. p. 225-258.

Brasil, *Código Florestal, Lei n 12651/2012*. Brasília, 2012.

_____, *Constituição Federal /1988*. Brasília, 1988.

_____, *Lei Federal nº 10.257/2001, Estatuto da Cidade*. Brasília: 2001.

Bordalo, C. A. L. (2019). Socio-environmental conflicts over water use in Brazil from the perspective of Political Ecology. *AMBIENTES: Journal of Geography and Political Ecology*, 1(2), 78. <https://doi.org/10.48075/amb.v1i2.23237>.

Cefai, D. (2017) Publics, public problems, public arenas... What pragmatism teaches us (Part 1). *New CEBRAP studies*, v. 36, p. 187-213.

Almeida & Teodósio. *Paraopeba, River Path!?: Pragmatism and right to the city in Brumadinho/MG*

Dias, A.L.; Quintão, F. D.; Teodósio, A.S. (2021) Brumadinho is many: existences and resistances in a context marked by Mining Dependence. Porto Alegre. In: Proceedings of the Seventh Brazilian Congress of Organizational Studies.

Dryzek, J. (2004). Pragmatism and democracy: in search of deliberative publics. *Journal of Speculative Philosophy*, v. 18, n. 1, p. 72-79.

Foucault, M. (1999). *In Defense of Society*. São Paulo: Martins Fontes.

Fung, A. (2007). Democratic theory and political science: A pragmatic method of constructive engagement. *The American Political Science Review*, v.101, n. 3), 443-458.

Gauleja, V. (2009). *Las fuentes de la vergüenza*. Buenos Aires. Mármol-Izquiero.

Hall, S. (2016). *Culture and social representation*. Rio de Janeiro: Apicure/Puc Rio.

Iared, V. G., & Oliveira, H. T. (2017). Walking ethnography for understanding bodily and multisensory interactions in environmental education. *Ambiente & Sociedade*, São Paulo v. XX, n. 3, p. 99-116.

Latour, B. (2004). *Nature Policies: how to do science in a democracy*. Bauru, EDUSC, 412p.

_____. (2012). *Reaggregating the social: an introduction to Actor-Network Theory*. Salvador, EDUFBA; Bauru, EDUSC, 2005-2012c.

Lefebvre, H. (1999). *The Urban Revolution*. Belo Horizonte. Ed. UFMG, 1999. p.178.

Leff, E. *Environmental Rationality, the social reappropriation of nature*. Rio de Janeiro: Ed. Civilização Brasileira, 2006.

Lynch, K. (1970). *The image of the city*. Lisboa. Ed. 70, p. 193.

Martínez, A. J. (2007). *Ecologism of the Poor. Environmental conflicts and languages of valuation*. Ed Contexto. São Paulo.

Mendonça, R F. (2016). Before Habermas, beyond Habermas: a pragmatist approach to deliberative democracy. *Journal of Society and State – V. 31 N. 3*.

Mbembe, A. (2011). *Necropolitics: biopower, sovereignty, state of exception, politics of death*. Editorial Melusina, S.L.

Morin, E. (1998). *Science with Consciousness*. Translated by Maria D. Alexandre and Maria Alice Sampaio Dória. 2ª ed. Rio de Janeiro: Bertrand Brasil.

Almeida & Teodósio. *Paraopeba, River Path!?: Pragmatism and right to the city in Brumadinho/MG*

Penido, M. O. (2018). Bio(necro)politics of mining: when disaster strikes the body-territory. *Brazilian Journal of Geography, Rio de Janeiro*. V. 63, nº 2, pág. 38-51.

Pogrebinschi, T. (2004). The Democracy of the Common Man: Recovering John Dewey's political theory. *Revista de Sociologia e Política*, [S.l.], n. 23.

_____ (2010). Pragmatic democracy: assumptions of an empirically oriented normative theory. *Dados* [online]., v. 53, n.3, pp. 657-693.

Pozzebon, M.; Petrini, M. C. (2013). Criteria for Conducting and Evaluating Qualitative Research of a Critical-Interpretative Nature. In: Takahashi, A. R. W. *Qualitative Research in Administration: foundations, methods and uses in Brazil*. São Paulo: Atlas, p.51-72. ISBN é 978-85-224-7712-8.

Quintão, F. D. M; Teodósio, A.S.S; Dias, A.L. F. (2022). Sweet bile of mining dependence in the cities of Minas Gerais: Brumadinho and Itabira in perspective. *Cadernos Metrópole*, São Paulo, v. 24, n. 54, p. 647-668.

Santos, B. S.; Meneses, M. P. (2010). *Epistemologies of the South*. São Paulo; Editora Cortez. 637p.

Silva, T.A.; Corrêa, V.S.; Vale, G.M.; Giglio, E.M. (2020). Influence of social capital offline and online on early-stage entrepreneurs. *Revista de Gestão*, v. 27, n. 4, set. pp. 393-408.

Silveira, R.Z, Palassi, M. P., & Paes de Paula, A. P. (2024). Modes of use of action research in Dissertations and Theses in Administration in Brazil. *Organizações Em Contexto*, 15(30), pp. 317–349. <https://revistas.metodista.br/index.php/organizacoesemcontexto/article/view/868>

Storr, V. H.; Haeffele-balch, S.; Grube, L. E. (2015) *Community Revival the Wake of Disaster: lessons in local entrepreneurship*. New York: Palgrave Macmillan.

Tetamanti, J. M. (2018). *Social Maps. Social Cartography: theory and method: Strategies for effective community transformation*. La plata: Editorial Biblos, cap. 2, p. 15-41.

Teodósio et al. (2019). Between tragedy and crime: narratives about the rupture of Vale's dam in Brumadinho, Minas Gerais. XXII SEMEAD Seminars in Administration. ISSN 2177-3866 (2019). <http://login.semead.com.br/22semead/anais/arquivos/1489.pdf>

Note: The authors are solely responsible for the translation in the Brazilian Journal of Public and International Policies (RPPI) in a foreign language.