

NEOEXTRATIVISM AND THE SAMARCO DISASTER: HISTORICAL CONSTRUCTION OF VULNERABILITY IN ANCHIETA (ES, BRAZIL) IN A MINING-DEPENDENCY CONTEXT

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Abstract: The aim of the current article is to analyze vulnerability in the municipality of Anchieta, Espírito Santo State (ES), Southeastern Brazil, as a historical process, by taking into consideration the implementation of the mining company Samarco in the 1970s as part of the large-scale industrial project policy put in place in the state. Assuming, as modernization advances, disaster risks emerge within a context of territorial vulnerability, whose effects are not limited to a specific moment in time. Based on interviews conducted with the local population and on consultations in macro-economic data, the study has identified that (1) the vulnerability of Anchieta is correlated to the global modernization process, to the core-periphery model implemented in Latin America and to neoextractivist mining-dependency; (2) the territorial heteronomy renders Anchieta dependent on Samarco operations. In light of Fundão dam's disaster in the municipality of Mariana, Minas Gerais State (MG), the vulnerability of Anchieta became evident after Samarco operations were interrupted.

Keywords: Vulnerability. Neoextractivism. Mining-dependence. Disaster. Anchieta/ES.

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Introduction

The municipality of Anchieta is located on the Southern coast of Espírito Santo State (ES), 71 kilometers away from its capital city, Vitória. It hosts one unit of the mining company SAMARCO / VALE / BHP BILLITON¹, which holds 4 ore pelletizing units, as well as a port terminal for export purposes. Samarco's operations were halted after the disaster triggered by the collapse of Fundão mining tailings dam in Mariana (Minas Gerais State / MG). Such an interruption encompassed the company's activities in Anchieta and had significant impact on the local economy. Behind aggregate figures at city and state levels, such impacts have led to relevant changes in the social fabric of Anchieta, since they reached its inhabitants' field of experiences.

Since most studies about Samarco disaster have focused on cases recorded along Doce River basin - from Mariana to its mouth in Linhares, on the Northern coast of ES -, the most general aim of the present article was to analyze the form how such a phenomenon reached Anchieta, based on economic transformations that took place in the municipality after the company was shut down². This matter has triggered reflections about the association between (neo)extractivism and disasters, based on discussions about vulnerability processes that followed the territorial establishment of major development projects in the context of modernity. The main argument throughout the text is that the establishment of Samarco in Anchieta during the 1970s as part of the major impact projects implemented by the ES government, in partnership with the federal government, set in place a process of vulnerable local economic development traversed by socio-environmental conflicts and considerably dependent on the company's presence.

The aforementioned argument was developed along three different moments throughout the text. Firstly, we resort to critical perspectives on mining extractivism and neodevelopmentalism in order to contextualize them as typical phenomena of Latin American and Brazilian (semi) peripheral modernity. This step enabled associating the idea of mining-dependency (COELHO, 2017) - which is linked to the debate about extractivism and developmentalism - to the concept of vulnerability (WISNER et al., 2004) deriving from transdisciplinary studies about disasters. Subsequently, the study presented a brief historical approach on the economic development of Anchieta in order to show the role played by Samarco in this process. Finally, a pragmatic methodology (CHATEAURAYNAUD, 2004) was adopted to compare tax and macroeconomic data to elements of the field work carried out in Anchieta and to help better understanding how actors who live and work in the municipality have experienced the impact caused by the interruption of Samarco's activities.

1 - Henceforth, SAMARCO / VALE / BHP BILLITON will be only referred to as Samarco.

2 - The current article originates from the research conducted in the master's thesis developed by the first author (TSCHAEN, 2019). However, in addition to not exhausting the discussion held in the aforementioned thesis, the herein presented study addresses the issue based on a different theoretical-methodological framework.

1. Development, social inequalities and territorial vulnerability

Mining projects implemented in Brazil have substantially acquired the status of modernizing factor since the 1930s, when what Domingues (2011, p. 26) called “state-organized” modernity started gaining more accurate contours. This modern formation in Latin America had the centrality of a nationalist and corporatist state as one of its main peculiarities, and it played the main role in a series of developmental experiences carried out in different national configurations.

Mining was a particularly important support point to the Brazilian developmentalist state. By adopting import substitution industrialization as the main route of economic and geopolitical strengthening, the state has strategically aligned the creation of large projects like that of Companhia Siderúrgica Nacional (CSN) and that of Companhia Vale do Rio Doce (CVRD), so that extractive activities carried out by the latter have fostered the development of means of production and consumer goods driven by the former (VILLAS-BÓAS, 1995, p.20; 29; 67). The “national capitalism” adopted by the Brazilian developmentalist state started to decline following the descent of the second phase of modernity in Latin America and elsewhere. At that time, its import substitution model started to crumble due to the crisis of capitalism experienced in the 1970s (idem, p.17, 104; MATTEI; SANTOS Jr., 2009, p.107; DOMINGUES, 2011, p.59-60). The consolidation of the third and current phase of modernity in Brazil started through the transition from the military dictatorship to the democratic regime, and it was marked by structural adjustments to neoliberalism, as well as by deindustrialization and reprimarization processes (DOMINGUES, 2011, p. 62).

Although intended as an alternative to neoliberalism, the neodevelopmentism implemented by the federal government under the administration of the Workers’ Party (PT - Partido dos Trabalhadores) from 2003 onwards failed to fight such processes, a fact that has directly affected government’s options towards mining (GUDYNAS, 2009; MILANEZ; SANTOS, 2015; LOSEKANN; MILANEZ, 2016). On the one hand, PT’s rise to power did not represent a breakup with the capitalist market logic, but rather the repositioning of the State as mediator between a capitalist market and society (BIANCHI; BRAGA, 2005, p. 1754). On the other hand, it coincided with important changes taking place in the international market at that time. The so-called “commodity boom” had, then, been initiated, among other factors, by import demands resulting from China’s internal growth, a fact that increased the price of primary goods and intensified the participation of most Latin American countries in this specific market (SVAMPA, 2013; LOSEKANN; MILANEZ, 2016, p. 404).

Based on this scenario, the position of the Brazilian neo-developmental policy towards mining can be understood as a fraction of the process focused on recovering the classic developmental project. However, this process was only partly successful, since the idea of growth as national economic strengthening factor was the main imaginary element recovered in such an undertaking. The most ambitious goal of being repositioned in the international division of labor at global market level got compromised without the support of a robust industrialization strategy. Thus, the country has reinforced its role as

primary exporter. Finally, a topsy-turvy (neo)developmentalism was formed (MILANEZ; SANTOS, 2013), according to which the neoliberal extractivism was counterbalanced by conditional, sectorial and particularizing social policies in order to fit the typical social liberalism model of the third phase of modernity in Latin America (DOMINGUES, 2013; also see BIANCHI; BRAGA, 2005).

Based on the diagnosis of different strands of the critical theory about the profound ambivalence in modernity (DOMINGUES, 2011, p. 9-12), it was possible identifying in the neo-developmental mining model the irradiation point of modernity's social and environmentally harmful effects. Such a model can be more specifically seen as a deepening factor in multidimensional vulnerability frameworks, out of which we emphasize some territorial and economic aspects. We define vulnerability by adapting the concept designed by Wisner and his collaborators for use beyond the idea of "natural" disasters. Therefore, we take it as "*the characteristics of a person or group and their situation that influence their capacity to anticipate, cope with, resist and recover from the impact of a [...] hazard [...]*" (WISNER et al., 2004, p. 11, emphasis in the original text)³. Territories are meso-logical complexes where the ontological dimension of social life vividly manifests itself (CHATEAURAYNAUD; DEBAZ, 2017), so that, upon settling in, large political and economic development projects have contact with a plurality of modes of life that do not welcome the extractive logic in its relationship with nature. Local economic activities are directly associated with the maintenance of the material and symbolic existence of communities; thus, they play relevant role in the ontological dynamics of different territories.

Different forms of shock can derive from this process. Mining exploitation encompasses a margin of technical insecurity that turn its initiatives into potential sources of hazards to the territories where they are implemented in - the risk of rupture in tailing dams is a fairly good example of it. Furthermore, such projects often promote socio-environmental conflicts that may involve different factors in companies' relationships with workers and local communities. Milanez and Losekann (2016, p. 406-407) have listed some of these factors, such as the aggressiveness in controlling productive activities due to locational rigidity and to the exhaustibility inherent to mining activities, the extent of the environmental degradation caused by it and legal tensions in the relationship among companies, communities and the state, which may lead to conflicts of interest due to state's shareholding in mining projects.

In their classic analysis of development in Latin America, Cardoso and Faletto (2010) have shown how the enclave model of extractive activity reproduces, both internally and locally, the dependency logic experienced at international level by peripheral national economies. Coelho has updated the notion of mining extractivism by discussing how the relationship of extractive companies with the territory leads to what he called mining-dependency, which consists in a "situation according to which, the pathways taken by the local structure are defined in external decision-making centers due to the specialization of the productive structure adopted by a given city, region or country to extract

3 - The word "natural" appears in the original text before the word "hazard". We suppressed it in the quote in order to exceed the limits set by Wisner et al's definition, which were centered on "natural" disaster risks.

minerals” (COELHO, 2017, p. 2). If one takes into consideration the relationships built between society and the environment - based on a central, direct and indirect coordination of the mining-extractive economic actor, who was initially foreign to the dynamics of the local ways of life - actors participating in them find barriers to self-determine their historical, political and economic development.

This asymmetric picture gets even worse in the contemporary configuration of modernity, due to companies’ greater freedom in their relationship with the State and to their intense connections with the global market. On the one hand, this aspect gives broad corporate power to mining companies, which become key players in the local insertion in networks of the national and international ore markets (SANTOS; MILANEZ, 2015, p. 2105), which increases their previously mentioned capacity to control the territory. On the other hand, the economic pressure of the global market on mining, mainly with respect to price instability, may increase the “[...] need of exporting at any cost [...]” in order to compensate for eventual revenue reductions (WISNER et al., 2004, p.68), a fact that can increase the risks posed by the extraction activity’s chain. One of the elements likely associated with such an increased risk lies on the relaxation of security measures in order to reduce companies’ costs. This factor becomes significantly evident in commodity crisis contexts, such as the one that ended the ore-exporting cycle initiated in the early 2000s (MANSUR et al., 2016, p.18-23; MILANEZ; LOSEKANN, 2016, p. 407-408). In the case of Samarco dam rupture, which took place right at the end of this cycle, there are “[...] indications [...] that such a pressure has led to intensification in the production process and, likely, to negligence towards safety aspects”, so that “such a process could, presumably, also be associated with the rupture of the dam [...]” (MANSUR et al., 2016, p. 21).

2. The development of ES and the historical process building the vulnerability of Anchieta

Since the 1960s-70s, ES has been involved in the national development process through companies of different sizes, including CVRD (nowadays called Vale) and Samarco. Samarco was founded in 1977 and organized under a joint venture system; it comprises two large companies in the extractive segment, namely: the Australian “BHP Billiton” and the Brazilian “Vale”. The Brazilian government has prominent participation in the shareholding composition of Vale⁴. Anchieta was integrated in the industrial modernization process of ES in 1977, when it was included in the set of initiatives known as “major impact projects” (BITTENCOURT, 1987, p. 209; SIQUEIRA, 2001, p. 58). This initiative began in the transition between the 1960s and 70s and it was encouraged by the alliance between the federal and state governments. It comprised a series of major undertakings in the steel, para-chemical, tourism, port and naval sectors, which marked

4 - For further information about Vale’s shareholding composition, see Santos and Milanez (2015) and, mainly, Mansur et al. (2016).

the time when state industry got separated from the coffee-based economy (SIQUEIRA, 2001, p. 58; also see BITTENCOURT, 1987, cap. 6).

The role played by Anchieta in this initiative lied on hosting Samarco's pelletizing plants (BITTENCOURT, 1987, p. 223-225). Four plants started operating since the beginning of the company's operations at the site until it was shut down in 2015. These facilities accounted for molding the iron ore extracted by the company at its Mariana and Ouro Preto units in small spheres (pellets), as well as for the port flow of exports of this material for steel production in different continents.

Overall, according to the official history of Anchieta, which is told at the City Hall website, the economic formation of the municipality comprised four stages: the first one, already extractivist, lasted from 1560 to 1860 and was marked by both the colonization process and the Jesuit influence; the second stage remained in force until 1960, when the agricultural development was consolidated, and fishing and tourism activities were also strengthened; the third stage started in the 1960s and it was featured by the industrialization and implementation of major developmental projects in the state; and, finally, the fourth stage, which started in 2010, was primarily based on future perspectives linked to Samarco itself and to Petrobrás⁵ (Prefeitura Municipal de Anchieta, 2017). The turning point in the municipality's economic history, corroborated by different authors (RAMOS; ATAIDE, 2013; MATTOS, 2014; PEROZINI, 2017) and suggested by this periodization, lies on large industrialization projects.

According to Mattos (2014, p. 111), the general picture of Anchieta's development from the 1970s onwards, mainly at the time Samarco's operations had started, depicts a sudden socioeconomic transition, which was followed by inequalities of different types, income concentration, territorial segregation, increased violence rates and by the degradation of historical, cultural and natural heritage. The migratory flow caused by the arrival of major projects in Anchieta led to a population density unattended by public authorities that would have led to a "[...] socio-spatial segregation process, typical of the capitalist production logic" (RAMOS; ATAIDE, 2013, p. 190). Amid these transformations, Mattos (2014, p. 110) has identified a crisis in the "socio-cultural system" of artisanal fishing, which historically represents one of the economic pillars of the municipality. According to Knox and collaborators (KNOX; TRIGUEIRO, 2014; KNOX et al., 2014), this crisis is linked to a broader ES coastal stretch modernization process, in which oil exploration, predatory tourism, real estate speculation and different industrialization paths have jeopardized the reproducibility of artisanal fishing and its own relationship with labor and nature. (KNOX et al., 2014, p. 28).

One of the most important consequences of the developmental type brought by Samarco lies on the way the organization of the municipality's economic and social life became increasingly associated with the company. Voices of legitimized political actors point towards the strengthening of this link over the decades. Back to the official history

5 - Petrobrás has a Gas Treatment Unit (UTG – Unidade de Tratamento de Gás) installed in the municipality; its activities are sometimes pointed out together with Samarco's, as the point of origin of environmental conflicts at the site (BARBOSA, 2009, p.75-84; RAMOS; ATAIDE, 2013).

of the municipality's economic formation, the local government mentions the construction of Samarco's fourth plant as one of the main achievements of its fourth development stage, which started in 2010 (Prefeitura Municipal de Anchieta, 2017). The fact that the local government prospectively counts on extractive activities in general, mainly those performed by Samarco, as the municipality's development axis, even after the disaster and the economic issues caused by the shutdown, reinforces the image of that company as one of the pillars of the local economy⁶. Finally, Samarco itself (2016, p. 64-69) corroborates the diagnosis in the textual material presenting the set of actions taken by the company 1 year after Fundão dam rupture. In this document, the company strategically resorts to an attempt to achieve generality in its positioning (BOLTANSKI; THÉVENOT, 1991) in order to legitimize the return of its activities in MG and ES, by portraying it as something not limited to its own economic interests, but that also suited to the general well-being of the population living in Mariana and Anchieta, among others municipalities. Thus, Samarco (2016, p. 65) has emphasized the important role played by it in the employment and tax structure of Anchieta, where it would represent no less than "half of the total collection, either through Tax on the Circulation of Goods and Services (ICMS - Imposto sobre Circulação de Mercadorias e Serviços) or through *Tax on Services of Any Nature* (ISS - Imposto Sobre Serviços de Qualquer Natureza)."

3. Approximations and crosschecks in Anchieta: the post-disaster experience

The current section brings the systemic and historical considerations about the previously addressed association among development, mining and vulnerability to the plane of experiences of the post-disaster Anchietaense⁷ territory. We return to the idea of the territory as mesological complex, where social relations at different scales (from micro to macro) are rooted and concretely experienced by human and non-human beings. This is where contact and friction with the world cut across the constitution of actors' perception and critical capacity (CHATEAURAYNAUD, 2004; CHATEAURAYNAUD; DEBAZ, 2017).

We adopted a pragmatic methodology to articulate different data classes. We subjected to reciprocal tests, on the one hand, approximations (rapprochements), intellectual associations based on databases and concepts, taxonomies and measurement standards between physically separated objects, as well as crosschecks (recoupements), which compare data deriving from one's direct experience with things (CHATEAURAYNAUD, 2004, p. 180). The contrast between these two sources of information favors the achievement of

6 - On July 9th, 2020 the News portal A Gazeta reported that Samarco was getting ready to resume its activities in December 2020. Available at <https://www.agazeta.com.br/es/economia/samarco-confirma-retomada-em-dezembro-e-vai-abrir-700-vagas-no-es-0720>, accessed on: September 18th, 2020.

7 - Adjective designating those born in Anchieta.

tangibility⁸ by the assertions derived from inquiry work. We will perform approximations between different tax and macroeconomic data regarding Anchieta, which derived from different sources (Jones dos Santos Neves Institute - IJSN, Espírito Santo State Revenue Office - SEFAZ / ES, Brazilian Institute of Geography and Statistics - IBGE). Although this type of data had been previously addressed, in an indirect way, through the speech of institutional actors in the second section of the present study, it gained more room in the current section. These approximations were counterposed to crosschecks deriving from the fieldwork carried out in Anchieta between October 2018 and May 2019.

The fieldwork was conducted by the first author, who visited the municipality and talked to some of its residents and traders. Interviews were carried out, upon authorization, with fishermen, shopkeepers and the president of the Board of Directors of Shopkeepers (CDL - Câmara Dirigente de Lojistas) in Anchieta. Interviews were based on semi-structured questionnaire about the likely impacts generated by Samarco's shutdown after the 2015 disaster.

In the first months after the disaster, when the aforementioned researcher passed by Anchieta⁹, he could observe a rupture in the local commerce routine to the point of commenting with a colleague who accompanied him how the city seemed "idle", likely because local residents were afraid to spend their money without knowing Samarco's fate after Fundão dam collapsed. Empty streets, vendors standing by the doors and few customers inside the establishments depicted a different scenario from that observed in his previous experiences in the municipality. This scenario remained unchanged - i.e., shops with little or no movement at all - in the following 3 or 4 times he passed by Anchieta - at maximum time interval of 2 months between visits. These experiences started to articulate in a non-systematic way questions about the association among the disaster caused by the rupture of the dam, the shutdown of Samarco in Anchieta and changes in the local economic routine.

On the other hand, during the fieldwork, after this initial impression had been turned into a sociological research problem, it was possible having access to local residents and shopkeepers' perspectives about the economic life of Anchieta before and after the disaster. The statement below indicates that the fishing and real estate sectors were affected by the shutdown of the mining company's local plant:

Nowadays, Anchieta's commerce has virtually stopped, it is dead! [...] whoever had houses for rent, they are all closed, stores are closed, fishmongers are a mess! In the past, there were many Samarco's contractors here, so every Friday they used to go to the fishmongers in the municipality, and we could sell a lot of fish, you see! [...] It has increased the number of thefts due to lack of jobs. (Interview

8 According to Chateauraynaud (2004), a given proposition is tangible if it is collectively and transactionally based on an arrangement substantiated by perceptual and representational bases, and it remains consistent after being subjected to a series of tests (*épreuves*).

9 - The presence of the aforementioned researcher in Anchieta in this case, as well as in other occasions to be mentioned below in the same paragraph, was justified by professional legal commitments unrelated to the academic-scientific activity.

conducted with former president of Anchieta fishermen's association)

Another interviewee has corroborated the feeling of the category when he remembered the time when large groups of Samarco and contractor employees flooded fishmongers on Fridays: "Samarco employees who did not live here often came to the market to buy fish to be taken to Vitória, Vila Velha, or to the place they used to live, you see!" (interview with fisherman from Anchieta). Based on the fishing sector's perspective, as well as on that of most of the trade and services sector, Samarco's disaster has negatively affected the local economy, since company employees and outsourced workers used to consume several products and services. Thus, the purchasing power of Samarco employees had great relevance for the circularity of the local economy, mainly for its commerce. The disaster and the consequent shutdown of the company would have destabilized this circular movement, as seen in the following statement: "[...] [Samarco's] workers used to buy our products and spend their money in our commercial establishments; thus, the company's shutdown had an unprecedented and significant impact on the local economy". (Interview conducted with the president of CDL in Anchieta).

Some macroeconomic data have evidenced the extent of the change that took place after the disaster. The time series of GDP per capita of Anchieta between 2012 and 2016 has shown that, among all 5,570 Brazilian counties, Anchieta ranked the 5th position in the item "GDP per capita" in that first year (IBGE, 2017), whereas in 2013 and 2014, it ranked the 15th and 14th place, respectively. In 2015, the year of the disaster, it dropped to the 45th position and, in 2016, it ranked the 1,472nd position (*idem*). This GDP series depicts the drop in revenues, which affected the municipality, as shown below. Based on the comparison between these data and those provided by IBGE (*idem*), among all 78 counties in Espírito Santo State, it was possible seeing that Anchieta ranked the 3rd position in 2013, 2014 and 2015, whereas in 2016, it dropped to the 12th position.

In addition to comparisons between GDPs at national and state level, other data can complete the comparison of the municipality's economic conditions before and after the disaster. Among them, one finds the Tax on the Circulation of Goods and Services of Interstate and Intermunicipal Transport and Communication (ICMS) and the Tax on Services of Any Nature (ISSQN, or ISS).

According to official data provided by SEFAZ-ES¹⁰, ICMS collection in Anchieta has significantly decreased in 2015 and in the first months of 2016. The ICMS collected in the first two months before Samarco's disaster reached R\$ 7,419,247.10 and R\$ 9,411,949.41, respectively, whereas in the month of the disaster (November 2015), it decreased by almost R\$ 3.5 million and totaled R\$ 5,892,121.78. A similar outcome was observed for ISSQN collection, which only reached R\$ 16,342,793.26 in 2016, whereas it had reached R\$ 29,822,867.80 in 2015 and R\$ 48,865,716.85 in 2014.

Although Samarco's disaster took place less than two months before the end of 2015, it has significantly affected the ISSQN collection. So much so, that the tax collection decreased by 38.97% in 2015 in comparison to the collection of the previous year

10 - <http://internet.sefaz.es.gov.br/informacoes/arrecadacao/consulta.php>, accessed on: December 23rd, 2020.

(2014); this outcome corresponded to decrease in ISSQN collection by approximately R\$ 19.04 million. A similar comparison can be performed between 2015 and 2016, when the municipality collected approximately R\$ 13.48 million less in ISSQN – such a decrease corresponded to 45.2% of the amount collected in the previous year.

This configuration was also observed in data available in the Report issued by IJSN in 2017, which showed that the GDP of ES remained affected by the disaster and by the shutdown of Samarco's activities, even two years after the event. According to IJSN (2017, p. 5) “[...] the national outcome in the index accumulated in four quarters was superior to that of the State, since the indicator remains influenced by the interruption of Samarco's activities [...]”.

The picture presented by residents and traders' citations, as well as by tax and macroeconomic data, substantiates the diagnosis of Samarco's centrality in the economic life of Anchieta. However, such a centrality can be interpreted in a way that emphasizes insidious aspects about the concentration of support in a single economic actor. It can be seen in a metaphor of domestic nature observed in the speech of one of the interviewees, who described the relationship between Anchieta and the company, in which the municipality would play the role of provider authority:

[...] but the social impact was the highest one recorded in all countries and, as a good Anchieta citizen, I can say, precisely because we ourselves ... Because our dependency on Samarco was so ... so ... so strong, that once the father was no longer at home, children starved [...] it is like a snowball. Since Anchieta has always depended on the industrial sector - in the present case, on Samarco -, tourism has been abandoned. (Interview conducted with the president of CDL in Anchieta).

In 2010, Samarco was the second largest mining company in the world; it ranked right after its shareholder 'Vale' and, in 2015, it was the tenth largest exporter in the country (VEJA, 2015). However, 4,111 direct and indirect job positions were at risk in ES when the company was shut down after the disaster in 2015. This figure corresponded to 51% and 18% of formal job positions in Anchieta and Guarapari counties / ES, respectively (Tendências Consultoria Integrada, 2017, p. 8-9). According to the study requested by BHP and carried out by the company Tendências Consultoria Integrada:

[...] each month Samarco remains inactive throughout 2017 will correspond to R\$ 82.4 million of total tax collection loss, on average [...] The R\$ 989 million referring to the first year represent 198% of the sum of public spending in health, education, sanitation and transportation in Mariana and Ouro Preto counties / MG, as well as in Anchieta and Guarapari counties / ES, in 2015. (Tendências consultoria integrada, 2016. p. 12).

Castro and Almeida (2019) have evaluated the economic impact caused by Mariana dam failure on both MG and ES. They concluded that ES suffered the most significant impact, since it recorded decrease by 18.22% in industrial production and by 25.01% in mineral extractive production. Data pointed out by the aforementioned authors tend to reinforce the idea that the State is highly dependent on the activity of large industries, such as Samarco. Although the study conducted by the aforementioned authors and their conclusion corresponded to the state level, it is possible inferring that this result was even higher at local level (Anchieta), as shown in negative economic impacts such as loss of royalties, drop in tax collection, recession in trade, stagnation in the real estate sector, among others.

Discussions brought about by the first two sections of the present article have gained a more concrete nature after the approximations and crosschecks started above. If one can safely say that Samarco played central role in economic relations in Anchieta, something that the company itself did not back away to declare, it is also necessary emphasizing another likely interpretation in the field, which gives negative connotation to this role and classifies it as a dependency relationship. This second reading seems to empirically illustrate the hypothesis about the mining-dependency of local economies (COELHO, 2017), since it sheds light on how the economic structure of Anchieta was coordinated from external decision-making centers. Based on the effort that has been made, it is advisable transposing this general idea into a more practical-phenomenological language, which is concerned with the implications of this type of insertion in a multiscale system of relations for actors' experiences in Anchieta.

Pragmatic sociology can be useful in such an effort. The interpretation of Samarco's centrality in Anchieta as a case of dependency is also close to the type of relational logic that Chateauraynaud and Debaz (2017, p. 501ff) have generically called "milieux under the control of a given entity". Under this logic, the set of relationships between beings, either human or not, in a given local environment is susceptible to the influence of a hegemonic actor, or group of actors, in the course of "[...] long periods of crystallization of forces and legitimacy" (idem, p, 508). Bearers of legitimate power, these hegemonic actors promote, in their favor, asymmetric and procedural reorganizations of the territory, so that most priorities and options crossing the experiences of other actors get directly (experiences deriving directly from the interests of the hegemonic entity) or indirectly linked to them. Hence, a form of instantaneous and inescapable dominance does not emerge at local level, but rather a diffuse and unequally distributed control. If it does not only affect relationships within society, but also relationships between society and nature, it is also not limited to exclusively economic, political, social or environmental domains.

As partly suggested before, other impacts reported by respondents comprised emigration and increased number of robberies, which was repeatedly reported in the press¹¹. With respect to emigration, many people would have moved out from Anchieta, as well

11 - Criminality is also reported at: <http://g1.globo.com/espirito-santo/estv-2edicao/videos/v/crimes-de-roubo-tornam-se-frequentes-em-anchieta-no-sul-do-es/4139529/>, <https://www.espiritosantonoticias.com.br/caliman-de-anchieta-alerta-para-aumento-da-criminalidade-na-cidade/>, access on: September 18th, 2020.

as from Brazil, in pursuit of job positions, according to reports by the former president of the fishermen's association: "people who worked at Samarco either migrated to fishing or left the country"; and by the president of CDL¹²:

[...] I cannot even count them in my fingers. Because we are from here [Brazil]. Nowadays, Portugal is the hot spot, because it is emerging, it is growing. And a lot of people [...] managed to go to the United States. I am not talking about one or two individuals; I am talking about a lot of them. (Interview conducted with the president of the CDL)

Imagetically, the herein referenced form of control is that of concentric circles around a unitary nucleus of power where the hegemonic entity is found (CHATEAU-RAYNAUD; DEBAZ, 2017, p. 509). Such circles represent the territory's web of relations orbiting that nucleus due to its force of attraction. Two considerations by Granovetter (2005) help better understanding the link between such an image and the speeches presented above about changes in the life of the population living in Anchieta after Samarco was shut down. The first one is his idea of interpenetration between economic and social dynamics. While Samarco's centrality combined moral factors to its economic power (see its previous representation as the absent father), according to the statements above, the rupture in the circularity of the local economy due to the interruption of the company's activities has affected local public security and led to the emigration of individuals in pursuit of better life opportunities.

The emigration issue leads to the second relevant consideration made by the American sociologist, which concerns his classic thesis about the strength of weak ties. Since the wefts shaping the set of relationships in Anchieta are concentrically linked to Samarco's presence, they are interconnected to each other at some extent and, therefore, they are more prone to relatively similar routine and standardization processes. Although the current study does not consider that wefts' concentration automatically leads to uniform associations among them, it meets the understanding by Granovetter (*idem*, p. 46) that such a model tends to decrease the points of contact with the outside environment, mainly with respect to its connection with experiences and players from the market, i.e., with elements from other exchange spheres. One of the main consequences of this process lies on the reduced number of alternatives for innovation beyond the type of activity performed by the hegemonic entity and beyond the sphere of concentric exchange erected around it, whose influence goes beyond the economic aspects of the experiences of those involved in it. Emigration can be seen as a radical way out of this logic, since it demands physical removal from the place, which often involves financial and emotional costs.

Based on the contrast between speeches deriving from interviews conducted with local people and aggregated macroeconomic data about Anchieta, there was increase in

12 - The objective verification of emigration requires census data, and it becomes an obstacle since it limits the analysis to 2010. However, once it is explained and qualified, the support found in interviewees' reports indicates what underlies their practical experience with the investigated problem.

the tangibility of the link among Samarco's centrality in the economic life of Anchieta, the diffuse control exercised by it in that territory and the processual construction of a vulnerability framework in those coordinates. This vulnerability of prevalently economic content - although it has social, environmental and political reach - took place due to the heteronomization generated by Samarco of the set of relationships observed in that place, which had the effect of reducing the alternatives for income generation and, overall, for population subsistence, under disaster-related conditions. Thus, although the local economic development has accelerated since the 1970s due to Samarco's centrality, among other factors, it was marked by little variation and poor internal integration, which became more evident due to the crisis caused by the company's shutdown after the disaster in 2015.

Final considerations - Samarco disaster beyond Doce River basin

Throughout the current study, it was possible seeing how the economic development of Anchieta, from the 1970s onwards, was guided by a national agenda of major developmental projects led by the alliance between state and market players. Consequently, the municipality presented a dependent economic scenario, based on the ore-extractive production logic, which historically worsened local vulnerability.

As final reflection, the current study highlights the importance of having such a discussion in order to broaden the scale that, so far, has prevailed in studies about the disaster that started in Mariana. If one takes into consideration that neo-extractive corporations are often structured in transnational and multi-scale production networks, such as Samarco (SANTOS; MILANEZ, 2015), it is not surprising that the radius of impact of disasters associated with them exceeds local limits or spreads through other dynamic vectors that are not primarily environmental (in this case, Doce River watercourse). In other words, the river was not the only element of dispersion of that disaster. The herein portrayed experience has shown how the company's own presence or, more specifically, the heteronomic control it developed over the set of relations in the territory where it was installed in, has acted as vector for the impact of the disaster on Anchieta. Therefore, phenomena like these ones do not need spatial contiguity in order to spread, since they can be transported along the lines of predominantly economic, political, cultural and / or social wefts intertwined by human action.

This consideration indicates that vulnerability-building processes are not only associated with the origin of disasters, but also with the ways they spread in space. In addition, it is especially relevant for studies about disasters in contemporary modernity, in which dynamic and accelerated flows of material and symbolic exchanges among "[...] people, information, as well as imaginary and institutional standards [...]" promote intense space-time compression (DOMINGUES, 2011, p. 97). It is necessary seeing in these flows the unequal power relationships that attribute different roles to the center and the (semi)periphery in the global system and that, in the herein investigated case, turn neo-extractivism and mining-dependency into fundamental factors for the analysis of the history and post-disaster condition of Anchieta.

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NEOEXTRACTIVISMO Y EL DESASTRE DE SAMARCO: LA CONSTRUCCIÓN HISTÓRICA DE ANCHIETA (ES, BRASIL) EN UN CONTEXTO DE MINERO-DEPENDENCIA

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Artigo Original

Resumo: Este artículo pretende analizar la vulnerabilidad de Anchieta (ES, Brasil) como proceso histórico, considerando la instalación de la empresa Samarco en la década de 1970 como parte de la política nacional de Grandes Proyectos Industriales. Se presupone que, con la modernización, los riesgos de desastres se construyen en un contexto de vulnerabilidad territorial, cuyos efectos no se limitan a un dado momento. Basado en entrevistas con la población local y el análisis de datos macroeconómicos, el estudio señala que: (1) la vulnerabilidad de Anchieta se correlaciona con el proceso de modernización mundial, el modelo centro-periferia implementado en Latinoamérica y una minero-dependencia de fondo neoextractivista; (2) la heteronomía territorial ubica a Anchieta en un proceso de dependencia de la empresa Samarco. Ante la ruptura de la presa Fundão en Mariana/MG (11/05/2015), Anchieta revela su vulnerabilidad tras la paralización de las actividades de Samarco.

Palavras-chave: Vulnerabilidad. Neoextractivismo. Minero-dependencia. Desastre. Anchieta/ES.

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Resumen: Este artículo tiene por objetivo analizar la vulnerabilidad de Anchieta (ES) como proceso histórico, considerando la instalación de Samarco en la década de 1970 como parte de la política nacional de grandes proyectos industriales en el estado. Se presupone que, junto con la modernización, los riesgos de desastres se construyeron en un contexto de vulnerabilidad territorial, cuyos efectos no se limitan a un momento o territorio. Con base en entrevistas a la población local y consultas a datos macroeconómicos el estudio apunta que: (1) la vulnerabilidad anchietense tiene correlación con el proceso de modernización mundial, el modelo centro-periferia implementado en América Latina y la minería-dependencia neoextractivista; (2) la heteronomía territorial sitúa Anchieta en un proceso de dependencia frente a las actividades de Samarco. Frente al desastre relacionado con el rompimiento de la represa de Fundão en Mariana (MG), el caso de Anchieta revela su vulnerabilidad después de la paralización de las actividades de la empresa.

Palabras-clave: Vulnerabilidad; Neoextractivismo; Minería-dependencia; Desastre; Anchieta/ES.

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