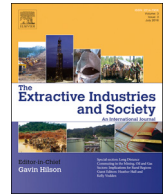




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Original article

## The temporalities of asbestos mining and community activism

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## ABSTRACT

In ancient times, asbestos was believed to be a magical mineral; its Greek etymology recalls eternity. The bio-persistence of asbestos fibres represents a crucial factor of asbestos toxicity and the long latency period of asbestos-related diseases. There is a “fragmented eternity” embodied by people exposed to asbestos through fibre inhalation and lived by community members in contaminated sites. This “fragmented eternity” influences both their suffering and activism.

This article addresses “multiple temporalities” of mining (D’Angelo and Pijpers, 2018, this issue) based on ethnographic research on the social and environmental impact of asbestos extraction in São Felix (Bom Jesus da Serra, Bahia, north-eastern Brazil), a mine in operation from the late 1930s to 1967. In this setting, the landscape and the bodies of the exposed are the “places” where the division between past and present disappears and disaster processes that began decades earlier continue.

I argue that through activism, people suffering from the effects of asbestos contamination use the traces of the past inscribed on their body and landscape to legitimise their struggle in the name of social justice, and make sense of the “temporal dissonances” affecting their lives.

### 1. Introduction

From the beginning of the twentieth century, asbestos minerals have been used extensively in multiple industrial sectors such as construction (e.g. roofs, water reservoirs, and pipes production), shipyards, railways and textile industries (Iocca, 2011). The main characteristic of asbestos—its fibrous consistency—made this mineral a valuable resource for a prosperous market, but at the same time it provoked a health disaster of global dimensions (Collegium Ramazzini, 2015). Inhaled asbestos fibres cause various serious diseases. The International Agency for Research on Cancer recognises asbestos-related diseases (ARDs) such as asbestosis; cancers of the larynx, lungs, and ovary; and malignant mesothelioma (IARC, 2012). The latter is a fatal cancer with a latency period that may last more than 40 years (Feder et al., 2017); inhaling asbestos fibres with certain asbestiform mineral fibres is the only recognized cause of this disease (Pasetto et al., 2014, p. 263). The World Health Organization estimates that 125 million people are still exposed to asbestos in their workplace (WHO, 2016) and 107,000 people die every year due to ARDs (Prüss-Ustün et al., 2011).

Considering the properties of asbestos minerals, ARDs’ long latency period, and the long-term social and environmental impacts of asbestos economics, “time” is a useful lens through which I explore the lack of synchronicity between asbestos mining, human and environmental temporalities, and the Brazilian anti-asbestos activists’ practices and narratives.

Anti-asbestos activists in Brazil aim to improve the quality of life of those injured by asbestos mining by claiming rights to compensation and access to adequate health care. They also promote future-oriented actions by lobbying for the recovery of the São Felix contaminated site in name of safety for future generations. Through activism, traces of a past that persists as a vivid and painful presence in the everyday lives of the exposed become the *proof* that sustains civil struggles for social justice. Thus, activist practices coincide with an attempt at “re-synchronisation” of the temporal discrepancies affecting a person’s life.

The temporalities of asbestos mining are illustrative of crucial processes and practices of the economics and politics of time in mining capitalism. I consider the socio-economic and environmental long-term impact of the industrial use of chemical pollutants and extraction of toxic minerals on the environment and exposed people after mining activities have ceased (Villas-Bôas and Barreto, 2000; Veiga and Hinton, 2002). I reflect on the properties of asbestos fibres—both as “fragments of eternity” and cancer-causing factors—as well as the traces of asbestos left by asbestos mining on exploited bodies and surrounding environments. Seen through the lens of time, asbestos mining is a dynamic process that can last decades and continue beyond human finitude. However, time can be experienced as irremediably lost or rapidly disappearing by those who suffer from the impact of asbestos extractive industry on their very existence (see Kirsch, 2014; Askland, 2018, this issue).

Although early epidemiological surveys dating back to the mid-

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1960s show the carcinogenicity of asbestos fibres (Selikoff et al., 1965), asbestos continues to be sold on the global market. Brazil represents the third highest producing country in the world (US Geological Survey, 2017), even though only one active mine, Cana Brava, in Minaçu, Goiás, remains.<sup>1</sup> Other Brazilian mines have been abandoned over the years, mainly due to deposit depletion and market logic. These include the São Felix mine in Bom Jesus da Serra, Bahia, north-eastern Brazil, which was active from 1937 to 1967 (de Oliveira D’Arede, 2009; Giannasi, 2012). In 1967, the “S.A. Mineração de Amianto [Asbestos Mining]-SAMA” company decided to abandon the Bahian site and invest its capital in the exploitation of the richer and newly discovered Cana Brava mine (de Oliveira D’Arede, 2009; Giannasi, 2012).

In 2015, I conducted ten months of fieldwork in Brazil to investigate the relationship between the experience of asbestos-related suffering and anti-asbestos activism (Mazzeo, 2017a). Based on my ethnographic data, in this article I explore the temporalities of asbestos mining and local mobilization organised by former miners and their relatives in Bom Jesus da Serra and Poções, where the *Associação Bahiana dos Expostos ao Amianto* (ABEA) [Bahian Association of Those Exposed to Asbestos] is situated.<sup>2</sup> Poções is the largest municipality surrounding the now-abandoned São Felix mine.

Contacts I developed with Brazilian anti-asbestos activists allowed me access to other anti-asbestos activists in Bom Jesus da Serra and Poções. During my fieldwork, I was based in Osasco (São Paulo, Brazil), where the Brazilian Association of Those Exposed to Asbestos (ABREA) is situated. I accompanied ABREA members to events and campaigns throughout the country and therefore had the opportunity to develop contacts with many anti-asbestos activists and conduct fieldwork in multiple sites.<sup>3</sup>

In Bom Jesus da Serra and Poções, I conducted semi-structured interviews with three former miners and the son of a miner who had died of asbestosis at 57, in 1987. The encounters with the former miners occurred at their homes in the presence of their family members, while the interview and the informal conversation I had with the miner’s son—Rodrigo (a pseudonym)—occurred during our visit to the abandoned São Felix mine. The former miners were aged between 74 and 80 and had been all diagnosed with asbestosis; Rodrigo was 56 years old, with an as yet unconfirmed diagnosis of pleural plaques (i.e. pleural thickenings due to asbestos exposure). All interlocutors in Bom Jesus da Serra and Poções were either external supporters or directly engaged in anti-asbestos activism, which has to be considered when interpreting the narratives that emerged from our encounters. These activists were aware of the dangers of asbestos and constantly referred to memories as collectively shared and told by their communities.<sup>4</sup> Their perception of the risks of asbestos’s toxicity might have significantly differed from the perceptions of other inhabitants and former miners who had been equally exposed, but did not perceive asbestos exposure as a primary risk threatening their health (De Abreu Moniz et al., 2012). My

<sup>1</sup> In November 2017, by acknowledging the constitutionality of laws promulgated by the federate states that had already prohibited asbestos, the *Supremo Tribunal Federal* [Brazilian Supreme Court] extended the prohibition of asbestos extraction, use, and commercialization to all national territory. However, the effective dismantling of the Cana Brava mine, and the repurposing of the plants currently using asbestos have yet to be realised (DIESAT, 2017).

<sup>2</sup> In the Bahian state, there are two organizations named ABEA, one is situated in Poções, and the other one is situated in Simões Filho (Salvador). Although the two organizations collaborate within the broader Brazilian anti-asbestos activism, they are distinct and reflect the multiple trajectories of the processes related to asbestos capitalism in two contexts affected by the extractive industry and asbestos-cement production respectively.

<sup>3</sup> For my research purposes (as reported elsewhere), in Brazil, I met with anti-asbestos activists from São Paulo (Osasco, São Caetano, Santo André), Rio de Janeiro (Cabo Frio and Rio de Janeiro), Goiás (Goiânia), Bahia (Salvador, Simões Filho, Poções, and Bom Jesus da Serra), Paraná (Londrina), and Santa Catarina (Florianópolis).

<sup>4</sup> I refer to the definition of mining communities proposed by Veiga et al. (2001) and the concept of communities emerging from shared and interpersonal experiences of disaster processes (Benadusi, 2015).

interlocutors had formed a community based on their shared experience of (asbestos-related) disaster processes<sup>5</sup> they had been victimised by (Benadusi, 2015). Their words revealed a degree of indignation developed over two decades of mobilization. However, as discussed by De Abreu Moniz et al. (2012), the majority of former miners and villagers living in Bom Jesus da Serra and Poções did not share an equal sense of indignation and risk perception.

In the following sections, I will briefly trace the history of asbestos mining with a focus on Brazil’s role in the asbestos global market. Next, I consider the impact of asbestos extraction on the local socio-political context, the environment and the bodies of the exposed. In the third section, I focus on asbestos-related experiences of risk and illness to show the cultural and emotional dynamics at stake in the “embodiment” of the socio-political and economic processes (Csordas, 1990) of asbestos capitalism. Last, I focus on locally organised anti-asbestos activism. I argue that these politics of time unveil and reflect conflicts and power relationships that are not immutable (see D’Angelo and Pijpers, 2018, this issue; Gilberthorpe and Rajak, 2017; Ballard and Banks, 2003). Time is not passively endured since there is a margin of action for the vulnerable social actors to enter into negotiation processes with more powerful actors in regard to their existence (Bourdieu, 1964).

## 2. Asbestos mining in Brazil

Asbestos is a generic term that indicates a group of fibrous silicate minerals including amphibole, chrysotile, amosite, and crocidolite. In ancient times, asbestos minerals were believed to be magical. Explorer Marco Polo (Polo, 1496, cit. in Roselli, 2010, p. 34) referred to asbestos fibres as “salamander’s wool” because like the small amphibian, asbestos cannot be damaged by fire.

The massive exploitation of asbestos minerals began at the end of the nineteenth century with the discovery of asbestos mines in Québec. The mining then boomed in the early twentieth century, after “Eternit” (a mixture of asbestos and cement) was patented by an Austrian chemist, Ludwig Hatschek, in 1902 (Roselli, 2010).

The main asbestos mines exploited throughout the twentieth century were situated in the former Soviet Union, Canada, South Africa, Zimbabwe, China, Brazil, Italy, and the United States (Iocca, 2011, p. 144). Currently, the major asbestos producers are China, Russia, and Brazil (US Geological Survey, 2017).

In the beginning of the twentieth century, Brazil imported asbestos; however, it began to use and export asbestos from its own deposits in the late 1930s (Giannasi, 2012). Although all extracted asbestos now comes from the Cana Brava quarry in Minaçu, Goiás (central Brazil), the only active asbestos mine in the country, asbestos extraction remains part of a broader mining industry that represents one of the most important economic sectors of the country (Barreto, 2001).

According to the collective memories of anti-asbestos activists in Poções and Bom Jesus da Serra, in the 1930s, a French geologist accidentally discovered an asbestos deposit in the proximity of the São Felix *fazenda* [farm]. Following this discovery, extraction began in 1937 and ceased in 1967, even though the deposit was not exhausted (de Oliveira D’Arede, 2009; Giannasi, 2012). The mining industry was moved to the newly discovered richer deposit of Cana Brava.

When I visited São Felix in August 2015, almost 50 years after mining activities ceased, the *pedras cabeludas* [hairy stones] were still scattered everywhere. In the past, the local population, which used the term *pedras cabeludas* for asbestos stones, used to consider these stones as sacred, even though they were common in the region. When asbestos extraction began, the wealth brought by the local mining industry reinforced the idea that the “hair” (i.e. fibres) of the asbestos stones

<sup>5</sup> I refer to the anthropological definitions of disaster that consider it as a process in which multiple aspects (e.g. cultural, political, economic, and social) are at play (see Oliver-Smith and Hoffman, 1999; Fortun, 2001; Da Silva Camargo, 2001; Ligi, 2009, 2011).

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