

Martín Arboleda, *Planetary Mine: Territories of Extraction under Late Capitalism*, New York: Verso, 2020. ISBN: 9781788732963 (paper); ISBN: 9781788732987 (ebook)

There is great depth to Martín Arboleda’s *Planetary Mine: Territories of Extraction under Late Capitalism* that will benefit future critical investigation into the wide-ranging tentacles of extraction for years to come. In particular, and suggested by the book’s very title, Arboleda’s work has a lot to offer the study of geography as *Planetary Mine* creatively extends recent theorization on planetary extraction (Labban 2014), urbanization (Arboleda 2016; Brenner 2014; Peake et al. 2018), and logistics and infrastructural networks (Cowen 2014; Mezzadra and Neilson 2017). In this vein, Arboleda invites readers to move beyond the mine’s conceptualization as a singular geographically situated place and instead recognize the mine as a fabric of interconnected infrastructures and spatial technologies that traverses the entire globe. In tracing these distinct but intersecting transformations from the mines of Latin America to its booming ports and the fiber optic networks of growing cities in East Asia, Arboleda radically expands the spatial contours of extraction under late capitalism and advances a new analytical approach, and language of critique, to lodge against extraction – perhaps the book’s most significant contribution.

The planetary mine emerges amidst the overlapping world-historical transformations of a new geography of industrialization in Asia and a “quantum leap” in the technoscientific articulation of the labor process – what Arboleda calls the “fourth machine age”. Situated empirically in Chile, Arboleda calls on readers to “transcend the territoriality of the mine” (p.29), through a critique of resource curse, dependency theory, and state imperialism scholarship that often takes the national and/or global as its point of departure. Essential to Arboleda’s approach is a revisiting of Moishe Postone’s (1993) thesis that capital is not an object but an alienated subject that embarks on a rabid trajectory of self-expansion, and a conceptualization of the global market as a “sociomaterial system organized in the form of national economies as its aliquot

parts” (p.20). Such an approach allows for a “subversive reading of the planetary” (p.18), and is central for Arboleda, who derides the tendency of resource extraction scholarship to fall into “methodological nationalism” (p.5). This privileging of the national economy, Arboleda argues, blurs the deepening interconnections between global supply chains, sprawling urban systems and the (re)production of the mine itself and, perhaps most troubling, proves “politically counterproductive” (ibid.) as it fails to connect, for example, the struggles of labor in host nations to those in manufacturing centers and beyond.

For Arboleda, the planetary mine is premised on the “reorganization of the mining industry into global supply chains” (p.5). Here, the state is far from illusory and is instead (re)centered as critical in the design, facilitation, and policing of extraction and its concomitant processes across time and space. In tracing the veins of contemporary extractive violence, Arboleda shows how these planetary linkages do not erode state sovereignty; instead the circulation of global capital “continues to be mediated nationally” (p.6) engendering new and contradictory forms of state authority amidst a logistical revolution that emerges alongside the increasing militarization and closure of national borders and the radical expansion of connective technologies and infrastructures. Emerging from this revolution, the contemporary mine is “not a discreet sociotechnical object but a dense network of territorial infrastructures and spatial technologies vastly dispersed across space” (p.5).

Such contributions will be taken up in scholarly discussion for years to come and, although I will tease some trajectories of these discussions below, in the spirit of *Planetary Mine*’s “ongoing dialogue” (p.xi), I intend to focus primarily on the *political* salience of Arboleda’s contributions to struggles against extraction. Therefore, I focus on the ways a planetary analytic elevates the stakes of mining, especially the industry’s impacts on the planetary systems necessary for life, and how the planetary geography of extraction holds significant purchase for collective politics and resistance. This seems appropriate at the time of writing as the global community teeters on the brink of a post-COVID-19 world that either

threatens to intensify the violence and inequality of the Capitalocene or collectively imagine a more just world that moves beyond extraction. We have already seen the impacts of supply chain disruptions for essential healthcare products juxtaposed with those of consumer goods and extractive operations continuing apace, placing workers, communities, and ecologies in grave danger while the rich get richer. These pandemic responses resemble the many interconnections and contradictions of global capitalism that Arboleda highlights throughout the book (locked down communities, but open gold mines; medical supply chain disruptions, but record profits for Amazon), but have also, in a hopeful way, become central to organizing efforts calling for a just recovery from the global pandemic.

Regardless of which side of the “-ocenes” debate one finds themselves on, common to these arguments is an acknowledgement that the impacts of this era of techno-scientific industrialization, and, as Arboleda rightly points out, the global dominance of the neoliberal project, has planetary repercussions that are threatening the life-sustaining features of the planet. Yet, something curious has transpired across the extractive industries as, despite significant and sustained pressure placed on the fossil fuel industry for its climate altering destruction, the mining sector has largely averted non-localized forms of criticism and has effectively (re)branded itself as crucial for just about every imaginable variant of the “green transition”. This, despite the mining sector’s massive terraforming project that physically moves more earth each year than all major industrial sectors (Bridge 2015; Kirsch 2009) and, as Arboleda rightly points out, the sector’s interconnectedness to sprawling infrastructures and processes of urbanization. Industry, governments, financial institutions, and swaths of civil society have accepted the mining sector’s leading role as a provider of critical minerals and technologies for a new green economy, built on the foundations of a discourse of “sustainable” and/or “climate-smart” mining (The World Bank 2019). Missing in this celebration of the sanctity of the mining (and metals) sector, and its ability to save us all from climate change (while conveniently generating vast profits for capitalists too), is the increasingly “convoluted terrain where fences,

walls, and militarized borders coexist with sprawling supply chains and complex infrastructures of connectivity” (p.16) or, rather, the conditions of late capitalist accumulation engendered by novel forms of state power and capitalist imperialism that the planetary mine emerges within (and a planetary analytic aims to reveal).

It is here that a planetary analysis raises the stakes of the mining industry by helping to capture the massive impacts of this sector and the violence of its *modus operandi*. In transcending the territoriality of the mine *site*, as Arboleda calls us to do, we can better appreciate what Joan Kuyek (2019: 3) refers to as the “awesome cost ... in terms of workers’ lives, Indigenous displacement and dispossession, environmental degradation and destruction, inequality and political distortions” of the metals, gadgets, and infrastructures that are embedded in each facet of everyday life and that are often taken for granted. Such costs extend far beyond the site of extraction, such as the effluence of the production cycle equaling 26 percent of global carbon emissions (Watts 2019) and one-fifth of particulate matter generated by the metals and mining industry (Auciello 2019), and the re-shaping of vast geographies that feed the mine and transport its commodities. In expanding the territoriality of the mine, linking the vast infrastructures, technologies, and urban centers necessary for the extraction of minerals, Arboleda expounds the world-making prowess of extraction, highlighting how industrial mining necessarily (re)shapes entire worlds, bringing both far-off places and the cities we call home into the realm of a truly global capitalist production (see also Labban 2014). Although recent scholarship has proven effective in pushing our collective understanding of extraction into new realms by investigating, for example, the contours of developmentalism premised on industry-state relations, and the resistances that upend private value creation through an analysis of the sites of extraction and their implications for the nation, the future of critical scholarship will undoubtedly benefit from a *planetary* analytic of the mine and the breadth of its component parts.

The political horizons of the *Planetary Mine* are expanded by Arboleda's meditations on the overlapping technologies, logics, and forms of governance between capitalist urbanization and resource extraction. Here, Arboleda situates the commodity boom (or super cycle) of the 2000s and the subsequent expansion of contemporary extraction, its infrastructures and supply chains, as a central driving force of the dynamics of capitalist urbanization. For Arboleda, the rabid intensification of extraction shifts Henri Lefebvre's (2003) renowned examination of the urban transformations of the countryside from the "explosion of the city" to the "explosion of the mine" (p.245), representing another significant world-historical transformation. Urban spaces are not merely the destination for the technologies and commodities of the mine as the "explosion of the mine" also results in the increased transfer of institutional and governance dimensions from the mine to the city in the form of financial and extractive logics that resemble the "frontier culture" (p.246) of the extractive industries. It seems that, in working to expand the spatial extent of extraction, Arboleda comes to view the city *as the mine*, a useful insight for understanding and (re)envisioning future organizing and solidarity efforts against extraction along the multiple nodes of its vast supply chain.

Resistance strategies targeting the infrastructures of extraction have a long history. Early coal miners are often used as an example of those who curbed access to the fossil fuel through the effective occupation of the mine shafts and infrastructures essential for transporting the material and, in so doing, won important workplace concessions (Aronoff 2019; Mitchell 2011). As Arboleda illustrates, such strategies have also been formative for Indigenous and community resistance to mineral extraction in Latin America, echoing efforts described by Naomi Klein (2014) as "blockadia", a term that represents the resistance efforts against the entire supply chain of the fossil fuel industry. Expanding these *sites* of struggle against various forms of extraction (and intersecting issues of racism, environmental rights, and gender violence), all along the global supply chain, is critical in resisting the imperial promises of extraction, and appears to be intensifying, perhaps most recently evidenced by the movement to #ShutDownCanada and the

increasing efforts to target the financiers, corporate headquarters, and conventions of extraction's proponents by various social movements today. In a hopeful section of the book (Chapter 7, "Struggle"), Arboleda writes that critical to the success of these movements is the increasing proficiency of international solidarity efforts grounded in Indigenous thought and resistance that are strengthened when combined with the capitalist technologies that can be bent to the will of those seeking more just forms of social, political, economic, and ecological organization. Indeed, the "fourth machine age" has revolutionary potential too.

Woven throughout the book, this expanded territoriality of extraction – from the mine to the city and back again – and its reorganization into global supply chains, leads Arboleda to suggest that confronting capitalism as a sociomaterial system necessitates a new reading of imperialism. Here, imperialism is not defined by military might but rather by efforts to expand the organic composition of capital by decreasing the ratio of labourers involved in the production of value. Read differently, the imperial promises of extraction are driven by a nation's ability to contribute to the global availability of the commodities of everyday life – the next generation iPhone – as an indicator of national economic growth and at an increasing rate of profit for the global capitalist class. Taken together, confronting extraction today requires both a fusion of the relations of race, class, gender and geography fragmented by decades of neoliberal (re)ordering, compellingly illustrated by Arboleda in Chapter 7, *and* a deeper appreciation for, to return to Kuyek (2019), the "awesome cost" of extraction. In showing how the boundaries between the nodes of global supply chains and their constituted labour relations are increasingly blurred under late capitalism, and the scale of the impacts of the sites of extraction and its component parts, *Planetary Mine* reveals how radical thought and organizing can be redefined "on the basis of *total struggle* against capital" (p.253).

In Chapters 5 and 6 ("Expertise" and "Money"), readers are treated to a deeper recognition of the temporality of extraction and the formation of the planetary mine. In Chapter 5, Arboleda details how the technoscientific tendencies of neoclassical economics and expertise

is “one of the key driving forces of the spatial technologies, population flows, and land-tenure schemes that act as the foundation of the planetary mine” (p.140). Central to this expertise-driven reformation of Chilean society (and global political economy) is the violent expropriation of small producers from their lands and the establishment and maintenance of private property, premised on the ongoing perpetration of state-sponsored violence, that ultimately, and infamously, creates Chile as the neoliberal laboratory. Simply put, the violence of Chile’s dictatorship allows for the opportunism of capital to penetrate and expand throughout the country, seizing upon the bounty offered by the (re)ordering of territory into spaces primed for extraction. In a novel reading of primitive accumulation, likened to that of Glen Coulthard (2014) and Alice Kelly (2011), Arboleda writes: “capital itself rejects the internalization of violence to its mode of operation ... it permanently relies on external agents that perform the acts of expropriation and extortion required for its conditions of existence” (p.152).¹ These are the *ongoing* processes and violence of primitive accumulation, whereby the force of extraction cannot be separated from the systemic violence of neoclassical economics. Such a reading reminds us that “the capitalists’ power does not grow from conquest and plunder; it originates from the fact that they are neither the conquerors nor the plundered” (p.173).

Focusing on Barrick Gold’s Pascua Lama project in Chile (Chapter 6), Arboleda reveals how the logics of finance are deeply embedded throughout the totality of extraction’s social relations. From the metabolic relationship between (inter)national debt and mega-infrastructure development to the individually burdened urbanite enrolled within the relations and discipline of money at the household level, vast and “complex financial networks converge in the production of the fractured everyday environments of extraction” (p.203). Arboleda’s approach to

¹ For Coulthard (2014), it is the settler-state and the ongoing colonial project that fundamentally orchestrates the dispossession of peoples as a way for capital to usurp the land. Kelly (2011) also reveals how the establishment and maintenance of biodiversity conservation territories, such as national parks, reveals the ongoing and unfinished processes of primitive accumulation under capitalism and how it produces various spatial openings for capital and capitalists to penetrate.

financialization is rather different from mainstream and (some) critical scholarship alike. Financialization, or the increasing use of “financial instruments, practices, and mechanisms over the actual production of goods or services in order to yield profits” (p.176) in the mining sector has, as shown by Mazzan Labban (2013), intensified commodity production by unlocking mines with higher waste densities and increasing the exploitation of labor. This is *not* a last-ditch effort to reap profits while primary commodity production falls or becomes unprofitable. Instead, corporate business models in the mining sector that are “driven by returns” intensify the utilization of financial techniques to increase shareholder value through financial means *and* simultaneously increase primary commodity production. A range of financial tools are central to this corporate strategy, including debt financing, which Arboleda focuses on here. Unfortunately, *Planetary Mine*’s publishing schedule did not align with the massive merger between Barrick Gold and Randgold (re-incorporated as just “Barrick”) in 2019, evidence of a trend in high-profile mergers and acquisitions that increases shareholder value, production output, and conveniently muddies the waters of corporate accountability through a process of name-changing (see Zalik 2020a, 2020b).

Yet, if we are to answer Arboleda’s call to investigate how and why the mine comes into being in the first place and grapple with the extent of the mining sector’s financialization, a deeper investigation of the temporality of the mining sequence itself could prove useful. In driving value creation through financial speculation and its material implications on the establishment and expansion of the mineral frontier, the mineral exploration and development sub-sectors of the mining industry are integral to the formation and expansion of the planetary mine. By way of extending the dialogue, less than critique, I end this review with some musings on how colleagues and I at Beyond Extraction (<https://www.beyondextraction.ca/>) have found Arboleda’s work, and the debates it is situated within, to be fruitful in grounding our efforts to excavate the temporality of extraction.

Throughout the book, Arboleda places the starting point of the extractive process at the

mine shaft and pit, making just a passing reference to the 16 years of exploration that were needed before a mining license for Pascua Lama was issued. Yet, as Gavin Bridge (2015) reminds us, “the hole is only the half of it”, and these 16 years of activity would have required finance capital, labor, and were likely filled with violence, expropriation, broken promises, and extra-regional wealth accumulation. Before Pascua Lama was given its name, it was in all probability referred to as a series of numbers on a grid of dozens if not thousands of mining claims.

It is often stated that out of every 10,000 mineral claims, just one will become an operational mine. This well-known industry saying helps to reveal the territorial imprint of exploration activities and, despite the reality that many of these 10,000 claims will never be acted upon, the thousands that are represent the initial wave of destruction wrought by the mining sector. The imagery and actions of colonial “explorers” lives on in the mineral exploration industry and often the most celebrated are those who go to the most remote and/or dangerous locations seeking the next big mineral “discovery”. Exploration is, as President and CEO of Barrick, Mark Bristow, recently reminded a packed audience at the 2020 Prospectors and Developers Association of Canada’s (PDAC) annual convention, that which “drives value creation” in the gold sector (The Northern Miner 2020). Given the nearly impossible odds of locating a viable mine, surveyors’ and geologists’ time behind the wheel is largely attributed to financial speculation, whereby shareholder value is increased through the *potential* for future profits stemming from a successful exploration program and the promised development of a future mine. To continue further exploration work and perhaps get to a sustained drilling program, explorers need to raise capital at sites such as the PDAC. They do this by telling stories – often done in the most spectacular fashion – of their exploration activities and their sites’ mineral potential.² This storytelling is, in many ways, the very essence of the junior mining sector and is one of the primary reasons that Beyond Extraction situates the PDAC as a central

² Anna Tsing’s (2000) analysis of the Bre-X scandal reveals this spectacle in a telling manner.

node in the planetary mine, because these conventions – as sites of financialization – are vital to the potential development of many future mines and the expansion of the mining industry itself (Alton and Holterman 2020). It is worth noting that major mining companies also actively invest in exploration. In 2019, majors spent \$4.95 billion on exploration, more than both junior and intermediate companies combined (\$3.85 billion) (Ferguson 2020). Indeed, Bristow also brought this to the fore during his speech, arguing that for the gold sector to continue to generate vast profitability, it should “get back to its pioneering roots”, perhaps hinting that Barrick’s new corporate structure will include significant investment in exploration activities.

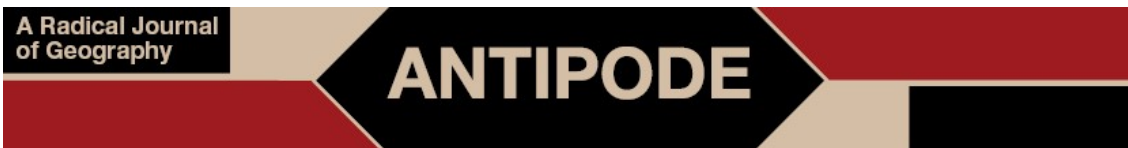
This brings me to my final point. If the technoscientific renderings of nature and processes of primitive accumulation create the conditions for the planetary mine to emerge in places like Chile, as Arboleda argues, then it is the pioneering violence of the exploration sub-sector of the mining industry that *grounds* the planetary mine in time and space. Such violence also lays the foundations for many of the urbanization dynamics that Arboleda seems particularly interested in (and more fully elaborates upon in earlier work; see Arboleda 2016). These dynamics generally come later in the mining sequence as prospectors and developers penetrate the frontiers of extraction, seeking the latest deposits and quite literally settling/unsettling the boom and bust cycles of extraction’s fragmented economies. There are many potential transformations that can arise as exploration work advances, including, but certainly not limited to, temporary camps becoming permanent, dirt roads being upgraded to asphalt, protected areas being traversed, trampled upon and degazetted, and homes being demolished to make way for infrastructural improvements and/or mining settlements. The point is that the *potential* for a future of mining kickstarts these processes well before the drilling of a mine shaft or the blasting of a pit.

Through a focus on the mine as a “dense network of territorial infrastructures and spatial technologies vastly dispersed across space” (p.5) and premised on the logistical turn in the mining sector, *Planetary Mine* challenges readers to move beyond the site of extraction itself and

consider how and why it “comes into being in the first place” (p.110). It seems that critical research could also benefit from a deeper engagement with the temporality of extraction, in particular the progression through the moments of the mining sequence, as ongoing research into the afterlives and legacies of extraction highlights (see, for example, Sandlos and Keeling 2016). Given its territorial extent and financial imperative, such an engagement would necessitate an examination of the exploration and development sectors of the mining industry, a crucial component of critique if we are to fully comprehend when a particular space *becomes* a component part of the planetary mine.

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