

Rachel Carson Center Perspectives

How to cite:

Santiago, Myrna. "Extracting Histories: Mining, Workers, and Environment." In: "New Environmental Histories of Latin America and the Caribbean," edited by Claudia Leal, José Augusto Pádua, and John Soluri, *RCC Perspectives* 2013, no. 7, 81–87.

All issues of *RCC Perspectives* are available online. To view past issues, and to learn more about the Rachel Carson Center for Environment and Society, please visit www.rachelcarsoncenter.de.

Rachel Carson Center for Environment and Society
Leopoldstrasse 11a, 80802 Munich, GERMANY

ISSN 2190-8087

© Copyright is held by the contributing authors.

SPONSORED BY THE



Federal Ministry
of Education
and Research

Deutsches Museum 



Myrna Santiago

Extracting Histories: Mining, Workers, and Environment

“Can we live without mining?” asks a colleague reviewing this text on the last two centuries of mineral extraction in Latin America. Mining and oil companies, foreign and domestic, are convinced we cannot and have ushered a new rush in petroleum, minerals, and metals—the building blocks of modern society. The “boom” is the latest reincarnation of a colonial era business that intensified with industrialization in the nineteenth century. The continuities in the practice are as striking as the breaks are remarkable. The technologies of extraction have changed dramatically. Yet in keeping with historical trends, the industry has provoked intense social conflict due to its impact on nature, workers’ bodies, and local communities—the elements that prompted my colleague’s question. Let us examine, then, the history of mining and oil in contemporary Latin America to understand his concern and answer his query.

Gold and silver, what sixteenth-century Europeans considered “specie,” are the precursors of contemporary Latin American mining. For three hundred years, mining fueled colonialism, nourishing Europe’s rise to global prominence and Chinese imperial coffers. Testament to the richness of Latin America’s subsoil is the extravagant display of silver and gold in European and Latin American colonial churches that astonish the most jaded tourist. Invisible but ensconced in that architecture and precious art are the millions of indigenous and African workers whose bodies and health were undermined to retrieve such treasure. Mercury poisoning, respiratory insufficiency, and maiming accidents were their fate throughout the empire. Forgotten also are the scarred landscapes left in erstwhile famous colonial mining sites such as Zacatecas and San Luis Potosí (Mexico), Potosí (Bolivia), or Huancavelica (Peru). Today both labor and nature are obscured in the cool shadows and bright artifacts of imposing European cathedrals. The same is not altogether true of the nineteenth century.

The Colony ended by the 1820s for the mainland but mining recovered haltingly due to political and economic instability. The impetus for renewed mining was the nascent industrialization of Europe. Minerals, metals, and previously ignored natural products suddenly acquired value and created high demand. Latin American nature and labor provided. Peruvian guano, piled in small mountains by millions of birds over millennia,

for instance, nourished English agriculture beginning in the 1840s until the organic matter was close to depletion by the 1870s. Likewise and for the same reason, Chilean and Bolivian magnates hired thousands of workers to mine for nitrates in the desert ecologies shared by Bolivia, Peru, and Chile. Work in the deserts was physically demanding, harsh, and exhausting. Fed by South American fertilizers and the bodily exertion of its workers, the industrialization of Western agriculture proceeded apace and spurred Latin American elites into a resource war. The War of the Pacific (1879–1883) was fought by Chile, Peru, and Bolivia. Chile won, increasing its territory by a third, leaving Bolivia landlocked. Nitrate mining, however, ended in the early twentieth century as nature's bounty lost value to synthetic fertilizers.

Keeping pace with the acceleration of European and US industrialization, mining expanded in more countries in the late nineteenth century. Latin American elites convinced that the export economy paved the way for progress liberalized laws to welcome foreign investment, opening up their ecosystems to exploitation and procuring the labor necessary to respond to demand from abroad. Bolivian tin became a prized commodity for canned foods and other uses. Local capital invested in new mines, attracting thousands of men to the desert in the process. Silicosis suffocated them and cave-ins entombed them. Survivors became highly politicized union men, the backbone of revolution by 1952. In Mexico, meanwhile, innovative technology coupled with 1890s Liberal economic policies and legislation that courted foreign investment industrialized mining itself and allowed US companies to return to colonial mining sites and dig deeper. In the process a new toxin, cyanide, was thrown into the mix and released into the environment. The health risks for miners and local communities increased as a result.

In the early twentieth century, European and US industrial needs promoted and developed a new extractive industry: petroleum. Coveted as fuel for machines from railroads to trucks to war tanks and planes, oil became of strategic importance by World War I. Mexico and Venezuela were first to experience substantial drilling. Therefore, they were first to witness oil spills, fires, and hydrocarbon pollution. The worst spill and fire in history, in fact, occurred at San Diego de la Mar, Veracruz in 1908. The exploded well, "Dos Bocas," shown in the photo below, became a lake that contaminates the landscape to this day. Ensuing socioecological conflict spurred Mexican oil workers to agitate successfully for nationalization in 1938.

The idea of nationalization soon spread. Chile, Cuba, Bolivia, and Venezuela joined Mexico in nationalizing their extractive industries over the course of the twentieth century. Argentina and Brazil, similarly, established state companies to gain control over the subsoil, which governments saw as a “natural resource” with potential for commercial exploitation. Generally labor tended to gain political voice under national ownership of nature’s underground deposits of minerals, metals, or oil. In the best case scenario, such as Mexico, nationalization of oil meant the government possessed an independent source of income that was used for economic development (infrastructure, schools), yet the damaging environmental effects of extraction went unmitigated. Despite environmental protection legislation, *Petróleos Mexicanos* (PEMEX) inflicted pollution, deforestation, soil degradation, and wild life destruction upon every community in which it operated.



Figure 1: “Dos Bocas” well exploded and caught fire on 4 July 1908. It burned for 57 days. Photograph by Russell Hastings Millward for *The National Geographic Magazine* 19:11 (November 1908).

Government recognition that oil represented a major commodity in the twentieth century led to another Latin America resource war. This one involved Bolivia and Paraguay. With Standard Oil prospecting in the arid ecosystem of the Gran Chaco, both governments sought control over disputed boundaries in anticipation of petroleum riches. Some 100,000 men lost their lives during the three-year conflict (1932–1935). A great number of Bolivians perished from thirst rather than combat, given the Chaco’s dryness and isolation from supply lines. Paraguay won the war and Bolivia, once again, lost territory to a neighbor.

At mid-century, extraction grew. Chile’s nitrate cycle was replaced by copper, mined since the dawn of the century. Geography and ecology, however, posed challenges for successful copper mining: high altitudes, aridity, labor scarcity. Foreign copper companies overcame nature’s obstacles through technological innovation, including

open pit mining via huge machines that could excavate the earth and crush its ore in ever more massive quantities without requiring additional labor. The scarring of the landscape intensified as did the policing of labor, which was confined to company towns in isolated locales. Dangerous and exploitative conditions contributed to working class radicalization and, as in Bolivia and Mexico, to revolutionary roles. Chilean miners were key actors in the election of socialist candidate Salvador Allende to the presidency in 1970. Their militancy, too, contributed to the final nationalization of the copper mines during his short three-year tenure in power.

Small countries became involved in mining at mid-century and experienced deleterious environmental consequences. Nicaragua, for example, produced enough gold by the 1950s, to be among the largest fifteen producers in the world. Located in tropical rainforests, mining fostered deforestation and heavy metal contamination of soils and water. Jamaica, similarly, joined the extraction world in the 1950s. Aluminum had become a valued industrial metal by then and the tiny island had one of its main mineral components, bauxite. Excavated in open pits, bauxite is blamed for deforestation in central Jamaica, in addition to social conflict due to the forced resettlement of communities living in areas identified as mineral rich.

At century's end, extraction intensified and expanded notably across Latin America. Modern society's dependency on petroleum, added to the rise of the high tech electronics industry and the growth of global consumer capitalism, including in Latin America, drove the demand for extraction exponentially. Ecuador, for instance, yielded oil and endured intense socioecological conflict as a result. Petroleum mining in the Ecuadorean Amazon subjected indigenous peoples and the environment to the worst consequences of oil development: deforestation, pollution, and illness. Small mining activity also grew steadily to satisfy demand for metals like gold. Colombia's small-scale gold miners and Brazil's *garimpeiros* led gold production in both countries. Unable to control the dispersal of mercury in the environment, this group of miners exposed their bodies and communities to poisoning without proper recourse to prevention or treatment.

Large scale open pit mining appeared on the landscape as well. An innovative response to reduced quantities of desirable minerals and metals within easy reach, open pit mining requires much less labor than previous technologies as it disturbs greater geographical spaces. As the photograph of Cananea, Mexico, shows, the open pit



Figure 2:
Open pit copper mine at Cananea, Sonora, Mexico, 2011. Photograph by Garrett D. Brown.

process often entails the wholesale razing of mountains and their ecosystems. The discarded ore, literally tons of rocks and tailings, gives rise to an allied process, that of “waste” disposal. Carcinogens and environmental pollutants permeate the slag, more often than not abandoned without remediation. One of the biggest open pit mines in the continent is Brazil’s Carajás complex, the largest iron mine in the world, covering nearly one million square kilometers of Amazonia. Inaugurated in 1985, the project has disrupted local the local ecosystem and, by some accounts, altered the climate already. Smaller Brazilian open pit mines such as the bauxite mine alongside the Trombetas River and the aluminum mines in Pará that require damming of the Tucuruí River for energy also threaten Amazonian ecosystems.

Nevertheless, extraction has been creative. It created the modern world, with its rapid transportation systems, its computers and cell phones, and its countless durable and replaceable consumer goods. For those whose class position denies them access to the modernity that is the fruit of mineral mining—often including workers in the industry themselves—there is at least the joy of electricity and television sets that al-

low remote villages to cheer their favorite soccer teams. Hence my colleague's query about our dependence on mining: it is possible to live a modern life without extraction? The answer is definitively no.

But extraction creates in other ways too. It has generated social critical consciousness and environmental thought and activism in Latin America and beyond. Bolivia, one of the poorest countries with one of the longest histories of mining, has treaded carefully around its lithium deposits, considered among the largest in the world, despite the metal's skyrocketing value for battery manufacturing. Bolivia's historical mining legacy has inspired new discourses about the meaning of modernity and life in relationship to nature, including the idea that *el buen vivir* (the good life) need not entail endless consumption. Ecuador tried to challenge the international community to pay for keeping its petroleum underground as a global environment-friendly gesture, given the connection between burning fossil fuels and climate change. When no one picked up the gauntlet, President Rafael Correa announced that oil extraction would commence again, unleashing a local polemic that has not been resolved. The lawsuit Ecuadorian indigenous people filed against ChevronTexaco in US court in 1993 demonstrates the creativity which communities use to defend their environments and health. The plaintiffs won their multi-million dollar suit in Ecuador, a major accomplishment. A decade later, the case is still under appeal with ChevronTexaco countersuing the plaintiffs' legal team and supporters in the United States. The precedent of losing a case on the grounds of ecological damage is unthinkable for extractive industries in general, not just ChevronTexaco, so the legal battle continues. In the meantime, Bolivia, at least has furthered the discourse with a campaign for "*Amazonia sin petróleo*." The term "extractivism" has become common to refer to a mentality of depredation, well beyond oil and mining, too. Allies in the Global North, meanwhile, seek pathways to "responsible mining" that respect and include local voices and concerns in the process. Discursively, at least, views of extraction have come a long way from the nineteenth century elites' belief that mining meant progress and development.

Whether *las venas abiertas de América Latina* will heal or even close, however, remains very much a contested question.

Selected Sources:

Alimonda, Héctor, ed. 2011. *La Naturaleza Colonizada: Ecología política y minería en América Latina*. Buenos Aires: CLACSO.

Brown, Kendall W. 2012. *A History of Mining in Latin America: from the Colonial Era to the Present*. Albuquerque: University of New Mexico Press.

Nash, June. 1979. *We Eat the Mines and the Mines Eat Us: Dependency and Exploitation in Bolivian Tin Mines*. New York: Columbia University Press.

North, Liisa, Timothy David Clark, and Viviana Patroni, eds. 2006. *Community Rights and Corporate Responsibility: Canadian Mining and Oil Companies in Latin America*. Toronto: Between the Lines.