Introduction: Land Use in Colonial Latin America in the Anthropocene History

José Augusto Pádua, Olaf Kaltmeier, María Fernanda López Sandoval and Adrián Gustavo Zarrilli

The arrival of Europeans to what is now called the Americas, beginning in the fifteenth century, was undoubtedly one of the most crucial events in the history of mankind. This displacement of populations marked the beginning of the consolidation of a global system that was able to connect the regional systems that were forming, with different levels of scope and intensity, in different areas of the planet. For the first time, it opened the possibility of integrating societies from all continents into the same planetary historical narrative, both in objective and subjective terms, opening space for the future establishment of a multi-civilizational order (Sharman 2019). In other words, a large global network was being built that would connect the different circuits of exchanges and domination – at the political, economic, ecological, and cultural levels – and would be implanted in different parts of the world (McNeill and McNeill 2003).

Of course, the formation of this global network was not limited exclusively to relations between Europe and America. From the fifteenth century onwards, European sea crossings were initially directed towards Africa and Asia, occupying a unique position in mobility from the Atlantic Ocean. However, European dominance in interoceanic navigation did not guarantee the conquest of new territories or the hegemony of the old continent. The incursion of Europeans into the areas of commercial and cultural exchange in the Indian and Pacific Oceans was relatively weak in the first centuries. Territorial acquisitions were quite limited and almost always depended on favored relationships with local aristocracies. European economic participation was thus limited to the commercial sphere, without significantly modifying local production relations (Chadhuri 1991).

The historical context in the Americas, of course, was very different. In these regions, Europeans conquered vast territories and subdued different native societies that were differentiated by their demographic dimensions and technological knowledge. The key point in the differentiation with contact and conquest processes in other regions, in terms of land use, was the establishment of economic activities beyond the commercial sphere, i.e., the European conquerors did not limit them-

selves to commodifying goods or natural resources based on local economic traditions. They also established their own productive dynamics, such as plantations and mining extraction, which produced radical changes in environments and territories. At the same time, they profoundly modified the regional and local logics of spatial and territorial management with the establishment of material and symbolic landmarks of their domination, such as cities, fortresses, haciendas, and churches. In the Amazon, for example, the religious missions were essential in the process of socioeconomic territorialization and in the control of the Indigenous populations disintegrated by the conquest. The environmental consequences of these transformations have undoubtedly had profound impacts. Deforestation and the loss of natural vegetation cover increased with the consolidation of colonial rule; the introduction of exotic species of fauna and flora, cattle ranching, and the expansion of monocultures caused, among other dynamics, profound changes in the structure and functioning of ecosystems, as well as the impoverishment of soils. Mining, with the use of galleries and pits, has become a dynamic of systematic landscape degradation and pollution, especially through the use of mercury. The European conquest of the Americas marked the beginning of what can now be identified as an environmental and civilizational crisis.

The colonization of the Americas was, consequently, much more intense and radical than that which took place in Africa and Asia until the nineteenth century. The appropriation of land, populations, and natural wealth occurred on a much larger scale, generating a substantial transformation also in the social and economic destiny of Europe. Thus, everything that happened subsequently in European history, including the industrial transformation of its economy from the eighteenth century onward and its domination of international geopolitics between the mid-nineteenth and mid-twentieth centuries, is linked to the colonization of the Americas. It is precisely this phenomenon and its consequences in Latin America, in the specific context of land use changes in the region and their impacts on the Anthropocene's genealogy, that will be analyzed in the five chapters of this section.

It is worth remembering that pre-Columbian societies were not a "new world," as defined by colonial ideology, but rather another old world. Nevertheless, it can be said that America acquired the label of "new world" when it was radically transformed by the impacts of the European conquest (Miller 2007). Contrary to the homogenizing, superficial, and misleading concept of "Indians," there was the notable presence of very diverse societies in social and cultural terms. These ranged from hunter-gatherers to agricultural villages that dominated most of the territory, as well as states or empires with a marked social stratification. All this human life, however, was isolated from what was happening on the other continents. Even though the American populations came from the same migrations of *Homo sapiens* that left present-day Africa tens of thousands of years ago and shared macro conditions on the same planet Earth, the societies that developed in the Americas charted their

own destinies and interacted with a diversity of ecological systems, each with its own uniqueness (Watson 2013).

A central element of these environmental and social changes, which occurred throughout the region, was the introduction of pathological microorganisms unknown to the immune systems of the local population, an event that had an enormous impact on human life. The specificities of pre-Columbian history help us to understand the magnitude of this epidemiological shock. On the one hand, Indigenous societies, for example, did not practice large-scale cattle raising, the activity that originated most of the diseases brought by the colonial conquest. In fact, there were few medium-sized animals in the local ecosystems to facilitate livestock activities. Europeans introduced oxen, horses, sheep, and many other exotic animals into today's Americas, which subsequently had enormous economic and environmental repercussions.

On the other hand, densely populated areas, favorable to the spread of epidemics, were relatively limited. The average standard of health of the pre-Columbian peoples was, therefore, better than that of the colonizing societies. In addition, this epidemiological shock cannot be isolated from the violence and abuses against local populations that marked the tragedy of colonization. But the impact of this shock was colossal, producing a differential that helps explain the scale of the territorial conquest, which was even greater. In addition to the direct deaths and waves of epidemics – which did not occur automatically or homogeneously, but differed in time and space –, the Indigenous economies and cultures were dismantled, and the stability of those societies was lost. In addition, the loss of population in some regions led to the inability to sustain sophisticated agroecological systems due to the lack of labor. The result of this process was a demographic decline of about 90 percent in just over a hundred years. It was as a result of this depopulation that much of the occupation of territories during the colony took place (Cook 1998).

The documentation of the time reveals that colonial rule was not only defined by economics, but also manifested itself in the cultural dimension. However, above all, colonial rule was marked by the control of power. This control took place at various scales, both at the macro geopolitical level, for example, in the competition between European states to become powers; and at the local level, insofar as the European elites became masters of the life and death of the inhabitants in the regions where they settled. The spread of Catholicism, in turn, intertwined religion, culture, social status, and power, thus contributing to European domination.

Undoubtedly, the search for material wealth was always present, substantially conditioning the other goals of colonization. In the context of the time, the search for precious metals was the main economic objective. In places where gold or silver reserves existed, such as Mesoamerica and the Andes, the creation of mining enclaves took center stage and produced significant social and environmental impacts. In addition to their direct impacts, such as the degradation of the local land-

scape and mercury contamination, these mining areas – whose main regional nucleus was Potosí (Machado Aráoz 2020) – became a sepulcher for Indigenous bodies, forced to work in terrible conditions through legal impositions or explicit violence. The mines also demanded a large amount of timber for economic and urban infrastructure works, which was acquired through the destruction of extensive areas of forest. The geography of supply to the mining enclaves was sweeping. For example, in the Southern Cone, much of the economy was oriented to the production and supply of food and pack animals for Potosí. Something similar occurred in Mesoamerica, where both the mining enclaves and the networks of cities and roads that were created to consolidate the territorial domain of colonization caused intense deforestation, accelerating the forceful expansion of production centers for supply.

The social and environmental impact of colonialism also extended to the exploitation of the organic world in all conquered areas. In the first instance, this was not only through the cultivation of exotic plants and the breeding of domesticated animals, but also through the extraction of non-domesticated species of native flora and fauna. Colonialism was imposed on the geography of Latin America. Land concessions played a key role through legal instruments such as grants and sesmarías by state authorities; thus, private ownership of land spread in the form of latifundios, haciendas, or ranches dominated by Europeans. These institutions of territorial and population control coexisted in a tense and oppressive way with the subordinate Indigenous communal agriculture, which was weakening over time.

A historically significant milestone was the invention of agricultural commodities, i.e., export-oriented agriculture through plantations and slave labor. The commercial extraction of certain trees and wild animals was too limited and irregular to consolidate and economically compensate the colonial extractive companies. Thus, in some regions where mining did not exist, an alternative was created through large-scale monocultures of agricultural products, which could generate wealth through their export to the markets of Eurasia and Africa. The plantation model was established mainly in regions with tropical and subtropical climates, where products that were not widely grown in Europe could be cultivated, gaining markets thanks to their exoticism. An example of this was cane sugar, whose large-scale production in northeastern Brazil (Rogers 2010) and the Caribbean (Funes Monzote 2008) revolutionized European food consumption. The plantation model produced a great deal of deforestation, since it relied on soil fertility obtained from the burning of forest biomass, which, although ephemeral, generated more production than in bare soils that were subsequently impoverished and eroded. The plantations were not limited to sugar cane. In the Caribbean, one of the central areas for the plantation model, crops such as coffee and tobacco, among others, were also developed. In other regions, in a more localized manner, plantations expanded where there were adequate ecological and social conditions; for example, in Amazon, where high river flows, intense rainfall cycles, and flooding made large-

scale occupation difficult, plantations were present that cultivated cocoa and sugarcane on medium-sized properties, which generated relatively modest exports. In addition, the plantations, along with mining, were essential for the development of a perverse but highly lucrative trade that brought some 12 million African slaves to the Americas, of whom about 2 million died crossing the Atlantic Ocean (Klein 2010).

However, the colonial rural economy was not limited to plantations. It was also oriented towards production for local and regional supply, either through agriculture or livestock farming. In this context, another historical and ecological process of global dimension took place: the massive introduction of exotic species by colonizers. It is worth mentioning that several native species were used to supply colonial societies, as was the case with maize, potatoes, beans, and cassava (Soluri 2018). It should also be recognized that Andean camelid breeding, for example, was maintained for wool extraction. The local biota was also used for extractive processes at different scales. This was the case of the factories in the Amazon, which extracted products such as cocoa, copaiba oil, and sarsaparilla from the forests without necessarily appropriating the land (Chambouleyron 2010). They also searched the rivers and beaches for manatee meat and turtle eggs. Something similar happened with yerba mate extracted from the forests of the Southern Cone, a plant that, like cocoa in the Amazon, later became a privileged crop with high agricultural commercial value.

However, as mentioned above, much of the colonists' rural economy was based on the introduction and production of exotic plants and animals. Some of the plants that were cultivated in the plantations have been mentioned above; to these are added, for example, wheat in the Southern Cone and barley in the Andes. However, undoubtedly, the introduction of exotic animal husbandry, especially cattle, horses, sheep, and goats, was the productive dynamic that spread throughout Latin America and caused significant changes in land use and severe environmental impacts, such as loss of natural cover, soil compaction due to overgrazing, and also social and cultural changes (Ausdal and Wilcox 2018). These exotic species generally benefited from the absence of enemies in local ecosystems, multiplying according to the pattern of "ecological invasions." This is exemplified by the demographic explosion of wild horses and bighorn cattle in the Pampa of the Southern Cone or of wild pigs in some Caribbean islands. In any case, this process of diffusion and global exchange of biodiversity – which was not unidirectional, since some plants and animals from the Americas also spread to other continents – profoundly transformed the planetary ecology.

In short, the colonial process in Latin America, in its broadest and most structural features, must be considered an essential factor both in the global history of European capitalism and in the planetary macro-transformation that is now identified as the Anthropocene. Examples of these transformations can be seen in certain

elements of the European industrial revolution, which led to the dominance of fossil fuels as a global energy source that continues to this day. For example, organizational learning in industrial production came, to some extent, from the segmented and complex production design of the sugar mills. Metals extracted from the region, especially gold from Brazil in the eighteenth century, also contributed to the bank capitalization that helped finance these industrial revolutions. The plantations inaugurated a model of agriculture that employed large-scale monocultures and the massive use of machines, oil, and water instead of human slaves – which to this day dominates large-scale commercial agriculture under the name of agribusiness. It is no coincidence that one of the names associated with the Anthropocene is the Plantationocene. Moreover, what would have become of Europe's demographic development without the introduction of American foods such as the potato? On the other hand, beverages such as sweetened coffee, which has been described as one of the "soft drugs" of modernity (Sahlins 1994), are essential as stimulants for the bodies of workers subjected to the rhythms of contemporary industrial and digital production.

But the colonial history of Latin America was not only shaped by the domination of patterns of production, consumption, territorialization, and ecological exploitation that marked the formation of the Anthropocene. It is also a history of resistance, of the resilience of alternative cosmovisions with Indigenous foundations and tributaries of complex cultural mixtures. These inspire today the search for worldviews that can oppose the ecologically suicidal path followed by a large part of humanity. It is also a history of subsistence-oriented forms of production and the *buen vivir* of communities that, despite being marginalized, have managed to survive and today inspire the search for healthier and more sustainable ways of relating to the Earth. Latin America is a macro-region of great ecological wealth, with vast biomes and ecosystems, essential for the environmental and climatic balance of the planet. These biomes and ecosystems have survived centuries of unbridled exploitation, often thanks to the efforts of Indigenous, Afro-descendant and mestizo communities that have fought to conserve their habitats. In other words, Latin America, which cannot be understood without lucidly discussing its colonial history, is a fundamental space both for the formation of the Anthropocene and for the search for a future that can effectively confront its multiple crises.

References

Chambouleyron, Rafael. 2010. *Povoamento, Ocupação e Agricultura na Amazônia Colonial*. Belém: Açaí.

Chaudhuri, Kirti N. 1991. *Asia Before Europe*. Cambridge: Cambridge University Press.

Cook, Noble. 1998. *Born to Die: Disease and New World Conquest*. Cambridge: Cambridge University.

Funes Monzote, Reinaldo. 2008. *From Rainforest to Cane Field in Cuba: An Environmental History since 1492*. Chapel Hill: University of North Carolina Press.

Klein, Herbert. 2010. *The Atlantic Slave Trade*. Cambridge: Cambridge University Press.

Machado Aráoz, Horacio. 2020. *Mineração, Genealogia Do Desastre: O Extrativismo na América como Origem da Modernidade*. São Paulo: Elefante.

McNeill, William and John McNeill. 2003. *The Human Web: A Bird's-Eye View of World History*. New York: Norton.

Miller, Shawn. 2007. *An Environmental History of Latin America*. Cambridge: Cambridge University Press.

Rogers, Thomas D. 2010. *The Deepest Wounds: A Labor and Environmental History of Sugar in Northeast Brazil*. Chapel Hill: University of North Carolina Press.

Sahlins, Marshall. 1994. "Cosmologies of Capitalism: The Trans-Pacific Sector of 'The World System'." In *Culture/Power/History: A Reader in Contemporary Social Theory*, ed. Nicholas B. Dirks, Geoff Eley, and Sherry B. Ortner, 412–455. Princeton: Princeton University Press.

Sharman, Jason C. 2019. *Empires of the Weak: The Real History of European Expansion and the Creation of the New World Order*. Princeton: Princeton University Press.

Soluri, John. 2018. "Home Cooking: Campesinos, Cuisine and Agrodiversity." In *A living past: environmental histories of Modern Latin America*, ed. John Soluri, Claudia Leal, and José Augusto Pádua, 63–182. New York: Berghahn Books.

Van Ausdal, Shawn and Wilcox, Robert. 2018. "Hoofprints: cattle ranching and landscape transformation." In *A living past: environmental histories of Modern Latin America*, ed. John Soluri, Claudia Leal, and José Augusto Pádua, 183–204. New York: Berghahn Books.

Watson, Peter. 2013. *The Great Divide: Nature and Human Nature in the Old World and the New*. New York: Harper.