

The Expansion of the Railway and Environmental Changes: The Modern Configuration of the Argentine Pampas, c. 1870–1930

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he occupation of South American territories during the colonial period was marked, to a great extent, by a complexity of factors, such as conflicts, socioeconomic policies, overlapping and absorption of cultures, and the entry of new technologies. These factors greatly contributed to the configuration of the current landscapes in these regions.

In the Argentine pampas, two events sig-



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nificantly contributed to the landscape transformations taking place up to the beginning of the twentieth century: 1) the entry of cattle and the establishment of farms from the sixteenth century; and 2) the arrival of the railroad at the end of the nineteenth century. Such events effectively altered the landscape of this region, including its biophysical and cultural attributes. Buenos Aires province and its area of influence (the so-called 'Litoral') was, during the seventeenth and eighteenth centuries, an unimportant region in the context of the Spain's large commercial flows – mainly of precious metals – which had their epicentre in Peru and Mexico. This context began to change slowly at the end of the eighteenth century, with the growing importance of the cattle industry, and in the second half of the nineteenth century, already in the independent period, with the expansion of the railways.

The modernisation process of the Argentine pampas, starting in the mid-nineteenth century, implied profound environmental, economic and demographic transformations. These changes were largely based on the expansion of the internal borders (the so-called 'Conquest of the Desert') by the newly formed National State. Through a rapid process of privatisation of public land, sixty million hectares were transformed by the production of agricultural goods aimed at export markets, the incorporation of technology, and the arrival of hundreds of thousands of European immigrants.

In this paper, landscape changes are analysed as socio-ecological transformations in the pampean space, and in particular the changes caused by the advent of the railway. For this purpose, environment and culture are considered agents of equal strength of action in the modernisation process. By making this analysis from the perspective of the altered biome, this process is cast as a promoter of heterogeneities in the Anthropocene Era. The place and time under analysis is the humid pampas, in the Province of Buenos Aires, Argentina, from the second half of the twentieth century to the 1930s.

Some theoretical considerations

The model of modernity based on capitalist exploitation of the land was adopted by the Argentine elite in their pursuit of economic and cultural development. To analyse the modernisation of the pampas, however, is to question the idea of modernisation itself. To think about it only as an idea of progress, development and production of capital on the territory is to ignore the action of modernity in socio-environmental dimensions; it is to apply a 'top-down' approach and not penetrate into the differences that distinguish the history of Latin American countries. In view of this caveat, it is necessary to re-think modernity from the inside out – that is, from the differences – in order to understand what modernity meant in peripheral nations such as Argentina.¹ In this way, the hegemonic model of knowledge production, imported from European scholars for centuries, is rearticulated so that socio-environmental and cultural differences may be highlighted and understood.

Arturo Escobar comments on the need to analyse different Latin American societies from the perspective of their differences:

If we look ethnographically at what there is at the level of economic, ecological and cultural practices, we can read them not so much for what they have as a content of domination but for what they have as a content of difference. Therefore, we see that an articulation can emerge from difference and that these practices can be taken as a starting point for the reconstruction of worlds, the reconstruction of thoughts, of knowledge.²

Through a focus on differences, historical narratives develop beyond the discourse of domination and come to the rescue of the history of place. Along this path proposed by Escobar, the social and

¹ B. Sarlo, *Una modernidad periférica. Buenos Aires 1920–1930* (Buenos Aires: Siglo XXI, 2020); H. Cao and J. Vaca, 'Desarrollo regional en la Argentina: la centenario vigencia de un patrón de asimetría territorial', *Revista Eure* 95 (2006): 95–111.

² M. Badaró, M. Carozzi, A. Escobar, C. Fonseca, A. Grimso, P. Semán, and G. Wilde. 'Conversaciones sobre la diferencia. Encuentro con Arturo Escobar', *Tabula Rasa* 15 (2011) 275–298, p. 282.

material reality of place shifts from the secondary role it is generally assigned when one thinks about globalisation.³ We can thus use the basis of his proposal – focused on difference – to structure our studies on the Buenos Aires humid pampas, given that the differences produced in modernity originated in the conception of the world founded by Western civilisation.⁴

In this way, the socio-environmental constitution of the pampas gains prominence. From the historical transformations of the environment, the peculiarity (difference) of Argentine modernisation in relation to the hegemonic idea of modernity inaugurated by Europe becomes clear and is differentiated from contemporary processes in Latin America. When the environment is considered a key element in the process of Argentina's economic development towards global capitalism, the differences that define its history are exposed. An important fact in the pampas is that this process did not involve the explicit destruction of a biome or the annihilation of native populations, as it did in other regions of Latin America and even in marginal regions of the country – although there were already negative environmental effects and brutal treatment of native populations.⁵

In analysing the historical environmental process of the pampas, the complexity involved in the use of the term 'post-coloniality' becomes evident. If not properly contextualised, this term can obscure the local characteristics that constitute modernisation, which in the case of Latin America is complex and heterogeneous. In Argentina, and specifically in the pampas region, 'colonialism' in the politically independent stage meant a process of indirect assimilation of

³ The author refers especially to the current processes of decolonisation of communities that raised awareness of the importance of their existence in the territories in which they live. The author deals with the differences especially in his studies of political ecology.

⁴ E. Dussel, 'Europa, modernidade e eurocentrismo', in: E. Lander (ed.), *A colonialidade do saber: eurocentrismo e ciências sociais – perspectivas latino-americanas* (Buenos Aires: Clacso, 2005), pp. 24–33.

⁵ At this time, the pampas territory was already dominated by the neo-European culture. The indigenous communities were practically annihilated or had moved to other regions.

European and especially British capitalist logic. Escobar considers place as a territory of difference, in which social actors, nature and culture assert themselves as heterogeneity in the face of hegemonic systems of domination. It is thus necessary to rethink the dynamics of modernity as a producer of heterogeneity, as a colonial difference produced by 'modernity-coloniality'⁶ itself, which extends as post-coloniality.

In this way, we are interested in rethinking the process of post-colonialism, not as Europe acting 'on' Latin America but 'with' it.⁷ In other words, Argentina also contributed to Europe's industrialisation process through agricultural production. Without this support, Europe would not have been able to achieve the desired modernity, either; without such past relations with Latin American nations, Europe would definitely be a different society.

The model of 'coloniality/modernisation' typical of the pampean region allows us to critically rethink and review a modern-colonial historical process that, in the case studied, assumes structures in keeping with Alfred Crosby's definition, the so-called 'Neo-Europes' (generally located in the temperate zones of the world). These regions did not behave like the traditional colonial models. The Neo-Europes became the world's food reserve, radically and definitively altering geopolitical relations.

But in all these regions, giving them the colour and shape capable of persuading any sensible man to invest his capital and even the life of his entire family in some neo-European adventure, there was the common denominator of factors that perhaps should be called biogeographical.⁸

The difference of this occupation and development process in comparison with other South American nations is that Argentine

⁶ Badaró, Carozzi, Escobar, Fonseca, Grimso, Semán, and Wilde 'Conversaciones sobre la diferencia', p. 284.

⁷ R. Haesbaert, *Território e descolonialidade: sobre o giro (multi) territorial/de(s) colonial na América Latina* (Buenos Aires: CLACSO, 2021).

⁸ A. Crosby, *Imperialismo ecológico: a expansão biológica da Europa 900–1900* (São Paulo: Companhia de Bolso, 2011), p. 17.

modernity took shape at an accelerated pace, in a territory with low native population density and centred in a specific region: the pampas. This achievement resulted from the combination of technologies, massive immigration, and the entry of exotic species of fauna and flora for domestication. In other words, this combination was unique in the continent, performed in the name of modernisation and solidification of the Argentinean National State. The hybrid dimension of this process is located within the configuration of modern Argentine capitalism, also embedded in a context of transformation of the global space.

From the mid-nineteenth century until World War I, the Argentine economy grew steadily, at a pace that accelerated from the 1880s onwards. The period 1880–1914 saw the greatest economic growth in the country. The trends that were already visible before 1880 ended up generating irregular but vigorous growth, oriented towards exports. This growth was endowed with an unusual dynamism, even when many of the peripheral regions of the world were witnessing processes in which exports constituted the engine of growth: between 1880 and 1914 the gross product per capita more than doubled; the total population quadrupled, rising from less than two million inhabitants at the beginning of the 1870s to more than eight million in 1914; and the annual growth rates between 1880 and 1914 were 34 per cent for population and between 2 and 2.5 per cent for GDP. Such singular growth is discussed throughout this text.

Environmental history and human work

For the most part in environmental history studies, the organic characteristics of space are understood together with the dimension of culture.⁹ This is because much of what we call ‘natural landscape’

⁹ D. Worster, ‘Para fazer História Ambiental’, *Estudos Históricos* 4 (8) (1991):198–215; J. Pádua, ‘As bases teóricas da história ambiental’, *Estudos avançados* 24 (68) (2010): 81–101; R. Oliveira and R. Svorc, ‘Uma dimensão cultural da paisagem: biogeografia e história ambiental das figueiras centenárias da mata atlântica’ *GEOUSP – Espaço e Tempo* 32 (2012): 140–160.

is the result of agency and human work.¹⁰ To think in this way is to keep humans and non-humans separate and not to consider how the constant interaction between them shapes places. Through the recognition that most landscapes include human labour, the environment we observe can be ‘read’ as an agglomeration of overlapping layers, where the processes of occupation and use of the territory are imprinted.

In this sense, considering a framed space as a domesticated landscape¹¹ opens a horizon for understanding the environment being studied, viewed as a product of humannonhuman interactions. Likewise, it expands the analysis of the spatialised object to its temporal dimension, to the historical process of societies based on occupation and use of natural resources. Constant change results in the material and immaterial attributes that shape the region under study. The landscape in its socio-ecological dimensions is suitable for perceiving the relationship between society and nature. In this way, the associated actions of the past and present are manifested in a place.¹²

In the process of modernisation, the Anthropocene has globalisation at its core, based on the advancement of a unified world economy centralised in the Global North. Resource use on a global scale is associated with the natural/cultural reconfiguration of the places explored. On the one hand, this trend generates the homogenisation of cultures and different ecosystems. On the other hand, the application of new technologies in diversified spaces, endowed with different cultural origins, reveals that in the expansive process of the Anthropocene, there is also the affirmation of differences. This contradiction generates the formation of exclusive cultures, based on the heterogeneity of their material and immaterial attributes.

¹⁰ R. Williams, *Cultura e Materialismo* (São Paulo: Unesp, 2011), p. 104.

¹¹ C. Clement, ‘Landscape domestication and archaeology’, in *Encyclopedia of Global Archaeology* (New York: Springer, 2014), p. 4389.

¹² A.Y.C. Sarmiento, J.H.S. Gélvez and J.M. Téllez, ‘Naturaleza y sociedad: relaciones y tendencias desde un enfoque eurocéntrico’, *Luna Azul* 44 (2017): 348–371; G. Galafassi, ‘Las preocupaciones por la relación Naturaleza-Sociedad. Ideas y teorías en los siglos XIX y XX. Una primera aproximación’, *Theomai* 3 (2001): 1–9.

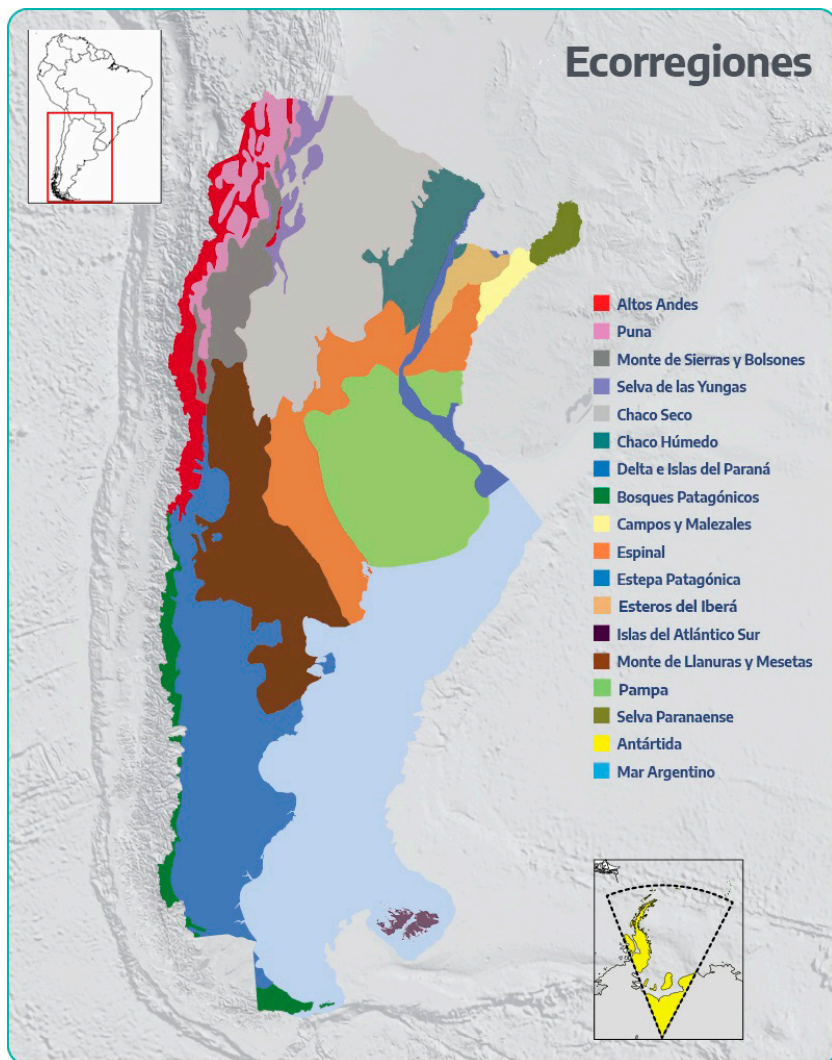
For environmental historians, the Anthropocene demands the integration of climate and ecological change with cultural, social and political changes. This idea is not entirely new. Classic works of environmental history, such as Alfred Crosby's 'Columbian Exchange' and William Cronon's 'Changes in the Land', both written decades before the Anthropocene existed as a concept, examine the historical effect of people on the environment and the historical relationship between people and nature.

The biome and the western occupation of the pampas

The pampas biome comprises an extensive plain of 398,966 square kilometres, located in the five agricultural provinces of Argentina: the southern half of Entre Ríos, the southeast of Córdoba, the south of Santa Fe, the northeast of La Pampa, and almost the entire province of Buenos Aires except for the extreme south. According to granulometry, the humidity regime and/or relief of the soils, the biome is divided into subregions. The so-called humid pampas is characterised by the presence of wetlands. Due to the size of the biome, it constitutes the most critical grassland ecosystem in Argentina (Figure 1).

The local climatic, topographic and edaphic conditions as well as the geographic location determine the distribution of various types of grassland that differ in vertical and horizontal structure and in the assemblage of species. The dominant vegetation is the grass steppe, and its species composition varies according to the characteristics of the local climate and the soil. The riverine zones are characterised by riparian forests; there may be gallery forests or riparian scrubs, and logging is performed in the river ravines and coastal ridges. These forested formations occupy a tiny fraction of the surface of the Pampas biome. In some areas, there are patches of introduced forests or neo-ecosystems formed by an arboreal stratum of exotics and lower strata of native species. The native flora of the pampas comprises about a thousand species of vascular plants.

Figure 1. Ecoregions (biomes) of Argentina.



Source: Ministry of Environment and Sustainable Development, Argentina.

Since the second half of the eighteenth century, even in the colonial period, the vegetation cover of much of the pampas biome has been affected by or replaced with livestock and agricultural activities. This process was driven by the strong expansion of cattle ranching across millions of hectares of herbaceous steppe without natural predators. Cattle ranching systematically grew to high value in world markets in the second half of the nineteenth century and remained that way for almost one hundred years. 'Due to the quality of its soils and the existence of herbaceous vegetation (which allows direct grazing of cattle without the need for dismantling), this region was occupied earlier and homogeneously.'¹³ The pampas biome is therefore the oldest agricultural production area in Argentina.

In the late nineteenth century, much of the grassland was converted to crops or pastures, due to the prolonged and intensive use of livestock, agriculture and forestry. Towards the twentieth century, the conversion of natural areas to crops and managed pastures occurred at a high rate of change, in time and extent. What used to be a natural grassland matrix with crop patches was transformed, in broad sectors of the pampas biome, into a cropped matrix from which the natural grassland patches have gradually disappeared.¹⁴

Most of the pampas landscapes are marked today by the breadth of pasture for cattle and grain cultivation, by sets of *Eucalyptus*, and by the past presence of the railway, which started to cross the country in times of national rearrangement and economic development during the second half of the nineteenth century.

For the new elite, rail transport was the most effective tool to consolidate the fragile national union and the reaffirmation of the authority of governments.

¹³ J. Adamoli and P. Fernández, 'Expansión de la frontera agropecuaria en la Cuenca del Plata', in O. Sunkel and N Giglio (eds), *Estilos de desarrollo y medio ambiente en América Latina* (México: Fondo de Cultura Económica, 1980), p. 471.

¹⁴ D. Medan, J.P. Torretta, K. Hodara et al., 'Effects of agriculture expansion and intensification on the vertebrate and invertebrate diversity in the Pampas of Argentina', *Biodiversity and Conservation* **20** (13) (2011): 3077–3100.

J. Morello, S. Matteucci and A. Rodríguez, *Ecorregiones y complejos ecosistémicos argentinos* (Buenos Aires: Orientación Gráfica Editora, 2012).

It was also a fundamental instrument to carry out the social and economic transformation that they considered a pressing necessity.¹⁵

Due to the flatness of its grasslands (*llanura*), the pampean region offered a favourable space for the expansion of the lines. The construction of large viaducts or tunnels connecting one town to another was not necessary. This characteristic, together with the good quality of the soils, favoured both the expansion of the railway system and the growth in the production of crops and livestock.

The railway

The expansion of the railway in Argentina started around 1850 and connected the towns (*pueblos*) and new colonies to the main ports. Many of the railway lines were drawn on already existing roads. Troops of beasts, stagecoaches, people and carriages had circulated on these roads. ‘The railway was only the means that supplied the blood traction and created a true revolution in transport and, therefore, in the organisation of space. For this reason, its layout was not arbitrary, it had solid geographical bases.’¹⁶ The development of this transport was related to the agro-export economic model based on agriculture and livestock production. At that time, it followed a radial scheme where the main lines converged on the city of Buenos Aires.

The investment in railways originated mostly in foreign capital until the network’s nationalisation in the 1940s. Between 1870 and 1930, most of the railway network was built using British, French and Argentinian capital. This network was the tenth largest system in the world, consisting of about 47,000 kilometres of railway lines at the end of World War II¹⁷ (Figure 2).

¹⁵ M. López, ‘La suma del capital privado y público en la construcción de las primeras líneas ferroviarias (1857–1886)’, in M. López, J. Waddell and J. Martínez, *Historia del ferrocarril en Argentina* (Carapachay: Lenguaje claro, 2016), p. 19

¹⁶ J.A. Roccatagliata, *Los ferrocarriles en la Argentina* (Buenos Aires: Eudeba, 2012), p. 51.

¹⁷ Ministerio de Educación/Universidad Tecnológica Nacional Facultad Re-

Figure 2. Map of the railway lines of the Argentine Republic. Gift for Kraft Guide subscribers, 1889.



Source: Archivo General de la Nación Argentina, Mapoteca II – 4.

Two companies were most significant in Buenos Aires Province: Ferrocarril Oeste (FCO) and Buenos Aires Great Southern Railway, or Ferrocarril Sud (FCS), the latter being a British company. The FCO was promoted by a group of businessmen, merchants and politicians from Buenos Aires who were granted a concession by the provincial government.¹⁸

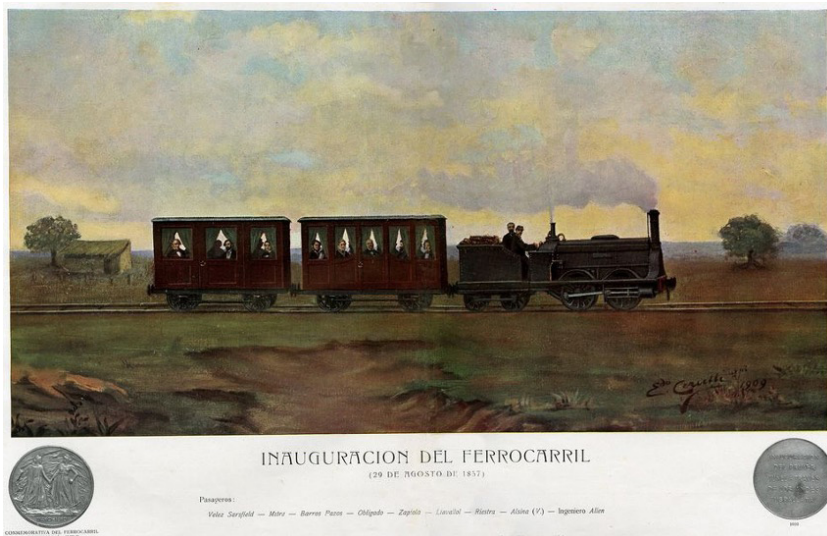
On 17 September 1853, the 'Society of the Iron Road from Buenos Aires to the West' was founded by a group of members of the Buenos Aires landowning bourgeoisie. Its network consisted of 22,000 to 24,000 varas, whose communications and transport would be carried out by locomotives (until then, communications had been performed by carts, galleys and couriers). Government authorisation was granted by a Provincial Law passed on 12 January 1854. Immediately afterwards, the professional services of an engineer (Guillermo Brogge), supervisors and specialised workers were hired from England. They began construction work the following year and finished it in 1857. The first ride was performed on a locomotive called *La Porteña*, built in the British workshops of The Railway Foundry, Leeds.

Officially, this first railway was inaugurated on 30 August 1857, in a ceremony presided over by Valentín Alsina, Governor of Buenos Aires, who made the maiden journey in the company of prominent personalities, such as Bartolomé Mitre, Domingo F. Sarmiento and Dalmacio Vélez Sársfield. *La Porteña* (acquired together with another machine named *La Argentina*) pulled two wagons, one for passengers and another for parcels. It was driven by the Italian engineer Alfonso Corazzi and the Allen brothers. The journey started at the station located where the Colón Theatre stands today and travelled westwards a distance of about ten kilometers to Flores, a locality on the outskirts of the city (Figure 3).

gional Haedo, *Breve Historia de los Ferrocarriles Argentinos, su construcción, su Destrucción, su Importancia y proyecto de Recuperación*, Cap. III, 2012, <http://www.cin.edu.ar/descargas/asuntosacademicos/art.%2043/INGENIERIA%20FERROVIARIA/26-02-13%20Ferroviaria%20-%20Cap%20III.pdf> (accessed 30 Oct. 2020).

¹⁸ López, 'La suma del capital privado y público', p. 21

Figure 3. Inauguration of Ferrocarril del Oeste (29 August 1857). Painting by Eduardo Cerruti. Published in *Ilustración Histórica Argentina*, 9 July 1910.



Source: Archivo General de la Nación Argentina – Biblioteca, C-0994.

The early development of this new transport system was difficult and marked by plodding progress, mainly due to the Argentine political situation and the separation of the Province of Buenos Aires from the Confederation. However, in 1862, the first section of the Northern Railroad was inaugurated, its route reaching El Tigre in 1865. In the same year, the first section of FCS, as well as the FC Buenos Aires–Port of Ensenada, opened. By 1870, there was a notable advance in the construction of the lines. With the joint effort of FC Ensenada and FC del Norte, the Buenos Aires Central Station was built and inaugurated on 31 December 1872. It was also connected to the FCO and FCS networks.

While the FCO covered a large part of the western section of the province, the British company FCS expanded to the South, covering a large part of the humid pampas. The preservation and expansion of its

area of influence were essential to the efficient functioning of the company. In 1861, a bill was presented to the Legislature of Buenos Aires Province, requesting a concession to build an 'iron road' to the South, from Plaza Constitución to Chascomús. The bill was approved in the Session of 27 March 1862, and the provincial Government enacted the respective law on 27 May of the same year. The contract establishing the conditions for construction was signed on 12 June 1862, and the concession was granted to its initiator, Eduardo Lumb. To carry out the works, the British Society hired Samuel Morton Peto and E. Ladd Betts, from London. Betts tried to form a consortium with Argentine capital, but when he failed to do so, he embarked for London. There he created the Sociedad del Ferrocarril del Sud, whose statutes were approved on 24 December 1862. The original layout of the rails, Constitución–Chascomús, was modified by a Provincial Law on 28 August 1863, which ordered its extension to the town of Dolores.¹⁹

The laying of the line began on 7 March 1864, directed by the construction engineer Thomas Rumball. The first section (77 kilometres long), between Plaza Constitución and Jeppener stations, was authorised for public use on 14 August 1865; four months later, the remaining 36.41 kilometre stretch to the town of Chascomús was inaugurated. During the first five years of its operation, the FCS dedicated itself to consolidating this route, also building several intermediate stations towards the south of the province. The lines crossed the entire depressed plains, where the laying of the rails was technically easier. Seven years later, the arrival of the FCS (Dolores–Maipú–Ayacucho branch) at Tandil heralded the arrival of the trains at the heart of the mountain system (19 August 1883). Simultaneously, the extension from Azul to Olavarría made it possible to bypass the mountain barrier to advance even further south, with one objective: Bahía Blanca, a future railway-port hub, whose train station was opened on 1 May 1884. Two years later, another branch started from Maipú and reached Mar del Plata. The FCS thus joined the most significant points both in cargo and passenger traffic, estab-

¹⁹ W. Rögind, *Historia del Ferrocarril Sud* (Buenos Aires: Establecimiento Gráfico Argentino, 1937).

lishing a network that would cover most of the southern province.

The impact of the railroad on space was significant. The physical characteristics of the pampas conditioned the laying of the tracks. The lines were laid on earth embankments, with almost no stone ballast, because rock was scarce in the region. The few existing rivers did not demand the construction of large bridges. It was, however, necessary to build many trenches, due to the cyclical periods of floods and droughts, especially in the depressed pampas (i.e. the wetland zone).

In addition to the railways, the presence of railway stations contributed to the landscape's transformation, both in the countryside and in towns and cities. Many of the countryside stations were built in the 'English' style. In general, they had similar characteristics: the gabled roof, the waiting room, the office of the chief and the assistant, the ticket office and a gallery that overlooked the main road. The station was surrounded by one or more houses and a water tank. This panorama, with the impact of the railroad on the landscape, was repeated throughout the pampas, affecting the structure and appearance of urban vegetation.

People

The arrival of the railroad in the agricultural areas brought economic development and triggered the formation of small towns, creating a new cultural/environmental configuration. Since the second half of the nineteenth century, aborigines (Araucanians and Querandíes) had been retreating towards the Patagonian regions, progressively losing their cultural and material distinctiveness. These people were nomads, hunter-gatherers or fishermen. The conflict and the attempted expulsion of the aborigines from this region had begun at the time of Spanish domination, with this area being a border permeable to exchanges, agreements and violence. In the 1860s, the process of expelling the aborigines from these territories intensified, culminating in the so-called 'Conquest of the Desert'. In this context, the Argentine National State finally subjected the indigenous

peoples to its power, disciplining or exterminating them. Since then, Europeans and Creoles (mestizos and descendants of Europeans) have been the largest population in this territory. Their activities were at first based on sheep farming, then cattle farming, and finally cattle farming associated with agriculture. The lands of Buenos Aires were sparsely occupied by ranches based on subsistence or agricultural activity for domestic consumption. The systematic occupation of the space of Buenos Aires became more effective at the end of the nineteenth century with agricultural colonisation. This process is closely related to Mediterranean European immigration and, to a lesser extent, internal migrations.

Argentina has a long and impressive history of immigration. Most of the European foreigners who came to the nation from the second half of the nineteenth century until around 1915 were Italian, Spanish or French; however, immigrants also came in smaller numbers from outside Western Europe.²⁰ The flow of European immigration during the years 1880 to 1914 was related to the policy that ‘to govern is to populate’, according to which settlement in fertile lands was fundamental to stimulating the country’s modernisation process.

Even with a considerable proportion returning to their countries of origin, and reduced influx during the Great War, the arrival of foreigners in Argentina was massive. According to the Third National Census of 1914, the population of the province of Buenos Aires grew from 921,169 in 1895 (Second National Census) to 2,066,165 in 1914, accounting for a relative growth of 124.3 per cent.²¹ The same document mentions the occupation of the Argentine plains in the mid-nineteenth century by immigrants devoted to agrarian activities, and its relationship with the expansion of the railroad: ‘The railroads extend their arms of steel over immense plains, bringing life and civilisation everywhere.’²² The railroad was understood

²⁰ M. Ceva, ‘El ciclo de la inmigración europea’, in H. Otero (ed.), *Historia de la Provincia de Buenos Aires*, Tomo I (Edhasa: Buenos Aires, 2012), pp. 309–337.

²¹ República Argentina, Tercer Censo Nacional. Levantado el 1° de Junio de 1914, Buenos Aires, 2016, <http://www.estadistica.ec.gba.gov.ar/dpe/Estadistica/censos/C1914-T1.pdf> (accessed 30 Oct. 2020).

²² *Ibid.*, p. 84

as a facilitator of the exploitation of Argentine lands, in pursuit of the desired modernity ('civilisation'). Likewise, 'bringing life' can be understood as the occupation and use of the land through work, producing crops and livestock and resulting in economic growth and the modernisation of the country. The rail network would be the access road to the long extent of the nation and an important connection with the Global North, especially England, as shown by the presence of railway stations at ports. The document also comments on the migratory process as fundamental for the occupation of the land and the intention of 'undertaking the exploitation of our rich plains, which still seem deserted'.²³ This makes clear the idea of occupying the immense territory then seen as empty. The socio-environmental changes in the pampas were clearly one of the most significant and rapid processes of environmental transformation in Latin American history, associated with the capitalist modernisation of peripheral regions.

In this context, the railroad was a vital factor for the 'colonisation' and development of the country's agricultural areas. This means of communication and transport made it possible for family groups to settle in the countryside, contributed to the modernisation of farming methods, allowed the introduction of new breeds of cattle (Shorthorn, Hereford and Aberdeen Angus) and plant species for cultivation, and improved the prospects for agricultural exploitation.²⁴ The modern use of the pampas is thus closely related to the mobility of species, people and goods.

Many plans and laws were projected and voted in the second half of the nineteenth century for the creation of towns based on agricultural activity.²⁵ These new municipalities were planned in paral-

²³ Ibid.

²⁴ J. Schvarzer, A. Regalsky and T. Gómez, *Estudios sobre la historia de ferrocarriles argentinos 1857–1940* (Buenos Aires: Universidad de Buenos Aires, 2007); S.N. Grahl and F. Fucito, *Las normas de excepción al ordenamiento urbano y territorial: Relaciones de correspondencia entre los condicionantes históricos, geográficos y sociales* (PhD Thesis, National University of La Plata, 2008).

²⁵ Schvarzer, Regalsky and Gómez, *Estudios sobre la historia de ferrocarriles*, p. 20.

led with the installation of the railway in the province. Agricultural colonies were created throughout the region, in part due to bills and laws. Most of these colonies were composed of European families, each of whom had access to and use rights for a plot of land (generally minifundia called *chacras*), on which they could begin a new life in South America. The internal migratory flow was likewise important in the formation of the colonies. The rails crossing the pampas gave rise to settlements in the plains, which also meant a radical transformation of the environment. Animals (livestock and poultry) and vegetable (grain) species, as well as ornamental and fruit plants, were produced extensively. The increase in population was intricately linked to an increase in production, and the rise of both required promoting mobility. In this way, Argentine modernity comprised both an advancement of technology and an increase in population.

An example of territorial occupation promoted by the arrival of the railroad is the city of Verónica, located in Punta Indio, Buenos Aires province. The formation of Verónica is linked to the subdivision of the lands of rancher Martín Tornquist at the beginning of the twentieth century. Tornquist intended to create a colony with an agricultural economic base. This region had been an area for cattle raising and grain production since colonial times, and in 1914, the rancher brought the railroad to his land in order to develop and urbanise it. Thus, the city of Verónica emerged from the station with the same name (Figure 4).

The arrival of the train was fundamental to the formation of this town because it guaranteed shipment of products to ports in Buenos Aires and La Plata. This is how the great opportunity was announced in one of the most important magazines of the time:

An advantageous business for small capitalists, settlers, farmers, gardeners and ranchers. First-rate land for immediate cultivation. The most fertile agricultural region in Buenos Aires province, with an FCS station in the center of the colony and town, situated 137 kilometres from Buenos Aires and 85 from La Plata.²⁶

²⁶ *Caras y caretas* (Buenos Aires), 13/3/1915, n.º 858, Biblioteca Nacional de España.

Figure 4. Verónica station, c. 1920.



Source: Museo Histórico de Punta Indio ‘Eduardo Barés’.

The railway was built by the British company FCS, hired by Torquist. The line was closed in 1977. The city of Verónica currently has about 6,000 inhabitants, mostly of European descent, and livestock has been the main economic activity in the area. From the original ecosystems, there remains a remarkable natural reserve located between the associated coastlines and the strips of talas (*Celtis tala*, a tree species of the region) parallel to the coast. This is the Parque Costero del Sur, Biosphere Reserve – UNESCO.

The landscapes of the 'modern' pampas

Modernity in Argentina implied the transformation of its 'original nature' as part of the national project. 'Cutting' and redrawing the flatlands (*llanura*) with railway lines and populating this space were part of the modernisation and inclusion of peripheral areas. The intense flow of people and products resulted from the expansion of the railroad throughout the country. With internal flows, the export movement of agricultural production traced a wider geography, connecting the south with the north. In parallel with the growth of internal commercial flows, there was an increase in activities related to the international trade of resources. In this sense, the modernisation desired by the Argentine elite expanded the area of influence of the National State, while foreign capital expanded its dominions to the other side of the Atlantic. 'Cutting' the pampas with the train tracks meant reterritorialising an already colonised space. The development of the railway network promoted the expansion of Argentina's peripheral model of capitalist accumulation. In this sense, railway technology contributed to the construction of a new national cartography, connecting places, creating new ones, and permanently isolating others.

Undoubtedly, the Argentine nation followed an abstract linear perspective that led to the kind of progress envisaged at the time: the European model of society. The established railway network, the colonisation of the pampas and the export economy were part of the unidirectional imperialist idea that imagined the progress 'of all societies'. As Walter Mignolo has said, however, 'we are not modern':

In this sense, 'Latin America' was fabricated as something displaced from modernity, a displacement that Latin American intellectuals and statesmen assumed and strove to become 'modern' as if 'modernity' were a point of arrival and not the justification of the coloniality of power.²⁷

The coloniality of power, of being and of nature is a form of

²⁷ W. Mignolo apud C. Walsh, 'Las geopolíticas del conocimiento y colonialidad del poder. Entrevista a Walter Mignolo', *Polis* 1 (4) (2003): 1–27.

domination through the institution and naturalisation of the Eurocentric imaginary as the only way of relating to nature and the social world.²⁸ Modernity would thus be part of the civilising project present in coloniality, extended to the former colonies despite the end of colonialism. What was not part of the modernity project was isolated in the stereotypical vision of a primitive ‘other’ that belonged to a marginalised past.²⁹ The diversity of ethnic groups, cultures and community economies thus kept Latin American countries ‘outside’ the Western standard.

The Argentina of the late nineteenth century sought greater inclusion in the Western world through the idea of civilisation. By reproducing European scientific, technological and cultural standards, the Nation sought to separate itself from its colonial and indigenous past. This dynamic required the adaptation of the pampean plains to a rational and Western configuration of space. In other words, the Nation sought to position itself in the world through the international market. The coalition with the Global North not only stimulated exports but also favoured the progressive discourse of the Argentine elite, materialised by the occupation of the ‘desert’. It meant erasing internal borders to build the National State. With the installation of the railway network, the ‘conquered desert’ could be adequately explored, and previously isolated places were connected with national and international centres. To this end, a profound transformation was required in the socio-environmental landscapes of the ‘conquered’ regions, redefining the space and its people.

Even so, Argentine modernity did not consist only of the entry of foreign capital and technologies – it included a mixture of pastizales (grasslands), humedales (wetlands), immigrants, native cultures, English cattle, *ñandu* (*Rhea pennata*), *Eucalyptus* and tala.

²⁸ V.C. Cruz, ‘Geografia e pensamento descolonial: notas sobre um diálogo necessário para a renovação do pensamento crítico’, in V.C. Cruz and D.A. Oliveira (eds), *Geografia e Giro descolonial: experiências, ideias e horizontes de renovação do pensamento crítico* (Rio de Janeiro: Letra capital, 2017), volume 1, pp. 15–36.

²⁹ A. Quijano, ‘A colonialidade de poder, eurocentrismo e América Latina’, in E. Lander (organizador), *A colonialidade do saber: eurocentrismo e ciências sociais latino-americanas* (Buenos Aires: CLACSO, 2005), pp. 117–142.

Settlement also required adaptation and acculturation by immigrant families. If, on the one hand, they brought with them their original material and immaterial culture, they also, on the other hand, had to adapt to the new environmental structure.

Conclusion

The geographical constitution of the Argentine pampas favoured the expansion of the National State through agricultural exploitation. Its fertile lands ensured the success of grain crops and cattle raising. In addition, the practically flat formation of the Buenos Aires pampas made railway expansion easy. Thus, the modernisation of Argentina resulted from an opportune combination of environment and technology. Such territory was already deeply socially and ecologically modified in the late nineteenth century, as we have noted. The process of homogenisation of the environment was, however, intensified by the massive arrival of immigrants and the domestication of exotic fauna and flora. Modernisation in the pampean region implied a process of environmental homogenisation, including substitution of the original herbaceous steppe with artificial grasses and then the incorporation of massive cereal crops in the last third of the nineteenth century. The pampean territory was westernised: exotic forage crops were cultivated to feed export cattle; large-scale cereal cultivation became widespread; and European labour traditions were introduced, according to the immigrants' perception of the world. In short, the space of a 'neo-Europe' was created. Moreover, native woods were logged for the construction of rural buildings and the railroad. Such species as quebracho (*Schinopsis spp.*), urunday (*Astronium balansae*) and guayacán (*Libidibia paraguariensis*) were heavily used for the manufacture of sleepers, causing brutal deforestation in northern Argentina, while tala was used for the construction of corals and fences, and for providing shade for livestock. Furthermore, most of the montes (small forests) were felled in the nineteenth century for firewood, and they quickly disappeared.

The commercialisation of land in Buenos Aires up to 1930 caused

a profound transformation of the landscape and established a diverse dynamic that until then was unprecedented in the Argentine territory. The combination of ranching and modern agriculture triggered major economic, social and environmental changes, such as the incorporation of more than forty million hectares into the productive market, the integration of technology for cultivation, the introduction of new animal and plant species, the expansion of the agricultural frontier, notable population growth, the dramatic extension of railway networks, and the proliferation of industrial crops. Spurred by external demand, these factors promoted the rapid occupation of much of the La Plata Basin and contributed to a reduction of its former environmental heterogeneity.

The Argentine pampas offered its land, forests and rivers to the Global North, while the Global North offered its livestock and technologies, among many other exchanges. It was through these exchanges that the Argentine National State and the bases of the current pampean culture were built, among which 'el mate' (*Ilex Paraguariensis*, a Guaraní herb for drinking) and 'el asado' (*churrasco* beef from English breeds) cannot be absent.

Thus, from the encounter between nature and technology, heterogeneous cultures are formed. Societies are built through – and not on – the biophysical world of which they are a part. When we focus on socio-environmental analyses, the originality of each Latin American nation thus shows heterogeneous cartography in the global world established by the Anthropocene.

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