

UNIVERSITY OF CALIFORNIA  
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**BELONGING IN THE PAMPAS:  
ECOLOGIES OF CONQUEST AND SURVIVAL IN ARGENTINA'S  
HEARTLAND**

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by

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## **Abstract**

**Rachel Antoinette Cypher**

### **Belonging in the Pampas: Ecologies of Conquest and Survival in Argentina's Heartland**

What happens when the love story that changes the world is not between humans? Based in the Pampas of Argentina, where cattle are an outsized symbol of prestige as well as an everyday meal, *Belonging in the Pampas* traces the love men have for cattle, and what they do when the world cattle create is threatened. It begins in 1996, when a representative from Monsanto visits David Murray's farm on the edge of the western pampas with a bag of genetically modified soybeans. The soybeans, according to the representative, could be sprayed with glyphosate – a potent and lethal herbicide that causes quick death in plants – and survive. David was skeptical, but he planted the seeds. They did so well that the next year he planted more. And he was not alone.

Within two decades farmers and multinational companies had planted over twenty million hectares of Pampas farmland with genetically modified soybeans, ushering in an astonishing and rapid landscape change. But David and other ranchers, aware of the possibility of immense profits in comparison to cattle, were faced with a dilemma. What would they do with their herd? Many ranchers culled their cattle herds to make room for soybeans in the plains, while others like David decided to lease ranches in the western forests, moving their cattle to the semi-arid savannas that were too dry to grow soy.

Tracing the arc of environmental change brought by European settler species to Argentina, the dissertation tacks back and forth between the current moment and poignant historical flashpoints that changed the social and ecological worlds of the Pampas. Soy, the dissertation shows, expands and develops a historical ecological conquest through its displacements as well as through its destinations. Rather than being a crop that feeds the hungry world, it is a crop that creates astonishing opportunities for concentrating more animals into smaller spaces. And so, even as the men sought to come to grips with the world they themselves were bringing into being, so too were they able to accumulate more cattle in feedlots, and to hang on to the part of themselves that had fallen in love, first with cattle. It was with cattle, and especially on the frontier in the forests, that they could be reminded of who they were. They sought out the forests as a refuge for masculinity and freedom, even as women in the plains retreated to the cities, estancias fell into disrepair, workers were made more marginal than ever, and in the forests a movement for Indigenous recognition was born.

Expansive in its scope, *Belonging in the Pampas* traces a century of environmental change, with special focus on the past two decades, and in so doing makes a case that this epoch we have entered due to human modification of the earth's environment cannot be thought without affect. And, the dissertation argues, it is the love between species, the love men have for cattle because of who cattle make them, that brings into being the Anthropocene.

## Acknowledgements

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Since beginning this research several colleagues and interlocutors have passed away. May the lives and spirits of Ashkan Reznavi Naraghi, Enrique Chaneton, Dudley Lowe, Nazareno Serraino, and Fermín Acuña be remembered and honored. Que en paz descansen.



Figure 1. Map of Argentina and Biomes. Illustration by Nguyen Tran.

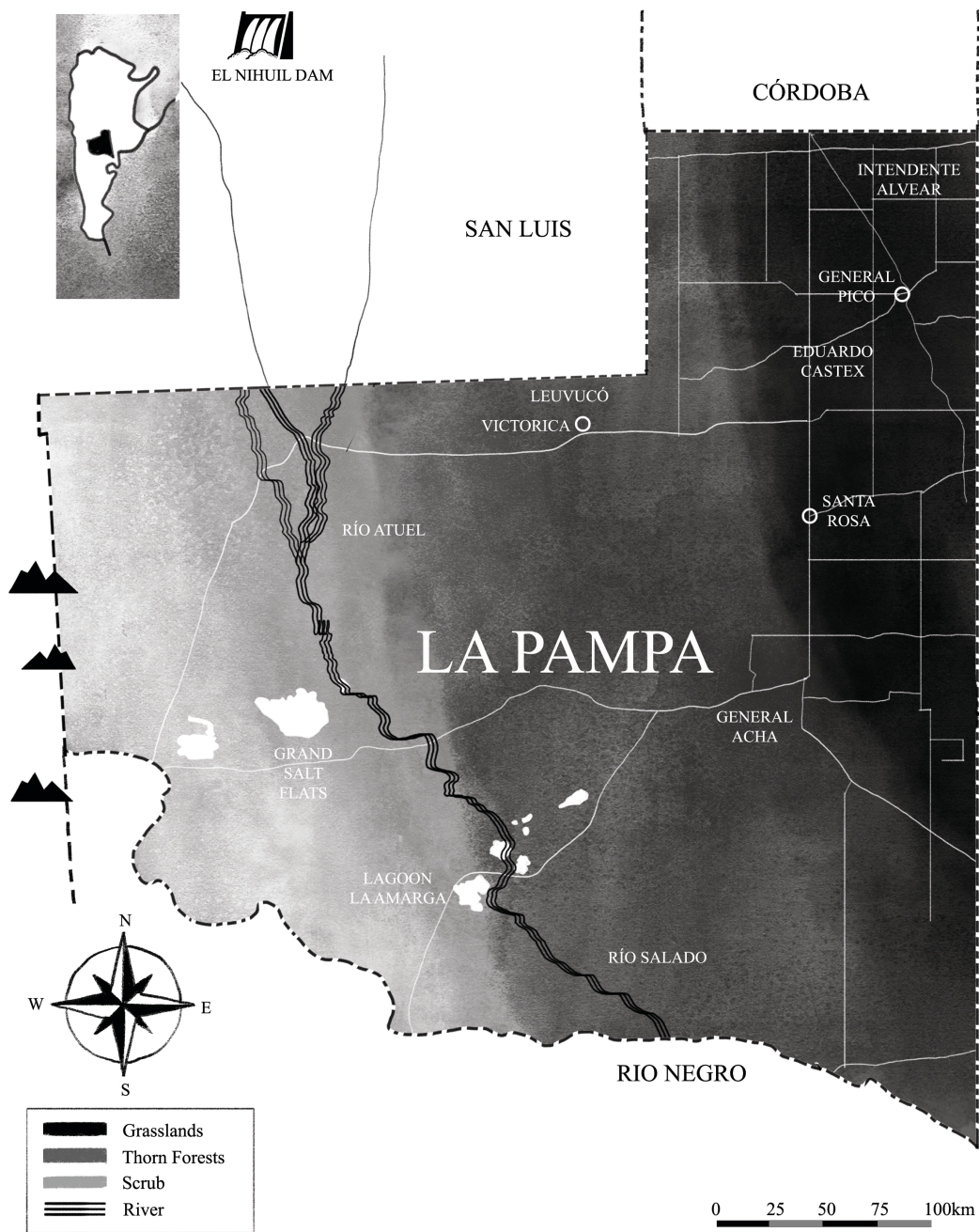


Figure 2. Map of La Pampa and Biomes. Illustration by Nguyen Tran.



Figure 3. Stormy skies over the western Pampas.

## **A Note to the Reader**

The Pampas are Argentina's heartland. They are a broad plain stretching across a lowland shelf created by ancient glacial movements and the retreat of the seas. The eastern Pampas were once covered in tallgrass prairies and marshy meadows that, moving west, gave way to a series of sloping and transversal valleys covered in upland xerophytic grasslands and lowland woodland patches where ancient sand dunes were covered over with trees and grasses. These dunes gradually opened into a semi-arid scrub, becoming sparse highland chapparal reaching up the dry slopes of the Andean

foothills. It took settlers just one century to burn and plow grasses, erect fences, and create a vast cattle-grain belt stretching from the Atlantic Ocean to the scrub. It took rancher-farmers and corporations just two decades to rip up pasture and wheat and plant the whole heartland with genetically modified soybeans.

This dissertation is about the way those beans went in, what I call intraction. Rather than being about extraction, about the way the beans were taken out, about the way Latin America is being sacked, it is about how the beans went into the soils and into the hearts and minds of the people. It is about the startling passion stirred within Pampean inhabitants, it is about seduction, about how people get swept up in a project and carried along, about passion's role in landscape change.

How something enters is necessarily messy and multiple, as with anything sparking desire it does not enter smoothly and it takes on numerous forms that shift and change over time. It does not correspond or fit neatly within explanations of science and technology. It has more to do with matters of the heart. Oil wells get drilled, or soybeans get planted, or pine is cultivated in rows where there was once yerba maté, and whole worlds change, people change through their own modification of the earth. It is this intimate dance that this dissertation tries to get at, this strange and ongoing tango that asks us to reconsider the boundaries of our own flesh. But in claiming multiplicity or heart-matters I do not want to give an impression that these processes are vague or ultimately untraceable. One of the main claims of the dissertation is that one way to trace these matters is through the landscapes all around us.

The case of the Pampas is illustrative and proceeds through world-ripping violence. Central to the project of Spanish imperialism in the Americas was the devastation of Indigenous ecologies. The Europeans who brought their cattle and horses with them to Argentina did not yet have what we might call a desire for development, but they understood very well how they would not survive without their nonhuman companion species. Environmental historian Alfred Crosby calls their prerogative “ecological imperialism” (1986). They knew that they could not conquer the Americas only through might.

Up and down North and South America, from New England to Mexico to the Pampas of Argentina, the conquistadors landed with their nonhuman companion species and set about transforming Indigenous ecologies. They did not achieve a perfect mimicry of European landscapes. The landscapes that emerged were contact ecologies. But what they did achieve was a destruction of the original natural resource base. What must be underscored here is how important nonhumans were in the devastation, and how specifically they were used and exploited – they were not passive, they were explicitly weaponized.<sup>1</sup> In the Pampas, this history of invasion can be broken down into four periods: an ungulate explosion between 1536 and 1580; a period of slow but inexorable change between 1580 and 1830; a ramping up between 1830 and 1930; and a sort of modernized stasis until 1996 when genetically modified soybeans transformed the plains.

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<sup>1</sup> I underscore this point because of the confusion around the agency of nonhumans and the claims to innocence through germ theory. Disease, perhaps the most controversial nonhuman in this debate, did not act independently of human forces. It, too, was weaponized.

Before the Spanish invasion, the grasslands beyond the muddy banks of the Río de la Plata were vast tallgrass prairies interspersed with marshes and wetlands, and Pampas Indians fired the grasslands to maintain them, creating rich hunting grounds for guanaco and rhea (Bucher 1982).<sup>2</sup> A failed Spanish expedition left horses and cattle on these muddy banks in 1536. Between 1536 and 1580 cattle and horses reproduced exponentially in what biologists call an “ungulate explosion” and very quickly spread out, trampling grasses and disturbing soils with their hooves, creating spaces for European weeds to take root. In 1580 criollos re-founded the fort of Buenos Aires but the center of empire was still in the silver mines of Bolivia and Peru, and Argentina essentially remained an afterthought for the Spanish viceroyalty. Because of this, the area ringing the small fort of Buenos Aires became a vast region of refuge for Indigenous groups escaping Spanish persecution.

Indigenous groups learned to use the conquering animals to their own advantage. They creatively appropriated settler species, especially cattle and horses, to create a space and refuge for their own survivance (Vizenor 1999). Pampas Indians established several cattle trade routes through this region of refuge up the eastern face

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<sup>2</sup> “Pampas Indians,” or *indios pampas*, is a Spanish catch-all for numerous and diverse Indigenous groups. When the specificity of a particular group is not clear due to historical references to them as *indios pampas*, I use this terminology. When the reference uses a Spanish exonym that is more precise, I use that name. Archaeologists and anthropologists have in recent years tried to break down the territorial naming divisions. Archaeologist Monica Berón cogently summarizes it as follows: “The identity and territorial division of the present territories of pampa and Northern Patagonia can be schematized as follows: the Puelches or People of the East had settled in the lands of Tapalqué, Azul, los Huesos, Tandil and Tuyú, Sierra de la Ventana, Cura-malal, Guamini, and the Río Negro. The Voroas (Voroganos) occupied the Salinas Grandes, the Cañada de los Manantiales, including the territories of Carhue to Chadileuvú and Naicó to Colorado, the valleys of Quehué, Utracán, Maracó Grande, Maracó Chico and Ucal Province of La Pampa. The Rankulches resided in the north of La Pampa, south of San Luis and Cordoba, with Leuvucó as their main center, Poitahué, in a territory known as *Mamül-Mapu*. The Pehuenches lived in the foothills of southern Mendoza to Chadileuvú. The Huilliches lived to the southeast of the Pehuenches, while the Picunches lived to the north of them. Finally, the Tehuelches had settled in the territories that went from Choel Choel to the Strait of Magellan. This ethnic group, with wide geographic dispersion, has been the reason for linguistic-territorial differentiation established by some authors and discussed by others (Casamiquela 1965, 1969, 1985; Nacuzzi 2005). However, it is important to state that due to the great mobility and exchange of these groups, it becomes arbitrary to categorize them in a definitive way, since they often changed their names and/or adapted those of their caciques” (Berón et al 2017:256 my translation).

of the Andes into Chile, and through herding began to change the composition of the grasslands. It is probable that this cattle trade route began to spread the *Prosopis* thorn tree species in part because cattle eat the beans and scarify them, spreading them along the routes with their excrement. By the 18<sup>th</sup> century Mapuche and Ranquel in Chile began to migrate south of the Toltén as well as east across the Andes (Klubock 2014:9-10). As they traveled down into the Pampas, interethnic conflicts and mixing eventually led to Mapuche/Ranquel dominance as well as the adoption of their language, Mapudungun.<sup>3</sup> All of this was happening outside the purview of Spanish rule. Mapuche, Ranquel, and Puelche maintained this sovereign territory for three centuries.

By the 1830s, a new period of settler expansion was beginning. Estancias clustering around Buenos Aires were becoming formal operations for ranching, and cattle and sheep had denuded the grasslands to the point where grass reproduction was impossible. A forest of thistles extending in a circle around the town of Buenos Aires had grown up along with other European weeds, destroying the natural resource base and rendering “hundreds of square miles impenetrable by man or horse” (Crosby 1985:160). Settlers used cattle as a form of land occupation that created attachment to place, and they continued to do so in this moment. Rather than shift their land

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<sup>3</sup> This migration, as well as the subsequent inter-ethnic mixing, is a subject of debate. Settlers called Mapuche “Araucanians” during the 18<sup>th</sup> and 19<sup>th</sup> century because they occupied the so-called Araucaria forests (*Araucaria araucana*, or monkey puzzle tree) between the Itata and Toltén rivers in Chile. Their migration and dominance over the western Pampas Indigenous groups, most often referred to as “Araucanization” to denote the fact that they “Araucanized” the existing Indigenous population, is contested by scholars such as Axel Lazzari, who argues that this was a simplified narrative invented by the Argentine government because of their need to draw an “ethnic map” to justify military campaigns (2003:62), and, later, to invisibilize ethnic groups such as Ranqueles. “The so-called Araucanized Pampas,” he writes, “were conceived as the effect of degenerative exchanges – the Araucanians ‘losing’ agriculture and the Pampas ‘surrendering’ language and sovereignty (Lazzari and Lenton 2002)” (2003:62). Lazzari and other scholars such as Claudia Tarquini and Nacho Roca are thus currently engaged in trying to puzzle together a history that was purposefully erased, an erasure which has had ongoing material consequences for the groups in question. See especially Tarquini and Roca’s *Investigaciones acerca de y con el pueblo ranquel: pasado, presente, y perspectivas* (2015).



management practices, they sought to expand, and used cattle as an excuse for conflicts with Indigenous groups. Through cattle they constructed claims to belonging, they cultivated ecologies of belonging by creating attachments to land and place even before they erected fences or surveyed the plains. Over and over, they weaponized cattle as an excuse for raids and war and expansion into the Indigenous territory known as Wall-Mapu.

Between 1878 and 1883 General Julio Argentino Roca launched a military campaign against Ranqueles and Mapuche in Wall-Mapu, partly in response to Chilean aggression at this tenuous border.<sup>4</sup> This was Argentina's final war against what was one of the longest held Indigenous polities in the Americas.<sup>5</sup> The surviving Puelche, Mapuche, and Ranqueles were driven on to reservations.<sup>6</sup> The southern passes into Chile, along which ran the famous Cattle Trade Route, were garrisoned and blocked. Prior land sales, which had financed Roca's conquest, constituted 8.5 million hectares and went to just 381 persons (Rock 1985:154), including British auction houses. As settlers began to pour into the Pampas in droves, second only to the United States in

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<sup>4</sup> See Thomas Klubock's *La Frontera* (2014) for a brilliant analysis of this moment as well as an excellent environmental history of the region out of which Mapuche and Ranqueles migrated. He points out that Argentina's response was in part a response to Chile's so-called "Pacification of the Araucanía," a series of military campaigns conducted between 1861-1883 against Mapuche in Araucanía. Rather than cattle and soy, as in Argentina, Chile eventually occupied the region by planting vast tree plantations with Monterey Pine. "Pine held both the promise of development and the imprimatur of forestry science; in the context of unregulated deforestation in the frontier territory, it provided a new method of rational land use and forest exploitation" (Klubock 2014:20). In addition, it was hoped this would change the rural population: "State officials viewed campesinos as a threat to forestry development and *sought to transform their relationship to the forests* by turning them into trained and settled forestry workers. Governments dedicated to social reform, from the Popular Front coalitions of the 1940s to the Christian Democratic government of Eduardo Frei (1964-70), looked to pine plantations and industrial forestry to settle southern Chile's itinerant rural laborers by transforming them into full-time forestry workers, in effect severing them from their access to a makeshift peasant existence and resolving their often violent movements to wrest land from estates and colonize public land" (ibid. my emphasis).

<sup>5</sup> See Claudia Tarquini and Diego Roca 2015; Claudia Tarquini 2010 and 2011; Monica Berón et al. 2018; Axel Lazzari 2003; Rafael Curtoni et al. 2003; Claudia Briones and Carlos Lanata 2002.

<sup>6</sup> Anthropologist Axel Lazzari tallies the estimates: "Apart from a thousand Indians who had been previously recruited in the army and in mission stations, the war booty included, by official numbers, 82,500 square kilometers of land, 1,313 Indians dead and 1,271 prisoners. Another 10,500 people were secluded in camps, some of whom were eventually sent to different provinces as domestic servants or laborers on big ranches and sugar plantations (Viñas 1983; Bechis 1984)" (Lazzari 2003:63).

number, they ushered in modern ecological regimes that were more expansive and destructive.<sup>7</sup> Settlers cleared and burned the thistle forests for forage and wheat, and selectively logged the thorn forests for railroad ties and agricultural colonies.

As in the areas around Buenos Aires, cattle, sheep, and wheat acted as species of colonization and empire, creating through their presence spaces of legibility to the Europeans. They created what I am calling “ecologies of belonging,” ecologies they constructed wherever they went to claim belonging in places where they did not belong. In the western areas where rain-fed agriculture quickly failed, at least six million sheep were imported to graze the land even as the fragile soils began to give out and turn to sand. Several hundred thousand settlers poured into the western Pampas, many of whom were tenant farmers and sharecroppers contracted to plant wheat. They burned the grasslands and plowed the soils, planting wheat over and over again without rotations. At the same time, an eccentric landowner named Pedro Luro imported red deer and wild boar into the forests in order to create a 23,000-hectare hunting reserve called “Establecimiento San Huberto,” named after the European Saint and protector of hunters.

Together with their nonhumans these immigrants created powerful ecologies of belonging, and what must be underscored here is that belonging was established through devastation. Year over year of wheat monocultures pulverized the soils. The settlers, like other immigrants in the settler colonies of the United States and Australia, used sharp plows in sandy soils. At first settlers in the Pampas made do with the so-

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<sup>7</sup> Writing from New England, Carolyn Merchant calls the ecological change between 1600 and 1860 “ecological revolutions” – the first wave being a “colonial ecological revolution” – the second wave being a “capitalist ecological revolution” (2010).

called “criollo” plow (*arado criollo*), a “large log of wood with a piece of pointed iron at one end,” but by 1900 Argentina was annually importing 50,000 plows from the US and England, including steel-faced moldboard plows as well as sulky plows and gang plows (Scobie 1964:82). The moldboard plow, which has sharp curved plates that cut through soil, lift it, and then turn it partly upside down so that several inches of soil that were underground are now baking in the sun, was particularly disastrous. The blades were sharp, driving deep into the earth and raking through the soft topsoil, breaking up any remaining prairie grass roots, overturning and killing organisms that contribute to soil structure, and leaving bare to the wind and sun the already sandy soils. Combined with almost nonexistent rotations – the occasional corn or flax crop would be planted between wheat – and no cover-cropping, the fragile soils began to erode, washing down even miniscule slopes and draining away nutrients. As in the United States and Australia, systems of debt through sharecropping and farm tenancy incentivized the farmers to simply keep plowing and planting, rather than let the soils rest (Scobie 1964:77-80). Poor soil conservation practices coupled with a nine-year drought and warmer than average summer temperatures led to massive soil denudation and the reactivation of dune systems (Tripaldi 2013; see *Metamorphosis 3* for more). The region became famous for its aridity, and famous for what was later known as the Pampas Dust Bowl. Settlers, still high with the rush of modernization, survived by moving.<sup>8</sup>

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<sup>8</sup> Lucas Bessire, in *Running Out*, describes this same pulsing high that has led farmers and corporations to drain the Ogallala Aquifer that runs beneath Oklahoma, Kansas, Nebraska, Colorado, and Texas. Bessire describes how flush with possibility the settlers were in the beginning, and how only now in the 21<sup>st</sup> century are they beginning to realize that their aquifer, which they thought would last forever, will run out in a few decades. In the Pampas where I was living it was slightly different, in part because the agriculture was rain-fed and not irrigated, which led the farmers to practice conservation methods such as no-tilling

Many settlers moved north to the Chaco where the Argentine government had begun to sponsor cotton cultivation, numerous English elites moved back to England, and the western Pampas was maintained mostly for grazing sheep and cattle. In the forests there was some intensive land clearance for pasture, while abandonment in other places increased forest density. The wild boar and red deer continued to overrun the forest landscape, and wheat, alfalfa, sheep, and cattle held the plains. The railroads brought people and products between the western Pampas and Buenos Aires, but without an influx of English capital the railroads, too, began to rot. The so-called “Green Revolution” – technology transfer initiatives between the 1950s and 1970s that resulted in the widespread adoption of “high-yielding varieties” of cereals as well as chemical fertilizers and agrochemicals – changed the composition of pampas agriculture and was an extension of the modern ecological regime that ushered in new inputs. Even so, this time in the pampas was known as a period of “agricultural stagnation,” and it was not until the invention of no-till sowing and the establishment of AAPRESID in 1989 that agriculture once again, however tentatively, began to creep back into the semi-arid region that it had once sacked and abandoned.

Then, in 1996, everything changed. Genetically modified soybeans transformed the face of Pampean agriculture, altering the region dramatically and, it seemed to the inhabitants, all at once. The pulse of soybeans was irresistible and seductive. Most important, soybeans were a *fait accompli*, not requiring attachment to land. The farmer-

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and cover cropping. But in the region that he describes as well as in the Pampas – both of which suffered from massive Dust Bowls in the 1930s – it is possible to feel that something similar was happening affectively, and it is this transitive feeling from 20<sup>th</sup> century high to 21<sup>st</sup> century horror that is the more general claim of the parable I am tracing.

ranchers planted soybeans, and when they saw how well they did, how it could all be converted to foreign currency, they wanted to plant more. They culled their herds or moved them west, to the monte, to make room in the plains for the soy queen.

2016, the year I lived on a farm in the western Pampas, was the height of the soy queen's reign. During the harvest farmers and contractors and multinational companies harvested an astonishing 60 million tons of soybeans. The area planted reached a record 20 million hectares, with average yield at about 2.9 tons per hectare. Heavy rains were beneficial for the harvest but complicated the 2017 growing season.<sup>9</sup> Over Whatsapp the farmer-ranchers sent me messages about the abrupt shift in commodity markets. Beef and corn were on the rise again. By 2020, at the time of this writing, the area planted in soy had dropped from 20 to 14 million hectares, with projections anticipating the ongoing fall of the soy queen. But she was by no means gone. In the north farmers continued to deforest to make room for her entrance. And to the west, in the monte, the future of the forest hung in the balance.

To follow the way something gets put in requires an unconventional approach, a genre different from the traditional liberal exposé. Intraction is a lived and felt experience, something Raymond Williams might refer to as a “structure of feeling” (1978), and the following account draws that out, paying special attention to affective registers, affects, and narratives – including unconventional uses of literary fictions – that permit structures of feeling to emerge, to be felt.<sup>10</sup> During the time I spent with the

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<sup>9</sup> <https://ipad.fas.usda.gov/countrysummary/Default.aspx?id=US>

<sup>10</sup> Raymond Williams coined the term “structures of feeling” in the 1970s to describe the “lived and felt,” the “affective elements of consciousness and relationships: not feeling against thought, but thought as felt and feeling as thought” (1978:132). Genre-bending anthropologists including Kathleen Stewart (1996; 2007) and Lesley Stern (1999), as well as literary critic Lauren Berlant (2008; 2011), have inspired me to experiment with affect, narrative, and affective registers. I was also encouraged by

farmer-ranchers they sought urgently to make me *feel* what they had done, and how they had done it. What they had done was to respond to their own impulses, to set in motion a brave new nature. The way to see what they had done was to feel the dialectic that gave their impulses meaning, to *feel* the flat vast vertigo of the plains and the dense soaring high of the forests. They aimed to have me feel the uncertainty, agitation, and movement of soybean production. They aimed to have me feel the spectacular rushing high of being with cattle in the forests. Things had been disturbed, they had a hand in the disturbance, and because of that they were modern, but they were also *men*.

In what follows I describe the role of desire in landscape change through the genre of the love story. “Tragic infatuation” is the narrative form, tracing the seed of seduction through cattle fever into soy fever and the height of the love affair, followed by the stunning unraveling of a passion twisted into shapes neither party ever dreamed. How, the dissertation asks, does passion work within us? How does it shape our projects, how does it seize us and carry us? The following romance is world-ripping, devastating, lifting and crushing. It is a story that cannot be told without affect, without multitudes of fragmented ecologies and Metamorphoses<sup>11</sup>, without belonging and desire. And it is, this dissertation argues, a parable for the Anthropocene as follows: In the early days of modernization, everyone was high with it, and not worrying about

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classes and conversations with Anna Tsing and Donna Haraway, who often use literary fiction within undergraduate and graduate courses.

<sup>11</sup> A word I use to indicate transformation as well as horror. “Metamorphosis” also invokes the modernist understanding that destruction is necessary to development. Marshal Berman uses it to refer to Faust’s three phases of development, and he also draws out the concept from Ernst Schachtel’s *Metamorphosis: On the Development of Affect, Perception, Attention, and Memory* (1959). This sense of development is also, of course, drawn from Franz Kafka’s short story (1915). Jorge Luis Borges was the first translator into Spanish of Kafka’s *Metamorphosis* in 1938, the same year that he suffered blood poisoning from an open casement window, an experience upon which he based his best story, “The South,” which I treat in the Epilogue.

effects. More recently, that high only holds in marginal spaces, and the everyday is no longer so convincing as a source of traction with the future.



Figure 4. Tango. All photos by author unless otherwise indicated.

## Prologue: Heartbreak Tango

My obsession, heartbreak tango,  
plunged my soul to deepest sin,  
as the music of that tango  
set my poor heart all a-spin.

- Argentine songwriter Luis Roldan<sup>12</sup>

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<sup>12</sup> This is Suzanne Jill Levine's translation of "Maldito Tango," quoted in her translation of Manuel Puig's *Heartbreak Tango* (*Boquitas Pintadas*). Her translations are masterful. The original Spanish lyrics are: Fue mi obsesión el tango de aquel día / en que mi alma con ansia se rindió / pues al bailar sentí en mi corazón / que una dulce ilusión nació.



Carolina fell in love with Diego when her son, Amancio, was already four years old. She was only twenty-four but well beyond her years, having become a mother at the young age of twenty. She was the village beauty, a stunning portrait of Spanish and Indigenous features mixed to create a delicate nose, thick black hair, wide hazel eyes, and red pouty lips. Because the category *mestizo* was not celebrated in Argentina the way it was in other places in Latin America, she was not known as mixed, simply as *hermosa*, beautiful.<sup>13</sup> She came from a humble family. She was proud and reckless. She felt somehow that if she had not been born in the village, she would have been seen on the streets of Buenos Aires by an agent, she would have been a model or an actress.

Her village, Coronel Vallejos, was four hundred kilometers west of the city of Buenos Aires.<sup>14</sup> It had 15,000 inhabitants and so really was not a village, but everyone knew everyone so it felt small. The basic characteristic of Coronel Vallejos was its flatness. There was not a single hill in sight. Slight changes of elevation only perceptible when the floods came revealed that the village had been founded in the middle of a floodplain. The Quinto watershed, as it was called, came to be important the year that Carolina fell in love, because it overflowed and flooded the whole village, causing the streets to be filled with water and everyone to take to horseback, like in the old days.

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<sup>13</sup> Gastón Gordillo and Silvia Hirsch underscore that the erasure of the category *mestizo* in Argentina was a political project of the nation-state because Argentina was born out of the systematic attempt to annihilate the Indigenous population. “This situation,” they write, “marked a sharp contrast to other Latin American countries such as Mexico, Peru, or Brazil, where discourses that celebrate the Indigenous component of the nation and/or the cultural salience of *mestizaje* (miscegenation) became crucial components of national ideologies” (2003:4).

<sup>14</sup> I have drawn upon Manuel Puig’s fictional name for the town to provide anonymity for inhabitants, blending three towns that I did fieldwork in into one.

The floods marked a rupture in a time, they became the thing that people measured their lives by: the time the floods came. The floods became the sort of thing that allowed anybody to talk about anything. They allowed the farmers to gather on the roads and protest the very state of the world. They threw into question the ubiquity of soy, the cattle feedlots, the reliance on agrochemicals. They threw into question the nature of love, joy, and dignity. They felt apocalyptic. They felt the way that some people want the Anthropocene to feel. Urgent, and necessary to respond to.

Diego, the object of Carolina's desire, was tall, handsome, green-eyed and dark-haired. He was the manager of a new business in town – the first feedlot to be established on this side of the Río Salado. Both the eldest son and the fifth generation of one of the oldest landed families that had helped grow the town nearly a century before, he carried on his broad shoulders the weight of aristocracy and decay. Carolina had known about him, of course, long before she fell in love with him. Then, in the winter before the worst flooding began, he invited her over for dinner. He cooked for her and they danced. The next weekend, he quoted to her in French *tu m'apprivoises, you tame me*, from the line in *The Little Prince*. In the story there was a fox that asked to be tamed by the prince so that they could be special to one another. She was delighted, what a coincidence: *The Little Prince* was her favorite book.

Carolina recognized in Diego a part of herself that she had suspected was there all along. It was the same part of herself that could have become a model or an actress. It was Carolina but better. But she committed the same error that most lovers commit: rather than understanding that act of cognition as a recognition of herself, she misplaced

it onto Diego. It was him that she fell in love with, rather than the version of herself that she suspected had been missing. Because of this, she felt that she had known him from before, and suspected that the stars and fate had brought them together. The recognition of herself which she mistook for love of Diego quickly turned, like many mis-recognitions, into hysteria. She became possessive. She began having vertigo, she stumbled into things and had to catch herself against the edges of tables or banisters. She found an English-language copy of *The Unbearable Lightness of Being* on his bedside nightstand and when she asked him about it he said he wanted to read to her about the woman in the book, Tereza, who also gets vertigo.

“Anyone,” he translated to her in Spanish, “whose goal is ‘something higher’ must expect someday to suffer vertigo...Vertigo is the desire to fall, against which, terrified, we defend ourselves.” She began to weep, and after that would cry for no reason. She wept inconsolably when the potatoes came out burnt, when she saw an old woman with a cane, when Diego couldn’t come home one night because he was tending to cattle in the west.

Later, after she moved out, she would think back on that night. She had called him and he said he had bad service, but he wanted her to know that his brother needed to use the house and was going over. She got mad. He got mad back, he said, Caro, it is my house. She didn’t know why she got so mad, why she felt like she was going crazy. She stood there pressed against the wall of the kitchen with the hot phone against her cheek. She felt the tiled floor sliding up to meet her as she heard him speak to her in what sounded like the echoing of a bathroom. A refrain echoed in her head. El amor

es ciego. Love is blind. She must have known that he was with another lover. But she only admitted that to herself much later, after the floods had abated, long after the horizontal pampas turned into a watery sky mirror.

I met Diego and Carolina after the floods had started, ten months into living in the pampas, after the roads between Coronel Vallejos and Intendente Alvear had been sliced through with earth-cutting machines so that the insistent water could pass through. I had to take the long way around, over pot-holed back roads past the Lopez Dairy Farm where the water came up to the very edge of the blacktop for miles. Coronel Vallejos, like all other pampas towns, was set off a two-lane route and signposted with an epithet, a row of century-old eucalyptus, and a YPF gas station. When I met Diego and Carolina at an asado, a barbeque dinner, hosted at the home of a mutual friend, they hadn't yet started their torrid love affair. Diego was dating a different woman from Venezuela and sleeping on and off with several others. Carolina was working as a dance instructor and loving just one man, her son.

After the affair was over, Carolina told me about Diego. She said he was just like all the rest, but everyone could see that she was heartsick for him. "When you are in love," said a radio broadcaster on the local station, "your whole body hurts and you suffer and live all at once." It was like that, she said, suffering and living all at once. She stalked his house, and when he found her they sat down and had a chat. He asked her to go see a witch. A witch was the only one who could break this terrible spell. She tried to crush the *maleficio*, the hex.

The problem was that their love had blossomed during the floods, when all the categories of their world had been upended. In order to break the spell a great deal of work had to be done to understand the categories that had been smashed and overturned. This was more than just a simple healing of heartsickness, this was a great world changing endeavor. Spells depend upon categories being stable. For example, a witch that Juli saw performed spells for all sorts of things, but especially to clean ghosts out of houses. This was something that was quite common, and it worked. Juli had been trying to sell the flat of her Uncle, who had committed suicide in the apartment, for almost one year, but it wouldn't sell. Finally, she hired a witch to come in and clean out the apartment, to let the Uncle's soul free. And within a week of the "cleaning," they sold the apartment. It was also possible to use the same method for mental ailments. For example, when a friend was depressed, her mother hired a witch to come in and clean out the ghost that was following her around, haunting her. The witch found the ghost under the bed and allowed her soul to be released. This cured the daughter's depression. But this heartsickness was a different story; this was the sort of hysteria – coming from *hustera* or womb – that fell into a kind of wandering grief, confused because it had misrecognized itself in the other, but also confused because during their love affair it had been impossible to tell earth from sky.

The evening I met Carolina and Diego I discovered, because of a large sign announcing the fact, that Coronel Vallejos was the birthplace of Manuel Puig, the famous Argentine author. If *Don Quixote* preferred the glory of fantasy over the real world and death, Puig and other American authors influenced by this Spanish tome had

shown the way that fantasy punctures through to become indistinguishable from the real. *Heartbreak Tango* captured precisely that feeling that is immanent to understanding the pampas. It was a tragedy in the mode of Hegel's world historical individual, but with a distinctly American twist because it revealed the character's – and the reader's – inability to tell between tragedy and accident, between fantasy and reality.<sup>15</sup>

I recognized in Carolina and Diego's love affair the structure of feeling captured by *Heartbreak Tango*. Like many Latin American novels in which death is foretold in the first few pages, the story opens with Juan Carlos dying from tuberculosis. The rest of the book is devoted to tracing all the events leading up to his death. It centers around his multiple affairs with several women in Coronel Vallejos, all of whom are infatuated with him. The hysteria produced through their desire to be loved by Juan Carlos is matched only by his inability to be possessed. If Juan Carlos were a woman she would be called a slut, but Juan Carlos is called a Casanova. The structure of feeling that permits Juan Carlos' masculinity creates ungovernable emotional excess (the wandering womb, like an animal within an animal). Even though over time Juan Carlos gets thinner and coughs up blood, he continues to represent, for each woman, "a measure of her capacity to have lived a higher form of love." *Heartbreak Tango* sweeps the reader up in this possibility, a possibility only available in this place precisely because the village is so stifling. Contrasted with the daily mundane tasks of folding rich people's laundry or sinking fence posts, this higher form of love is a salvation, a

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<sup>15</sup> This formulation of the world-historical individual is from Marshall Berman (1981), who borrowed it from Robert C. Tucker's 1956 "The Cunning of Reason in Hegel and Marx."

structure of feeling that somehow also leads to Juan Carlos' death. Indeed, the text is also a critique of the structural violence that made laborers unable to get access to facilities where they might be cured of communicable diseases. *Heartbreak Tango*, like other surreal forms of Latin American fiction, puts forth the historical thesis that seemingly disparate events – the letters from a lover, the serial notice in a newspaper, the air-conditioned cinema – add up to *something* and that *something* leads to Juan Carlos' death.

The romance of Juan Carlos, of Diego and Carolina, is a familiar genre. It traces what happens when we fall in love and are blind to love's tricks. It is when a structure of feeling envelops us so completely that we forget why we even desire the object of our affection, why we have gotten caught up. Sometimes we might even recognize it – we might recognize it and describe our feelings as a betrayal to ourselves – why do I feel so crazy? Sometimes it is a destructive madness. It was a mode common to the pampas, a way of storying the world and bringing the world into being at the same time. This mode I call *tragic infatuation* to capture the way love sweeps us up and betrays us.<sup>16</sup> But sometimes we do not recognize it, and that is why tragic infatuation describes more than just a love affair. It captures the fact that most of the time we do not know why we desire what we desire. Tragic infatuation is what happens when fantasy punctures the real until they become indistinguishable. It sweeps us up in a dream and a project that has no end, something that morphs before we even know what happened. The love stories that emerge in these moments of crisis index the blindness that

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<sup>16</sup> Infatuation doesn't translate directly in Spanish. I am using the English approximation of what I heard called *amor ciego*, or blind love, and *el mal querer*, toxic love.

everyone feels. Love and tragedy is a way of seeing oneself reflected in the world, a way of reaching both crisis and catharsis. Tragic infatuation is *tragic* because we bring into being a world that also destroys us.





Figure 5. Fuzzy soybean pods ripening.

## **Introduction: The Soy Queen**

From the Desk of David Murray, January 2013 (my translation):

*The answer to your question is that yes, there is soy in La Josefina, [and] ...it is certain that soy has changed much more than just the crop planted in a globally important region of rain-fed agriculture.*

*I always remember a passage from a book by Ayn Rand published in 1957, where reference was made to the dependence of a state on the soy harvest of its*

*producers, which I read in 1984, when the Argentine government of that time "was saved" (or not, depending on how the national harvest went) by soy. Since then, soybeans have become more important every year, because domestic consumption is almost nil, so it is all convertible to foreign currency. To say nothing of the export taxes.*

*In short, the thing is that in my professional life I have seen how the rural community of the Pampas in general has changed its habits of life, and in many regions there have been major changes, just because of the importance of the soy queen.*

The soy queen brought a new rurality to the pampas. Hers was a technocratic and global pastoral that multiplied. It was a *globalism in the countryside*. She seduced a whole generation of men who promulgated a new kind of "efficient" and "sustainable" farm that would "feed a hungry world." Her most egregious seduction was of hedge fund managers, who in the early 2000s began to invest in global farmland through leasing arrangements. They drove up land prices around the world and created a categorical imperative to adapt to changing financial and leasing arrangements or to give up the family farm. The emergent shape of the new rurality was thus, by the time I began living in the pampas, bringing into being a class of man who fought to save the family farm by making the land, and himself in it, efficient and sustainable. The soy queen brought about a particular kind of spiritual and material globalization that transformed the pampas, and the men and women in it. David, the manager and part-owner of the farm I lived on for four seasons between 2015-2016, faced the dilemmas

I am outlining here. His struggle was emblematic of what many farmers lived all over the pampas.<sup>17</sup>

When David first wrote to me about the entrance of the soy queen into the Pampas, I had yet to grasp the symbolic and material consequences of GM soybeans in Argentina. It was 2013, and I was doing preliminary dissertation fieldwork in the Pampas. I wanted to know if genetically modified soybeans were planted as far as the western edge of the western Pampas, where David lived and farmed. In his email David confirmed that, indeed, there was soy on his farm La Josefina, and there was also so much more. With melodic and powerful Spanish he revealed both his philosophical stance as well as the way that his memory was intimately imbricated with the land he farmed. He mentioned “a book by Ayn Rand” which happened to be *Atlas Shrugged*. His memory of this text was correct inasmuch as Rand did mention soybeans, and it was published in 1957. However, the way in which David read soybeans was revealing. Unlike libertarian North American readers who remember Rand’s tome as a warning about government intervention, David remembered the dependence of the state on its soy producers.<sup>18</sup> At first, I assumed that David’s reality was just different from those

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<sup>17</sup> Here and throughout the text I am inspired by a wide breadth of recent scholarship that examines the industrialization of agriculture and the concomitant sociality that emerges with soybeans in South America, including Gregg Hetherington’s brilliant *Government of Beans* (2020), Amalia Leguizamon’s *Seeds of Power* (2020), Antonio Lapegna’s *Soybeans and Power* (2016), Carla Gras and Valeria Hernández’s *Radiografía del Nuevo Campo Argentino* (2016), Gastón Gordillo’s *Rubble* (2014), and Hugo Ratier’s *Poblados Bonaerenses* (2009). Beyond South America, Alex Blanchette’s *Porkopolis* (2020) and Lucas Bessire’s *Running Out* (2021) have illuminated poignant regional contrasts with the US, while Julie Livingston’s *Self-Devouring Growth* (2019) has inspired my thinking about the “metaphysics” of cattle and soybeans.

<sup>18</sup> In *Atlas Shrugged*, soybeans are promulgated by progressive self-styled modernist Emma “Ma” Chambers. Ma, who believes soybeans have a higher moral value than wheat, wants to make soybeans a substitute for bread, meat, cereals, and coffee. “Project Soybean” wastes millions of tax dollars, pulls trains out of the Midwest, destroys the wheat crop, and leads to economic collapse and starvation. The soybean crop is even lost. Rand uses the failure of “Project Soybean” to represent the failure of government intervention and to critique what happens when people are seduced by “big government.” Even if David read Ayn Rand as a progressive Argentine rather than a United States libertarian, it remained salient that he had remembered the soybeans, and that Rand had used soybeans – and not any other crop – as a symbol. The 1950s, when Rand was writing, marked the emergence of a modern agriculture that would save the world, funded primarily by the Ford and Rockefeller Foundations. Henry Ford had become a soybean booster because he had been inspired, during the 1920s, by a piece in *Farm & Fireside* titled “Wanted: Machines to Eat Up Our Crop Surplus.” The problem in the 1920s, as it still is today, was a glut of grain. Mass-scale

readers who Rand was speaking to. He lived in a country that depended heavily on soy export taxes, which he paid along with other farmers, and so from Rand's time he remembered soybeans. But over time I began to understand that soy in Argentina stood in for globalization itself. Soy had become a symbol of multinational companies, of North American greed, of the Argentine aristocracy, of the ways in which global markets were destroying local livelihoods. "Soy kills" and "Soy kills the earth," people chanted during protests against globalization (Hetherington 2020). Soy is "a weed" (*yuyo*), said the President of Argentina, Cristina Kirchner.<sup>19</sup> Argentina is "the republic of soy," wrote journalists. "Can we live without soy?" Read a headline from an Argentine newspaper in 2014.<sup>20</sup>

At the 2016 annual market auction of the first soy truckload to arrive in Rosario the governor said, "Es demasiado por un porote," *it is too much for a bean*. And yet,

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grain farming in the US had led to too much grain, and, combined with the Depression, prices plummeted. Subsidies, payments to farmers not to grow food, and new uses for foods were inaugurated by new governmental organizations such as the USDA. Ford began a soybean laboratory in Greenfield Village in an attempt to unite, for the first time, industry and agriculture. It was there that some of the first experiments on soy-based oils and soy plastics began. In one 1946 advertisement for his vision, Ford kneels in a khaki suit amongst a field of soybeans, contemplating the plants over the banner, "1<sup>st</sup> to 'Grow' Automobile Parts on the Farm."

<sup>19</sup> Amalia Leguizamón (2020) rightly points out that after the 2001 financial crisis, the Kirchner administration promoted agricultural biotechnology in a ten-year development plan precisely because exports – and especially soy exports – were picking up the bill for increased social spending. This was a pattern seen throughout Latin America, where pink tide progressive governments relied on natural resource extraction to fund their own social welfare programs. But in 2008 when President Cristina Kirchner proposed to increase the soy export tax from 35 to 44 percent, massive protests erupted throughout the country in what eventually became known as "el conflicto del campo," the conflict of the countryside. Unrest swept throughout Argentina and farmers blocked routes leading into the city of Buenos Aires. It was in this moment that a significant discursive rupture emerged between the administration – which had up to that point been seen as "pro-soy" – and the campo. President Cristina Kirchner gave a speech on March 31, 2008, as an entreaty to the protestors to stop blocking the routes so that trucks and other important products could enter the city. To read the speech is to be startled by all the tropes she invokes that were later repeated throughout the following decade. In powerful and persuasive Spanish she reminds the audience over and over that Argentines do not eat soybeans, that they are a meat-eating people – "estamos comiendo casi 70 kilos de carne vacuna por año... un caso unico en el mundo" – and that for this reason 95% of soybeans are exported. She calls soy a weed in the context of a conversation that she had with a farmer, who explained to her that [GM] soy can be sprayed with glyphosate and survive, that it can under extraordinary conditions – like a weed – flourish. It is shocking to see the symbolic power that the soy queen animates in this moment. Farmers, producers, and others took this out of context and latched onto it as an insult, turning the phrase against the Kirchner administration to galvanize the ongoing protests. The discursive reproduction was political, but hearing farmers repeat the phrase to me a decade later, it was obvious that it also felt personal to them – that they felt like they were working hard to make sure these plants produced soybeans, and that to call soybeans a weed was to pretend that they could grow all on their own without much work. And, indeed, this was also President Cristina Kirchner's point, that the new soybean plantations required very little labor. See

[https://es.wikisource.org/wiki/Discurso\\_de\\_Cristina\\_Fern%C3%A1ndez\\_el\\_31\\_de\\_marzo\\_de\\_2008](https://es.wikisource.org/wiki/Discurso_de_Cristina_Fern%C3%A1ndez_el_31_de_marzo_de_2008) for the full speech.

<sup>20</sup> <http://www.eldiplo.org/wp-content/uploads/2018/files/7913/9887/1983/LMD-179.pdf>

perhaps it wasn't too much for a bean. In all of this I began to see what David had been pointing to when he cited Ayn Rand's use of soy as a symbol. It had captured the popular imagination, but not just that. It had brought something different into the world, and everyone was in the grips of trying to discover what it meant for them, for who they were and for how they belonged. It was why David had called her a queen.

David was a man of privilege who had, in everyone's estimation, been able to successfully craft himself to adjust to developing conditions. He was in his early 60s, with a high forehead, blue eyes, and a keen intellect. David wanted the farm to be efficient, and for him this meant high yields. The book that encapsulated his theory was the first book he gave me to read, a Spanish translation of Dennis T. Avery's *Saving the Planet with Pesticides and Plastic* (2000). Avery, who is purposely being incendiary with his title, suggests that the solution to "saving the planet" is with pesticides, plastics, and hybrids. He wants to "make room on the globe" for both people and wildlife, and the way to do this, he suggests, is through high farm yields.

Besides being provocative, David's endorsement of this book revealed the importance of the planetary in his own development. Rather than giving me a local text, he sought to underscore the global aspect of his farming project. In order to grow food in the world, David had had to learn to embrace the paradoxes of what it meant to produce food for the 21<sup>st</sup> century. The soy queen was emblematic of these paradoxes central to 21<sup>st</sup> century food supply chains. She needed pesticides and plastic to survive, and she would also save the planet. She needed to multiply, to proliferate, to be traded elsewhere, even though she was not directly feeding those who were hungry. David

had struggled to come to terms with these contradictions, which were crucial to the structure of food supply chains. It was not just that he had learned to be a good capitalist – although he did once shrug and say, “It’s all about the dough” – he had come to grips with a particular kind of disaster in which the planet needed to be “saved.”

It was in the quiet moments when David went out to the fields that I saw this primal global scene played out. One of the first spring nights that David planted soybeans the weather was still exhibiting normal patterns and there hadn’t been any rain. It was November 2015. After doing his office work for the day he turned off the lights, locked the wooden door, and we drove out to the field that Carlos had just planted. The sun was setting to our left and everything was flat, wide, and dusky. It smelled like earth and sky.

“This field,” David said to me that evening as we walked over the soybeans buried an inch below our feet, “is the longest GM [genetically modified]/no-till field in La Pampa.”

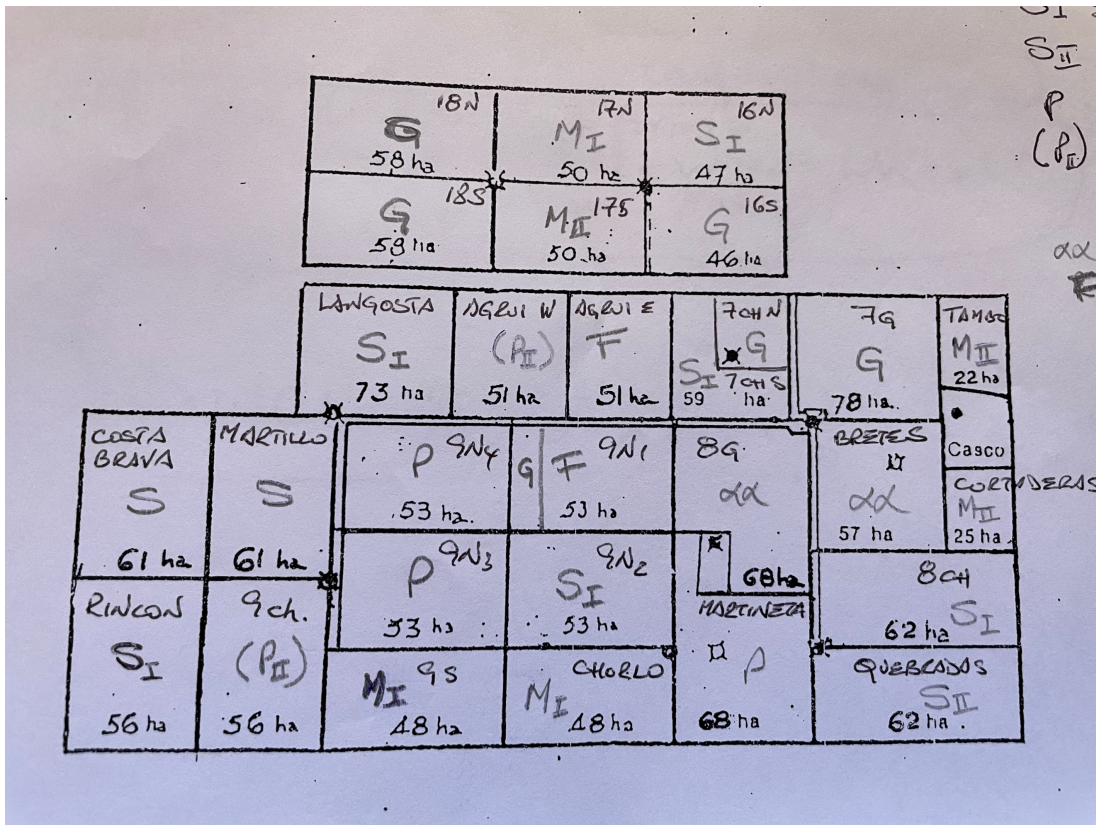


Figure 6. Map of a typical farm. Most farms raised *both* cereals and cattle – called “mixta” or mixed – with perhaps some sheep, which they were able to do because the tracts of land were massive. At the bottom of each square field are noted the hectares of that plot. In this case, G = sunflower, M = Corn, S = Soy, P = Peanut, PII = Volunteer Peanut, and the double squiggle symbols in 8G and Bretes = Alfalfa. 8G and Bretes were, for the five years that I was visiting the ranch, where the cattle were kept, and in between 8G and Martineta was the small feedlot where cattle were finished. These pasture fields were rotated every five years. I = first crop of the year and II = second crop of the year, post cover-cropping or post-wheat. The “Casco” was where the houses, offices, some sheep fields, and gardens were located, as well as the entrance to the farm. “Tambo” was stables, machine shop, siloes, corrals, and some sheep fields.

Since he had first planted this field almost twenty years before, the country had changed, the world had changed. In 1996 only a few thousand hectares were sown with genetically modified soybeans. By the planting season between 2015 and 2016, a record 20 million hectares of Argentine land was planted in GM soybeans. In less than

two decades soy plantations in South America had expanded to cover an estimated 60 million hectares – an area about the size of Texas, and larger than any other continent. In 2018 Argentina and Brazil together were the largest producers and exporters of soybeans in the world, accounting for almost 58% of global production (USDA 2018).

The soy queen had compelled David to begin participating in a primal global scene, and in the field that evening and for the year that I lived on his farm he tried to show me what it meant to be *part* of that scene, to be part of globalism in the countryside. He wanted to show me the imaginative power necessary to even bring the soy queen to life. He wanted to show me what it meant to have the moral courage to be tied to the land but not bound to it; to devote yourself to it at the same time that you changed it.

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Soy in Argentina had been planted experimentally long before 1984, the year David mentioned in his first letter to me, and although many trials had failed some did succeed. In the 1960s, breeders had figured out that soy did best when it was planted in November, and by the 1970s soybeans were exported to Europe. The 1973 US grain embargo against the Soviet Union opened up a market for Argentina at the same time that the Argentine company Asgrow was developing varieties specifically bred for the southern cone. Over the course of many years, breeders selected different varieties to be suitable to the different bands of light within each latitude. These were numbered



according to latitude, progressing from the most southern (1) to the most northern (9). During the 1980s and early 1990s, soybeans continued to gain value as an export crop for Argentina, and farmers continued to engage in the gradual mental shift that was necessary to bring the soy queen to life.

David began farming in 1983, right when the US-backed military dictatorship was ending and post-terror reparations from the US were attempting to pull farmers into a global revolutionary future. David remembered the year 1984 precisely because it was the year that Asgrow disseminated A 5308 (also there was A 5409 in 1989 – this might have been the one that David was remembering), a variety bred by Agronomist and plant breeder Rodolfo Rossi, the “father of soy” in Argentina. A 5308 did better than any other variety in the history of Argentina and was popular among farmers.<sup>21</sup> The countryside was changing, and it felt like unseen forces began to pull David into a global scene that he had not conceived of before. Before, it had been inconceivable to *return* to the farm. For years everyone had been fleeing the countryside for the city. But investment vehicles known as “sowing pools” (*pools de siembra*) coupled with filial devotion and an unsteady infatuation, which I will treat in the following chapters, enabled David to even conceive of returning. He pooled together about \$25,000 USD from various friends and family and returned to the farm owned by his family.

When he arrived, he told me, the farm was in shambles. The ebullient modernization that had brought farm machines to the pampas had destroyed the soils. The earth was sandy and full of weeds half the height of men. The fences were busted,

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<sup>21</sup> See *El Cultivo de Soja en Argentina* Eds. Baigorri, Héctor and Luis R. Salado Navarro. Agroeditorial, 2012.

the dirt roads between the fields fragmented and potholed. The railroad had shut down. What had once been the closest station and town was dusty and abandoned. It was, he said, much like the decline of Buenos Aires, whose most popular tourist attraction was now a cemetery, whose once-white porticos were streaked with years of water and city soot, whose wide shopping boulevards graced with the first overseas Harrod's were now shuttered. All the great modernizing energy that had gone into Argentina in the early twentieth century never regained its momentum. It had been, he said, "left behind."

David and other farmers tried hard to not be left behind. David repaired the soils with cover crops and rotations, he replanted perennial forage and let the soils repair for five years at a time, he slowly and painstakingly each year incorporated a little more technology into the farm. But it was really with the entrance of GM seeds and no-till technologies that something began to shift. It was also an internal shift, something he recognized only later: With genetically modified seeds, with no-till farming, with *more data*, he could conjure the power to change the world that was changing him.

For David, who had remade the soils for thirty years and in so doing had remade himself, he belonged precisely by being a man who was "saving the planet with pesticides and plastic." In the making of a farm that was *better* than when he had begun, David was crafting himself. He was cosmopolitan, but this wasn't quite the subjecthood toward which he strove: it wasn't just that he knew how to read the markets, speak English, travel far distances, and lease land. He knew this place intimately, and it was through this intimacy that he was brought into the world. Indeed, as he showed me the

estancia, as he mapped everything out, as he pointed out the names of the white and purple flowers along the side of the road, as he pointed in the distance toward an advancing storm, he was showing me that he knew this piece of land. He knew it so well, in fact, that he felt confident telling me that the bone-dry flats covered in salt would turn into a lagoon in several months.

In the field that spring evening with David, he knelt and gestured that I do the same. Scratching away at the top of the soil he found, just below the surface, a tiny beige soybean. He held it up for me between his thumb and index finger: the soy queen.

David had changed the world, and himself in it, with this tiny seed. But he had not done it alone. The soy queen inaugurated a new rurality with, as Avery puts it concisely, pesticides and plastic. She was an extraordinary creature by all counts. Seven days from that spring evening, she would burst from the soil with tiny green cotyledons. Because of thousands of years of domestication and a century of intense breeding and selection, she would grow a thick stock strong enough to support the weight of 50 pods, each of which would be filled with 2 to 3 heavy soybeans. She would be bushy, with wide fuzzy spear-shaped leaves that spread to absorb the sun efficiently, and flowers that self-pollinated. And she would, incredibly, live through many applications of glyphosate, a potent agrochemical lethal to all plants. Later, after she yellowed and dropped all her leaves and a combine harvested the seeds from her dried pods, she would be stored in massive plastic silos as big as an airplane fuselage. David would keep her in these plastic silos until he was ready to sell her to an exporter in Rosario.

David had also moved mountains for the soy queen. As David began to plant more soy on his home farm, and as the Kirchner administration enacted bans on exports of beef, he realized that he needed to do something with his cattle herd. David, along with other ranchers in the Pampas, loved cattle. Cattle were what had made him fall in love with the Pampas, they were emblematic of a breathless rural modernization that was different from the soy queen. But it was becoming unsustainable to maintain the herds in the plains where land prices were skyrocketing, and where ranchers were forced to sell to a domestic market that made ranching unprofitable. Many ranchers decided to cull their herds, while others including David decided to corral cattle into feedlots, as well as lease cheap land in the western forests, moving their calf/breeding operations to this marginal frontier. The forests saved the herd, and in a sense also saved the men, for it was there that they could visit the cattle herd, it was there that they could nurture freedom and masculinity. And when the male calves were weaned from their mothers the men moved them back to the plains, to feedlots, to be fattened and finished on soybean pellets mixed with corn silage. Soy might have been a queen, but for the men cattle had always been king.

The way that men stood apart from soy was, in part, integral to her power. Whereas David was in the corrals with the cattle every day, he hired others to sow, spray, and harvest soybeans. David once told me a saying that brought out the contrast – “El ojo del patrón engorda el ganado,” the eye of the boss fattens the cattle.<sup>22</sup> Cattle

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<sup>22</sup> *Ganado* in Spanish can refer to livestock in general. *Ganado mayor* is larger livestock like cattle and horses while *ganado minor* is lesser livestock like sheep. *Ganado* also means earned, gained, or beaten, and is from the root *ganar*, to win, reach, or attain.

required daily labor. “Cattle eat, shit, and drink every day,” David continued, making the point that it was impossible to simply leave them in the field, the way he left soybeans. Not a single landowner that I ever met in the Pampas drove his own tractor to sow or harvest the beans. They were not making decisions from “above,” the way agricultural investment funds practiced armchair farming from as far away as the United States, but there was a sense in which they were part of something outside of the scene in a way that they were not with cattle. To be clear, the power that comes from attachment and belonging and even love is in part because they claim to be good, when in reality they are powerful agents of destruction and exclusion. When I describe men’s attachment to cattle and the cultivation of ecologies of belonging, it is to index how concepts like belonging were and are used to claim innocence against invasion. The feeling was not breathless, not participatory. Men who could read Chicago commodities futures were rewarded, rather than the men who went out into the fields. They bought glyphosate, watched the numbers on the readouts indicating yield per hectare, felt the way that something was shifting as new rapidly evolving weeds emerged onto the scene.

In the Pampas, then, two roads opened up from the restless questions that soybeans raised in the men’s minds. One was the search for a world that was knowable, while the other was a recognition channeled into action. They invoked the planetary and in so doing invoked what I am calling the global pastoral, a genre that depicts such life in an idealized manner for urban investors. The global pastoral is what *Saving the Planet with Pesticides and Plastics* seeks to achieve – a genre that conveys a tamable

and knowable nature, a “sustainable” nature mapped precisely with none of the unknowns that farming has historically brought with it. The men recognized themselves in the commodities that they were growing, in the soybeans that multiplied like heavy magic on the thick stocks bred over and over to proliferate. This was the techno-scientific sublime, a structure of feeling to which they gave themselves over even as they struggled to find the meaning of the global pastoral, to place their feet within the framing of the field. Where did they stand?

For them it was obvious that plantations bred disease ecologies – they knew more than anyone about the way that pests, rusts, fungi, and weeds developed the astonishing ability to live through applications of pesticides, fungicides, and herbicides – and for them it was also obvious that this was the cost of modernization. The weedy natural resource base that they had brought into the world was not limited just to their inquiry – can I live without soy? It was something that constrained their choices, and in so doing created a paradox of herbicidal effluent that was unwanted even as it was applied over and over to the fields. They were at home in these landscapes because they were modern men, even as they dreamed of places less disfigured by their ceaseless activity.

The unraveling was part of the unreal and hyper-real rurality that the soy queen created. She was grown primarily to feed animals – about 75 percent of soybeans are crushed for poultry, hogs, and cattle – she was grown so that more animals could be crammed into smaller plots of land. She defied “the laws of nature” at the same time that she sharpened the consequences of “nature.” She had been shot with a gene gun so

that she could live through applications of a chemical normally deadly to all plants, she had been bred to have resistance to multiple infestations including *Phytophthora* and different Nematodes, she was made over and over again to produce more, to multiply, to proliferate. She was prolific and seductive. Men laid down with their machines to bring her into the world, they laid down with agrochemicals, plastics, and computer read-outs. This is why I felt, for the first time in that field with David, what I am calling a primal global scene. This everyday encounter between a man and his bare glyphosate-drenched fields, a man and his seeds, expressed the tensions and contradictions of bringing into being a world that also destroys you. It was weirdly pastoral. It was not spectacular or breathless – not modern – it was the place where the personal and political life became one, the place where biology-as-politics was fully expressed. The fields of David's pampas conveyed the internal contradictions of belonging in a globalizing world. How does he become a farmer in this world? What must he do to himself?



Figure 7. Cattle at auction.

## Chapter 1: Hysteria

Young composer: (walking along the shores of an Andean lake) It is strange that this unbridled nature does not enthrall you, why your soul is the very reflection of its beauty.

Glamorous widow: (new in this place) What do you know of my soul?

Young composer: I think I'm beginning to know it.

Glamorous widow: In order to know a soul you must first dominate it.

- from the Argentine film *Swan Song*<sup>23</sup>

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<sup>23</sup> Translated by Suzanne Jill Levine for Manuel Puig's *Heartbreak Tango*.



The day after I met Diego and Carolina, Diego took friends and I to the new feedlot he managed. Diego was recognized as having prestige precisely because he managed the most cattle in the region. Men looked up to him and in a sort of feedback loop he therefore performed prestige and noblesse. It was in the way that he knew what to say, how to hold himself, how to be gracious and banter but not too much, how to hold a knife and fork with ease, how to make eye contact with someone to show them that he was listening but also that he was honorable. Cattle had always been a prestige symbol in the pampas, a way to measure the monetary worth of a man, and consequently, a way to measure his political worth. But Diego managed more cattle in one year than most men had hustled in a lifetime. The feedlot was a new system of cattle proliferation in the pampas, and the feedlot manager, Diego, was a new figure.

The feedlot was set off the main route. There were thousands of cattle, and the stench was overpowering. We wore old rumpled clothes fetched from the bottom of Diego's closet because simply going to the feedlot attached to the hair and fabric the smell of cattle, impossible to simply air out. It was not exactly the smell of death. Cattle had died on the estancia where I was living and I had learned what that death smelled like, putrid enough to make lunch come up into your throat. This smell was more like an anticipated death, an odor of wallowing enclosure, of living in your own feces and urine. We walked close to the pens and meandered along the pathway. The fences were metal and as we walked through the cattle came to us, gathering to the fence line to watch us with big eyes and frothing lips.

Diego sent to the *frigorifico/faena*, the slaughterhouse, between 200 and 240 animals per week. To do this, he described the way he had to cultivate a kind of agnosticism toward death and toward the cattle. We stopped in front of one of the pens, where the brown cattle stood knee deep in mud and their own feces. Several of our friends took out cigarettes to smoke. I circled closer to the fence line. One steer stood staring at me from the side. His face was handsome and angular, strong and yet covered in a sweaty brown coat. His eyes were watery and deep, with long lashes. I was reminded of the letter from Rosa Luxemburg to her friend Sonya Liebknecht, when, imprisoned for speaking out against the war, she finds herself face to face with a Romanian water buffalo captured and enslaved for work. He was bleeding from his thick hide, and tears began running down her face as she stood looking at him. But they were *his* tears, she writes. She flinched in her “helplessness over this mute suffering.” And in this moment the panorama of war passed before her eyes.<sup>24</sup>

Diego and the group of friends had walked on, and I tore myself away from the steer’s wretched eyes to catch up with them. Diego was saying how different his mode of production was from the estancia, how he had to be constantly thinking about contamination. Bovine Respiratory Disease Complex (BRDC) or “Shipping Fever,” Blackleg (Clostridial disease), Bovine Respiratory Syncytial Virus (BRSV), Bovine Viral Diarrhea (BVD), H. Somnus, are just a few of the many diseases that cattle might have. To prevent that, when the cattle came to the feedlot they received a modified live vaccine (including IBR and BVD) as well as a clostridial vaccine. They were also

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<sup>24</sup> S. Bronner (ed.), *The Letters of Rosa Luxemburg* (New Brunswick, New Jersey, Humanities Press, 1993).

dewormed or deloused for parasites. And if they became sick, they were administered antibiotics. Diego had to avoid contamination at all costs because the feedlot environment made things highly infectious. I felt what he meant. To experience the crush of cattle bodies standing in their own feces and urine, to be overwhelmed by the muck and the stench, was to feel cattle fever heightened. This was a feverish and strange nightmare, a kind of sweaty sickening that made everything muggy and bilious.

On the way back to the house, the men chatted about whether or not they had ever been with a prostitute.<sup>25</sup> There was sometimes a tendency for men to become excited by cattle in a particular way. They would never consciously link this conversation topic to the feedlot, but there was a relationship between the submission and domination inherent within the mass production of cattle that mapped into desire.

I looked out the window, smelling the stench of cattle prison wafting from my hair and clothing, watching the flat pampas flicker by. This was one way that I had learned to see the pampas: out of a car window, flashing by in regular flatness like in the old stop-animation films.

One of the men was saying something about how he didn't like paying for sex because he liked the game too much. He used a word that Argentines sometimes used to describe dating pairs, *histérico/a*, literally translated as hysterical, that illustrated the way in which the low lows were the very thing that created the high highs of this game. To be hysterical was to cancel at the last minute, make an excuse, read a text but not respond.

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<sup>25</sup> The word prostitute comes to us from the Latin *prostitut-* "exposed publicly, offered for sale." Ganado, the work for livestock in Spanish, is sometimes used in certain Spanish-speaking regions to refer to promiscuous women or prostitutes.

Every so often, a big cluster of trees would pop up. They were a landscape element common to the region, tangled and often feral forest islands planted by settlers one century before, surrounding a settlement that was more often than not now abandoned, or not occupied full-time. Sometimes these forest islands were set off the road, and a double line of eucalyptus shading a long drive marched toward the forested knot. They were known as *cortinas*, or curtains.

“The foreplay of the chase,” the man said, interrupting my contemplation of the eucalyptus curtains, “makes the climax that much better.”

Men often said strange things in front of me, and I wondered if they thought I couldn't understand them, or, worse, if they were saying such things for my benefit. These were haughty men visiting from Buenos Aires, men who had their own musk of privilege wafting around them, men who, in comparison to those in the pueblo, had far more economic opportunities. The contrast of their arrogant shininess with the village made more poignant the uneven effects of tragic infatuation, the ways in which capital could be captured by some and not others, the ways in which such a capture would then have differential effects on the campo and the workers of the campo, and on women.

But this was not the only time that men had bragged in front of me about women they had slept with. This was a particular local genre of male conquest. It was a way to show how wanted they were, a way of manufacturing desire around them, as if to say, can you smell my musk? *Women can't even help themselves*. Men in Buenos Aires had done this in front of me, had shown me photographs of the beautiful women they had been with, as if to say, you too, could experience my ardor. In the rural places it was

less overt, less absurd, but still alive and well. Once during an innocent conversation with the traveling salesman I had asked about his wife, simply to make conversation. He had just shown me photos of his children and I said that was so sweet and asked how long he had been married. This is more or less how the conversation went:

“How sweet, how long have you been married?”

“Thirty-seven years! She is beautiful, I love her very much.”

“How lovely, congratulations.”

“Yes,” he said, reaching into his vest pocket, “but I also have two lovers, one is twenty-seven and the other is thirty-five.” He pulled from his vest pocket a cell phone.

“This is my secret cell phone.” He put his finger to his lips as if we shared a secret, “I’ve been with fifty-nine women in my life and I know each of their names.”

On another occasion, when I was visiting an estancia on rural back roads several hours from any asphalt, the estanciero greeted me with the air of flagrant masculinity that I was accustomed to and declared, while we were walking through a field to see an archaeological dig on his property, that his estancia was called “Los Cuatro Caranchos” because he and his three brothers were loved by women. The carancho (*Caracara plancus*) is a noble bird of prey in the Falcon family native to Argentina. I had come to be familiar with this species because it loved to perch on the quebracho fence posts all over the pampas. It had a distinct orange face and thick beak, striated dark brown and white feathers and a brown cap. I didn’t immediately make the connection so asked for clarification. Again, the conversation went something like this:

“What do you mean, what does that have to do with a carancho?”

“Oh, they have the reputation of being womanizers.”

“Oh.”

“And so since my brothers and I do too, we gave it that name.”

“Hmmm.”

“Did you know that when missionaries first got here they wanted to have sex with the Indigenous women but they thought doing it doggy style was bestial?”

“No, how interesting, I never knew that.”

“Yes, and that is why doing it face to face is called what it is.”

What was I to make of these male conquest stories? Of these ways to introduce sex into the conversation? On the one hand, this last conversation was clearly expressing colonial desire. But when I asked potential cultural translators, women, what to make of these situations, they were sure that I was mistaken, that the men in the car must have thought that I couldn't understand what they were talking about, or perhaps that I had misunderstood. Somehow it was my problem. This was, I learned, not an unusual interpretation. When I later posed to a group of women the fact that *machismo* was a rampant force in the pampas they kneeled their eyebrows together and corrected me. Not really, they said. I gave them an example of the so-called *piropos* – basically cat-calls – that women received constantly on the streets, especially in Buenos Aires.

“But then,” they said to me, “then you know you are looking good that day, and you feel good!”

Besides, one of the aunties added, I personally always give them *piropos* back. She stood up and theatrically told the story of when she met her husband, who thought he was hot shit. He pulled up next to her in a borrowed car on a road in the village, showing off. She opened her arms wide and reenacted what she had done,

“Ayyy mi sol! Mi reino! Ojala fueras sol pa’ que me des todo el día! Donde estabas escondido? Quieres ser príncipe? Ven y bésame el sapo!” *Ay my sun! My king! I wish you were the sun so that you could give me your rays all day! Where were you hiding? Do you want to be a prince? Come and kiss me you toad!*

See, said the auntie, we can give them back. Her niece, who was breast-feeding on the couch, was laughing so hard that the baby started whining because her breast had fallen out of his mouth. But auntie, she said, you are very unusual! I laughed with her and said that it was a good example but that it didn’t mean there wasn’t machismo. They did not agree. They looked at me strangely, almost with pity, as if they felt sorry for me, that I could not enjoy the pleasure that masculine domination could offer.

The genre of male conquest formed a particular kind of genre of excess, of seductive potential. It was shameless. Later, when I asked one of the men in the car what he wanted his pseudonym to be, he said, “Ricardo Ruben.” How precise, I laughed. Then he sang for me the song: “Ricardo, Ricardo, Ricardo Rubén...nunca ha sido fiel, pero cuando llega la hora del placer, se porta diez puntos Ricardo Rubén.” *Ricardo, Ricardo, Ricardo Ruben, he has never been faithful, but when the hour of pleasure arrives he performs a 10 out of 10.* Ricardo Ruben, then, was the unabashed figure of the womanizer, the man who both hid and showed off his sexual exploits, the

man who, on the way back from the feedlot, talked about the chase and the climax. He was the man who told me, when describing the dynamics with a woman he was dating, that he was “being too easy,” that he needed to play harder to get. It wasn’t that this sort of attitude was “beneath the surface,” it literally created the landscape that I was watching out the car window.

The cattle auction, a public offering of cattle upon which the feedlot depended, was the pinnacle of the techne that created this structure of feeling. Cattle auctions exposed cattle in pens, offering them for sale to the highest bidder. I had attended several cattle auctions, in both rural La Pampa and in Buenos Aires, and I had seen the way men – they were all men – got high off buying cattle. Buying cattle at an auction is like gambling. It is addictive because it is risky and can therefore have exciting rewards. The rural auction in Victorica – organized by none other than Diego’s father Thomas – set it up so that the group of men followed behind the auctioneer as they rolled past the cattle pens where between five and ten cattle were crushed together, panicked and stressed from having been moved and being in a new place. The auctioneer banged his gavel and called out ascending prices. The men sized the cattle up at the same time that they sized each other up. It was the auctioneer’s job to create a crescendo, starting low and slowly building until the men were goaded into continuing to bet, swept up in the *momentum* of the auctioneer’s voice, the banging gavel, the bellowing cattle, and the men around them. They touched each other’s shoulders, they slapped each other on the back, there was a closeness to them. In Buenos Aires, at Mercado de Liniers, this was heightened to the extreme. There was a



hierarchy: the men who were going to spend the most money got to ride on horses as the auctioneer traveled from pen to pen. Their shirts were slightly unbuttoned, exposing gold crosses and hairy chests. The smell of cattle imprisonment clung to everyone. There was a momentum, a mounting excitement, between all the men. They huddled together, they grasped onto each other's shoulders. It was a male bonding ritual. Much was at stake: the very foundation of their society was at stake. And it was premised on the sale of these cattle.

After the Buenos Aires auction I had lunch – regular sausage and blood sausage, sweetbreads (the Thymus gland, called locally *mollejas*), skirt steak, flank steak – with one of the men who had been riding the horse and who was one of the biggest buyers in Argentina. He was high, he had done well that day, and so he was generous with his words and his time. He was a gentleman: he served me first, and like all Argentines had the most excellent table manners. I recognized in his conduct the feeling of having won. He was brazen, he asked me out for dinner, he was feeling good. The rewards were an *affect*, characterized by exhilaration, euphoria, even rapture. But these highs were only created by deep troughs, characterized by the kind of despair that takes over your whole body, an anguish and devastation so profound that the only thing to do is to *keep betting*. Thomas, Diego's father, had once lost everything, and was now heavily medicated in order to just get through the day. To become addicted to these feelings was to replicate the same structure of feeling within Diego and Carolina's affair. It was the sort of deranged madness, of hysteria, that emerges from unrequited love.

The madness of unrequited love depends upon domination. And there were several rituals where men could demonstrate their domination of beasts (of women): one was the doma, or rodeo, and another was in the feedlot, when cattle were being herded, weighed, and sent off to slaughter. The madness in these two places replicated the feeling of hysteria and in some cases heightened it to an extreme. There was one day at the corral (locally called *manga*) when this experience especially came home to me. It was a hot day, the sort of wet heat that makes your clothing stick and everything damp. The men were corralling cattle at the manga, sorting them by weight and getting them ready to sell. They had been delayed by some paperwork, and so they were working in the noon heat with the sun right overhead. Marcos had somehow sweated the shape of South America into his grey polo. Ceferino was bellowing at the cattle and Marcos was shrieking at Ceferino. I sat cross-legged in the shade of the upper floor of the manga and tried to stay out of the way.

From this viewpoint, the highest on the estancia, I was sitting right above the cattle hug and scale. The cattle were hot and restless, seeking the corner of shade in the manga and startling away from Ceferino as he approached them in order to sort them out. As he slowly siphoned off the ones he thought were fat enough, they kicked up their heels and ran into the sorting station. Then Ceferino would open the gate and they would run forward into the cattle chute. Today they were unruly, hot, and pestered by thousands of flies. They would not move forward, and finally Ceferino got a sharp metal pole and started slapping and poking them against the rear end. They smooshed into one another and screamed. Marcos was trying to put their tags on their ears –

basically an ear piercing. One opened its mouth so wide and froth sprayed out as it screamed and bellowed. But this only goaded the men on more to scream and holler, both at the cattle and one another.

Marcos wanted to dominate Ceferino and Ceferino wanted to dominate the cattle; each was engaged in his own game of domination. Of course they would never say this to one another; like the agrochemicals, to *admit* to such a thing would be ludicrous. One person did admit it to me: Gregorio. And this was precisely because he had changed the way the cattle chute operated. Having read about Temple Grandin, he decided to invest in the cattle chute and hug that mimicked the cattle's feelings.<sup>26</sup> The chute was a spiral rather than being straight, and the hug gently closed their bodies in a real hug. But the gauchos, Gregorio said, didn't know what to do with themselves. Their work was premised precisely on the domination of the cattle, or the performance of domination. With Temple Grandin's cattle chute, there was nothing to dominate. "You don't even have to yell," he said, "all you do is whisper and [the cattle] go."

The feedlot and the love affair created mystical experiences. They both engaged unbounded, unfathomable excess. They were both born from the sort of hysteria that must always be *frustrated*, that can never be *satisfied*. Even if Ricardo was being too easy, as he said, as soon as he sensed that he was no longer being too easy, that the woman had become sufficiently enamored with him as to always want to be with him and to become possessive of him, he dropped her. I had seen this happen many times, and not just with Ricardo. In the feedlot this excess was obvious. There was a hysteric

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<sup>26</sup> Grandin, Temple. 2007. *Livestock Handling and Transport*. Wallingford, UK: CABI.

quality to the thousands of cattle standing knee deep in their own urine and feces. The uncountable cattle pens, the mud and the muck, the frothing mouths, the cattle mounting one another and bellowing in frustration. These cattle were captive and submitted in every way, but more than all that, no amount of cattle *would ever be enough*, just as no amount of women would ever be enough for Ricardo. It was as if the potential for production and consumption was limitless.<sup>27</sup>

Rather than the ecstasy of Aldo Leopold's fierce green fire, in the eyes of that steer I had seen a muddy panicked blaze. It was the hysteria of death without meaning, the sort of death that has characterized the late twentieth century, a death unmarked and sickening by the billions. Standing there, the steer was living, but he had not lived. In his eyes, which were my own, I saw the panorama of the twentieth century, the fervent blazing gust of light that humans had somehow ignited in the world, I saw a kind of feverish story. It was the story of a death foretold, it was also Juan Carlos in some form, it was a sickly untethered longing.

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<sup>27</sup> Two feminist meditations on the desire stirred between cattle and men both inspire this point as well as add to it from Botswana and Australia. Julie Livingston's extraordinary parable of *Self-Devouring Growth* details the passion stirred between men and cattle, what she calls a "total social fact" (2019:37-41). Deborah Bird Rose in *Reports from a Wild Country* describes the way cattle are enmeshed in an ethos suited to conquest, see especially Chapter Four, "Cattle Kings and Sacred Cows" (2004:73-94).



Figure 8. Riding through the rye with Ceferino.

## **Chapter 2: Go West!**

To question the world that is being brought into being by oneself is to face a difficult and mind-wrenching paradox. Tragic infatuation reveals this strange conundrum wherein the world that we seek to create is destroyed through our creation. But the men of the Pampas were not the first to face this paradox. Before the soy plantation and the feedlot were inaugurated as a system of production in the pampas, the cattle and their humans destroyed the grasslands upon which they depended several

times: first, in the 18<sup>th</sup> century, over-stocking turned the radius around Buenos Aires into a forest of thistles. Then, in the 19<sup>th</sup> century, the sheep and the plough went further afield and annihilated the grassy subsistence base of the new country. Then, in the twentieth century, agrochemicals poisoned the air and the soil and drove rural families away from the countryside. The structure of feeling that drove these changes was the same structure of feeling that inaugurated cattle fever. It was something that people got caught up in, it was a momentum, a gathering.

If there was one person who would be able to remember and explain to me the irreversible and world-ripping transition the pampas had undergone, everyone was sure that it would be Diego's grandfather. The morning after the asado, some friends and I gathered into Diego's car and he drove us on unmarked dirt roads around flooded fence-lines to the low L-shaped white estancia occupied by his grandfather. I had heard of this mythic man for almost a year by the time I met him. He did not disappoint. He had white hair and eyebrows that tufted upward like unruly white feathers. He wore an impeccable outfit, and I was assured that he always dressed this way. Around his neck was tied a silk scarf, around his waist a belt with silver decorative coins imprinted with Indigenous caciques. His pants were the billowing multi-pleated *bombachas*, a style of trouser allegedly adopted by gauchos given these pants as a uniform after they were sold to merchants in Buenos Aires due to an excess in the Crimean War.

He was gentlemanly, punctilious, gracious, and yet his memory had begun to fail him. He showed me his extensive library collection with books on *How to be an Estanciero*, he showed me black and white photographs of him and his sisters riding

sheep as a pastime, he showed me the brass bells for *la madrina*, the bell mare, lining his hearth. But the linearity of time had left him. All these objects clustered and crowded into the Saturday lunch we were having, into the manifest destiny the Argentines had imagined might too be theirs, like their North American counterparts in the prairies. He repeated to me several times throughout the course of the day, “Go West, young man!”

Out of respect for the elders, Diego did not intervene other than to try to signpost for his grandfather particular artifacts that might jog his memory. Diego’s deference indexed a social hierarchy that valued sons and age. This hierarchy was always deferent to elder sons and was being thrown into question because of the deteriorating state of Douglas’ mind. Douglas’ wife had passed away many years before, and although he had remarried his new wife was an heiress of the Bridges estate in Patagonia and so had no interest in the claims on the comparably miniature El Ombú. The four biological children of Douglas’ first marriage did, due to the law of inheritance which divided properties evenly amongst siblings, and three of them had returned to the village to stake a claim, after three torrid marriages that ended with love affairs and acrimony. The brother, Martin, was a handsome middle-aged man who insulted his sisters in order to lay claim to the farm. Claudia, Diego’s mother, had begun keeping the books, and Diego was in charge of the management. While Diego might have been better suited for the job, it was not his turn. And so his father had found him a job as the manager for the new feedlot, a managerial position suited to his education and class level.

As we sat on the couch side by side, Douglas showed me with his gnarled sun-spotted fingers the black and white photos of men in ponchos crouched on short grass sharing mate together. In one photo, an Indigenous woman is standing to the right of a seated well-dressed European man. She is holding the kettle and pouring the mate for him. “Go West, young man!” he said to me for the third time that afternoon, repeating the ways in which his ancestors had been swept up in a project of colonization. Afterwards, in the car ride home, Diego apologized for his grandfather’s fading memory. But although Douglas’ memories were crowded and jumbled, and he did not describe the way the entire pampas had once been covered in pampa grass, he indexed for me precisely that project of tragic infatuation that had swept up his ancestors, and that he, too, tried to capture in the way that he dressed, in the way that he had a portrait of Cacique Pincén hanging above his breakfast nook. Go west! Was the *feeling* that the whole world was yours. Go West! Was the way the pampas made you feel, it was the project that had brought with it cattle and horses to the Americas.

One of Douglas’s father’s contemporaries and neighbors, Jorge (George) Newberry, writes about this project in *Pampa Grass*.<sup>28</sup> He was a young man from North America who came to try his luck in the Southern Cone in the 1880s. He spent years wandering around northern Argentina and falling in love with the country. He hadn’t dared go south, since President Roca was then waging his so-called “Conquest of the Desert.” Several years later, over warm beer in a bar in Buenos Aires, a man told him about an English company that was selling large tracts of land to men brave enough to

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<sup>28</sup> Newberry, Diego. 1953. *Pampa Grass: The Argentine Story Told by an American Pioneer to His Son*. Editorial Guaranía.



settle on the recently opened frontier. Jorge was intrigued, and he was hooked on Argentina. He bought the land for peanuts, hired a few scraggly gauchos, and hustled 4,000 head of cattle over three hundred kilometers west to a settlement near Colonel Vallejos. He was infatuated, he was caught up in this project of colonization without thought to the violence wrought on this frontier. But the gauchos he had hired knew exactly what had happened here, and they wanted nothing to do with it. They abandoned him and he was left with just one man trying to figure out what to do with all the cattle.

It was dusk as he and his companion built a fire and sat down to think about what to do. Off in the distance he suddenly saw a group of people coming toward the fire. Jorge and his companion got their knives ready, even though they were clearly outnumbered. A cacique entered into the ring of firelight and, without saying anything, speared the skinned rodent hanging from his belt and put it on the fire to roast. He shared the meat and then offered himself and his men to work for one month for Jorge. They worked for one month on land that had recently been taken from them for a man that had stolen their land. They built fences and erected a small rancho, they taught him where to plumb water and how to get the cattle accustomed to this region.<sup>29</sup> And after exactly one month, they left. Jorge describes their figures receding into the distant horizon. The tragedy of colonization was captured in their receding figures. This was tragic, it was world-ripping, *go west*, said the project, *go west and do not question why*.

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<sup>29</sup> The Spanish word is *aquerenciamiento*, verb form *aquerenciar*. The word *querencia* is metaphysical, coming from the verb *querer*, which means to want or desire. The word may have originated from bullfighting, when the bullfighter draws the bull out of his *querencia*, his safe place, in order to kill him.

But of course, this project was more than just a feeling. It was a material gathering of fact, it had real effects in the world.

The frontier had expanded as men had *gone west*. David, on whose estancia I was staying, had been taught by Douglas how to gather this feeling to himself, and he had gathered it through a love affair with Douglas's daughter. Love is productive of worlds, it is not just about the desire inflamed between two people. David fell in love with the pampas, and David's project was still part of this idea of making the land better, of better working the land.

David and Claudia fell in love when they were young, at an upper-class English Boarding school in the undulating hillocks and craggy knolls of La Cumbre, just north of Córdoba. Claudia had creamy skin and dark brown hair, and David had thick blonde hair and blue eyes. Claudia was Douglas Lowe's eldest daughter and had been sent to the boarding school at the young age of seven, a fact for which she never forgave him. "I was too young," she said, and even though everyone understood that Douglas had sent them to the school because of his love for them, because of his desire for them to be educated outside of the mediocre schooling system in rural Coronel Vallejos, it was generally agreed that indeed, this was too early. Claudia grew up learning how to think like the British, and this was in many ways a curse since it did not prepare her to live in Argentina. This is, perhaps, why she was so taken with David. Even as a teenager, he was the most gentlemanly person she had ever encountered. He was, like Douglas, fastidious, and perceived idleness to be a sin. He was the sort of person who doesn't have to *try* to sit up straight, who doesn't hesitate to open a door for a woman, who

doesn't think twice about pouring the milk into a glass rather than drinking it from the carton with the refrigerator door open. He was *bred* to do such things, and as a consequence it was natural for him, it required no effort.

Claudia and David felt like they were meant for each other. They were both fourth generation Argentines and spoke impeccable Victorian English, which their cousins in Britain always teased them about. Through some strange quirk of human language, they had continued to speak the way that their great-grandparents had spoken when they arrived to Argentina in the 1880s and 1890s. What was extraordinary was that nearly a century later, they continued to “keep up the side” through British schools, clubhouses, and customs.<sup>30</sup> They were, it turned out, the last generation to do so.

The summer they were eighteen, Claudia brought David to Coronel Vallejos and to Douglas' estancia, 400 kilometers west and a bit south of Buenos Aires. This was when the trains were still running, when you could take the train all the way from the city in a sleeper car, before the United States intervened and backed a military dictatorship that destroyed much of the country's intellectual community for decades, and ended up destroying the infrastructure of industrial colonization. David's family lived “just down the road” in local parlance, although he hadn't had much contact with them since he had grown up almost exclusively in Buenos Aires and La Cumbre. “Just down the road” was actually 130 kilometers a little more south and west. That summer

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<sup>30</sup> See Gallo, Ezequiel. 2004. *La Pampa Gringa*. Buenos Aires: Edhasa. See also Rock, David. 2018. *The British in Argentina: Commerce, Settlers and Power, 1800–2000*. 1st ed. 2019 edition. New York, NY: Palgrave Macmillan. And for the book that was on every good English-Argentine bookshelf: Graham-Yooll, Andrew. 2001. *The Forgotten Colony: A History Of The English-Speaking Communities In Argentina*. 2nd edition. Buenos Aires, República Argentina: L.O.L.A.

he planned to visit Douglas with Claudia and then continue west past Coronel Vallejos, where his uncle would pick him up and bring him to La Josefina.

“Douglas,” David told me, “made me fall in love with the pampas.” Douglas told him about how the pampas used to be covered in grass, he gave him an old gaucho knife and showed him antique ponchos. He took him riding. After a week of falling in love, David and Claudia tearfully parted and David went to work on La Josefina for the rest of the summer. Neither of them would know, then, that it would be the last summer they would spend together, and the first summer that David would decide that he wanted to spend the rest of his life in the pampas.

David was swept up in the pampas project partly because of Douglas, who showed him what was possible in the pampas, and because of the gauchos he spent that summer with. It was an extraordinary summer full of dust and light. The pampas, which have the singular characteristic of being flat, is a place that plays with light. The flatness permits the sky and the earth to sometimes blend together, as on dark nights when the fireflies gutter and the Milky Way is so bright as to be three-dimensional. The pampas is loved by lightning and rolling storms, by mirages that occlude the horizon, by dramatic purple sunsets and orange dawns. It is a place that lends itself to the sort of dense confusion that Manuel Puig evoked through the melding of fantasy and reality, an unsettled place, and, therefore, a place of possibility. David lived with the gauchos in the low brick rancho that had many single-person apartments and a shared bathroom and kitchen. They lent him seven horses – a tropilla necessary for riding across long distances – and taught him how to ride across hundreds of hectares in a day. At night

they taught him how to whittle and roll your own cigarettes, how to play guitar and sing *recitados*, the oral poetry of the pampas. They taught him how to drink mate, how to braid rawhide reins for the horses, how to skin a sheep and use the skin to soften the saddle for long rides across the plains, how to get hungry and cold, how to cook meat over the ground to give it the flavor of the earth. But the thing that David couldn't get enough of were those long rides and roundups. This was before the estancia had been broken up, when it was still almost 13,000 hectares. He cantered long distances and slept in tiny huts on the edge of the earth, making fires to ward off the dusk. He felt the dust in his hair and the sun on his cheeks. He felt the *purpose* of his horse when, hustling behind a thousand cattle hooves pounding against the sandy earth, it began to gallop and gather speed, to press its ears back and stampede across the grasslands. David was, like many men before him, swept up into the Pampean project through the relationship he established with the horses and the cattle.

But this project had somehow morphed, and this is what made the infatuation tragic. If David had begun because he loved cattle, by the time I met him this was not apparent. These stories described what he had loved and somehow lost. He had an uneasy relationship with these stories. He wanted to fulfill his ache, he longed for those evenings whittling with the gauchos. And yet, somehow everything had changed. Indeed, the estancia I occupied, although the same one David lived in, was far different from the lively estancia he experienced that summer. Where the gauchos had sat whittling their wooden figurines and playing guitar, where once the meat hooks had hung heavy with cow carcasses, the corrals had been filled with almost one hundred

horses, the chicken coops filled with fowl, the peach orchard heavy with sweet fruits, the gardens bursting with lettuces and the clay tennis court constantly occupied, now it was silent. The furniture was covered with white sheets, the shutters were drawn, the meat hooks rusting, the grasses overgrown, the brick chicken coops crumbling, the clay court grown with weeds, the home park grown feral and tangled, the peach trees gnarled ghosts of themselves surrounded by nettles and sheep that rested in their shade. The forest surrounding the manor and the corrals jutted up from the plains like a great evergreen island, a feral reprieve for species of all kinds with only two human occupants: me and the cowhand, Ceferino.

What was tragic was not the fact that everything had changed; this is something that we must all deal with. What was tragic was that even though he longed for that world, it was he himself that was responsible for having transformed the estancia into something else. He had a responsibility to his family to make sure that the estancia survived through the multiple financial crises, he had a responsibility to his family as the elder son to make sure that the farm wasn't gobbled up by multinational corporations or leased to a greedy soy baron. And so he had begun an intensive farming relationship with the land. He used his brilliant mind to extract the most possible value from the land – and that value was no longer in cattle. Ten years before, in 2005, shortly after soy fever began, he and his wife hired her brother to come down and take over the cattle. Marcos, a handsome square-jawed hazel-eyed thirty-something fresh from Buenos Aires with no cattle love or experience to speak of, moved four hundred kilometers west to Coronel Vallejos to begin working on the farm. Marcos learned to

love living in the country almost immediately. Compared to the exhaust and noise of Buenos Aires, which gave him massive migraines, the country was peaceful and fresh. He began managing the cattle for David, and eventually took over the entire operation. After several years of infatuation with the novelty of the project, Marcos very quickly began hating cattle. Marcos got caught up in cattle fever begrudgingly, it was a fever that made him sick with anxiety and worry, a fever that expressed no longing or love. Once when I was standing on top of the corrals with Marcos looking out at the steers grazing in the alfalfa, I asked him what he saw. I am not sure what I expected – perhaps he would describe the flatness, the rolling grey clouds in the distance, the verdant green of the forage, the ways that cattle traveled in groups together, the visually pleasing combination of brown Hereford and black Angus bowing their heads to graze from the earth. Marcos looked out and knit his eyebrows together. “Nine-hundred problems,” he said, and turned away to go back down to his truck.

Marcos had been working with cattle for over ten years, and although he was the grumpiest person I met in the pampas, he was still tragically infatuated. He *couldn't help himself*, and that is why he was so moody. He had been swept up in something before he even knew what he was part of. He was infatuated, he was *hooked*. Marcos was not just hooked on cattle, he had gotten soy fever too. With a loan from David and Juli, of money and machines, he had just leased his first 200-hectares on the other side of Coronel Vallejos. And he had planted it with soy.

Neither David nor Marcos were able to teach me the structure of feeling that sweeps you up in cattle fever, in part because they had already descended into the tragic part of the story.

It was Ceferino, the cowhand, my sweet companion and patient teacher, that taught me how to love cattle, and how to see the uneven effects of tragic infatuation, the way the project opens itself to some while denigrating others, the way it *depends* upon the denigration of workers in order to perpetuate itself.

Ceferino had a wide face with a strong jawline, yellow-green eyes, and a callused body thick from *trabajo*, from work. He was missing a front tooth from drinking the hard highly fluorinated pampas water. All his life he had been discriminated against because he was partly Indigenous, but he did not identify as such. He lived in a poor agricultural colony, Gonzalez Moreno, with a wife twenty years younger than him. He was young, in his mid-forties, but had already buried two children. One had died by drowning as a toddler. The other had been a teenager in a car accident. On his right bicep he had tattooed their initials in a Romanesque script with a record player needle and ink. On the other bicep was a heart surrounding the words “Tu y Yo,” You and Me. He had grown up poor, and he remained poor. “Life gives you opportunities,” he said to me once, “and you have to know how to take them. I have not known how.”

The sea-foam green walls of his room on the estancia crackled and split with dampness. Underneath the chinked floorboards a wild dog had puppies. Ladybugs multiplied and swelled in the windowsills. In the middle of the small room was a steel-



legged table covered with a linoleum flower-printed oilcloth. Armadillo carcasses nested on the table alongside a revolving set of objects: an ashtray, a spray-can of mosquito repellent, an empty Fanta bottle, a plastic bag of three rolls of white bread, an unsheathed gaucho knife glistening with sheep fat. He had fashioned curtains out of stained pale blue sheets that he draped over the front window. In the place where the window frame met the wall, he stuck a small photograph of a young man on a horse, wearing the traditional gaucho outfit. The young man's eyes had the look of human eyes in old photographs. They appeared like deep pools, hunted and unhidden.

He trimmed the horse hooves with his own knife, he killed the sheep and sliced them up for the weekly rations between workers, he made fires and cooked his meat on the ground because the earth gave the meat flavor, he listened to "El Malevo" at dusk and smoked cigarettes while staring at the clouds. He prognosticated rain, he spent much of his salary on expensive boots from the pilchero Carlos, he was stoic and prone to anger, he taught me how to drive a tractor, how to sit still, how to ride a horse, how to stick a needle in a flailing cow, how to fall into a state of prayer in order to be unbothered by mosquito hordes, he taught me how to pray in front of the altar of the folk saint of the pampas, Gauchito Gil.

The cattle project depended upon Ceferino continuing to be a worker with local knowledge taught to him by his father through a long and unstructured apprenticeship. It depended upon his simplicity, it depended precisely on the idea that he mattered less in the grand scheme of things. It depended upon the fact that he was Indigenous but did not identify as such. Everything Ceferino did mattered, and everything that he did

mattered for the cattle project. Many of the things he did felt like remnants. It wasn't that he was stuck in the past, it was that cattle fever continued to live on through cowhands. Without men like Ceferino, the cattle project would have collapsed. These men were both denigrated and revered, anonymous and immortalized through the very symbol of their production. The structure of feeling was both mundane and tantalizing.

To accompany Ceferino on morning rides, to learn how to slip the bridle over the velvety muzzle of the horse, to feel horse in my whole body during siesta when I lay splayed on the floor reeling with dust and light, was to fall in love with the Pampean project. There was no way to really know what David and Douglas had experienced, or even what their grandfathers, in the great rush west, had felt. But it was possible to imagine through those material effects what the project embodied. The first time I helped Ceferino round up the cattle I understood immediately the pleasure involved. It was a blustery spring morning. Ceferino had given me the stallion, Facundo, and he was riding the mare, Margarita. It took almost an hour for us to cross the wintry barren fields, through the tallgrass rye that grazed the bellies of our horses, and down across the salt flats to arrive to the pasture.

When we arrived Ceferino whipped a quick wide circle around the back of the field and as he began to loop closer to the cattle hollered, "Uppppppp! Uppppppp!" Where there had been only stillness, suddenly there was movement. I watched near the open gate as the cattle sought each other out and began to herd and then stampede. As he drove them through the gate he motioned me to close the latch and follow behind. Facundo moved beneath me before I even knew what he was doing. His hooves

thundered against the ground behind the charging cattle. We galloped across the plains. My hair flew back behind me, I lost my hat, dust covered my face and the wind whipped up sand into my eyes. I felt, for the first time, the exhilaration of a stampede. I forgot in those moments every violence the cattle project had ever wrought. For the entire year that I lived in the pampas, I longed for the mornings when I could help Ceferino round up the cattle. There was nothing more exhilarating or satisfying.

The rush of *Go West!* Captured the blind love. Douglas, it turned out, was precisely correct. *This* was a feeling that I recognized from all of the historical novels I had been reading. I had not recognized this feeling in Douglas's Dairy, which had felt cold and mechanical, and I had not recognized this feeling in Diego's feedlot, which had reeked of war and death. *This* exhilaration after morning rides with Ceferino was the feeling that Ernest Hemingway described when he wrote that to read W.H. Hudson's *The Purple Land* too late in life was sinister because it recounted the "splendid imaginary amorous adventures of a perfect English gentleman in an intensely romantic land,"<sup>31</sup> making the reader long for a place and the possibility of life that never existed, but that *could have been mine*.

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<sup>31</sup> Hemingway, Ernest. 2016. *The Sun Also Rises*. New York: Scribner.



Figure 9. Lunch.

### Chapter 3: Insatiable Appetite

[referring to a cow]

*“Lo que miras es una mujer...buena culata, bien femenina...”*

“What you see is a woman...good butt, very feminine...”

– from Argentine film *Todo Sobre El Asado* (*All About the Barbeque*)

Perhaps you remember that the first time I met Diego and Carolina, I had to drive over backroads because the main route had been flooded and then sliced through

so that the water could pass by. Their town, Coronel Vallejos, was located within the Quinto watershed, a normally dry basin that had turned into a vast shallow lake. By 2017, both scientists and farmers were coming to grips with the fact that the land management of the previous two decades had made all the difference.

“We have done this to ourselves,” said Gregorio to me, as he read aloud what the Director of the Institute of Soils in INTA, Miguel Angel Taboada, had summarized to a local newspaper:

“There were years when it rained the same or more, as in 2001, and the province wasn’t flooded. Essentially, what happened in the last 25 years was that 8 million hectares of pastures and 5 million hectares of forest disappeared, both of which had consumed a lot of water per year....Those 13 million hectares were mainly destined to soy monoculture – which has nothing bad in itself as a crop – but it consumes half or less of the water and makes the soil have less absorption.”<sup>32</sup>

If herbicide resistant weeds had coaxed the men into thinking about themselves in relation to a feral nature, the flooding made them think about themselves in relation to whole landscapes – to drainage basins and also to global rainfall patterns. The men began to question the world they were bringing into being at the same time that they hung on to those fantasies which had made the cattle-soy complex.

Nowhere were these fantasies more apparent than in the daily consumption of meat and the concomitant weekend rituals that accompanied the insatiable appetite for beef that had flooded the Pampas hinterland. The night after I met Diego and Carolina,

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<sup>32</sup> <https://www.pagina12.com.ar/62254-no-es-problema-de-lluvias-sino-de-suelos>

after I looked into the muddy panicked blaze of the steer and saw for the first time cattle hysteria, we ate beef at an asado hosted by one of Diego's friends. Smoke wafted out from the mesquite-wood fire. Above us the stars glowed and I could see the thick Milky Way. I sat at the table being served on a wooden plate by the asador, tasting the way that the insatiable appetite for fire-cooked beef was cultivated.

In Argentina, no meal is really a meal without meat. Argentina has one of the highest consumptions of beef in the world, vying with Uruguay for first place, at 120 pounds per capita. The asado, around which this appetite is born, is an elaborate ritual. It is not just a barbeque. The asado is an homage to the pampean deity, the cow, it is an extravagant hours-long custom often occurring with friends on Saturdays or family on Sundays. There is always a figurehead, the *asador*, the person who is responsible for starting the fire, getting the coals hot enough, cooking the meat, and bringing it to the table. The asador is always male. There is a recognized pattern to what is served first: a sausage in the middle of a baguette, followed by perhaps entrails, offal, or other fatty cuts that cook more quickly, followed by the choicer cuts that are tender and pure muscle. The ritual of the *asado* was time-honored and it incorporated into everyday life the appetite for a meal, beef, that was both revered and commonplace.

This appetite, which I am calling insatiable, was justified to me multiple times throughout fieldwork with one line: "We are feeding a hungry world." In the first riveting book David gave me to read, *Saving the World with Pesticides and Plastics*, the author Avery claims that high-yielding agricultural technology can save biodiverse places *and* feed the world's booming population by increasing the efficiency of land

already in use. This is why genetically modified soybeans were so important: the increased yields meant that other land didn't have to be deforested. When David and I visited a newly built soybean processing plant with his farmer group, this thesis was reinforced to me. Renova was a massive, shiny new facility built on the banks of the Río Paraná. It was in the very north part of the river, in the place where the cliffs had begun to fall off and erode, thus widening part of the river that was once quite narrow, at the same time that it filled the bottom and required more dredging.

The entire zone was known as “Up River,” a shortened version of the English “Up River Parana Ports.” Up River Paraná Ports depended upon massive dredging begun in 1995 – the beginning of the soy boom – by Hidrovía SA along with Belgian company Juan De Nul N.V. Because Renova was the plant furthest upriver in a long line of ports belonging to other corporations including Bunge, Nidera, and Dreyfus, it was technically the most disadvantaged location-wise. To make up for this, to entice farmers to send soybeans to them, they had bet on the capacity to scale through sheer volume. The Renova stats were impressive: it received 1,000 tons of soybeans per hour, crushed 20,000 tons per day, made 1,400 tons of biodiesel per day, and pressed 270 tons of glycerin per day. At the time it was the largest soy crushing facility in the world.<sup>33</sup>

We were given white hard-hats to walk through Renova. The plant was a material instantiation of the techno-scientific sublime. It was all glass and shiny metal, computer readouts and long, snaking tubes. It was premised on exact coordination, on

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<sup>33</sup> Since my visit in 2016 it expanded operations and now claims to have a larger crushing capacity. See the Renova website, <https://renova.com.ar/planta-timbues>, for constantly updated output statistics.

a sort of glowing glass and steel aura of efficiency. It felt like a spaceship. This kind of design, I had come to learn, was par for the course in agro-industrial complexes. It was the sort of human-design interface that imagined the farm as “una fábrica sin techo,” a factory without a roof, as one farmer told me. There were no nostalgic references to some imagined pastoral past. This was future-looking, this was stunning technological prowess that shuttled millions of tons of soybeans through crushing machines down into grain elevators and into awaiting boats floating on the gentle Río Paraná.

We walked down to the river with our tour guide and watched the soy meal loading onto massive bulk carriers with names like Ionic Huntress.<sup>34</sup> Unlike the more photogenic container ships, bulkers are merchant ships designed to transport unpackaged bulk cargo in cargo holds. The soy meal drifted on the wind, smelling vaguely of the farm and settling in a fine dust on our clothes and hair. Like the delicate moment of the routes, when the soybeans were in a liminal space between farm and processing plant, the moment the soy meal was loading was delicate, dangerous, and time-consuming, taking several days depending on the load. In order to maintain stability, it was crucial to keep the cargo level. One of the managing operators expressed that many of the captains were gruff sea-faring men who had a totally different idea about what to do and how to load, and that many cultural differences had to be worked out every time a bulker was being loaded. Indeed, the sailors knew they were working in a dangerous occupation, in part because of the shifting nature of the

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<sup>34</sup> Ionic Huntress: <https://www.vesselfinder.com/vessels/IONIC-HUNTRESS-IMO-9595371-MMSI-538004541>



cargo in the hold, which had led to numerous deaths and sinkings in the 90s, when bulk carriers were becoming more common.

After touring the plant we went to lunch in an abandoned silo repurposed as a swanky restaurant. A man wearing a pressed white shirt that was slightly unbuttoned to expose the large gold chain and cross against his hairy chest pointed his fork at me.

“And what’s your opinion about soy?”

I paused in the middle of cutting the steak I had ordered. The Argentines have impeccable table manners that I had learned to be wary of. The whole table had gone quiet and was looking at me.

“I don’t have an opinion,” I said, and was about to say that soybeans themselves had nothing inherently bad about them when he spoke.

“Tiene mala fama, ese porote,” soybeans have a bad reputation, but Monsanto was doing good things. He said emphatically, looking me in the eyes, “We’re feeding a hungry world.”

I looked at the man. He was powerful, rich, and appeared to be Catholic. He waved around his masculinity the way he waved his fork at me. He was intimately bound up in the Renova complex. His masculinity and the techno-scientific sublime combined to create a *project* that had at its center this idea that the entire world was hungry, a project that created an insatiable appetite. And he was not the only one. The line was repeated to me multiple times, but as he waved his fork at me I remembered especially the estanciero of the “Cuatro Caranchos” estancia. He had also said to me this line. I had arrived to his estancia a bit breathless from the exhilaration of speeding

for hours through clouds of dust on back roads. He welcomed me to sit in the shaded porch of his decaying estancia. It had once been glorious but was now overtaken by great flocks of squawking parrots, by a restless and insistent crumbling. He sat in front of me. He was rotund and wearing gold pinky rings. On either side of him sat dogs as big as small ponies. He petted their big heads with his ringed fingers and invited me to ask him questions, which very quickly turned into him giving me a sermon.

“We’re feeding a hungry world,” he said.

The masculinity of these men – their forks, open shirts, gold pinky fingers, chest hair, rotund bearings, massive dogs – and the project of insatiability were bound up together.

When I protested to men that said “We’re feeding a hungry world” that in fact most of the soy processed by places such as Renova was going to animal feed, they seemed nonplussed. Meat was food, wasn’t it? When I agreed but described the way in which the people who were buying meat weren’t the hungry ones, they looked at me quizzically.<sup>35</sup> They could parrot this hunger line as much as they wanted, but between themselves, as businessmen, they could acknowledge openly that “feeding a hungry world” was merely a moral justification with no real foothold. But it was this discursive production of scarcity which made possible insatiability. If there is always scarcity,

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<sup>35</sup> Hungry the world is, but corn and soy are not feeding the reported 815 million people that are hungry. Domesticated animals – not humans – are eating the GM corn and soybeans that now occupy an estimated 75% of the world’s temperate grasslands. Consider soybeans. Close to 85% of the global soybean crop is crushed for oil and meal. Soybean meal is used to feed farm animals, and in FY 2014 soybean meal production reached 190 million tons and accounted for 62.5% of oil meals. The average grams of soy used per kilo of product bought by consumers are: 575 grams for chicken; 263 grams for pork; 173 grams for beef; and 307 grams for eggs. The people who are buying the kilos of meat from these products are not the hungry ones – they are the ones who can afford to buy meat and eggs.

then there is never enough. One loses the ability to tell whether one is “full” when what is eaten or consumed is empty. Empty both of nutrients and also of meaning.

Sitting there at the asado with Ricardo Ruben and the other men who loved cattle, with men whose great-grandfathers had been told to *go west*, I ate the meat to which they had dedicated their lives. My teeth tore into the marbled flesh of the steak. The taste exploded in my mouth, charred and fatty, tender and juicy, hot and fleshy. I had never tasted anything more delicious. This meat had probably been fed on forage for the first six months of its life, and then transferred over to a diet of soy pellets and corn to fatten it up for the last few months. I was eating soybeans and corn, hexane and petroleum, male desire and musk. This taste, of charred meat and musk, contrasted distinctly with the blandness of soybeans. I had eaten a dried soybean once and immediately spit it out; it was bitter and cardboard-like and made my lower jaw shudder. Soybeans, unless harvested fresh and eaten raw as *edamame*, must be processed through heat or fermentation to destroy trypsin inhibitors, which are toxic to humans. Later, at an old processing plant that crushed soybeans with heat, I tasted the thick buttery slab that came out of the pressing machine. It was bland. What better metaphor for the inability to feel full, to feel sated? Products such as “Soylent” emerged onto the market during my fieldwork, gobbled up by Silicon Valley engineers who didn’t have “enough time to eat.” It was as if insatiability depended both upon the inability to have enough meat and the inability to taste.

But it was not just taste that was collapsing, making satiety impossible. The men felt scarcity and emptiness also because they were alienated from their own

production. Landowners and men who hosted asados very rarely killed their own animals, and they almost never ate their own production. To consume the meat closed a loop of desire but opened up another one that stretched on in perpetuity, for it is known that once such meat is tasted, it is forever after craved.

“The thing is,” one of the men at the asado was saying, “is that when I have a meal, I don’t feel like I’ve eaten if I haven’t had meat.”

The men nodded, agreeing. One said that he felt strong after eating meat, that once he hadn’t eaten meat for a while and he had felt weak. Beef is part of Argentine foodways in a way that it is not in, say, Botswana.<sup>36</sup> It has shaped the inhabitants and the landscapes. The appetite that desired meat – that needed meat to be part of every meal in order for it to be a “meal” – was part of what constituted cattle hysteria. Cattle hysteria depended not just upon the production of cattle, and the use of cattle as a prestige symbol, but also upon the preparation and consumption of what cattle became after they were slaughtered – beef. What does an infinite desire for meat express? More than anything, the desire for meat in the pampas expresses a desire to be within the social system that, still, sees cattle as the pinnacle of a prestige system. To eat meat together is to validate this system, to foment the social worth of unspoken bonds that knit society together. This is why repudiating meat, such as through veganism, makes the meat eaters suspicious. To not eat meat is not just to propose a shift in diet or even moral code but is potentially a threat to the very social links that meat itself foments.

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<sup>36</sup> See Julie Livingston’s magisterial *Self-Devouring Growth* (2019), which details the extent of “insatiable appetite.”

And in the pampas meat – *carne* (root of carnivorous and carnival) – is beef. But there was a missing climax.

The slaughter of cattle was the symbolic foundation upon which Argentina was built. The founding work of Argentine literature, Esteban Echevarría's *El Matadero* (*The Slaughter Yard*), illustrates the centrality of slaughter in Argentina. Written sometime in the 1830s, the text is usually interpreted to be an attack on the Federalist regime ruled by Juan Manuel Rosas and his thugs. And it is that, but it is also a feat of fictional prose that elevates the symbol of cattle to describe this tension between meat and sex, appetite and desire, eating and death. Borges calls the 6,000 line story a "hallucinatory realism." Set in the abattoirs of old Buenos Aires, where a primal scene is played out between the barbaric Rosista thugs and the civilized self-contained protagonist, Echevarría describes the cattle fever: the cattle stuck in thick mud, the "blood-smearred half-naked butchers," the "hideous black female offal-scavengers, the growling mastiffs, the screaming carrion birds," the frothing and flayed bullocks, an accidentally decapitated young boy, the ways in which the crowd calls for the death of the young protagonist, the ways in which the Judge, mad with the barbarism emerging from the gory scene, declares, "Drop this city slicker's pants and give him the verge [cornucob] to his bald buttocks," the way in which the protagonist, rather than submitting to this indignity, dies on the spot.

Death comes quick in the pampas. This was a different kind of death than Diego's, though. This was not an agnostic death. This was a confrontation, this was non-alienated death, this was cognition and recognition, a way of killing passed down

through thousands of generations. But this form of death was denigrated by the upper classes. Ricardo Ruben would never deign to kill his own meat. Eating was classed, but the way to distinguish yourself as upper class was not necessarily to eat beef, since beef was eaten by everyone. This is different from many other places in the world where meat on the tables still signifies class. To *not have to kill your own meat* was the signifier of class. These men who owned thousands of cattle would go to the supermarkets to buy meat. Thus what distinguished them was both the *way* that they consumed beef as well as the way in which they did not have to get their hands dirty with the act of killing.

I became accustomed to eating with Ceferino, Pedro, and Sylvia because that is who I passed nights with on the estancia. I watched Ceferino kill the sheep and hours later we would spear the meat right off the barbecue and eat with our hands.

*Ceferino grabbed the rump of the unshorn sheep. His fingers dug into the thick fleece and he motioned for me to hold it down. The fur was oily around my fingers. A pungent odor of lanolin filled my nostrils. It was the smell of animal, of the countryside, a residue that enveloped me. The sheep struggled, kicking up against my body and bleating. Ceferino sandwiched the sheep between his legs, pressing hard into the ribs of the sheep with his calves. He asked Hugo to hold the back legs. With his left hand he held the snout shut. With his right hand from his waistband he pulled out his gaucho knife and slit the throat. Blood gurgled out. Quickly Ceferino kneeled onto the grass and pressed his right knee against the convulsing body. He pulled back the head so that it folded over unnaturally onto the sheep's back. Dark blood soaked into the grass.*

*In this moment both he and Hugo looked toward the horizon. I followed their gazes, but saw nothing. The blood's seeping subsided. Ceferino tipped the sheep onto the spine and Hugo continued to hold the back legs spread open.*

*The first thing he did was to slice a seam from the red stained neck all the way down to the anus. He then ran the knife up the inside of each leg, from the middle seam to the hooves. With the corner of his knife he edged just beneath the lip of the skin and pulled it away from the body. With his left hand he kept the fleecy skin away from the muscles and with his right hand he made a fist and kneaded the two away from each other. It made a tearing sound, and came away like a layer of white crepe paper. He kept it whole by pulling with one hand and padding the body with the other.*

*He then cut off the hooves and sliced between the ankle tendon of the hind legs. He threaded a rope through the tendons, and then, with effort, he and Hugo lifted the heavy body up with a rope that they had tied to a tree in the corner of the corral. Ceferino finished the skinning job with the sheep hanging upside down from the tree. He sliced off the head, then pulled the skin down away from the spine. The whole thing slipped off like a mantle. He put it aside to clean it and keep the hide for his saddle. No words were spoken, and I was discouraged from speaking because when I asked questions I received only noncommittal shrugs and nods.*

*With the sheep belly facing him, he cut down the middle, from the anus to the neck. Coils of hot intestines heavy with digesting grass slicked down as Ceferino carefully cut them away from the spine. They dropped steaming on to the grass. He saved everything else to eat: the heart, the kidneys, the liver, tripe, and especially the*

*caul fat. He put each organ to the side, then sliced the sheep up for both him, Hugo, and Godoy. This was not the work of a butcher who will sell cuts, but of a man who will eat the meat of the animal he has watched over for months and just killed. One slices the meat with an eye for accuracy and for the customer. The other, with an eye for his own stomach. Peeling the caul fat away from the internal organs, he gently waved it out to get rid of the crinkles. It looked like a curtain of white lace. He then took the liver and impaled it through the center with a stick from the tree. Gingerly, he wrapped the fat netting around the liver. Then, he cleaned the anus. He turned it inside out several times and washed it beneath the spout in the side of the corral. He rinsed off his hands in this water and dried them on his pant legs. Finally he looked at Hugo and they exchanged murmurs about how delicious this precious fatty offal would be at the Sunday asado tomorrow.*

For days after eating these asados my hands had the lingering smell of sheep fat, a gamey fat thick with yellow greasy euphoria. Once an upper-class sister was visiting and staying in the manor, and I invited her to the asado that Pedro was having. We walked over together. She was polite in every way, but later I heard her describing to her mother, “But Mummy, they eat *with their hands!*” She was shocked by the lack of utensils, but in registering her shock sought to normalize her own decorum. To kill one’s own meat with your knife and eat one’s own meat with your hands is to acknowledge and be a part of the ongoing struggle of the world, and for that precise reason it was considered lower class. Diego’s way of killing, by comparison, rejected this act of killing and eating. This allowed the project to map onto and reinforce pre-



existing appetites for prestige. Sending cattle to the slaughterhouse re-enacted founding narratives but was then classed.

Indeed, it wasn't as if Diego and other managers like Ricardo Ruben weren't getting their hands *dirty*. The men that I worked with performed a particular kind of self-work that read as filial devotion. This included getting muddy, applying foot and mouth disease vaccines, getting their hands dirty with fiber and other things, often having to do jobs that were quite menial, but that they enjoyed because it was a job done with cattle. Gregorio loved cattle so much that he had spent years saving up for and researching the cattle hugs created by Temple Grandin. At great cost he built a new cattle hug that curved and soothed the cattle rather than rattling them and stressing them out. The men also made sure cattle were pregnant by sticking their arms into the cow's anus, a messy process that, unless they were comfortable, they usually hired veterinarians to do. Others have written about the sort of heightened sexual tension emerging from these moments when a bunch of men stand around watching another man stick his whole arm into a cow's anus. Once, I went with David to buy 50 pregnant heifers from a farm quite far to the south. We drove for many hours with the veterinarian, and when we got there he put on his overalls, donned his rubber glove, and we stood there in the sun with the gauchos, who were coaxing the cattle into the hug, and the manager, who was overseeing everything, while the veterinarian thrust his arm into 50 cow anus' to feel for their swollen wombs. The manager and David made small talk about if the water was salty in this region and how they had trouble finding loyal workers. After, it took us hours to get to the monte, and even longer to wait for

the cows. In other words, he spent a lot of time taking care of cattle. They took care of their cattle, but only up to a point.

And that was when the traders came in. The traders, like the men at the auction, had a brotherhood. Once I was having lunch with a meat trader who was fluent in several languages. One of his main European buyers was in Paris, and that night this buyer wanted weed and women. The meat trader I was having lunch with asked if he could make a call. I nodded. He called a friend in Paris, and that friend found a weed dealer and put him in touch with a beautiful woman he knew who had no plans for the evening, and then he called the buyer back. “Done,” he said. The buyer was so pleased. They exchanged no meat in this moment, but they cemented their enduring bond, they reaffirmed their commitment to one another for future transactions. “That’s what it is about,” he said to me, satisfied with his ability to connect people and to seal a future deal, “relationships.”

The traders on the auction floor in Rosario enacted the same kind of “relationships.” When I visited the trading floor I chatted with the floor manager, who admitted to me that much of the trading was “psychological.” We watched the men grab each other’s shoulders and butts in familiar ways. One pretended to hump another one. When they received a call from their clients they walked away importantly. In their dealings, the floor manager told me, they built upon one another’s enthusiasm. If something started trading, it became hot, more people started making phone calls, they fed off one another’s excitement. Even though the friend I had been having lunch with

did not work on the trading floor, he was part of this same brotherhood that generated “demand” in the market, pushing up or lowering prices.

The brotherhood of the traders generated part of the hysteria that formed insatiable appetite. The kind of incandescent energy which writes new formulas for financial instruments that involve the collateralization of futures contracts to engineer even higher orders of financial instruments in order to bet on price changes in contracts of physical commodities (vs. physical commodities themselves) creates volatility and liquidity. This kind of liquidity, as Karen Ho has shown in her eponymous ethnography *Liquidated*, makes anyone expendable, a value that trickles into all parts of society. But it is the kind of subsequent hysterical emptiness that creates appetite. This was an appetite based on status. And the appetite for women and beef went hand in hand.

Ricardo Ruben once bragged to me about how many women he had slept with. Another one of his friends boasted that he was averaging about 11 women a month and so I asked how many women he had slept with in his life, curious about what might be an astronomical number. He admitted that he had a bad memory and so he kept an Excel Spreadsheet he constantly updated – an idea he had taken from the movie *Cruel Intentions*. He was 35 years old and currently at 479. Like the numbers Alfred Crosby estimates for cattle in the pampas based on Felix Azara’s best guess – 40 million? – such “multitudes inspired awe, not statistics” (Crosby 1986:178). The status that men received from having slept with hundreds of women, or owning and hustling thousands of cattle, was a very real prestige. There were other opportunities to demonstrate this prestige, such as at La Rural, where men showed off their gorgeous cattle – the first-

place winner in 2015 came in at 920 kilos! No cow can gain that much weight just eating grass and walking around.

As I sat there at the table eating the marbled meat, eating the soybeans and hexane, eating confinement and force-feeding, I was also bowing to the soy queen. She had brought heavy cattle into the world: along with corn she produced more beef than the global market had ever seen. I was participating in the world she had made, in the world that the men had made with her, and nowhere was that more apparent than in the flooded landscape all around us.

What does it mean to have an appetite that is never satisfied? Why is enough never enough? Dreams depend upon being frustrated. Indeed, once a dream becomes “reality” it is no longer a dream. The system of the feedlot mapped onto and created insatiable desire lines that still clung to traditional techniques even as it fed into a feverish and muck-filled dream of cattle by the thousands. It was an unending nightmare, one from which it felt impossible to awake.



Figure 10. Puma in Natural History Museum of La Pampa.

## **Metamorphosis 1: Cattle**

The high that came from the raid and the herd had been building for three centuries by the time it reached peak fever. In these grasslands the moving spirit of modernity, long before the railroad, was *the herd*. The cattle achieved what no settler family could achieve on millions of hectares of land: they trampled the Indigenous bunched grasses, destroyed the natural resource base, and acted as a world-historical force far more destructive than any bulldozer. To oppose their movement, which brought along estancias, the railroad, train stations, hamlets, and eventually towns, was

to oppose progress and modernity in the hinterland. Cattle moved, and with them men's spirits were moved too.

The ecological convulsions wrought by cattle can be traced into five main periods: 1536-1580 when cattle experienced an ungulate explosion; 1580-1770 when cattle were ranched by Indigenous groups and also hunted in the grasslands; 1770-1840 during which estancias were formalized around Buenos Aires; 1840-1870 when sheep and wool dominated; and 1880-1930 when the rush of modernization destroyed the remaining edges of the Pampas. I will treat each one in what follows, detailing the final phase most extensively.

### *1536-1580 Ungulate explosion*

Before the 16<sup>th</sup> century the Pampas grasslands knew no large ungulates,<sup>37</sup> being grazed only by small deer known as venado, as well as guanaco – a camelid closely related to the llama – and a large flightless bird like the ostrich known as nandu.<sup>38</sup> The grasslands were managed skillfully by Pampas Indians with fire regimes (Bucher 1982). With the introduction of hardy hooved ruminants everything changed. Between

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<sup>37</sup> This must be met with a caveat – in fact, the Pampas had been occupied by numerous species of megafauna including sabretooth cats, large capybaras, massive terrestrial sloths, armored glyptodonts, as well as oversized animals similar to camels and rhinoceros – all of which experienced a massive extinction event about 10,000 years ago. The explanation for extinction is hotly debated, but some theorists suggest that the Pampas grasslands had developed in concert with these large megafauna, and that there was an effectual absence later filled by European ungulates. Did Indigenous fire management fill the ecological niche during this time? More research is needed.

<sup>38</sup> “Venado” is really just a generic term for deer – in English it is known more specifically as Pampas deer (*Ozotoceros bezoarticus*). Guanaco (*Lama guanicoe*) is supposedly the “wild” form of the domesticated llama, while the closely related vicuña is the wild form of the domesticated alpaca, but numerous historical travelers refer to “tame guanaco” and this differentiation needs more research. Nandu is the name recognized in European languages, taken from the Guarani/Spanish *ñandu*, while in Mapudungun it is *choique* – two extant species are recognized by the Latin names *Rhea americana* and *Rhea pennata*.

1536, when Pedro de Mendoza's miserable expedition left cattle and horses on the banks of the Río de la Plata with Pampas Indians, and 1580, when settlers from Asunción decided to sail south back to the fort of Buenos Aires, cattle and horses experienced an ungulate explosion. These were years of extraordinary and almost unbelievable reproduction and adaptation. The breeds of Spanish Andalusian cattle adapted to the environment through a process of natural selection that led to the ancestors of the breed currently known as Argentina criollo, a hardy breed of cattle uniquely adapted to the grasslands. Environmental historian Alfred Crosby reports that by 1580 feral herds were present in large numbers, and that by 1619 the governor of Buenos Aires estimated that, "80,000 cattle per year could be harvested for their hides without decreasing the wild herds" (Crosby 1986:178). By 1700, Félix de Azara estimates "the number of cattle in that grassland between 26 degrees South and 41 degrees South at 48 million, feral cattle in numbers comparable to those of buffalo on the Great Plains in their heyday."<sup>39</sup> Crosby sums it up: "Horses [and cattle] in such profusion, tame or feral, existed nowhere else on earth" (1986:185).

### *1580-1770 Cattle hunted and ranched*

Between 1580 and 1770 cattle held the land, and they were so abundant that very few settlements practiced any continual mode of pastoralism, preferring instead

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<sup>39</sup> Crosby makes sure to point out that "a caveat should accompany Azara's estimate: 48 million, plus or minus how many? A quarter, even half? The bovine multitudes inspired not statistics, but awe" (1986:178). Also it is important to note that estimates of the guanaco population before the 16<sup>th</sup> century also hover around this amount, and although they are of course of smaller stature than bison they must also be considered in relation to the grasslands.

to simply hunt. Pampas Indians exploited herd mobility for trade on the border with Chile, establishing massive trade routes through a region of refuge beyond settler control. The few settlers around the fort of Buenos Aires practiced an informal pastoralism, but it was not until 1770 that they began to more formally exploit the land for pasturage and to control reproduction of herds. This is because the hordes of so-called “cimarron” cattle and horses began to be overhunted, due largely to increasing foreign demand for hides.<sup>40</sup>

#### *1770-1840 Estancias formalized*

The shift from hunting and raiding to actual cattle raising changed the organization of land occupation, as historian Tulio Halperín Donghi has shown (1963), but it also began to dramatically change the landscape itself. When the rhythm and drama of human-guided cattle reproduction began in earnest in 1770 around Buenos Aires, this was the moment when the grasslands north of the Río Salado began to be irreversibly changed. Between 1770 and 1880 estancias and estancieros dedicated to raising livestock spread over the region, erecting fences, establishing water holes, and stocking cattle. Wire fencing was not introduced until the 1840s, and not used extensively until the end of the 19<sup>th</sup> century, and so *aquerenciamiento* – the method of getting livestock accustomed to a place – was the only way to retain cattle within the

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<sup>40</sup> Note that vaquerías began first in Entre Ríos and the Banda Oriental, and then spread to Buenos Aires. Samuel Amaral cites Cosme Bueno who, writing in 1770, describes estancias around Buenos Aires due to the decline in cattle head: “That shift from simple hunting to cattle raising was a modest but nonetheless remarkable departure for a place that had provided Adam Smith with the example of a primitive economy” (Amaral 1998:10). Amaral is a Marxist historian so it is understandable that he reads it through this lens. The shift *is* remarkable, but not just because of Adam Smith. See also Tapson 1962.



open fields and was one of the main tasks on a new estancia.<sup>41</sup> At first, they depended upon the natural resource base of pampean grasses, all of which were tussock, or caespitose, grasses.<sup>42</sup> The tallest layer in a multi-layered community around Buenos Aires included xeric grasses and herbs palatable to cattle, and within just fifty years the cattle chewed the grasses down to the roots and trampled the spaces between the bunched grasses, creating a bed of continual disturbance. European weed seeds, hiding in hides and hooves and pockets and seed bags, took root in the soils.<sup>43</sup>

Within just fifty years, the grasslands were denuded to a 50-mile forest of thistles ringing the fort of Buenos Aires. The culturally defined system of animal and range management had roots in Spanish pastoralism, but it also was shaped by the fragile grassland environment, and by the way settlers established ecologies of belonging through attachment to cattle, species that provided excuses for expansion through degradation.<sup>44</sup> When Charles Darwin traveled through the region in 1833, he

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<sup>41</sup> Samuel Amaral's careful examination of estancias from the 1820s gives us a sense of this transition from raiding to raising. For example, in 1820: Felipe Santiago Burgos's estancia is 337.5 hectares. There are three ranchos with adobe walls and a paja roof, as well as five fig trees, seven poplars, and one ombú. Amaral mentions that there were only seven ñandubay poles – attesting to the scarcity of this resource – and the rest of the poles were patched together as woodsticks. The estancia has two sickles, two plows, 13 oxen, 157 head of cattle, 39 heifers, 20 calves, 10 horses, 1 redomón (colt in process of being broken), 8 colts, 72 mares, 25 foals, 94 sheep, and 18 lambs. From these early estancias Amaral writes that fences are mentioned in twelve cases, with poles made from ñandubay. European trees are one of the first things planted. Amaral describes groves of over 1,000 peach trees as well as fig, quince, apple, orange, and vines. Talas, espinillos, algarrobos, willows, and poplars. Interestingly, it is the peach tree that thrives in the plains and that we see so much of in traveler's accounts. "No other type of tree was in greater number than peach trees, which were the main supply of firewood as Paucke found in the 1770s, Darwin in the 1830s, and Bishop in the 1850s" (Amaral 1998:89). On more established estancias, the main tasks were roundups, branding, and gelding, carried out in March and April, in order to avoid infections more likely to fester in hotter months. The added technical innovation during this time was the bottomless stock tank, which greatly improved access to fresh water for cattle, and allowed rotation further afield from freshwater streams. See Samuel Amaral 1998:136-8.

<sup>42</sup> Parodi 1930; Cabrera 1971; Soriano 1979; Mack 1989. Mack compiles from those sources the following dominants: "Prominent xeric grasses in the pampas south of Buenos Aires form[ed] the tallest layer in a multi-layered community and included *agropyron laguroides*, *Aristida murina*, *Briza subaristata*, *Panicum bergii*, *Piptochaetium bicolor*, *Stipa hyalina*, and *Stipa papposa* (Parodi 1930). Herbs, such as *Asclepias mellodora*, *Baccharis cordifolia*, *Heimia salicifolia*, *Melica macra*, *Sphaeralcea miniata*, and *Verbena chamaedryfolia*, occupy the shorter layers (Parodi 1930; Soriano 1979). With increasing aridity to the west, *Poa ligularis*, *Stipa ichu*, *Stipa tenuissima*, and *Stipa trichotoma* persist (Soriano 1979)" (Mack 1989:160).

<sup>43</sup> von Tschudi claims that the cardoon arrived in the hide of a donkey. "Even if apocryphal," writes Mack, "this example illustrates that many early plant immigrants probably arrived with livestock, and for 250 years these flat plains were grazed but not extensively plowed" (Mack 1989:161).

<sup>44</sup> Elinor Melville argues that "environmental degradation is not a necessary consequence of ungulate irruptions," and that it is pastoralism and the environmental modifications for domestic stock – e.g. deforestation, burning, plowing, road building – that leads to loss of plant species, erosion, and extinction (1997:6-9).

observed the total transformation of a landscape by European animals and plants (Mack 1989:160). Massive forests of thistles (*Silybum marianum*) and wild artichoke cardoons (*Cynara cardunculus*) had colonized the lands north of the Río Salado where all the estancias clustered.<sup>45</sup> W.H. Hudson described the “thistle years” when the thistles were so dense they were like forests, and how the European in the pampas was surrounded by weeds “that spring up in his fields under all skies, ringing him round with old-world monotonous forms, as tenacious of their undesired union with him as the rats and cockroaches that inhabit his house” (2016 [1922]). Thistles competed with more nourishing forage, caused cattle to have diarrhea, and made cattle drives impossible except for a few months out of the year when the thistles were not high.<sup>46</sup> By 1877, Carlos Berg recorded 153 European plants in the province of Buenos Aires, including white clover, shepherd’s purse, chickweed, goosefoot, red-stemmed filaree, curly dock, and Englishman’s foot (Crosby 1986:161). It was this barrenness that justified an expansionist and extractive capitalist paradigm, as Pratt and other authors have shown (Gordillo and Hirsch 2008). As the capitalist vanguard began to travel through the pampas they described over and over a “modernizing extractive vision” that Mary Louise Pratt calls “industrial revery” based on the poverty of the hinterland (Pratt

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<sup>45</sup> “From a coarse herbage we passed on to a carpet of fine green verdure. I at first attributed this to some change in the nature of the soil, but the inhabitants assured me that here, as well as in Banda Oriental, where there is as great a difference between the country round Montevideo and the thinly-inhabited savannahs of Colonia, the whole was to be attributed to the manuring and grazing of cattle” (1997:106).

<sup>46</sup> “In its first stage,” writes Amaral, “thistles were not adequately nourishing and caused diarrhea. Even when seeds fell down, cattle could feed better on other grasses, but thistles hindered their growth. Extirpation was only possible in small stretches of land. This task was done in two steps: in the early spring and at blossoming time. If grasses could be helped in such a way, Wilfrid Latham optimistically remarked, gradually they would spread because their pressure over the thistle’s roots would restrict its exuberant growth and density to deprive it finally of favorable reproductive conditions” (Amaral 1998:134). In addition, the pressure to gather and herd cattle was limited to February through April, when the thistles were not high. “More than a fear of thorns, as Joseph Andrews guessed, that seasonal preference was due to a rational choice: There was no use in driving livestock at a time when the head could get lost in the thistleries” (Amaral 1998:135). Francis Bond Head, writing in 1826, also gives an excellent description of the seasonal variation induced by thistles, and the way that they obstruct cattle forage.

1992:149). They remarked upon how “barren and inhospitable” the Argentine pampas were, how the plains, unable to be described, could instead be summed up as they were by John Mawe in 1815: “What a scene for an enterprising agriculturalist! At present all is neglected” (ibid.). And yet, it is clear that the barren and inhospitable lands so derided by the capitalist vanguard as a reason for European intervention were based on contact ecologies – alien landscapes that emerged from settler conquest.

Men’s attachment to cattle as a form of prestige was solidified, and they began to argue that Buenos Aires needed to expand. The colonial discourse of the civilizing mission was thus reproduced in the very landscape of the Pampas, with the ultimate hypocrisy being that the “native” and “barren” weedy plains were their own.<sup>47</sup> Settlers seeing their own cattle-made thistle fields as inhospitable turned this into the reason for a breathless onward rush. And there was no creature better suited to lead the way than cattle. Alien weedy ecologies reliably sprang up under the hardy hooves of ungulates that trampled the soils, altering community composition, destroying soil matrices and crusts, and exposing mineral soils for seedling establishment.<sup>48</sup> Félix de Azara observed this process, describing how everywhere cattle and horses went “tall pastures” were replaced with “soft, modern pastures” by *‘pata y diente, hoof and tooth’* (Crosby 1986:289). This notion that “soft pastures” were “modern” was also reinforced through

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<sup>47</sup> Pratt notes that, “Readers accustomed to thinking of the civilizing mission with respect to Africa may be startled to find the same language applied to postcolonial populaces of Spanish America,” but such is, she argues, “the immense flexibility of this normalizing, homogenizing rhetoric of inequality. It asserts its power over anyone or any place whose lifeways have been organized by principles other than the maximizing, rationalizing mechanisms of industrial production and the manipulation of commodity capitalism” (Pratt 1992:153).

<sup>48</sup> Mack writes: “Whether through grazing or trampling, or both, the common consequences of the introduction of livestock in the four vulnerable grasslands [in Argentina, the United States, Australia and New Zealand] were destruction of the native caespitose grasses, dispersal of alien plants in fur or feces, and continual preparation of a seed bed for aliens that evolved with large mammals in Eurasia and Africa” (Mack 1989:159).

the relation between the grasses and the modern breeds being imported into the pampas environs at the same time. The shorthorn breed from northeast England was introduced in 1826 to replace the cimarron – mostly feral Turdetano – cattle breeds, and with its introduction new breeding initiatives began in earnest around Buenos Aires. Wire fencing began to be thrown up in the 1840s, increasing the potential carrying load on the pastures, and by 1858 the Hereford breed – known for its high beef yield – was introduced. The Hereford was a special kind of breed produced specifically in concert with England’s industrial revolution and food market expansion, and was emblematic of modernity, along with Scotland’s Aberdeen Angus, brought to Argentina in 1879. These breeds were also promoted by the Rural Society of Argentina (Sociedad Rural de Argentina), an elite group of landowners who published the *Anales* journal to promote selective breeding, fencing, and the planting of alfalfa in order to appeal to European palates (Scobie 1964:43). The scope of human desires were reflected in the bodies and behaviors of these cattle breeds – they had been selected over and over again to have wide backs, high yields of beef, early maturity, maternal skills, fertility, rustling ability, and growth capacity. They also were emblematic of a particular kind of spirit that was different from the criollo cattle exploited for hides and tallow. They were modern cattle, selected for in the context of an industrializing society, and they were herded into the pampas in another wave of ecological imperialism, bringing the hurtling momentum of modernity in their very bodies and behaviors, reorganizing the environment into “soft, modern pastures” as they went.

### *1840-1870 Sheep boom*

At this same time, between 1840 and 1890, the powers and processes put into motion by cattle were dramatized in a different and complementary way by sheep. If cattle had held the land and begun conquest degradation, sheep broadened and intensified this process of grassland extinction and erosion. After 1850 the first great export boom was led by wool, and the expansion of the wool economy began to significantly change the region north of the Río Salado. Over a period of fifty years, sheep farming gradually supplanted many of the estancias in this region, pushing cattle toward the periphery of the frontier. Sheep required different patterns of labor and rhythms of production, mostly because they require daily care, and are more vulnerable to parasites and predators. Like cattle, sheep are also ungulates with hardy hooves, but they graze with their lips rather than their tongues, and so come into more contact with parasitic worms and larvae. Because of this grazing habit they also eat forbs and grasses closer to the ground, further eliminating tussock grass reproduction. Oftentimes cattle and sheep grazed together, with cattle eating the taller grasses while sheep ate the forbs and short grasses. Hilda Sabato, in the best study of this “pastoral age,” points out that although sheep displaced cattle, many estancieros did keep some cattle head on their ranches for meat, hides, and grease. She estimates that by 1881, “409,000 hectares out of 58 million were under cultivation north of the Salado, and 1.4 million head of cattle shared the prairies with 27 million sheep” (Sabato 1990:37). Multi-species grazing of

the land thus worked together to continue an ongoing conquest, and by the 1870s, the 100-mile radius around Buenos Aires was severely denuded.

Such a condition of continual disturbance forced the settlers to make choices. Rather than dampen their enthusiasm, the spirit of modernity expressed by disturbance infused them with a startling energy. Much has been written of how the settlers were driven to expand the frontier by ranching interests, modern technologies, their alliance with England, and General Julio Argentino Roca. Argentine scholar David Viñas describes how, “When the steamship the *Refrigerator* landed in 1876, one look told cattle ranchers they urgently needed more land.” Cattle exports of salted meat and hides had dominated for many decades, and with the advent of refrigeration and steam shipping, which allowed frozen meat and on-the-hoof exports, it was clear to cattlemen that a major export shift was about to occur. One of their representatives, channeling the spirit of conquest, wrote: “Further and further south” (Viñas in Nouzeilles and Montaldo 2002:164). Historians such as Viñas reserve special vehemence for General Julio Argentino Roca, the man who led the charge south and west, the man who organized the Conquest of the Desert into La Pampa to open the Argentine territory up for cattle development. And it is easy to brood over the personal power and style of these military strongmen, from Rosas to Roca (and eventually to Perón), but this emphasis obscures the fact that without the destruction of the original natural resource base, it would not have been considered so urgent. The deterioration of the rangelands was a far more important factor in the desires of the cattlemen to support Rosas and the military campaign into the western Pampas. Overexploitation of the herds and of the

range was part of conquest. They had managed to transform the original fertile grasslands into a range of weeds, and, channeling the spirit of modernity, they survived the degradation by transforming the energies of disturbance into displacement and violence.

General Julio Argentino Roca's military campaign known as the *Conquista del Desierto*, the "Conquest of the Desert,"<sup>49</sup> began in 1878 in response to external pressures from Britain to expand and from Chilean attacks on the border at the backbone of the Andes. It was the final military campaign against Indigenous groups in what had been one of the longest-held sovereign Indigenous territories of the Americas. It ended in 1883 with the death of thousands of Pampas Indians and the annexation of over 80,000 square kilometers of land.<sup>50</sup> The seized land was distributed to generals and captains in the war, as well as auctioned off in 1,784 10-by-10 km townships (*lotes*) based on cadastral surveys conducted between 1882 and 1884 (Lluch 2008; Gonzalez-Roglich et al 2015). Prior land sales, which had financed Roca's conquest, constituted 8.5 million hectares and went to just 381 persons (Rock 1985:154), including British auction houses. The active powers and processes of cattle and horses that had initiated the high stampeded into the western Pampas, led by cattle. And Argentina began to actively recruit immigrants to its hinterland. The biological

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<sup>49</sup> "Desierto" in Spanish refers to an uninhabited place – it probably should be translated as wilderness, as that is closer to the English sentiment accompanying that word, whereas desert evokes a particular biome – but for this event I have only ever seen it translated as "desert." There are numerous critical interpretations of the settler's evocation of the region as empty and uninhabited through symbolic naming, see especially Gastón Gordillo and Silvia Hirsch's "Indigenous Struggles and Contested Identities in Argentina" (2003).

<sup>50</sup> Lazzari writes: "Apart from a thousand Indians who had been previously recruited in the army and in mission stations, the war booty included, by official numbers, 82,500 square kilometers of land, 1,313 Indians dead and 1,271 prisoners. Another 10,500 were secluded in camps, some of whom were eventually sent to different provinces as domestic servants or laborers on big ranches and sugar plantations" (Lazzari 2003:63).

expansion of Europe into the Southern Cone, which had begun in 1536 and had been central to the destruction of the Pampean natural resource base, and consequently of Indigenous lifeways, began its last cycle in this moment. It corresponded also with Argentina's fin de siècle. From 1880 to 1910 was the peak of the fever that cattle had initiated, raveling out into the 1930s Pampas Dust Bowl.

### *1880-1930 Modernization*

The immigrants and landowners who arrived in the western Pampas as settlers and colonizers replicated the same pattern of rangeland degradation that their predecessors had begun around Buenos Aires. This time, however, instead of several centuries, the process of extensive erosion and weedy colonization took just four decades. It is true that this zone was semi-arid, receiving less rainfall than the lands closer to the Río de la Plata, but to attribute to climate the massive and rapid degradation of these rangelands would be to obfuscate the mode of conquest that had as its blueprint the ecological conquest around Buenos Aires. The landowners and pastoral interests had discovered, long before, that they were too few to hold the land, and that they had to do it with their nonhumans, especially cattle and sheep.

That it was the mode of exploitation which led to degradation is evident based on the fact that this was not the first time this region had known ungulates. For centuries Pampas Indians had managed these lands for herds (Fernández 1998; Tapia 2005; Lluch and Tarquini 2008) and at least since the 18<sup>th</sup> century had practiced various forms



of both pastoralism and agriculture (Mandrini 1984, 1986, 1991; Palermo 1986, 1988; Alioto 2011). These forms of land management varied based on the group and the area, but in addition to horses and cattle, most raised sheep and goats and chickens, and had gardens, in addition to domesticated ñandu and guanaco (Tarquini 2008:63; Alioto 2011).<sup>51</sup> What must be also underscored here is that forms of land management do not always look like the extensive agriculture that is often understood as cultivation; the alleged line between cultivated and natural is much more nuanced, sometimes called para-domestication. This land management was extensive, evidenced by the fact that there were at least 54 Indigenous settlements with multiple trail systems connecting them, totaling over 6,500 km (Ramos et al 2009; Gonzalez-Roglich et al 2015; Curtoni et al 2012).<sup>52</sup> These multiple networks had been developing for hundreds of years by 1879 when the Conquest of the Desert began, driven by the openings created by horses and cattle across both sides of the Andes. It is also probable that this landscape was anthropogenic, and to understand why for a moment I need to introduce an important nonhuman character in our story, the calden tree.

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<sup>51</sup> New studies have shown more detailed examples of Indigenous economies, especially of Cacique Calfucura, probably the most well-known. He operated the Salt Flats, Salinas Grandes, and in exchange for salt received 2,000 cows and mares monthly at least until the 1850s. See Alioto 2011 for details on the mares and farms of Calfucura. Observers mention, besides sheep and milking cows, chickens, squash, melons, tame ñandu (“avestruces mansitos”) and domesticated guanaco (“guanaco criado gaucho”). Note also that even as late as the 1850s multiple groups were still recognized within this region. Quoting Avendaño, he mentions Lailmaches, Picunches, Ranquelches, Güilliches, and Chehuelches (Alioto 2011:200).

<sup>52</sup> Archaeologist Rafael Curtoni et al. have shown that the rastrillada cattle route to Chile was not singular, as it is depicted in so many histories. Indigenous settlements were in fact linked by multiple routes and trails, which followed a circular pattern. This was, according to Curtoni et al, the “nervous system of the Rankülche sociopolitical organization, regulating the circulation of people and resources between a hierarchy of camps that were ordered according to the social distance from the main chiefs.” Ranqueles, they argue, thus imprinted the landscape through dwelling as well as circulation with other Indigenous groups for exchange and political and marriage alliances. “Social identity,” the authors write, “was performed and reproduced in reference to the landscape.” In addition to the complex distribution of Indigenous camps, place names were based on topographical features as well as the activities that occurred, such as: *Luan Lauquen*, place of social meetings; *Calchahue*, where women cut their pubic hair; *Curralauquen*, lagoon with stones and settlement (ibid.). It was the dwelling within this landscape that created their identity and which cultivated belonging.

The calden tree is a beautiful hardwood tree that is part of a large family of leguminous thorn trees falling under the *Prosopis* genus, known best as “mesquites” in the United States. *Prosopis caldenia* is endemic to subtropical regions of Argentina and thrives in sandy soils, reaching up to 12 meters in height and up to 250 years of age. The wood is hard and it grows slowly. It has tiny deciduous leaves no bigger than the moon of a fingernail. The wonderful thing about *Prosopis* in general, and calden specifically, is that they have an incredibly deep root system that allows them to resist drought as well as fire. While the pods are not as sweet as other *Prosopis* species, cattle eat them as forage, which spreads the trees because their seeds must be scarified – either by a digestive tract or by fire – in order to reproduce. This intimate relationship between cattle, fire, and calden has led several ecologists to suggest that the thorn forests of calden trees – what the men called the monte, wrapping around the grasslands – was itself was an anthropogenic landscape perhaps only a few centuries old and was at one time a much more dispersed savanna-like steppe (Lerner 2004; Dussart 2011; Bogino 2015).<sup>53</sup> Forest ecologist Stella Bogino has, with others, described how the growth of the oldest recorded calden trees coincided with the establishment of chieftanships that formalized cattle trade across the region (Bogino et al 2015).<sup>54</sup> All of this points to the possibility that the landscape the settlers found was also a contact ecology, but not a

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<sup>53</sup> Further evidence for this possibility is confirmed by studies in other similar regions, where the ecological baseline was assumed to be mesquite forests only because Spanish cattle had spread out into the region ahead of the settlers (e.g. Melville in central Mexico and Sayre in the Sonoran desert of southern Arizona and northern Mexico). For Argentina see Lerner PD. 2004. El Caldenar: Dinámica de poblaciones de caldén y procesos de expansión de leñosas en pastizales. Arturi MF, Frangi JL, Goya JF editors. Ecología y manejo de bosques de Argentina. Follow-ups on this thesis are much needed.

<sup>54</sup> Calden “recruitment in the 1790s coincided with the establishment of the first aborigine *cacicazgos* in the area that commercialize wide amounts of cattle, driven by foot, from the pampas to Chile crossing the Andean cordillera walking about 40 km per day which signified a means of calden’s seed dispersal for long distances. Fires that would also facilitate regeneration were used by ranquel aborigines as a way of defense against conquerors and for reducing shrub cover and increasing grass availability” (Bogino et al 2015:63).

conquest contact ecology. It was a survival contact ecology, a region of refuge made in conjunction with settler animals that effectually maintained it as Indigenous territory until the 1880s (it could also be considered a resistance ecology, although not in the way social scientists use it, or shudder at it). It was the result of a creative response to alien animals and plants, and it provided an almost impenetrable barrier to those who were ignorant of the landscape. *Metamorphosis 3* details the forests and the delicate link between fire, calden dispersion, and Indigenous herding of cattle that led to Indigenous survivance (Vizenor 1999), but for now I want to return to the settler conquest.

When settlers conducted the first extensive land survey of this region between 1882 and 1884, they described the region as fertile, as a forest with large trees beneath whose shade grew rich, palatable grasses (Dussart et al 1998).<sup>55</sup> Almost immediately following the 1882-4 survey, settlers poured into the region and set about logging the calden forests, burning whole quadrants down, and clearing the land for pasture and agriculture.<sup>56</sup> Their advance all the way to the foot of the Andes by 1890 was, historian Enrique Stieben writes, “vertiginous” (230), and during the first two decades of occupation they indiscriminately burned whole stands of forests in order to clear land.<sup>57</sup> After great loss of the forest they realized that calden had beautiful wood, similar to cedar, and they began to more formally and selectively log parts of the forest,

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<sup>55</sup> Dussart et al write that, “When farming began in the early 20<sup>th</sup> century, the landscape was covered with stands of large or medium sized calden trees surrounded by a matrix of short grasses,” and that the calden were concentrated in valleys and grasslands predominated on the dunes and plateaus (1998:686).

<sup>56</sup> Stieben writes that the gorgeous calden tree was considered a plague to be removed, an impediment to civilization: “Considerado como una plaga de ‘la Buena tierra’ pampeana, fué tratado como tal: ¡a exterminio!” (1946:230).

<sup>57</sup> “Para limpiar pronto un campo y entregarlo a la explotación agrícola, uno de los expedients consistía en la quemazón” (1946:231).

converting much of the wood into *parquet*. Massive logging continued for over sixty years, with an estimated 12 million trees destroyed and the entire forest reduced by half (over 50,000 square kilometers). At the same time that indiscriminate burning was destroying the forests, so too did there commence massive exploitation of native animals. It was to this region that so many Indigenous fauna such as the guanaco (*Lama guanicoe*) and ñandu (*Rhea pennata*) had escaped, and it was in this place that their numbers were definitively diminished. It is difficult to know exactly how many, but Stieben writes that their extermination was precipitous: in 1893 settlers exported almost 15 thousand kilograms of ñandu (he calls it avestruz) feathers, by 1893 that number was halved to 6,000, and by the 1930s it was just 100 or less kg per year (Stieben 1946:243). Settlers also exterminated the guanaco so that it would not compete with sheep for precious grazing pastures. Guanaco had once been the most prolific ungulate in South America, with a population between 10 and 30 million, and now their numbers hover around a mere half million, 95% of which live in Argentina. While the forests burned and Indigenous fauna were over-hunted, land speculation companies with capital from British investors began laying track for railways right on top of Indigenous rastrilladas, which were well-worn routes weaving through topographically advantageous depressions and, further to the west, hills and valleys.<sup>58</sup>

It is hard to imagine a more devastating scene. Settlers did everything they could to destroy Indigenous claims to territory, both through destruction of the original

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<sup>58</sup> “Casi todos los caminos recorridos luego de la Conquista, por las galeras o mensajerías, siguieron las rastrilladas de los indios; porque estos eran excelentes topógrafos. Los mismo hacen muchas rutas...y los propios ferrocarriles” (Stieben 1946:280). Stieben goes on to list the many railroads that follow the paths and rastrilladas, and provides a map of the identical rastrilladas and routes (1946:283).

environment as well as through denial of petitions for land and cattle. Between 1882 and 1900, local and national authorities received numerous petitions from Indigenous groups soliciting legal use of their land and, by extension, cattle. National strategies of Indigenous exclusion included denying these land petitions as well as relocation to marginal scrublands in the west.<sup>59</sup> Furthermore, the new *Ley Argentina del Hogar* – Argentina’s Law of Residence – stipulated that it was necessary to “poblar,” e.g. to homestead, with cattle, cultivars, and buildings for five uninterrupted years, after which property title would be given (Tarquini 2010). Their cattle had been stolen from them, and the semi-arid and impoverished scrublands to which Ranqueles were relocated made this almost entirely unfeasible. At the same time, Ranqueles were sought out for their local knowledge, and pressed into menial labor as cowhands and ranch hands, further contributing to their marginalization.

Cattle, sheep, and wheat were three major species of empire that were shuttled into the western Pampas to occupy the periphery and to create an ecology of belonging, a space of European legibility for the settlers. Before agriculture and logging came with the railroad, cattle and sheep held the land around estancias. By the early 1900s it is estimated that over six million sheep entered the province of La Pampa. In black and white photos taken during this time, it is possible to see how settlers tried to cultivate ecologies of belonging in landscapes that were fundamentally unfamiliar to them. In one photo taken during a fair (*fería*) in Catrilo, thousands of sheep herd together

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<sup>59</sup> Indigenous groups were forcibly relocated to the villages of Victorica, La Blanca, and General Acha, and to Colonia Emilio Mitre in the far west. Tarquini notes that it is difficult to find exact numbers for these places, also in part because there was an incentive to underreport the Indigenous population to create “empty space.”

through the dirt streets driven by gauchos on horseback behind which rise calden trees. The photo evokes the transhumance of sheep through the cañadas of Spain, even as it also is evidence of a different world. In another black and white photo small children dressed in bonnets ride sheep on a sprawling lawn in front of an estancia, while in another ranch hands shear sheep for their wool in the shearing barn. Sheep moved into the American environs and evoked the world from which the settlers came at the same time that they began eating down the long bunched grasses. With their species the settlers established ecologies of belonging that through land management facilitated conquest, for without their companion species they would never have been able to claim the land.

Because the region was so peripheral and could only be reached by rastrilladas-turned dirt roads, it was really with the railroad that wheat cultivation as well as logging began. The railroad was a cultural system and replicated the spirit of the herd, being as it was a major force in bringing settlers as well as agriculture because it facilitated transport across the vast region. The western Railroad (*Ferrocarril Oeste*) was one of the broad-gauge lines (5 ft 6 in) built on the flat lands extending west of Buenos Aires, and it arrived to Coronel Vallejos by 1896. An offshoot of the western Railroad continued west, passing through the *pradera* and about 100 kilometers into the thorn forests, where the final westernmost station was constructed in Telén in 1910. Waves of both immigrants and wheat came together from Buenos Aires, high from the rush of a modernization that promised through monocultures planted in American soils standardization and simplification.

Creating ecologies of belonging in the shape of familiar European landscapes was difficult, both because the landscape was comparatively so vast and also because very few wanted to live so far away from the metropole. The immigrants who were recruited in Europe or sent by the Hotel of Immigrants in Buenos Aires into the interior were often small farmers, and, as historian James Scobie describes, “The new country dwarfed his previous experiences. Where before he had cultivated a few acres, he was now faced with hundreds” (1964:77). Following the model of the Central Argentine Land Company, numerous British entrepreneurs established companies and encouraged emigration from Europe for tenant farming, especially for wheat. In the English barrio near Coronel Vallejos, for example, the English company “Ranches and Colonies of Trenel” purchased much of the land, along with the landowning families Drysdale and Castex (Gaignard 1966). The landowners signed contracts of colonization with banks or firms that lent capital for colonization including service centers, roads, fences, seeds, and other farming materials. Immigrants were lent seeds and land and were contracted to pay rents.

European immigrants who arrived to the western edge of the pampas were disoriented in the new landscape, astonished by the sheer scale of the tracts they were contracted to farm. The seasons were reversed, labor was scarce, land was plentiful, and rural villages were far from each other. They very quickly converted their ignorance into conquest landscapes. Scobie describes how in the more humid pampas “Deep plowing, twelve to fourteen inches, in the fall, followed by a second plowing and repeated harrowings, pulverized the dirt particles and created a dust mulch which

reduced surface evaporation,” while in the semi-arid western areas they plowed to a depth of four inches or less (Scobie 1964:77-79). “The primary objective,” he writes succinctly, “during plowing and planting was not thoroughness but extensiveness, to cultivate as much land as possible even if poorly done” (1964:79). It was this goal of *extensiveness* that was part of the ecology of belonging that sought to make the landscape legible to the European immigrant at the same time that it excluded Indigenous land management and Indigenous peoples. Oftentimes harvests were not cultivated after sowing and the three main operations of the wheat harvests – reaping, stacking, and threshing – could not even be completed because the tracts of land were too large. The farmers accomplished what they could with the criollo plow and the “Taberning” plow as well as the scythe and the reaper, while in the beginning to thresh the harvest they galloped mares over the sheaves on hard ground and winnowed the wheat by tossing it into the air (Scobie 1964:82).

The goal of planting the whole pampas was outsized, but it was no less powerful for that. Histories of agriculture in Argentina often cite the lack of labor as the reason that so many harvests went to waste, but it would be more accurate to say that it was the vast and astonishing expanse of land that the farmers plowed and cultivated which made such extensive harvests impossible. Indeed, reading between the lines of the difficulties Scobie cites – the flooding, the locusts, the lack of threshing-reaping-winnowing machines, the resultant smell of mare’s urine on the wheat, the absence of grain siloes and barns and grain elevators to store and protect it from rain – it is possible to see that the power of wheat cultivation lay not in the export itself but in the way that



such cultivation finally broke up the last remaining grasses and destroyed the regions of refuge that had, however tenuously, still demonstrated that the land had never been the provenance of the settlers. The settlers did not need such vast tracts of land, and they never could have claimed them without their nonhuman companion species. And, like other settler colonies in North America and Australia where the land was extensive and the labor scarce, the invention of mechanized agricultural instruments emerged in part from the fact that no family could ever adequately sow, cultivate, or harvest such immense expanses.

Still, precisely because the population of Argentina was so small, very little of the wheat crop was needed for local consumption, and by 1900 Argentina became the world's third largest exporter of wheat after the United States and Russia (Scobie 1964:87). They mainly exported Barletta, an Italian grain with a high gluten content softer than the hard red winter wheat of Kansas, which was good for the region because "it resisted drought, rust, frost, and extreme heat; it did not degenerate as quickly as other varieties; and the heads of grain did not shell out if left standing for several weeks and ripening" (ibid.). After 1900 reaper-threshers (combines) and tractors were imported, and a system of credit was instituted which ensured that the tenant farmer would continue to try to till more land even as he was unable to repay his debts. By 1910 sharecroppers and tenant farmers had planted over 750,000 acres of wheat. By 1915 this number reached over 2 million acres planted (Scobie 1964:50).<sup>60</sup> Farm

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<sup>60</sup> Enrique Stieben has slightly lower numbers, including those acres planted every five years after 1914, see esp. Chapter 16 on Agriculture and Livestock, but the point both authors make is the same: wheat expanded into the western Pampas rapidly, and very quickly took over vast tracts of previously grazed grasslands.

tenants continued to try to plant more wheat and shear more wool. The system of farm tenancy ensured that the nation continued to hold the land with European species, continued to hold the land with conquest ecologies, even as, year over year, the harvests began to fail.

Within just two decades it was clear that the western Pampas were poorly suited for extensive sheep grazing and agriculture. Between 1912-1914 droughts increased the desiccation of the soils, and harvests began to fail spectacularly. The changes in the biological regime were widespread. The sandy aeolian soils began to collapse under so many years of cultivation without rest, and for the first time sand dunes began to appear in this region. All of this was worsened by the continued firing of grasslands for the clearing of meadows, the maintenance of high grazing rates, and the selective logging for fence posts, furniture, and flooring. Sheet erosion, gullying, the buildup of dunes, and the invasion by desert scrub resulted. What boosters had three decades before lauded as some of the most fertile lands they had ever seen, now were derided as poor and infertile (Silvia di Liscia and Martocci 2012). The expansion of intensive settler agriculture and pastoralism ultimately gave to this region the semi-arid reputation for which it became famous.

By the beginning of the 1930s, the land was suffering from massive erosion. Fences disappeared beneath sand dunes, hunger swept the colonies, and tenant farmers were evicted due to debts they could not pay (Gaignard 1966:71). This was the “Pampas Dust Bowl,” similar to the North American Dust Bowl. In both places, anthropogenic factors amplified the effects of this period of profound aridity. In the western Pampas,

successive modes of ecological conquest – from cattle to sheep to agriculture – had created massive aeolian erosion leading to soil degradation, sand dunes (*médanos vivos*), the formation of deflation hollows, and the burial of surface soil (Tripaldi et al 2013:1743).<sup>61</sup> Argentine historian Enrique Stieben, who is usually more reserved, suddenly begins to insert exclamation points into his prose to emphasize how badly managed the lands were, conveying his outrage to the reader. It was, he puts succinctly, a disaster due to deforestation and monoculture (228). And it happened so quickly, he laments, in just a few short years, “en los primeros y ¡ay! breves años” (232). Settler conquest gave rise to serious land degradation, massive economic loss, and a rural exodus to other provinces such as the Chaco, where the national government was supporting cotton cultivation.<sup>62</sup>

What I have been tracing thus far demonstrates that changes in land use can lead very quickly to profound environmental change. This first metamorphosis also demonstrates that environmental transformation can signify acute changes in the natural resource base. In other words, the transformation from thorn forests and grasslands to meadows and wheat farms was not just aesthetic, it literally transformed the possibility of production on the land due to soil erosion and the fall in the water table. This builds upon Alfred Crosby’s thesis that the biological expansion of Europe

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<sup>61</sup> Tripaldi et al are clear on the matter: “We infer that pronounced aeolian activity in western Pampas in the 1930s was triggered by drier conditions amplified by the unprecedented land surface changes with a significant increase in population and expansion of wheat cultivation into this fragile environment” (ibid.). See also Stieben 242, who describes the massive formation of sand dunes around Toay where before there had been savanna.

<sup>62</sup> See Gastón Gordillo’s *Landscapes of Devils* for a description of the colonists arriving and changing the landscapes in the Chaco. Also note the marginality of La Pampa: this national support did not exist in part because it was still not incorporated, and it fomented in the families that stayed a kind of rugged individualism that was deeply suspicious of the nation (Gaignard 1966:71), something we will see later in the adoption of the monte as frontier.

turned temperate grasslands into “neo-Europes,” showing how such a world-ripping force proceeded in a particular region. I have also been arguing that environmental and social survival go hand in hand. For the Indigenous groups of the Pampas, the biological conquest after 1536 had been devastating. Still, many had managed to survive by escaping into the heartland and establishing a massive region of refuge ringed by the thorn forest resistance ecology. The biological conquest of this region of refuge, the transformation and destruction of the fertile natural resource base, was world ripping. The case of the western Pampas demonstrates that this rapid and profound environmental change was part of an ecological conquest that, we shall see in the next metamorphosis, is ongoing to this day. What I have also been showing is how settlers galloped into the pampas, high with modernity and without a care for the consequences. Their spirits survived by moving – in this case to the north where the government was sponsoring cotton cultivation. What remained in their stead holding the land were, of course, cattle.



Figure 11. Cattle Roundup.

## Chapter 4: Round-Up Ready

He who knows about the evils of this land [the Pampa], for having lived them, has tempered himself to dominate them. Ricardo Güiraldes, *Don Segundo Sombra* (my translation)

Men's attachment to cattle was never replaced by the soy queen, but she was able to exploit their attachment to colonize the plains. An underlying metaphysical

understanding that soy was going to feed meat was, in part, crucial to the men's acceptance of soy. But it went farther than that. There were ways in which the movement and momentum of the old cattle world could not just be left behind, could not just be something in the past. Soy managed to replicate and reproduce some of these movements, and with her came a sense of invasion and domination, but cattle had cleared the way.

The last time we left David he was walking through the fields of his home farm in the Spring, scratching away at the surface of the earth to see if the seeds had been buried at the correct depth. He held a beige seed up and against the falling light the seed expressed all the contradictions of belonging in a globalizing world, of producing food in the 21<sup>st</sup> century. I asked what he had to do to himself, how he had to bend himself to the will of the soy queen. Before we explored the internal contradictions of farming in a globalizing world, we had to explore the cattle ecology of belonging. Cattle-settler culture formed the background metaphysics informing the men's fantasies. What happened that allowed the raid disguised as the roundup to continue to inform those dreams?

The personal encounter between a man and his seeds in the campo became, with genetically modified soy, an everyday event raised to the level of the political. But this did not happen all at once. In 1996 a man from Monsanto came to David's campo and gave him a bag of seeds "to try out." The plants of these seeds, explained the representative, could live through applications of the herbicide glyphosate, commercially known as Roundup. They were "Roundup Ready," an alliterative play

on words lost in Spanish but alluding nevertheless to that western roundup, to the mythological ranching past that the seeds also promised to obliterate. David was skeptical but he planted 25 hectares with them just to see how they did. And they did so well that the next year he planted 100 hectares.

Roundup had been around since 1973, when Monsanto patented, branded, and packaged the glyphosate molecule as a non-selective broad-spectrum herbicide to be used like paraquat or diquat. It was a potent herbicide that farmers initially attempted to use on row-crops, but because of the damage sustained to their crops it was not until Monsanto developed the glyphosate-resistant soybean in 1996 that it became widely used. This soybean, known under the patented moniker “Roundup Ready,” was ready for the cowboys. It was just a name, but the powerful associations that it stirred in the hearts of farmers and ranchers was not accidental. Like the feelings that I had when I was rounding up the cattle with Ceferino – potent, exhilarated – there was something about Roundup Ready soy that allowed it to replicate these muscular feelings. There was a kind of “Exterminate the brutes!” sentiment about killing all the weeds that were clear obstacles to civilization and progress – for Roundup was widely used not just on farms but also in the cracks of sidewalks, on railroad tracks, on the sides of roads, anywhere that weeds might interfere with the infrastructure that signaled civilization. The ubiquity of Roundup thus depended, in part, on the idea that weeds, vines, and other unwanted plants were threats not just to farmers but to the very nation. If you wanted to be a good neighbor and have a good lawn, you sprayed Roundup. If you

wanted to be a good citizen, you sprayed Roundup. You participated in and contributed to progress.

The powerful idea that weeds were a threat to the nation was amplified with the word the men used to refer to the spring sowing: *la campaña*, the campaign. Taken directly from the word referring to a large scale and long duration military operation, the campaign was a war of sorts, against weeds, time, mud, hail, rain, agribusiness companies, the state, broken parts, and corrupt brokers. The farmers felt that they had to have a strategy and a map, they had to figure out which fields got planted first and with which crop, they had to know how much cash they had available and what they could sell if they needed more, and all of this was made more precarious by the fields the men leased.

“Estás todo el día luchando,” said Daniel, all day you are fighting.

In Argentina, the campaign assumed new importance when the trains were de-privatized during the military dictatorship. For Argentines trains were the “veins of the nation,” they were what had helped to make Argentina the “breadbasket of the world,” the supreme symbol of Argentina’s progress.<sup>63</sup> Because rural routes were mostly dirt and the highway system had never been developed, trains were the primary way to travel the countryside and the primary way that seeds were transported to the ports. After the trains stopped running in the 1980s and whole villages were shuttered overnight, the movement that marks progress was physically and spiritually stalled.

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<sup>63</sup> See Stephanie McCallum’s dissertation *Derailed: Aging Railroad Infrastructure and Precarious Mobility in Buenos Aires*, for an excellent analysis and description of the importance of trains in Argentina, both materially and symbolically. See also her recent article, “Railroad Revolution: Infrastructural Decay and Modernization in Argentina” for a contemporary look at the modernization of rail infrastructure (2019).



The farmers learned then the cost of expectation. They incorporated into their spirits the sense that nothing was guaranteed. It was in this moment that rural routes assumed a new importance. Asphalt was laid on previously dirt roads. Oil became cheaper. Routes became the places that allowed the men to ride their trucks, and they became the places on which – instead of railroad tracks – most of their capital was transported. Roundup was sprayed on the shoulders of roads rather than on the now-weedy railroad tracks.

On the two-lane shoulder-less routes of the pampa was where the men, sitting in their bucket truck seats layered with the hides of massive pampa rats called carpinchos, became cowboy-farmers. To ride with the men in their trucks was to feel a kind of replicated roundup, a fast rushing that they understood how to perform, and that also brought them into the world. They spent much of their time driving between campos or doing errands between places and although the encounter between them and their seeds did occur in the fields, it occurred in a powerful way on the routes. They did not drive the tractors – this was for the laborers – and they did not usually ride horses except for pleasure. The movement on the rural roads evoked an exhilarating roundup, a way to see the country from a higher perspective, a way to feel the friction between the tires and the dirt. In his truck, which had replaced his horse, the man was more fully who he was. He felt in the great rush of speed the risk involved in his endeavors, he felt what it meant to do things himself, he felt the power of perspective through the windshield.

The US-backed military dictatorship that had ended in 1983, the year David started working, in addition to destroying infrastructural projects that united the nation wreaked havoc on civic and intellectual life.<sup>64</sup> It marked a particular kind of interventionist philosophy that the US continued to implement with President Menem's neoliberal restructuring policies, making him a darling of the so-called Washington Consensus and plunging Argentina into debt. These years were brutal, sowing a deep disillusionment that never went away. For both David and Daniel's cohorts, this disillusionment was a primary source of energy because it created a personal sense of urgency. David expressed this disillusion by explaining the insecurity he had to historically endure as a pensioner, in part because he was older and had lived through more cycles of insecurity: "When I finished university and started working, 1983, I began my payments to the national pension fund, as required by law. One has to contribute for at least 30 years, or maybe 35, I'm not sure now (everything changes!), before one can become a pensioner. ...When I started working there were no private pension schemes on the market here, and by the time they became available I was at an age at which these plans become quite a bit more expensive, so I decided to go for my own 'pension fund.'"

"To make things worse," David explained, "in the 1990's, when the money market joined the pension fund market during President Menem's privatizations, one could voluntarily leave the national pension scheme and enter a private one. I did this. But a few years later the Kirchners undid all this, and by decree I was forced to return

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<sup>64</sup> See Marguerite Feitlowitz's *A Lexicon of Terror: Argentina and the Legacies of Torture* (1998). See also for terror affect structures Timmerman, Jacobo. 2002. *Prisoner without a Name, Cell without a Number*. Madison: University of Wisconsin Press.

to my previous situation. With a little detail. When all was said and done, my "account" in the pension fund was less than I had to start off with. And this government has used the pension fund capital to finance a lot of their mismanagement, I wonder if I'll ever see anything back at all!"

Like other farmers in the 1990s, David was struggling to come to grips with a crumbling nation, a destroyed pension, and a rapidly changing agriculture. He had gone to school to become an agronomist but new technologies were suddenly and dramatically transforming what he had learned. The biggest shift was by far no-till farming (*siembra directa*), the method of farming which does not plough the soil to prepare it for the next crop, and he was one of the first farmers in La Pampa to buy a drill and employ this method in 1989 with a pasture, a “vegetable covering” of fescue, alfalfa, white clover, and other forage plants. He was astonished by the results. “The soil came back,” he said, describing the way the organic matter began to build up again, the way that without tilling, the fragile soils began to have mass, the way he found worms. At the same time, he was also learning about cover crops, which act as a “natural herbicide.” They conserve the moisture, cut the wind, and allow the soil to continue to be covered and cool.

“Let’s say I’m doing soy in December,” he said hypothetically, “wind evaporates the humidity, temperature is heating the soil and evaporating, UV is killing off the bacteria and insects and the worms are feeling uncomfortable...and then the seed emerges in this unfavorable environment.” Cover crops and no-till changed this, harnessing moisture for the future crop. After seeing the results, he asked rhetorically,

who could carry on with conventional farming? He gave me an example of how quickly it all changed: in 1996 he had two fields of soy versus nine of sunflower, and by 2000 he had seven fields of soy and only four of sunflower.<sup>65</sup>

Although everyone has always complained that there is no “public” in the Argentine campo, the strong tradition of fraternity paved the way for several organizations that helped the men I worked with to make the campo their own, to craft themselves in the shape of men who would survive in this strange new world. AACREA, the farmer’s cooperative organization modeled on French farming cooperatives, established a model that encouraged twelve men from the same region to gather every month. David, Daniel, and several of the other farmers I worked with were all part of AACREA. At the monthly meetings one farmer would host the all-day affair. On Powerpoint presentations he demonstrated his yields and profits for that year at the same time that he proposed questions to the group about things he needed help with. They would break off to discuss potential solutions as well as ways forward, collectively helping him to think about everything from family conflicts to investment strategies. Another organization, AAPRESID, the no-till farmers association, also drew upon and fomented the brotherly bonds.

This fraternity helped the men to collectively adapt to the changing definition of biology in relation to politics, but when RR soy came to the pampas it was not immediately an event. The question of royalties, contracts, and genes wasn’t even mentioned when David bought DM 4800, one of the “colonizing” varieties, in 1999.

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<sup>65</sup> Many small farmers became “foreigners in their own land” during this time and were pushed out by transnational organizations and larger sowing pools.

The issue of royalties arose only later – by the time I was there in 2015, the intense gene tests and border control financed by Monsanto at the soybean checkpoints was all anyone was talking about – but in the beginning no one said anything about genes. In addition, it was not yet obvious that Argentina’s economy was going to be destroyed by the IMF and World Bank debt programs, nor that commodity markets were going to blow up the way they did in the 2000s. In the 90s David did not quite think of himself as the “agri-businessman” he would become, he thought of himself as a farmer trying to make sure he did the best things for his land so that he could pass it down to his family better than when he had inherited it. And the way that he did this was, above all, with Roundup. Cover cropping and no-till farming didn’t work if you didn’t kill the cover crops and the weeds before you planted, and without tilling the only way to do this was with herbicides.

The cowboy is always the one who fights for something better, for his family, for his land, and for his country. Roundup Ready soy enabled him to continue to fight for something better. In a world where nothing is guaranteed, RR soy enabled him to return to the farm, to save money, and to pay for the education of his children. RR soy was sustainable, it was good, it allowed the soils to be built back up. But no matter how hard he tried to be good, just like the gauchos, whose way of life was destroyed by the fence, his lot in life was to be persecuted. It was not long before the government began to see how much money the farmers were making off RR soy. This moment in 2008 was when biology-as-politics took the center stage in Argentine politics. The US was suffering from what would come to be known as the Great Recession and Argentina’s

markets were feeling the heavy blows. President Cristina Fernández de Kirchner proposed to raise the export taxes (*retenciones*) on soybeans to 44 percent. Farmers, who were already paying 35 percent, for the first time in the history of the campo mobilized to engineer a nationwide lockout.

“It was incredible,” said Claudia.

Almost every farmer I talked to described their sudden and improbable gathering with breathlessness. They blocked the routes, they banged on pots and pans at the foot of the Obelisk in Buenos Aires, mass protests erupted like a wave throughout the countryside. Because of the protests, President Kirchner was forced to send the export tax proposal to the Argentine Congress, where the lower house approved it, sending it on to the Senate. After seventeen hours of nail-biting debate in the Senate Vice President Julio Cobos cast the tie-breaking vote, 37-36, that blocked the farm exports tax bill.

“I couldn’t believe it,” said David and every other farmer who thought of this moment when the campo briefly became a public as one of the most important moments of their lives.

By 2015, when I was living in the pampas, the cowboy-farmers’ daily errands took them onto the routes and made the everyday landscape. When the farmers had blocked the routes on rural roads – all leading to Buenos Aires – it was not just because it would prevent food from arriving to the capital, although that was an important message too. The routes were those places where they could fully become who they were. The men connected places together through their travel, and in so doing marked

themselves as both of the campo and cosmopolitan, *campolitan* men tracing the outline of the polity as they wore deep ruts in the soft asphalt. They performed what I first considered rather menial errands – picking up papers two hours away for the transfer of their property, getting papers signed in the capital, transferring papers from one county seat to the next to give to the truckers who would then transport the bulls to the ports – that often took many hours, even full days. But these papers, these signifiers of property, were of utmost importance because they were an expression of assets and because they could easily be fudged.

In addition to the papers, the men often spent long hours driving to their faraway properties in the west, the place where they could get away from it all, get away from their wives, and check on their cattle. When Argentina suffered through the 2001 debt default and ensuing depression, in addition to losing the value of what they had stored in the bank, their cattle also lost value because the price of meat was being held down by the new government to keep the peso from inflation. In 2002 and 2003, David said, agriculture was much better business than cattle farming, and so many began to turn to agriculture. Many folks, said David, “sold out during this time, while others went out west so as not to lose all the hacienda.” For the men that I worked with, one of the ways that they had shifted to accommodate themselves to the changing world was by moving their cattle to the west, to the thorn forests. In the west David paid about 30 kilos per hectare and could graze a cow on about 5 hectares. They were losing money, but they didn’t want to lose all the cattle. Driving with the men I saw the way they had retained their cattle, their first form of property, and in so doing managed to hang on to part of

themselves, at the same time that soy gave them the ability to perform the cowboy ethics of duty.

Because the farmers were constantly involved in errands that required them to be driving, they also, like the cowboy's time spent on horseback, were able to use this time to tell stories. I was told stories of women, of affairs, of cattle. I was told old sayings of the vizcacha that meant that the primary way of knowing the world was through experience: *Lleváte de mi consejo. Fijáte bien en lo que hablo: El diablo sabe por diablo. Pero más sabe por viejo. Take my advice. Listen well to what I say: the devil knows because he is the devil, but he knows better because he is grey.*<sup>66</sup> This line, from the gaucho epic *Martín Fierro*, embodied what I am calling a cowboy ethic and spirit, one which values experience, honor, and duty. Like the other gaucho epic the men gave me to read, *Don Segundo Sombra*, these stories provided a framework for understanding themselves in relation to Argentina. The stories that they told me on errands during which I accompanied them were thus also about how they had been wronged, about how the ability to perform their duty had been deeply threatened by the multiple crises Argentina had suffered through. From different men I always heard the same sentiment. They were disenchanted. "Hecha la ley, hecha la trampa," said David to me one evening on our way back to the ranch. Laws are made to be broken. And by this he meant not just by himself or his neighbors, but also by the government.

The routes were a liminal space, a space between campos and ports, and tension was always heightened when capital was being transported on these potholed shoulder-

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<sup>66</sup> My trans. *Consejos del viejo Vizcacha*, Sec. 15 de *La Vuelta de Martín Fierro*, José Hernández.



less roads. The men who moved the seeds, the truckers, were thus very important, and had to be trustworthy. It was a delicate moment, Juli told me, the moment that the soybeans were transferred from their silo bag into the truck, then transported by the truckers to the grain silo or to the port.

“It is the magic moment that seeds turn into capital,” Daniel said. When he said this we were standing on top of a white plastic silo bag as big as an airplane fuselage, looking out over the campo.

“We’re just walking on a million dollars,” he said, half-joking. I really didn’t understand how important it was to him until something happened. I snapped a photo of him on top of the bag. It was a good photo. The sunset light was nice, and in his hand he happened to have a corn cob that we had plucked from the field where the silo bag was resting. He temporarily made it his profile photo on Whatsapp, but then changed it. I asked him why. He said he felt that it looked too arrogant, him standing on top of the seeds. He had also, another time, balked when I asked how many cattle he had. “That’s just like asking someone’s salary!” he said to me. This is when I finally understood that the seeds and the cattle were his income, they were a physical representation of how much money he was making, of his place in the world.

Like the men hired to do a roundup, it was important that truckers were reliable and honorable, that they wouldn’t skim from your herd or your load or do something else. The truckers were stoic men who had a certain frame of mind that emulated, like the gauchos, solitude and melancholy. I chatted and rode with several truckers who endured the constant movement, the being-away from family, the staying awake for

hours on end, in various ways. One man had ingeniously rigged a hot-water contraption on his dashboard so that he didn't have to look down when he poured his hot water for mate. He told me matter of factly, "Es lindo y es jodido, la vida del campo," the life of the country is beautiful and fucked. Another had decorated the inside of his cabin with elaborate red velvet fabric that his wife had sewn. Another smoked a whole pack of Marlboro cigarettes a day, just to stay awake so that he could go to the port and back in one trip. He bent his head against the wind from the open window and, finding the flame, lit his cigarette. There he was, a cowboy-trucker, a man who moved commodities for the world. As long as they were moving, most said to me, everything was right in the world. It was the momentum, the bouncing beige seeds that flew out of the trucks, often flying against one's windshield and bobbing along the asphalt, the feeling of hustling that allowed them to settle in to muster the seeds.

But the cowboy ethic did not just exist on the farm and the routes, and that is why it drew the men into a collective. From the beginning commodity traders have been considered cowboys because of their willingness to take risks in a market "frontier" and endure large losses. The commodity asset class is associated with volatility, danger, and potentially large rewards. Easy headlines read "Bill Perkins is the 'Last Cowboy' on Volatile Gas Markets," or "Did the commodity cowboys forget how to ride?" reinforcing the sense that commodity derivative trading funds make up a kind of wild west (now of course being challenged by the crypto-cowboys!). Around the same time that Roundup was patented, commodity price volatility in the 1970s led many investors to recognize the potential for huge profits and new investors came on

to the scene. However, it was not until the late 90s that commodity investment vehicles became mainstream investments. Because commodity prices rise when inflation accelerates – a negative correlation with other asset classes like stocks and bonds – they are considered a hedge against inflation, and many investors began to use them to diversify investment portfolios. Commodity portfolio fund trading grew quickly, from \$15 billion in 2003 to over \$400 billion in 2010. In an extensive 2011 report prepared by HighQuest and Soyatech, they suggest that the size of these large speculative investments have increased market volatility and pushed up prices, perhaps even leading to the food riots “from Haiti to Egypt.”<sup>67</sup>

In Roundup Ready Soy the spirit of the cowboy thus preserved itself even as it shifted to accommodate the changing world. By the time the soy queen came to the pampas, the men were already familiar with a roundup and a military campaign, the things that make a frontier risky and exhilarating. GM soybeans created frontiers. They were Roundup Ready, they were so astonishingly strong that they could be sprayed with a lethal herbicide and not only survive but flourish. Perhaps most importantly, something tricky happened. The mixed ration was invented so that soybeans could be grown to feed cattle. This very clever shift enabled farmers to begin growing industrial crops for industrial animals, creating vast possibilities for accumulation and concentrated animal feeding operations (CAFOs) known more generally as feedlots. What this means is that no study of soybeans is really complete without a study of

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<sup>67</sup> 2011 Soybean Export Council, *How the Global Oilseed and Grain Trade Works*. P 49

CAFOs, the animals that are confined to those operations, and the diets that they are fed.

In the case of beef cattle, as soon as calves arrive to feedlots they are fed a Total Mixed Ration (TMR), which consists of roughage, grain, supplements, and a premix (these mixtures are often different for beef cows vs. dairy cows). TMRs are high in protein in order to encourage quick weight gain for beef cattle – an additional 400-600 pounds in 200 days – as well as fat marbling. Between 80 and 85% percent of the soybean harvest year over year was, and is, destined for animal feed.<sup>68</sup> Soybeans and corn formed the foundation of the cattle feedlot diet. In the pampas, ground shelled corn and corn silage was usually mixed with soybean pellets and minerals to create a complete mixed ration.<sup>69</sup> Because the corn and soybean that proliferated throughout the pampas in the first two decades of the 21<sup>st</sup> century was thus mostly destined for animal feed, the metaphysical foundation of society did not have to change. This was a brave new nature, but the farmer-cowboys already knew what was required of them.

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<sup>68</sup> The protein in TMRs varies according to region and almost always include corn silage/grain in addition to protein pellets with a base of soy, sunflower, or cottonseed hulls. Corn is the gold standard for beef cattle diets because it is palatable to cattle and does not have to be processed to remove tannins. Soybean meal – a co-product of the soybean oil milling process – is the gold standard protein supplement that can be mixed with salt or corn for a “range meal.” However, because soy meal is such a major ingredient in chicken and pig diets, cattle producers have to compete with these industries.

<sup>69</sup> Rations for growing and finishing beef cattle differed slightly from complete mixed rations, but both depended upon grain, silage, protein, and a mineral mix.



Figure 12. A father buttoning his son's collar.

## Chapter 5: Filial Devotion

If men's love for cattle bound them to the plains, it was men's love for their sons that kept this relation ongoing. Reproduction was necessary, a man's manliness was often measured by how many children he had, and it was an unspoken rule amongst land-owning classes that the farm and the business would be passed down to the sons. But this relation took work, it was not a given, and because soy did not bind men and their boys to the plains the way cattle did, different ways of relating to land and to money had to be established, and this was nowhere more evident than in sowing pools.

By the time I began living on the estancia in 2015 the soy rush had turned into a soy slog, the sort of everyday slog that happens to couples after the courtship is over and they have two kids and they wake up realizing that they sort of hate each other. Still, for the most part the men were still faithful to the soy queen, and they were generally reticent to say too many bad things about her. She had made the men quite a bit of capital, and they had been able to draw on their social capital in order to establish investments and foment filial succession within the family. This was, in fact, the point of the entire endeavor – to reproduce, to gain independence, to maintain status and honor by being the Provider, and to pass it on to the sons. When they talked about the soy rush it existed as something in the past that was unreal, *the time the men fell in love with the soy queen*.

That the affective rush had congealed into a more serious endeavor was part of the world that the soy queen had created, that unreal and hyper-real rurality that sharpened the consequences of a category called “nature” that the men were beginning to question. As David became aware of himself in relation to a community of other entrepreneurs and businessmen, in relation to genetically modified soybeans, in relation to a food supply chain that “fed the world,” he was beginning to become aware of himself as a co-actor in a historical moment. Suddenly he was at a nodal point – it was not clear if it was the beginning or the end – in the history of global self-awareness. Two historical movements had been happening to him at the same time that he had been part of bringing the movements about himself. There was, on the one hand, the massive shift known in Argentina as the “agrarian revolution” and, on the other hand,

a reorganization of land ownership. Both of these movements were deeply intertwined with one another, and both were symptomatic of and integral to a shift in the cultural and spiritual ideals of what was called agricultural development.

In the US such development had really taken off in the 1960s with the Green Revolution, a vision for a biotechnical and industrial global agriculture that Argentina was forced to swallow after the US-backed military dictatorship and subsequent neoliberal restructuring of the 1980s and 90s. By 2015, when this “development” was ongoing and widespread, the “king of soy” Gustavo Grobocaptel summed up the two movements succinctly: “We made the agrarian revolution that democratized access to land. The land is no longer in the hands of the heirs, but of the professional entrepreneurs who occupy the space that the heirs had before.”<sup>70</sup> His romantic assessment of the consolidation of land leasing schemes combined with democracy and alleged land reform was central to the projects of the previous thirty years. But in his endorsement of the neoliberal leasing schemes he chose to overlook something quite central. The heirs had *become* the professional entrepreneurs. He himself was an heir to the land that his father had farmed, and that he farmed after his father.

It was not unusual to divorce the family from capital – as if capitalism could reproduce itself without kinship sentiments and bonds! – especially since independence was such a key symbol in the masculine ideology of the family. Such independence requires capital, and it was no coincidence that Grobocopatel was credited with popularizing the investment vehicle that permitted soy’s spread. This investment

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<sup>70</sup> [https://elpais.com/elpais/2015/08/04/eps/1438698239\\_623902.html](https://elpais.com/elpais/2015/08/04/eps/1438698239_623902.html) My translation.

vehicle was called a *pool de siembra*, or “sowing pool,” a group of investments into a farming venture. The term was an odd mash-up of English and Spanish. “Pool” originally derives from the English word, probably originating in Rioplatense vernacular from the early 19<sup>th</sup> century British merchants’ “buying pools” created to keep hide prices low (see Rock 1985:96 and 224 for more on buying pools).

At first, sowing pools were not linked with soy’s spread. At their most simple they were a collection of small investments into farmland. Eventually they began to be more expansive in their definition, to the extent that Harvard and other business schools began doing case studies of them and they eventually changed the face of agricultural investment worldwide, something I will go into below.<sup>71</sup> But, like sports betting pools, sowing pools in Argentina retained a sense of masculine deep play where something else was at stake. The men I spoke to described a kind of fraternity, a way of getting one another’s backs, a way, also, of making a risky bet with the potential for huge returns. When Ricardo started farming, for example, an old wealthy family friend said, “I’ve got your back.” Other men told similar stories. This was evident, as I have traced in the previous chapters, in the cowboy ethic and brotherhoods. But there was something else about sowing pools. I grappled with how to understand this underlying pulse for a long time. Then, one day, one of the elder sons that I worked with triumphantly declared something to me that reminded me of the origin of betting pools.

“You can choose much in life except three things,” he said to me, counting them off on his fingers, “your parents, your nation, and your soccer team.”

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<sup>71</sup> McAfee, Andrew P., and Alexandra de Royere. "[Los Grobo](#)." Harvard Business School Case 606-014, December 2005. (Revised January 2007.)



To include in the magic of the family and the nation the soccer team was to index an ethic of manly status and honor. In a place where you cannot choose your own soccer team, what mattered was how your team – how you – played the game. And the game was played by men. To experience the thumping psychosis of a whole stadium singing in unison, faces painted, waving blue and white flags, roaring with passion for their team, was to feel the way in which honor and status were taken seriously.<sup>72</sup> The more fanatical you were, the more you had at stake.

Sowing pools amplified the masculine deep play to an extreme degree through capital. In the case of those Pampean men who were heirs and had become professional entrepreneurs, it was a complicated kind of play having to do with their position as elder sons – as heirs and providers. Indeed, Grobocopatel wasn't a king because he had popularized sowing pools, he was a king because he had made astronomical sums of money. Los Grobo's annual revenue was \$550 million in 2018. Grobocopatel's status was indisputable. Still, his vision for farming other people's land had not inevitably led to this status.

The late 1980s marked a moment when sowing pools began to take off. David, for example, first used this investment vehicle after a date he remembers so precisely – “the 26<sup>th</sup> of December 1987” – because it was the date that a torrential hailstorm destroyed all the crops all at once.

“The hail was as big as the palm of your hand,” he said.

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<sup>72</sup> See Eduardo P. Archetti's *Masculinities: Football, Polo, and the Tango in Argentina* (1999) (note that the football here refers to soccer). Also see for a most extraordinary description of this soccer fervor Paul Theroux's San Salvador excerpt in *The Old Patagonian Express* (1979).

David called on his best friends in Buenos Aires – a dentist, a pilot, a hare-hunter – and pooled together about \$25,000 dollars into an official sowing pool that he called Orion Sociedad de Hecho. He farmed on a percentage basis, splitting the profits proportionally in size to the investment, and over a few seasons gave them a return.

It was around this same time that David also began no-till farming. The agricultural technologies promulgated by US boosters post-World War II had made it to Argentina after the US-backed military dictatorship inaugurated a string of restructuring compromises. These included technologies that required investment, such as direct sowing drills and combines. Farmers assumed more debt, but many farmers were unable to pay back their debts. Beginning in the 1980s, families began either selling or consolidating their farms, leading to a loss of over 80,000 farm units and a 24% increase in farms over 5,000 hectares between 1988 and 2002 (Gras and Hernández 2009:351; see also 2014). The loss of smaller farms and the consolidation of larger ones made evident the possibilities available to upper class families who were able to draw on their contacts in order to save the farm. In David's case, even though at the time he was comfortably middle class and raised only \$25,000, he was able to use his network to be able to continue farming.

It was in this moment, too, that Los Grobo became a bigger sowing pool in the sense that it began not just pooling money but renting large tracts of land, contracting machines and labor, and direct sowing with transgenic seeds. By 1992 Grobocopatel had shifted from his father's 3,500 hectare farm in Carlos Casares (the same region where I was working), to renting and farming 70,000 hectares of land. This massive

jump in scale was possible due to the leasing/contracting model that permitted him to farm leased land with rented machines, as well as to the technology that every year made farming a little more like plug and play – plant this seed, apply this agrochemical, wait until this date, harvest and turn it in.

What sort of person did this agrarian revolution produce? As the horizons for Pampas farming began to expand right in front of the men’s eyes like some kind of magical thinking, they were in the midst of becoming, as Grobocopatel so succinctly put it, professional entrepreneurs. David, for example, was the first man in his family to receive a BS in Agronomy. But these men did not live in a vacuum. These men who were able to pull their farms through this time were not just “professional,” they were men who were able to exercise their status. They were able to successfully foment local ties and social capital to create sowing pools. Throughout the 1990s, as more families were forced to lease out their land, those men who stayed survived through this rather extraordinary reproduction of sentiments *through* sowing pools.

By 1996, when the soy queen arrived to the southern plains, the plug and play model still wasn’t inevitable. Los Grobo (inc. 1984) and El Tejar (inc. 1987, also family-owned by the Alvarado family) were still the two dominant players in a scene that didn’t quite yet embody the global pastoral. The soy queen changed everything. Suddenly, plug and play agriculture was a reality with the soy queen, and the most wonderful thing about her was that she “selfed” herself identically, unlike transgenic corn, which was hybrid. In Argentina farmers were permitted to save their seed – saving GM soybean seed is illegal in the US – which meant that the dollars per hectare invested

was far lower than in the US. Investors took note. MSU (also privately owned by one family, the Uribelarrea family) incorporated into a sowing pool 1997, Adecoagro (with the purchase of Pecom Agropecuária by Soros Fund Management) in 2002, and Ammagi/Bom Futuro (was est. 1977 but became independent in 1993, still owned by the Maggi family in Brazil) also began to grow at this time into the largest private soybean producers in the world.<sup>73</sup>

As the massive sowing pools began to lease more farmland each year, medium-sized farmers began to lease land as well. They drew on their local contacts to establish contracts with absentee landowners who were in Buenos Aires who then got a return based on the harvest. David, for example, started small and increased the land he leased to almost 5,000 hectares before the 2008 crash. At the same time, elder sons who had been sent to Buenos Aires to be educated began to take note. The younger men (average age 33-40) I worked with were all elder sons, and they had learned to narrate their Return Story, to the point where I realized that it was so ubiquitous as to have a structure that more or less followed: (1) the parents tell him that he should go to Buenos Aires and get educated, that he should do anything except farm (2) in the early 2000s agriculture begins to be profitable again (3) he begins a sowing pool with friends that in many cases is more profitable than his job as a banker or lawyer (4) something happens in the family that makes it necessary or emotionally correct for him to return (5) the family sets it up so that he can be more comfortable than if he were in the city in order to begin to take over the family business.

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<sup>73</sup> See Gustavo Oliveira and Susana Hecht “Sacred groves, sacrifice zones, and soy production: globalization, intensification, and neo-nature in South America” (2016) for an excellent investigation of these sowing pools.

For example, Daniel Weber was an elder son in Colonel Vallejos who had been a banker at HSBC in Buenos Aires and who had started a sowing pool with his brother in 2001. After several years the sowing pool was making more money than their salaries combined. Daniel quit his job as a banker, moved back, bought a small house on the outskirts of town, and took over as the accountant, seller, and buyer of the family farm and sowing pool. Another elder son, Gregorio, was a successful litigator in Buenos Aires who had followed a similar pattern after his father abruptly passed away in the early aughts. He returned to Colonel Vallejos with his wife, although she had many misgivings about moving her entire life to this tiny town where everyone knew everyone's business.

When they arrived to the rural plains from the city, there was a kind of shift that happened. In their cases, as with Diego, Ricardo, Fernando, and other men in their mid to late 30s, they embodied that shift which characterized them both as heirs *and* professional entrepreneurs. As anthropologists Lisa Rofel and Sylvia Yanagisako have traced, family labor converted into capital is central to the ongoingness of numerous enterprises, and the family-business-farms of the Pampas were no exception.<sup>74</sup> Local wisdom taught that only sons were able to have the extreme moral commitment that arose unbidden, this kind of feeling that made the nation, the family, and the game

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<sup>74</sup> Rofel and Yanagisako point out that, "An unintended consequence of the inattention to kinship in research on transnational economic ventures is the endowment of capitalism with reproductive powers independent of kinship sentiments and bonds. In this account, firm owners, investors, and professional managers emerge as rational seekers of profit in corporate capitalism. Family businesses, in contrast, are treated as archaic survivals of an earlier stage of capitalism...the data demonstrate without a doubt that family ownership and control of firms prevail in Europe as well as in other regions of the world. In Italy, at the turn of the twentieth century, family firms constituted 75-95 percent of all registered firms...The comparable percentages were 7-80 percent in Spain, 75 percent in the United Kingdom, more than 90 percent in Sweden, 85 percent in Switzerland, and 80 percent in Germany" (2019:219). Latin America is no exception. In Argentina, it is estimated that at least 80% of the country's 1.2 million firms are family owned, with an estimated 92% of family involvement in established businesses. See <https://www.babson.edu/media/babson/assets/global-entrepreneurship-monitor/GEM-2019-2020-Family-Entrepreneurship-Report.pdf> for more.

(because it is played by men) feel like fate. But, as Rofel and Yanagisako point out, the category “capitalist,” “father,” and “son” are not static – they are situated, vibrant categories shaped by cultural and historical circumstances. The son as social actor was shifting in relation to the influx of capital and technology in the Pampas. Quite suddenly he could reassert his independence. But he had to continually show that he was able to perform his duty to family. There were multiple ways to demonstrate this filial devotion, which guaranteed, at least in the moment, filial succession. The performance of this devotion ranged from (1) completing menial and mind-numbing labor to (2) demonstrating continuity through “correct” social ceremonies and marrying the right person (3) employing the latest and best farm technologies (4) accumulating capital by contracting and selling at the right time to the right brokers. I treat each one briefly below.

(1) Menial labor was one of the key devotional performances that enabled the sons to check on the land, to be involved, and to demonstrate to their elders that they were not “above” doing what needed to be done. This was in part because it connected them so intimately to the formation of the landscape itself, and in part because not a single landowner in the Pampas *ever* drives his own tractor. I went on hundreds of incredibly boring errands to perform some menial task – with Daniel to fix downed electrical fences, with Gregorio to shovel hay (“Look what a law degree can get you!”), with David to check on rust in the corn, with Diego to channel water – but never, ever did they consider getting up into the tractor to sow the land themselves. It was Ceferino who taught me how to drive a tractor, it was Antonio, Carlos, and Juan who I sat with

in the tractors and the combines as they trundled at an agonizing 5 kilometers per hour across the earth. This complex boundary that the heirs didn't cross distinguished them in their status. Because of this, they had to demonstrate their moral commitment in other ways. After I visited one estancia, had a lovely lunch with the mother, and spent several hours with the sons fixing a truck that had broken down in an alfalfa field, we were driving back to town in the dark when the mother called the son's cell phone to reiterate something that I should know. She asked him to hand the phone to me, and she repeated to me in fast Spanish that she needed to let me know the most important thing, it was what I should take away from my visit: "My sons do everything themselves."

(2) The performance of patriarchal continuity was also established through marriage. Every father was looking for a "good match" for his children, and while some of the fathers might admit that this had to do with class (sometimes revealed through sayings such as he comes from a "buen familia" – a good family) I never, ever heard them speak about it through race. The racial aspects of finding a good match were implied. For example, I asked Diego about this many times, and finally after repeated prodding he said, look, mira, we never *ever* use the word mestizo. No one would ever, *ever* use the word mestiza to describe Carolina, nor even think to imagine describing her as working class, but Argentines are "very, *very* aware" of race and class. Diego was considered white and upper class while Carolina was considered non-white and working class, and this ultimately meant that she was not a good match for him – and not the other way around i.e. he would have been a good match for her, according to

her family. Ultimately, Diego performed his filial devotion by finding a white woman that his family approved of and with whom he had a baby. The continuity of marriages between “like” families was fairly strong, and it was reinforced through local ceremonies of value and tradition such as the quinceañera, a girl’s 15<sup>th</sup> “coming out” birthday party that, according to David and Juli’s cohort, had become more elaborate in the past decade. Like a debutante ball, the quinceañera announced the girl’s passage from a child to a woman who was ready to be married. The gatherings I attended were modern – the families did not actually want to marry their fifteen-year-old daughters off to a suitor – and yet they also performed powerful boundaries that were historically colonial. In most cases, the celebrant wore an extravagant dress and danced with her father, who then passed her on to other waiting relatives. This was followed by dinner, dancing, a toast, cake, and more dancing. The amount of money spent on these parties was astronomical. Many families went into massive debt throwing quinceañeras that often assumed the grandeur of large weddings. This is because the parties were symbols of social status – the more elaborate the party, the richer the family. Of course, I was told, most of the time everyone knew what each family could afford. They would whisper about it over the punch bowl or at dinner, lowering their voices and describing whether the family had money to throw such an elaborate party, and in so doing establishing distinction. But it was the performance of this status more than anything which ensured the continuity of marriage within class – and race. Sons were aware of who was “coming out” and it was fairly common for them to recognize local families’ prestige. A handful of last names were well-known within the region, and it was not



uncommon for people to understand through the patrilineal succession of these families the containment and guarding of status.<sup>75</sup>

(3) The performance of this filial devotion was also established through an entrepreneurial and professional spirit that knew how to employ the latest technologies. On the one hand, the farmers performed the knowledge of technologies by knowing which seeds to plant, which agrochemicals and fertilizers to use, and when to sow and harvest. Knowing all these things required a steady and ongoing education that was provided by the multiple “charlas,” INTA classes, and agricultural expos that the farmers were invited to, as well as through farmer groups such as CREA, which met once monthly to exchange information and sometimes more often to attend investment/business opportunities. In other words, the men had to draw extensively on their networks, and extensively on their social capital, in order to stay up to date with all of the latest farm technologies.

(4) At the same time, to show that they had a sufficiently deep emotional attachment to the farm to ensure its continuity, it was also necessary for them to keep an eye on the markets. To keep up with soybean’s 30% volatility they drew extensively on contacts and social capital. Reading the markets was difficult, time consuming, and took a particular kind of expertise that many of the men admitted to not having. Two men in the CREA group – Daniel and Hugo – were known for having the best understanding of the international markets because they were ex-bankers, and the group

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<sup>75</sup> In an extraordinary study by Verena Martinez-Alier, *Marriage, Class, and Color in Nineteenth-Century Cuba* (1989), she traces the historical colonial mandates around intermarriage that determined the “choices” of sexual and marriage partners. Like Cuba, colonial Argentina was dramatically formed by Spanish colonial mandates that, even as policies were discarded for being anachronistic, continued to inform marriage choices.

drew on their knowledge and suggestions. Daniel, who offered to teach me about how to play the markets, told me that you must never, ever get swept up in the momentum. On the contrary, when you begin receiving thirty Whatsapp messages and emails a day from brokers and Cargill and Nidera and Lartirigoyen and local trading desks, that is precisely when you shouldn't sell (he quotes Warren Buffet here: be greedy when others are fearful...and fearful when others are greedy). To exercise restraint was to be good at the deep play of the game, one which required him to "play the long game," where long is buy and short is sell.<sup>76</sup> To play the long game, Daniel read the monthly USDA reports, skimmed market analyst blogs, and also looked at the Chicago Board of Trade Futures Contracts once a month to see if they were short or long.<sup>77</sup> His decision about when to sell as well as his willingness to feel the ground constantly shifting beneath his feet was intimately tied to how he conceived of what he called his "rooting" and "responsibility" to the land of his family:

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<sup>76</sup> Daniel, for example, in August 2017 was selling to four places: directly to Nidera, directly to Molinos Rio de la Plata, and directly to two brokers (*corredores*). He was constantly shifting who he dealt with and simply went to "whoever pays more," except when it concerned multinationals such as the despised Monsanto, whom he would never deal with. He had, he said, become accustomed to *feeling* the 30% volatility at which soybeans fluctuated. This was, for traders, "the perfect environment in which to trade" because it meant that if you bet correctly you could do quite well for yourself. Producers, merchants, processors, users – such as Cargill, PepsiCo, etc. – were all the people who actually needed soybeans. Swap dealers, on the other hand, and Managed Money were all speculators – these were the folks who buy in a long position in May and sell a short one in September. So when the market was getting to a maximum, he could see that when the long positions of the speculators were high, then the price started to get higher, and when they were in short positions they sold. When the managed money was very long, for him it was the moment to sell because it meant that they had inflated the price "por valores encima de los normales" to values above normal.

<sup>77</sup> Julio looks at the prices in Chicago <http://www.cmegroup.com/company/cbot.html> and for oilseed trade <http://www.cmegroup.com/trading/agricultural/grain-and-oilseed/soybean.html> and Rosario <http://www.rofex.com.ar/>, which are more or less equivalent, although one has to learn to read them. In Chicago, for example, the price might be 960'2 which is \$9.602 per bushel. A bushel was an imperial and US unit of weight equal to eight gallons, a carryover from the Norman Conquest of England that sought to institute standard weights for tribute circa 13<sup>th</sup> century. Currently the bushel depends upon the commodity being measured as well as the moisture content of the commodity. So, for example, shelled maize at 15.5% moisture by weight is 56 pounds (lb.) or 25.4012 kg. Soybeans at 13% moisture by weight is 60 lb. or 27.2 kg. To find the price in Argentina, which uses dollars per metric ton, you divide this by 2.719 which will give you the dollars per ton – in this example that is about \$353 per ton, which is equivalent to the price on ROFEX. Also to note is the fact that the ton is a unit of measure as well, of which there are two recognized weights: the ton and the tonne. Because they sound the same, in the US it is common to say metric ton to denote tonne. A ton is 2,000 pounds (907 kg) and a tonne is 2,240 lb. (1000 kg). To find the price that a producer would receive, he or she will then multiply \$353 per ton (353) by 0.7 (which is essentially the 30% taxes that are applied) and that is about \$247. One hectare averages about 3 tons of soybeans, and of that the government takes about 300 dollars. With taxes that means that – without factoring in the costs of agrochemicals, seed, labor, machine, storage, etc. – in this example 100 hectares would bring in \$74,100.

“They [the traders, brokers, investment funds] look at it only as a business whereas for us it is a lifestyle and a business. Knowing that previous generations have had a link with the land we work creates roots (*nos genera arraigo*) and a responsibility for us. Never in my life, not even in the worst moments, would it occur to me to sell the land that comes from the family. It would be to disappoint all the ancestors. Nor do I feel that the land is mine even if my name appears on the papers. It is a loan that has been made to me while I am alive and that I will pass on to those who come after me.”

His daily dawn-to-dusk labor guaranteed the continuity of his family through the farm, which Daniel captures magnificently in his description of “roots.” The moral commitments and sentiments that were kicked up when the men drove their trucks through the dust in the setting sun between rows and rows and rows of soybeans were specific. They confirmed their belonging in the landscape, a landscape that, like their role as *sons*, was a social actor that was historically and culturally contingent, always shifting. Filial devotion as I am describing it was tied specifically to the cultivation of the land, which was metaphorically and physically connected to the son’s ability to choose the right partner, and in so doing to carry on the family farm. In this sense filial devotion was contingent not just on the *pool* but also on the *sowing*. *Siembra*, the Spanish word for “sowing,” comes from the Latin *seminare*, forming the English *seminate* or *inseminate*. Metaphorical slippage between these two acts abound, from Virgil’s *Georgics* to the present day, where insemination and sowing go hand in hand to populate virgin land. In the Americas and in other settler colonies this took on a particular urgency. This urgency assumed one of the most violent and horrific forms of

accumulation, the plantation, which in its landscape structure imposed alienation and proliferation. Jill Casid calls these cartographies of patriarchal desire (2005). The founding imperial gesture, she suggests, was sowing seed, where to sow was also to produce imperial/colonial subjects to populate, to reproduce, and to work the plantation machine.

In the sowing of genetically modified soybeans, the farmers drew on the landscape structure of the plantation, a historically situated form of accumulation dependent on alienation and racial subjugation. Each plant was identical and evenly spaced, each plant had been bred to be a certain height with certain kinds of seeds that could be easily harvested and that would not break in storage and in transit. In sowing the land they claimed it as their own – “Those who don’t work the land lose it,” said David – and they also claimed it for their family. Over and over every year, and sometimes even twice a year as in the double-planting of soybeans, they sowed the land of their ancestors and their future progeny. But they also, of course, sowed the leased land of families with whom they had absolutely no emotional investment – and in most cases this land was far more extensive than the land they actually owned. In the case of the larger farm investment firms, by 2016 Adecoagro had 437,245 hectares in Argentina, Brazil and Uruguay; SLC Agrícola managed 384,070 hectares in Brazil; El Tejar had over 1 million hectares in Argentina at its peak; and Los Grobo leased over 300,000 hectares at its peak leasing in 2010/2011 (Oliveira and Hecht 2016:261-265). The farmers I was working with were technically competing against these massive agricultural investment funds – all of whom, by the way, promulgated the same line to

their investors about establishing “sustainable and efficient farming” throughout the world, thereby making it *better* than if it were in the hands of local producers.<sup>78</sup>

It was difficult for small farmers to compete with these firms, but the two things that made them able to do so were precisely those two historical movements – land ownership concentration and the agricultural revolution – that were drawing them into a nodal point of global self-awareness. On the one hand, they competed by increasing production by leasing land and controlling the quality of harvests through use of glyphosate and GM seeds (Oliveira and Hecht 2016:260)<sup>79</sup> and by using silo bags. Silo bags were especially important because they allowed the producers to keep the seed for up to two years without a major infrastructural investment into an expensive steel silo. “The producer defends himself,” said Daniel, using the language of war, “and the form in which he defends himself the most is not selling – he waits for the right moment – and the silo bags permit the producer to capture the best prices.”<sup>80</sup> On the other hand, they competed by siphoning their accumulated capital back into emotional sentiments that would serve to reproduce the family.

While in some cases it was true that capital led to the emotional breakup of families – to envy, greed, and resentment – there was something about such feuds that actually served as a competitive motivation for siblings. For example, when Daniel and

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<sup>78</sup> This model has since been copied on smaller scales in agricultural investment funds throughout the US; I’ve informally chatted with two founders of separate agricultural investment firms who parrot the same line about efficiency. After a glass of wine, the founder from Los Angeles told me that it was obviously all about the shareholders, for whom he claimed to have gotten an astronomical 26% return from hundreds of thousands of leased hectares in Australia. When I asked if he had a website he said, “We like to keep a low profile.” It is a ripe area for further research.

<sup>79</sup> Oliveira and Hecht write: “Since the intensive use of glyphosate and other herbicides drastically reduces the contamination of harvests with weeds and leaves, farmers now consider glyphosate-resistant GM varieties necessary in order not to incur price deductions at the point of delivery, deepening the technological treadmill and the farmers’ need for finance” (2016:260).

<sup>80</sup> There are 3 sizes of silobolsas, 60 meters – 180 tons; 75 meters – 220 tons; 100 meters – 300 tons.

his brother took over the farm after a terrible family spat with their uncle, they had to prove that they were able to run the land efficiently. In this case, not just to themselves or their father, but to the whole family. Almost every family I talked to cited some kind of feud that was ongoing, whether it was between uncles, brothers, or sons. Stories abounded about class mobility and masculine deep play, about an angry wife going so far as to rip out the plush red stair carpet so that she could take it with her when she left, about fathers who encouraged their daughters to marry only “estancieros.” The reproduction of masculinity was key to what Yanagisako calls “betrayal as a force of production” (2003:114). In one case, after outsized fights with their families, two male friends went on a skiing trip in Bariloche and met some guys from Dallas who told them a story about this one time that their friend met a woman, took her home, and woke up in the morning with his arm under her head. He looked over and realized that she was one of the ugliest women he had ever seen. “What does a coyote do?” They asked. “If he gets caught in a trap he chews his own paw off.” Betrayal stories were part of the deep play that allowed the men to get away with things they wouldn’t have otherwise done.

This was apparent especially in the contrast between the fields that farmers owned versus the fields that they leased. The farmer cared deeply for the land that he owned, rotating it every season and building up the soil, removing weeds and planting cover crops so that the soil would be thick and fertile for the next generation. This was part of his duty to sow, to choose the right partner, to create continuity through reproduction of the correct kind of filial devotion. But as for the land that he leased, he

only wanted to make sure that he could plant and harvest soy. Year over year, absentee landowner's land was planted with soybeans, and with no rotations and the use of the same chemicals year over year, pests and weeds resistant to agrochemicals invariably emerged, spreading across the plains. The men's kinship sentiments were central to the conversion of capital, but these sentiments created both the landscapes of the home farm as well as the landscapes of the leased plantations. At the same time that they sowed the reproduction of the family they were becoming aware of themselves as being part of a primal global scene, one which arises from the massive reorganization of land ownership. They shared experiences that arose from the soil of globalization, experiences that were reshaping what it meant to be an *heir*, a man who was professional and who could congeal into the farm kinship sentiments of global life.



Figure 13. Soybean breaking through the topsoil.

## **Metamorphosis 2: Soybeans**

The powerful expression of conquest conveyed by the herd, culminating in a fever that crushed the pampean soils to sand by the 1930s, was not felt again until the late 1990's in the form of soy fever, but that did not mean that nothing happened in the intervening years. During this period of so-called "agricultural stagnation" the men continued to cultivate the cattle-man bond, and the ranchers were in fact being drawn into primal modern scenes that would, like the years leading up to the period from



1880-1930, set the groundwork for an explosive agricultural movement. The forces that rural modernization brought together in the 20<sup>th</sup> century were informed by the sense that the spirit could survive again by moving – the way it did in the 1930s – but after almost two decades cultivating genetically modified soybeans it was clear that this new kind of movement did not convey the same kind of confidence in the future.

The 1930s Pampas Dust Bowl had been a reckoning for pampas sharecroppers and tenant farmers. Many moved to the north, where cotton and sugar cultivation were expanding, and others were absorbed into the urban workforce. Landowners called “absentee” also decamped to Buenos Aires, hovering around 62 percent by 1937 (Rock 1985:237). Sunflower, oat, and barley production all increased through the 1940s, but in general the major trend continued to reflect the same pattern as in the western Pampas: the substitution of livestock and forage for cereals and oilseeds. It would take at least another forty years for extensive agriculture to once again be attempted in the western Pampas.

During those years the conquest ecologies initiated by cattle in the name of a spiritual and material progress and then transmuted by sheep and agriculture into the obliteration of the very natural resource base led the settlers to seek out new methods of exploitation on those very same soils. It was from such aeolian erosion that emerged the initial idea to sow directly into soils without extensive ploughing – an idea that had antecedents in tillage methods imitating natural sowing processes, but when applied to large tracts of land is usually credited to agronomist Edward H. Faulkner’s *Plowman’s Folly* (1943) that blamed the moldboard plow for the pillage of western soils. “The fact

is,” he wrote provocatively, “that no one has ever advanced a scientific reason for plowing.” Still, it was not until after the second World War that this question was perversely transformed to fit plantation agriculture. If it was possible to grow food without the plow on small plots, mimicking as he and Masanobu Fukuoka had natural processes, it proved more difficult on the vast tracts of land that had turned to dunes in the semi-arid regions of North and South America. 2-4D and Paraquat, more widely produced post-WWII, became the herbicides and weed-killers of choice in order to prepare the soil for no-till sowing. But this did not happen all at once.

In the western Pampas, the total number of sheep began to decline after the drought, and especially after WWII, while the total number of cattle increased. East of the thorn forests where the Pampas Dust Bowl had been most severe, agriculture began to in the 1970s tentatively expand onto land that livestock had been holding. This pattern was seen all over the pampas, and the tendency was called a technological and economic “boom” due to the dissemination of hybrid seeds and a two-harvest system that rotated wheat with a legume, such as soy.<sup>81</sup> Soy, farmers had for a long time known, had the benefit of fixing nitrogen in the soil due to its symbiotic relationship with rhizobia bacteria, making it an excellent crop with which to rotate grains. Argentine agronomists began to formalize experiments with direct sowing and cover cropping, and in 1974 formed the first National Center of Soy in Marcos Juárez, importing 80 tons of soy varieties from the US to disseminate and grow (Barsky and Dávila, Location 461). Historians Osvaldo Barsky and Mabel Dávila argue that the expansion of

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<sup>81</sup> See Carla Gras and Valeria Hernández. 2016. “Hegemony, Technological Innovation and Corporate Identities: 50 Years of Agricultural Revolutions in Argentina.” *Journal of Agrarian Change* Vol. 16 No. 4:675-683.

soybeans during this time must also be seen in relation to something that was perhaps even more decisive than the Green Revolution, and a glaring example of marine conquest ecologies: the massive collapse of the Peruvian anchovy population during the 1972 El Niño warming event. The precipitous decline of fish meal production – a major protein supplement in compound feed – led agronomists to experiment with other proteinaceous oilseeds, especially soybean and cottonseed, but also with leftovers from processed corn, wheat, and algae. By the end of the 1970s around two million hectares were sown with soybeans in the pampas.

Still, the western Pampas continued to suffer from erosion well into the 1980s. “The whole countryside used to go flying by the window!” Said David in a moment of ebullience, gesturing with his hand across the length of the truck window while we drove through his fields. It was only really with the wide dissemination of no-till sowing – formalized with the formation of the no-till association (AAPRESID) in 1989 – that agriculture began to seriously displace livestock in the western Pampas, and even then cattle were not so much displaced as moved to lowland areas on estancias that, for example, could produce forage but not crops.<sup>82</sup>

Then, in 1996, the energy that the herd had once brought to the western Pampas was, suddenly and spectacularly, renewed with Roundup Ready (RR) soybeans. RR soybeans were a dramatic leap of faith expressing the pinnacle of a rural modernization that sought to sow, once again, semi-arid soils with agriculture. Still, unlike the

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<sup>82</sup> “Lowland” here describes what farmers, not ecologists, referred to as lowlands. The elevation variation between their fields was so slight and yet so consequential. To me, the land would often look so very flat while to land managers it looked undulating. For example, just a slight difference of a few inches on David’s farm would ensure that the rain would collect in the lower areas, flooding them and, when the water dried, leaving salty residues. This is why he would put grains such as forage sorghum in these “lowland” areas – the sorghum was able to tolerate small flooding and it would serve as forage for cattle.

breathless momentum that settlers had once found in the herd, farmers were at first not sure about soybeans. It was hard for them to believe that these plants contained within them the ability to sequester glyphosate and to live through multiple applications of the herbicide. Furthermore, soy did not create the sort of social worlds that cattle did. Like the modernism of urban environments post-WWII, which attacked and destroyed what Marshall Berman has praised as the “moving chaos” of 19<sup>th</sup>-century urban life, soy presented a rural modernism that had as its kernel the flattening and simplification of the country. Social life with soy promised to be uniform and sterile, guaranteeing none of the freedom that cattle had ushered in a century before. The high that eventually ensued thus came not from movement itself but from the farmer’s burgeoning ability to grasp the immense consequences of a new era, from their capacity to get a grip on the changing world born from the very spirit with which they sowed anew the plains.

Where it took cattle three hundred years to establish conquest ecologies throughout the plains, it took soy just three decades. Like the modern cattle breeds that ushered in the modernization of pampa grasslands “by hoof and tooth,” the soybean varieties ushered in the globalization of pampa fields. The soybeans did not have hooves and teeth, but they did have a gene embedded within them that made them able to live through applications of an herbicide that would have otherwise killed them. Hereford had been made in concert with England’s industrial revolution, and RR soybeans were made in concert with the United States’ massive industrialization of food production. Both were bred to evoke and enact a particular kind of feeling of control and conquest that would impart to the farmer-ranchers – and eventually to the

consumers – the processes and powers of capitalist energy. RR soybeans were innovative and almost extravagant in their powers. There wasn't anything they could not do.

This feeling that soy could do anything made it an object of veneration and of hate. It was a triumph of modern technology at the same time that it was also emblematic of a widespread and ongoing ecological imperialism. It's metaphorical hooves and teeth, the way that it would transform the pampas landscapes was, like Hereford, embedded within its DNA. It had been shot with a gene gun containing an enzyme cloned from a Petunia plant and a bacterium that enabled it to live with glyphosate.<sup>83</sup> The herbicide glyphosate usually works on plants by inhibiting a key enzyme (EPSPS) that synthesizes aromatic amino acids essential for growth. When glyphosate is sprayed it is absorbed through foliage and transported to growing points, inhibiting the enzyme and causing shikimate to accumulate in plant tissues, diverting energy away from growth processes and within several days killing the plant.<sup>84</sup> RR

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<sup>83</sup> In more technical terms: The first RR soybean variety was known as GTS 40-3-2. The transformation method, according to the Agri-Biotech Application, was "microparticle bombardment of plant cells or tissue." Scientists at Monsanto and Asgrow shot a regular soybean germplasm with a gene gun containing a plasmid with glyphosate tolerance. This plasmid contained a version of an enzyme from a strain of bacteria (CP4 EPSPS) from a glyphosate waste column. The expression of the CP4 EPSPS was regulated by an enhanced 35S promoter (E35S) from cauliflower mosaic virus (CaMV), a chloroplast transit peptide coding sequence from *Petunia hybrida*, and a nopaline synthase element from *Agrobacterium tumefaciens*. This transformation made the soybean "herbicide tolerant," able to live through applications of a chemical normally lethal to plants. The germplasm of GTS 40-3-2 was used by breeding scientists in Argentina in order to adapt it specifically to the conditions in the southern cone. Later, another "event" would be created and named MON-89788-1, or, Roundup RReady2Yield™ and "stacked traits" of herbicide and insect tolerance would be created by traditional breeding of two parental lines, from MON 87701 and MON 89788, known as Genuity™ Insect Protected Roundup Ready 2 Yield. See for more: [https://web.archive.org/web/20111208201907/http://www.isaaa.org/gmapprovaldatabase/trait/default.asp?TraitID=13&Trait=Insect Resistance and Herbicide Tolerance](https://web.archive.org/web/20111208201907/http://www.isaaa.org/gmapprovaldatabase/trait/default.asp?TraitID=13&Trait=Insect%20Resistance%20and%20Herbicide%20Tolerance) <https://web.archive.org/web/20110930182016/http://www.isaaa.org/gmapprovaldatabase/events/default.asp?EventID=94> – also see for all Soybean "events" – <https://web.archive.org/web/20111006035650/http://www.isaaa.org/gmapprovaldatabase/cropevents/default.asp?CropID=18&Crop=Soybean> [https://web.archive.org/web/20111208201328/http://www.isaaa.org/gmapprovaldatabase/trait/default.asp?TraitID=1&Trait=Herbicide Tolerant](https://web.archive.org/web/20111208201328/http://www.isaaa.org/gmapprovaldatabase/trait/default.asp?TraitID=1&Trait=Herbicide%20Tolerant)

<sup>84</sup> Shikimate, or shikimic acid, is a biochemical metabolite in plants whose name comes from the Japanese flower *shikimi*, or Japanese star anise (*Illicium anisatum*), from which it was first isolated.

soybeans, because they had a version of the synthase resistant to glyphosate's inhibition, did not accumulate shikimate, and therefore did not die.

But, also like Hereford, it was the way soy was exploited, the way that it was sowed, sprayed, and harvested, that made it transform pampean ecologies into new conquest ecologies. Cattle had not by themselves destroyed pampean ecologies, and neither did soy. The genetic component was of course critical, but it was the plantation structures into which soybeans were planted that transformed the pampas into what so many observers described as a "sea of soy." No-till farming and glyphosate – much like the fences and water tanks of the 19<sup>th</sup> century – were the infrastructural technologies that enabled soy ecologies. These were, of course, also ecologies of belonging. The no-till fields created places in which certain things and people belonged: tractors, agronomists, and glyphosate displaced cattle, ranch hands, forage, and wheat. The question that remained for the farmer-ranchers, even as they planted more soy, was whether they themselves belonged within this new scene.

The shift was vertiginous. In 1990, farmers planted about 5 million hectares of soybeans. Ten years later, this number had reached 12 million, and by 2012/13, when the peak of soybean fever was reached, farmers planted a little over 20 million hectares in RR soybeans.<sup>85</sup> Between 2012 to 2016 was the height of soybean production. During the growing season that I was there, between 2015/16, it is estimated that about 20,500,000 hectares were sown, the largest amount of any year before or since. The floods between 2016 and 2017 wiped out at least 2 million hectares, and by 2019/20

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<sup>85</sup> This supplanted other crops including sunflower, corn, wheat, and oat, as well as perennial forage fields of alfalfa, vetch, forage sorghum, etc.

the total area planted in soy had dropped to a little over 14 million hectares.<sup>86</sup> Still, despite this decrease, the Argentine oilseed complex (including soybeans, sunflower, peanuts, and their oils and meals) was still the most valuable export sector for 2019, producing \$18 billion worth of exports (in comparison, the next most valuable sector, automotive, exported \$7.1 billion).<sup>87</sup>

Three intertwined processes and activities transformed the shape of pampas fields as well as the social conditions and relationships that helped to bring into being such forms: no-till sowing, glyphosate, and transgenic seeds. Each of these required different modes of action that the farmers quickly adopted, and together they formed an almost incandescent project that traveled from one field to the other until it was possible when driving through the pampas in the summer to see for as far as the eye could see fluttering fuzzy leaves of soybeans. As with all projects, new forms rose up with these simplified fields. Cattle had brought thistles to the pampas; RR soybeans brought weeds resistant to glyphosate. As with the cattle project, the conquest ecology created in the wake of RR soybeans was lucrative for developers. In other words, weedy disturbance ecologies were not resistance ecologies, as they were sometimes painted to be by soybean detractors throwing “weed bombs” into fields (Beilin 2017). Perhaps the weeds changed the farmer’s bottom line, making annual herbicide expenditures more costly, but at the end of the day weeds put money back in multi-national company’s pockets. The same companies that sold transgenic seeds also sold herbicides to treat

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<sup>86</sup> SISA Soy Report 2019/2020. [https://www.argentina.gob.ar/sites/default/files/inase\\_if\\_soja19\\_2020.pdf](https://www.argentina.gob.ar/sites/default/files/inase_if_soja19_2020.pdf)

<sup>87</sup> [https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?fileName=Oilseeds%20and%20Products%20Annual\\_Buenos%20Aires\\_Argentina\\_04-01-2020](https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?fileName=Oilseeds%20and%20Products%20Annual_Buenos%20Aires_Argentina_04-01-2020)

those fields. For them, to say that fields were disturbed was to say that the economy of agribusiness was alive and well.<sup>88</sup>

One of the first glyphosate-resistant weeds to emerge in the soy fields was Johnsongrass (*Sorghum halepense*), and the tale of this grass is in some sense the tale of the evolution of glyphosate resistant weeds in Argentina. It was a perennial grass native to the Mediterranean introduced to Argentina as forage in the early 20<sup>th</sup> century. However, it quickly became apparent how misguided this was. The grass was so invasive and difficult to eradicate that it led to massive agricultural productivity losses and by the 1920s it was known as the “farmer’s terror” (Binimelis et al 2009:4). Sales and imports were forbidden in the 1930s and in 1951 the government banned the sowing and breeding of the grass. Still, the qualities which made it so invasive – a sprawling and scaly rhizome, 30,000 seeds per plant – continued to plague farmers. By the 1970s herbicides such as Monosodium Methanearsonate (MSMA) and Trifluralin became available in the Argentinian market, and farmers began to combine these with mechanical tilling to control the invasive weed. In 1977 the National Stockbreeding Association launched a Pilot Plan to try to reclaim infested fields with cover crops, rotation practices, and mechanical measures, and in the 1980s more herbicides became available, including Dalapon, Pirifenop, and glyphosate (Binimelis et al 2009:5). But it was really with the introduction of RR soybeans and the increased use of glyphosate that the weed became, according to farmers, eradicated. One farmer interviewed by ecologists Rosa Binimelis et al described the shift: “Glyphosate [became] the essential

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<sup>88</sup> Marshall Berman makes the point more generally: “Catastrophes are transformed into lucrative opportunities for redevelopment and renewal...To say that our society is falling apart is only to say that it is alive and well” (Berman 1982:95).



tool for fallow-land and soybean cultivation in 1996. Johnsongrass practically disappeared from the rolling Pampas except from patches on uncultivated land...but none in agricultural land” (ibid.).

Glyphosate was, in the beginning, a cure-all, a saving grace, a simplified post-emergence herbicide that, when combined with the surfactant POEA (*polyethoxylated tallow amine*), controlled a diversity of weeds *after* soy had emerged.<sup>89</sup> In addition, due to chemical production in China the price of glyphosate by itself had plummeted from around forty US dollars per liter in the early 1980s to less than ten US dollars per liter by 1992 (Wahren 2020:76). Farmers always told me that, at first, planting RR soybeans meant using *less* herbicides. And this was true. Between 1996 and 2001 the total amount of herbicides applied per hectare was much lower (Binimelis et al 2009:5). However, weeds quickly responded to the new glyphosate-rich environment. Like the thistle conquest ecology, which emerged in the context of ongoing cattle disturbance, glyphosate-resistant weeds emerged in the context of ongoing glyphosate disturbance. The rapid evolution of these weeds was extraordinary – in the case of GR Johnsongrass, the plants developed the ability to reduce glyphosate translocation to their meristems, as well as to prevent glyphosate leaf uptake, therefore reducing glyphosate’s normally lethal inhibition of plant metabolism (Vila-Aiub et al 2011). Argentine farmers in Salta warned the National Agrifood Health and Quality Service (SENASA) as early as 2002 that they had detected glyphosate resistant Johnsongrass, but it was not until 2005 that this was internationally confirmed, and by then, according to many producers, it was

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<sup>89</sup> Roundup had contained this combined formulation since going to market in 1974, but when the patent expired in 2000, a number of companies began manufacturing generic glyphosate which farmers would sometimes buy alone and then mix with surfactants.

too late. The spread was precipitous, and by 2009 GR Johnsongrass had invaded an estimated 100,000 hectares (Binimelis et al 2009:6). To control the weed, farmers began to return to older and more toxic herbicides, such as MSMA or 2,4-D, increasing both health and environmental risks as well as production costs.

Still, soybean fever raged on. Farmers continued to plant more no-till RR soybeans, and weedy conquest ecologies continued to evolve rapidly to meet the challenges of the new environment. In this same year, 2009, Palmer amaranth (*Amaranthus palmeri*) emerged as another weed that had, incredibly, managed to develop glyphosate-resistance. Palmer amaranth developed resistance in a different way than Johnsongrass. It began to replicate the gene responsible for the production of the EPSPS enzyme, reducing the blocking capabilities of glyphosate. It also began to translocate, detoxify, and sequester absorbed herbicides through the increased activity of enzyme complexes (see also Cypher 2021). Palmer amaranth grows big and sprawling and can produce an astounding 100,000 to 500,000 seeds in a lifetime. In 2015/16 in the province where I worked, both GR Palmer amaranth and GR “rama negra” (*Conyza spp.*, or horseweed/fleabane) were two of the most troublesome weeds that had evolved glyphosate resistance. Interestingly, unlike the introduced Johnsongrass, both Palmer amaranth and horseweed have a long history in the Americas, histories which have been overlooked by plant scientists but which are key to the evolution of these plants as “weedy” invaders. Horseweed was used as a medicinal plant to treat dysentery and sore throat, while Palmer amaranth is a weedy cousin of grain amaranths, once one of the main subsistence crops for American

Indigenous populations. Spanish conquistadors banned grain amaranths in the 1500s in a violent edict epitomizing prime ecological imperialism – the other side of which was the importation of European species – in an effort to destroy the material and symbolic power of this important Indigenous plant. Even to this day powerful biases against this plant continue, such as the banning of its use for red dye, as well as the ongoing prejudice against it as a nutritious grain with delicious and healthy leaves mild in flavor and similar to spinach.<sup>90</sup> The soybean project thus ushered in along with it the rapid evolution of certain plants that also thrived in the plantation condition (Tsing et al 2021).

During this time, besides becoming the ultimate symbol of globalization, and ushering in the concomitant experience of globality, soybeans became much more than a crop which had transformed the face of the southern plains. The Kirchner administrations (2003-2015) began using soybeans as a political tool, disparaging soybeans at the same time that they exacted 35% export tariffs (*retenciones*). In other cases, as conflicts over deforestation and eviction in the north intensified and herbicide resistant weeds became a real problem, regulators and breeders blamed farmers. They claimed that farmers were illegally deforesting land, and that rusts and weeds wouldn't evolve so rapidly into such monstrous ecologies if the farmers would at least rotate between corn and soy, and maybe even plant cover crops. This was sound and correct logic, however, it pretended that the farmers were operating in a vacuum.

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<sup>90</sup> All amaranth leaves can be eaten, including Palmer amaranth, but not all amaranths produce grains. Numerous foraging sites are dedicated to describing the perfect way to cook amaranth leaves. Here is one: <https://grist.org/food/amaranth-isnt-just-another-weed-heres-how-to-cook-this-prolific-leafy-green/>

Most of the political questions revolved around the regulation of RR soybeans. But since the soy rush had been so broad, so expansive, so utterly and astonishingly capacious, there was a feeling that soybeans had somehow spilled over the boundaries of the petri dish. The soy queen had brought something new to the Pampas that wasn't just herself, and in the full shade of her overwhelming presence she revealed a surreal quality to everyday life. This was brought home to me one evening when I was chatting with several corn breeders who, in response to my answer about what I was studying, said, "Ahhh, La Criatura," *The Creature*. At the time we were in the north, in the deforested scrub forests of the Chaco, staying at a new hotel on the outskirts of an impoverished town overtaken by the soy rush. The corn breeders didn't have time to chat that night but they invited me to go for a run with them in the morning.

As we ran down the dirt road in the fresh dawn air past simple one or two-room houses it was obvious to me how out of place our hotel was, and how it was catering to a specific kind of new clientele that were coming to the region.<sup>91</sup> But I stopped short when we jogged past a mansion modeled after Versailles wedged between two shacks on the main road. I slowed down to snap a photo.

"In the US we call that new money," I ventured.

They laughed and slowed down to marvel at the home.

"Here," one said, "we call that soy money."

To the corn guys, soy money was somehow garish. Soy money was tasteless, but not just that, it was also tone deaf. Who in their right mind would build such an

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<sup>91</sup> Gastón Gordillo describes this same surreal experience in "The Metropolis: The Infrastructure of the Anthropocene." In Gregg Hetherington, ed. *Infrastructure, Environment, and Life in the Anthropocene*. Duke University Press (2019:66-94).

absurd building on a dirt road? They asked rhetorically. Someone who had soy fever. But not just that, the corn breeders were emphatic that it was not corn money. It was soy that was “green gold,” soy that had made men rich overnight, soy that made men blind. This sense that soy could make men blind was something I heard quite a lot, but I was surprised to hear it coming from them. Later, one of the corn breeders sent me two satellite images of the place where we were, from before and after the soy boom. Look at the destruction, he said without saying it, look at what The Creature has done.

The Creature is, of course, also the name of the intelligent and articulate monster Victor Frankenstein creates in a German chemistry lab in the story by Mary Shelley. In her tale the Creature shows a capacity for empathy, but because he is rejected by humans – in part because he is frighteningly hideous – he becomes violent. He pleads with Frankenstein to create a female creature like himself, arguing that he deserves happiness like humans, and he promises to flee to the South American wilderness with her. *Frankenstein*, subtitled *The Modern Prometheus*, deals with age-old questions of who we – humans – become in relation to the technologies that we discover and invent. It is no accident that most laypeople familiar with the gist of this story think that Frankenstein is the name of the monster, not the creator. Frankenstein unleashes into the world something so powerful and destructive that in popular idioms he becomes that which he has created.

On the one hand, I understood what the men meant when they said soy was a creature. The first RR soybean variety was known as GTS 40-3-2. The “transformation method,” according to the Agri-Biotech Application, was “microparticle bombardment

of plant cells or tissue.”<sup>92</sup> Scientists at Monsanto and Asgrow shot a regular soybean germplasm with a gene gun containing a plasmid with glyphosate tolerance. This plasmid contained a version of an enzyme from a strain of bacteria (CP4 EPSPS) from a glyphosate waste column. The expression of the CP4 EPSPS was regulated by an enhanced 35S promoter (E35S) from cauliflower mosaic virus (CaMV), a chloroplast transit peptide coding sequence from *Petunia hybrida*, and a nopaline synthase element from *Agrobacterium tumefaciens*. This transformation made the soybean “herbicide tolerant,” able to live through applications of a chemical normally lethal to plants.<sup>93</sup> The germplasm of GTS 40-3-2 was used by breeding scientists in Argentina in order to adapt it specifically to the conditions in the southern cone. Later, another “event” would be created and named MON-89788-1, or, Roundup RReady2Yield™ and “stacked traits” of herbicide and insect tolerance would be created by traditional breeding of two parental lines, from MON 87701 and MON 89788, known as Genuity™ Insect Protected Roundup Ready 2 Yield.<sup>94</sup>

On the other hand, the fact is that maize has over 19 events conferring herbicide and insect tolerance – far more than soybeans – and through traditional breeding techniques has been made *hybrid*, meaning that it cannot self itself. Stacked traits of maize include resistance to Lepidoptera and Coleoptera, glufosinate and

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<sup>92</sup><https://web.archive.org/web/20110930182016/http://www.isaaa.org/gmapprovaldatabase/events/default.asp?EventID=94> – also see for all Soybean “events” –

<https://web.archive.org/web/20111006035650/http://www.isaaa.org/gmapprovaldatabase/cropevents/default.asp?CropID=18&Crop=Soybean>

<sup>93</sup>[https://web.archive.org/web/20111208201328/http://www.isaaa.org/gmapprovaldatabase/trait/default.asp?TraitID=1&Trait=Herbicide\\_Tolerant](https://web.archive.org/web/20111208201328/http://www.isaaa.org/gmapprovaldatabase/trait/default.asp?TraitID=1&Trait=Herbicide_Tolerant)

<sup>94</sup>[https://web.archive.org/web/20111208201907/http://www.isaaa.org/gmapprovaldatabase/trait/default.asp?TraitID=13&Trait=Insect\\_Resistance\\_and\\_Herbicide\\_Tolerance](https://web.archive.org/web/20111208201907/http://www.isaaa.org/gmapprovaldatabase/trait/default.asp?TraitID=13&Trait=Insect_Resistance_and_Herbicide_Tolerance)

glyphosate, as well as corn borer and other insects specific to certain regions. Corn is just as much a Creature as soy, if not more.

It was not the science, then, that the men were concerned with. When they showed me the satellite images and called garishness “soy money” they were indexing a kind of irrational exuberance that the soy creature brought out in men because she could be exported and therefore almost completely converted to foreign currency. It was the wholesale transformation of the countryside for “greed” that felt alarming to them. Correctly implicating German and Swiss chemical laboratories and dye extraction plants as precursors to the brave new world of RR soy,<sup>95</sup> they intimated that the scientists had become that which they had unleashed into the world and that the Creature had in some sense made it to South America.

Several dimensions open outward from their declaration. There is, on the one hand, a vision of the madness upon which genetically modified soybeans are based. This is a madness in which the very chemicals that cause disease are manufactured by the company which markets pharmaceuticals to treat the disease. This is a madness which believes that nature can be tamed, dominated, ordered, and multiplied, a madness

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<sup>95</sup> The fascinating history of German and Swiss chemical labs was brought to my attention by Donna Haraway after I told her I was using gentian violet for a thrush infection originating in the Pampas. The ironies abound, and are outside the scope of this dissertation, but deserve a brief mention. Gentian was originally used for a mixture of methyl pararosaniline dyes but is now considered the same as crystal violet, also known as methyl violet 10B or hexamethyl pararosaniline chloride. It is a triarylmethane dye used as a histological stain and in Gram’s method of classifying bacteria and is derived from coal tar. Pararosaniline, Basic Red 9, or C.I. 42500 is an organic compound and one of the four components of basic fuchsine (along with rosaniline, new fuchsine, and magenta II). Alexander Clavel began to produce fuchsine in 1859 in his factory for silk-dyeing works in Basel. In 1873, Clavel sold to Bindschedler and Busch, and in 1884 it was transformed into a joint stock company known as Company for Chemical Industry Basel, or CIBA. Around this same time, in 1857, Johann Rudolf Geigy-Merian and Johann Muller-Pack also built a dyewood mill and dye extraction plant, and in 1859 also began to produce synthetic fuchsine. This company later became Geigy Limited, which is most famous for Geigy chemist Paul Herman Müller’s discovery of DDT as a chemical effective against malaria-bearing insects, for which he won the Nobel Prize. CIBA and Geigy merged in 1971 to form Ciba-Geigy Ltd. In 1996 it merged with Sandoz laboratories, with the agrochemical and pharmaceutical divisions staying together to create Novartis. Finally – and here we are not at the end of our story but rather at the beginning – in 2000, Novartis Agribusiness and Zeneca Agrochemicals merged to form Syngenta, the largest crop chemical producer in the world. Similar histories of the connections between pharmaceutical companies and their agricultural arms will reveal themselves through even brief Wikipedia histories of Bayer/Monsanto and Dow/Dupont.

which believes that there is one singular nature apart from humans. On the other hand, their declaration is also about the way this vision is crumbling, about the slowly developing sense that it would be impossible to separate human from nature, creator from creation. Looking at the satellite photos the breeder had sent to me, it was possible to see in the metamorphosis of the Pampas a kind of surreal horror. Unless they were told not to, and such an admonishment was actually enforced, would everyone continue to do what they could – claiming filial devotion, something so virtuous as to be blameless – to plant soy?

Even as the corn breeders were critical of soy, they also *admired* it, they admired how prolific it was. At the time that I went running with them, I was visiting the northern region with the “mother” of soybeans, Graciela Salas, and she waved her hand when I told her about what they had said. We were driving back to Tucuman through the flat plains in her massive diesel truck. The fact you have to understand she said, as she shifted the gears and revved up to pass a small horse cart, the fact you have to understand is that even if those guys are from my company, corn and soybean compete with one another for acreage. I knew this was true, but there was something about the way the men were trying to make home in these global pastoral landscapes that they were in part responsible for. Indeed, Graciela and these guys were technically responsible for the massive landscape change. The reason Graciela was known as a “mother” was because she was responsible for a large family tree of RR soybeans bred specifically for the north. Graciela was smart – she didn’t want me to think the guys were being critical of soy the way the rest of Argentina was – but wasn’t it true that,



embedded within their critique, was also a struggle to make home within these new soy landscapes? They, too, were trying to figure out how they fit into the global pastoral, how they fit into a primal global scene that expresses all the contradictions of belonging in a globalizing world, of belonging in a world where technology from the US, local Argentine *métis*, demand from China, cheaply produced glyphosate, new shipping routes, but also filial devotion, sowing pools, and patriarchal desire all create 21<sup>st</sup> century food supply chains.

What did it mean that The Creature had made it to South America, and had colonized such vast expanses of land that even plant breeders were astonished? What constituted these relationships? Susanne Freidberg, in *French Beans and Food Scares*, suggests that through food supply chains “power is being exerted in new ways through old, and formerly colonial, relationships between North and South” (2004:30). Imperial paranoia, regulation, and power are at the center of these relationships, and so is terror. This is terror not just about what we put into our bodies – the food scares over mad cow disease, GM maize, and green beans that Freidberg is referring to – but regimes of terror that foreclose some possibilities and open others. The plant breeders and scientists in Argentina were all aware of the ways in which their intellectual questions were dramatically framed by the regime of terror during and after the military dictatorship. Perhaps because they had lived through terror, they were also aware of the ways in which their lives continued to be shaped by US post-terror reparations, which included new forms of ecological imperialism.

The US had to make the world safe for capitalism (democracy), and the way they did so in Argentina post-1983 was by enrolling the country into the Green Revolution. In this sense, Grobocopatel's statement about the agrarian revolution and democracy was spot-on. This required a certain kind of capitalist architecture known as neoliberal restructuring promulgated by the Washington Consensus and US corn/soy boosters. Knowing this, I should not have been surprised to receive early on in my fieldwork an email from Dr. Wayne Parrot, Director of the University of Georgia Soybean Breeding and Molecular Genetics Laboratory, telling me that if there was one person who could be considered the "architect" of RR soybeans in the Pampas, it would be Dr. Moisés Burachik: "...Argentina was very quick to establish a working regulatory regime that enabled it to approve and adopt the RR soybean. The architect of the whole thing was none other than Moisés himself. He is very humble about it, but it was all his doing."

When I visited Moisés for the first time on a darkening spring evening he answered the door of his Buenos Aires apartment in a jean apron emblazoned with Marilyn Monroe and ushered me into the dark tiled foyer. He was in his late 70s, his back bent over from time and his skin speckled with sunspots, but his brown-clouded eyes bright and twinkling. He had generously insisted that I come over for dinner. His wife, who was confined to a wheelchair, kissed my cheek with her crepe-paper skin and ushered me into their crowded kitchen where she had me sit at a table covered with an embroidered oilcloth littered with scientific papers that she scooped up. They opened

a bottle of red wine, poured me sparkling water from a classic soda syphon, and proceeded to tell me about RR soybeans, which was also a story of their lives.

In 1983 Moisés had founded the first biotechnology course in Latin America, a great feat because the political situation had been shaky in the 1970s and 1980s during the military dictatorship. They spoke with great sadness of this time. They were Jewish, their parents had been refugees from Europe, and it was a reliving of terror. Many of their friends had been exiled or jailed, and it had shaped the course of their lives in profound ways. This was one of the ways that globalized science (biotechnology) comes into the world through terror, and the way terror comes into the world through co-opted science. They had been able to pull themselves up out of this time eventually, but it had stained their lives in profound ways, directing them into places that they hadn't necessarily envisioned.

Moisés had been one of the key scientists, along with stakeholders' representatives, that was recruited to institute a regulatory framework for the entrance of GM seeds into Argentina beginning in 1991. By 1996 Argentina had, along with six other countries, established a framework that allowed the first glyphosate-tolerant soybean to be commercialized and disseminated to farmers, resulting in 370,000 hectares planted that year. The regulations he helped to write required each application for a new seed to include phenotypic expression, the description of agronomic practices, and molecular genetic characterization. What Moisés emphasized above all to me, and what he wrote about in the article he sent to me, was that this regulatory framework was flexible, rational, and scientific (Burachik 2010). The paper he sent to

me had emerged from decades of conversations in biotech circles, and this Volume was specifically about *Transgenic Plants for Food Security in the Context of Development* (Vol 27:5 2010). From the insecurity he had felt in his very bones during the US-backed military dictatorship, he emerged wanting to create something secure. He wanted to alleviate poverty with biotechnology, to develop agricultural crops for improved nutrition, and to sustainably intensify food production.

Both Moisés and his wife had circulated in biotech circles, and they described to me the way new technologies that used transcription factors – expressing proteins that bind to DNA and regulate – were part of the future for wheat.

“The thing about wheat,” Moisés said, “is that it has an emotional content, it is embedded in religion – give us our daily bread – it has an emotional character, which is why it isn’t yet genetically modified.”

What had been a kind of family dinner suddenly became impassioned. He described to me the way I would probably witness it when it was approved, and that it would be safe, but it was definitely possible to take these things too far. One guy he knew had “fallen in love with horizontal gene transfer” and was “totally crazy!” But wheat, for Moisés, was different from soybeans because there was a European cultural history attached to it. Wheat was religious, it was biblical, it formed the foundation of Judaism, Islam, and Christianity. Wheat was more emotional than soybeans. Soybeans, at least in the Americas, could be rational. He admitted, though, that soybeans still had an ideology, and that there was a man I should meet who could perhaps tell me more about this. He was known as “the father of soy” in Argentina.

Rodolfo Rossi, like Moisés, had been drawn into biotechnology first through his intellect, which was *inquieto*, restless, and thirsty for learning, and also through terror, which denied him his original dream. He had come from a family that were not of the land-owning class, and in order to pull himself up out of the barrio he had participated in a military draft that paved the way for his eventual education at the University of Buenos Aires. He was not violent and so had served as a coffee waiter, wearing for several years a black bowtie and white gloves for various generals at a remote outpost in Rio Gallegos. Once, he had to run and retrieve his captain from a Sunday evening Mass, who when answering the phone had spoken as everyone did then to the President, “Si, mi General?” Yes, my General? He learned early on about hierarchies and discipline. He learned early on about what it meant to respond to the General. And when it was time to go to University, he remembered a neighbor from his childhood who had been of that land-owning class, who returned from his campo with mud on his shoes and floormats, smelling of earth and sweat and sky. This had made him want to work in forests, to become a forester, but the Generals of the United States had by that time decided to bring Argentina into the global revolutionary future economically and for the Pampas this would be accomplished through corn and soybeans. And so, like so many other men, he abandoned his original dream for another one but still longed from time to time for the trees.

By the time I met him, Rodolfo Rossi was a rosy-cheeked grandfatherly man with a sweet smile and kind brown eyes. He was considered the father of soybeans in Argentina, the man who had the extraordinary insight in the 1990s that Argentina was

more climactically similar to the East Coast than to the Midwest, as many had assumed for so long. Because of this insight, he was able to breed the first genetically modified soybean adapted for southern latitudes that had widespread application in farms all over the country. Early on he understood the power of the United States, the power of establishing relationships with scientists from that boastful and money-heavy country, and he had positioned himself in a relationship that led them to put their arms around his shoulders and tell him about the future of agriculture. In several faded photos from the early 1980s, he stands in the fields with them, mustachioed men who loved the country first and changed the world.

Rodolfo was committed to his role as the father of soybeans in Argentina. He had gotten to where he was because he was critical; he looked at the plants not just with pride but with critique. How could he make them better, and in so doing, make himself better? I drove with him once for several hours through the main productive region of the pampas, Santa Fe, which is north of Coronel Vallejos and climatically better suited for agriculture because it receives more rain. It was late afternoon turning into dusk. We saw soybeans for hours, as far as the eye could see, green bushy spear-shaped leaves fluttering in the wind until the earth curved over the horizon. Thirty minutes outside of town we stopped to walk through the fields of *pruebas*, soybean trials. We waded through the knee-high soybean plants and found the breed Rodolfo was most proud of. It was a seed bred for Argentina with Monsanto's INTACTA gene. He showed me how he had bred them to have thick stocks that could support the weight of

the heavy pods. Before we turned back to the car he stood with his hands on his hips for a moment, looking with thoughtfulness at the plants.

Rodolfo was preoccupied with what he called the “improvement” (*mejoramiento*) of soybeans in Argentina. He sent me a paper he had written in which he defined what “improvement” meant: “It is the art and science of changing the characteristics of plants, in order to produce previously defined desirable characteristics.” I asked him about this, what did he mean by art? There was just a little magic somewhere, he said, it was the part of it that couldn’t be pinpointed. It was necessary to be philosophical, to have awe, to wonder. He showed me some photos of his original soybeans on his phone and as he thumbed through I noticed that the background of his phone was Johannes Vermeer’s “Girl with Pearl Earring,” a portrait of a young turbaned woman looking over her shoulder. Why Vermeer? He shrugged and said he liked it, that Vermeer was one of the great masters. Vermeer had captured something ineffable. To be a master was to be able to bring into the world something that others could not.

Rodolfo was an artist and a master. He stayed close to his work, he lived near his material, he relied on experience, and as a result, he was able to bring into the world something extraordinary, a seed for which he was famous. In Rodolfo’s paper about plant breeders he had written about how the breeder should cultivate this mastery by staying close to the materials: “The proximity of the breeder to his materials is essential. As Smith (Smith et al, 1996) has said, ‘there is no substitute for the man who can observe and who lives near his material, and can recognize a favorable change when

he sees it.’ The breeder chooses germplasm to work, manipulates reproduction, applies selection protocols, implements testing programs, collects and analyzes the data, with modern computer programs, analyzes the data and finally decides. A qualified opinion of Duvick (Duvick, 1996), says that ‘the breeder depends on experience and art rather than on genetics.’” He had manipulated the germplasm bought from Monsanto, creating an enormous family tree of GM soybeans that had been bred for decades to be adapted to the southern sun. His vision was startling local and in that sense it had become expansive. There was something so precise about the way that he looked at soybeans. I tried to understand it in relation to what he had said about magic and art. He believed fundamentally in the good soy would bring if it was planted in the correct way. He was critical of farmers, who he said planted year over year without rotations, which increased their reliance on agrochemicals when the herbicide resistant weeds inevitably arose. In the annual soy supply chain conference put on by ACSOJA, of which he was the Director, the main topic was how to culturally manage the herbicide resistant weeds – how to teach farmers that rotations were necessary.

Both Moisés and Rodolfo sought to show me the “architecture” that Wayne had referenced. In the tidy rows of soybean plants, in the laboratories of the seed breeding companies, in the biofuel factories of the Up-River ports, in the grand rooms where machines crushed thousands of tons of soybeans into meal and lecithin, in the thousands of soybean trials that began in a petri dish, in the stunning proliferation that had turned the southern cone into a sea of soy, in relation to that which they had in part created, the scientists grappled with who they were becoming. They were scientists,



artists, men with desires who “fell in love with horizontal gene transfer,” men who felt a trembling power. It was true, as Moisés had said, that soy did not figure in the Bible the way wheat did, but in Argentina soy was emotional. It was, as Rodolfo had so eloquently described, an art form.

When Graciela and I drove back to Tucuman the day after I went for a run with the corn guys, she took me to one of the outposts of Aceitera General Deheza (AGD), an Argentine industrial group specializing in the export of soy and peanut vegetable oils and soy and sunflower protein meals. Rodolfo had asked her to bring me to several places so that I could understand the vast soy supply chain, not just the breeding. As we were driving through the main security gate to a second security guard, I wondered aloud to her about the intense security. It was something that I had noticed at several other cooperatives as well. Soy is valuable, but if I had learned anything it was that soy is abundantly difficult to transport. She shrugged and suggested we ask the manager. The manager walked us around the mammoth factory. We wore hard hats and took an industrial elevator operated with red and yellow buttons. He walked us through oil crushing rooms, massive cold storage warehouses, past grain siloes thirty stories tall, over to the trains where from an automatic steel tube reaching from the silo poured billions of whole soy seeds harvested from the region and destined for the AGD crushing facility just north of Rosario. I climbed up to the top of the train to look at how the seeds rushed down in a waterfall of beige blur into the belly of the train car. I asked if I could ride with the conductor to the port and was told no, that the journey

took too long anyway – 24 hours at least – and that they were re-doing some of the infrastructure as part of a larger provincial/national project called “Plan Belgrano.”

After, in the office, the manager showed us the paper brown and white envelopes that I had become familiar with, the “trials” pulled from each batch of soybeans to test whether the seeds had the RR2 gene. Large plastic bins were haphazardly stacked in a corner next to a plastic folding table full of trials. The office, he explained, had been repurposed into a soybean checkpoint. I had seen these checkpoints in multiple places where the office and lab had also been hastily thrown together. At an agricultural institute one of the technicians had shown me a broom closet converted into a slapdash trial storage facility with so many envelopes spilling out onto the linoleum floors. At another very official checkpoint they had converted an unused lab. Although the manager at AGD declined to show how they did the testing, the lab technician at the agricultural institute had rather shyly – after furtively looking around – agreed to show me the basics of rapid isothermal nucleic amplification (RPA). The DNA Molecular Detection kits were all supplied by Monsanto. She blended the soybeans, put two scoops of the ground seed into an extraction buffer in a tube, heated it, vortexed and centrifuged it for a couple minutes, then diluted, capped, amplified, and read it. The assay protocol took all in about fifteen minutes. It was an ingenious test by any standard, replacing expensive and time-consuming gene testing methods requiring extensive lab equipment and relying on Polymerase Chain Reactions (PCR). She seemed a bit nervous to show me the test, which I assumed was because it was

considered proprietary, but after a quick 2-minute Google search I found numerous documents and articles describing RPA.<sup>96</sup>

In the AGD office I wondered aloud to the manager about all the security. He had a rather bland and evasive answer, but several months later, David received a letter in the mail from Monsanto. It accused him of using the RR2 soybean without having declared it. One of the RPA tests at a soybean checkpoint had found that seeds from one of his trucks were positive for the gene. The letter threatened fines that if not paid would lead to lawsuits. David was absolutely livid. He prided himself on paying royalties for the genes that he did use – just RR in his case – and the fact that he had been such a loyal customer for so many years made him feel even more betrayed. What had happened? Had there been genetic drift? Had someone else’s seeds gotten mixed up with his? Had the assay protocol failed? The thing was, it was impossible to trace it back, impossible to say that seeds *hadn’t* gotten mixed up, impossible to say whether there was in fact genetic drift. He drew on local contacts to get them to drop the suit, which they eventually did, but the whole experience left a bad taste in his mouth.

The breeding scientists, the folks at soybean checkpoints, the *science*, was participating in the construction of an ongoing colonial reality, one which enrolled farmers in massive debts at the same time that it betrayed them. The regulatory framework, which was rational and scientific, existed less to protect the consumer than to protect US patents. Transgenic plants for “food security” were being regulated “in

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<sup>96</sup> See for example: [https://www.nsf.org/newsroom\\_pdf/arc\\_wp\\_envirologix\\_gmo\\_soybean.pdf](https://www.nsf.org/newsroom_pdf/arc_wp_envirologix_gmo_soybean.pdf); [https://scholar.google.com/scholar?q=rapid+isothermal+nucleic+amplification+soybean&hl=en&as\\_sdt=0&as\\_vis=1&oi=scholar](https://scholar.google.com/scholar?q=rapid+isothermal+nucleic+amplification+soybean&hl=en&as_sdt=0&as_vis=1&oi=scholar)

the context of development” so that they could colonize vast new swathes of the world. Indeed, the Creature had made it to South America, remaking old imperial and colonial relationships into new ones, asserting power through the architecture of regulation and science.

For the farmer-ranchers who planted soy and relocated their cattle to the monte, the renewed modes of activity that they opened up in the plains were possible inasmuch as there remained the promise of marvelous energies in the west. The range of activity they were limited to as they planted more and more soy became in some sense stifling precisely because it promised so much and, as the years went on, began to metamorphosize into something else. Like the shape of the thorn forests, which assumed new and dramatic forms depending on the cadence of fire and the number of cattle, the shape of the soy fields also changed over time. If in the first ten years they were regular and uniform, behaving as guaranteed, they began after years of repeated applications of glyphosate to rise up in feral forms. The farmers knew this would happen – they felt it coming in their bones, they knew the way nothing was guaranteed, they knew how herbicides over time would begin to fail, would begin to bring new feral forms into the world – but they did not know it would happen so quickly. Perhaps they had forgotten about the Pampas Dust Bowl, perhaps it felt like something was different with Roundup Ready Soy, but it was evident within a few short years that the catastrophes that capital always converts into value were coming quick and hot to burn the ground out from under their feet.



Figure 14. Driving the tractor.

## **Chapter 6: The Gladiators**

“From henceforth let no man trouble me: for I bear in my body the marks of the Lord Jesus.” Galatians 6:17

The land-owning men’s ability to plant soy was cultivated through a sense of non-attachment that they exploited especially through their distinctions between who did and did not sow, harvest, and spray. In other words, landowners were able to consider soy a *fait accompli* to cattle in part because workers in the Pampas continued

to be marginalized and pushed out of full employment into contracting work. This was not the case on the ranch where I was living – the men there were employed full-time – but the manager leased land from other landowners and if they were not busy the men would sometimes be contracted out to work on other farms. The ongoing marginalization of the workers was not the dark underbelly of soy production, it was right there for everyone to see, and most of the men knew exactly what they were doing. They did not have false consciousness about their pesticide exposure, they knew the odds, and they were, they told me for the most part, doing the best they could.

One morning it was early but already hot and the heat shimmered across the plains, creating vast mirages. I had gone with Antonio to one of the leased fields where they were sowing soybeans. The men were exhausted that day. Dust kicked up from the wind and a bitter smell leached up from the ground. Antonio had just torn the flesh of his palm on the seeding combine that they were trying to fix. He pressed a dirty rag to it as sweat dripped down his temples, trickling across his dusty skin down to his stubbled jawline. I remember looking at Antonio, his eyebrows kneeled together against the glare, and following his gaze. He was staring at the riot of weeds growing up tangled and thick across the otherwise unnaturally bare earth. Herbicide resistant weeds clustered together in large sage-green clumps swelling across the field like a rash that keeps spreading.

Antonio, a tall barrel-chested man who wore a bristly five-o-clock shadow and smears of grease across his face like war paint, was the machinist for the estancia, the man who drove and fixed the tractors, the man who was in charge of the tractor team,

including himself, Juan, and Carlos. Together that year they sowed almost five thousand hectares of land. Sometimes I sat with them in the tractors, or followed them to the leased fields, and when I did Antonio presented to me a prime expression of the global spiritual quest. He did not write this expression in an essay. Instead he enacted it in his everyday toil. He fought and rode the machines like beasts, he tinkered with the broken tractors in the fields, he sat in the combine from early light to dusk. He sometimes caught and roasted the sweet meat of peludos, small armadillos that scuttled through the soy fields burrowing deep warrens with their armored bodies. But most of the time he made store-bought steak for lunch in one of the small boxcar trailers that he and the men pulled behind the tractors to the field they were working in that day. The corrugated trailers had screen doors that banged open on to cracking brown linoleum floors, tiny kitchens with wooden stools smelling of meat grease, and miniature plank bunks that Antonio filled with his immense size.

On some days when he was feeling expansive, he narrated the quest aloud to me. Antonio sketched his and his team's activity, he drafted with his body and with the scenes of the global pastoral what someone would call a "life's work" if it had been written down, and in so doing, he drafted a version of himself in relation to the new rurality. He felt that the new rurality was, above all, dependent upon him and his team. For Antonio they were the prime movers, and this was evident only if one took the time to really observe the activity on the estancia. Who was in the office, he asked rhetorically, and who was in the fields?

Antonio had caught soy fever back in the early aughts. It came on him hot and quick, burning his whole body with fire until he sweated and swore off his job as a machinist and took out a loan and became a contractor, became his own boss, became the man that drives the combine and the tractor to sow soy for the world. He was not a landowner – they never drove the tractors themselves – but he knew who he was, and he was his own man.

When I met him it was 2015 and the fever had burned the ground right out from under his feet and he had fallen back to the earth cold and shaking. To atone for what he called “his sins” he had tattooed the Crown of Thorns around his wrists and across his back. Thick, plaited thorn branches needled in dark olive ink, symbols of the instrument of the Passion placed upon Christ’s head to cause pain and mock his authority. Antonio mocked his own authority to understand the world and wanted to inflict pain upon himself. The thorn branch shackles wrapped permanently around his wrists were self-inflicted, but they were also symbols for the shackles that the system had put on him. Even though he felt guilty for having caught the fever and losing everything, he also knew the odds were stacked against him and the other workers, which is why, when I asked what he wanted the team to be called in the dissertation, he said, “The gladiators.”

When I rode in the tractor with him he told me his story all at once, like a confession. Antonio’s story was the story of soybeans in the Pampas, it was the story of new technologies and financial instruments in agriculture, but it was also the story of many workers throughout the pampas, who were made even more marginal by the soy



project. Antonio's story revealed the way soy production separates ethnic groups, creating a world in which non-property owners are more marginal than ever.

It was, said Antonio, the early 2000s and soy prices were skyrocketing. Prices began climbing in July 2003. First, they were around \$5.00 a bushel. They had climbed to \$7.00 in January 2004 and by April 2004 they had spiked to almost \$10.00 a bushel. This was astronomical, an unheard-of doubling. Antonio was sick of working at his job as the machinist, and so he sold his father's bakery, took out a loan, and became a contractor. He bought a combine worth half a million dollars. He was his own boss. Everything was booming. He became so high off himself that he divorced his wife of ten years and married a younger woman. Then, quite suddenly, soy prices plummeted with the US recession. He couldn't repay his debts, he hadn't been watching the numbers. He went bankrupt. His new wife divorced him. He sat for many weeks trying to decide what to do.

All the contradictions, pleasures, and tragedies of bringing into a being a world that also destroys you were crystallized into the way that he narrated his story to me. Antonio was Roman Catholic, descended from Italian immigrants to the Pampas, and from the beginning of his life he had been taught to confess. Confession was dreaded, sometimes he had to invent things and obfuscate others, but it taught a particular way of thinking that had primed both France and Argentina for the development of psychoanalysis. This way of thinking required the speaker to excavate his own thoughts and feelings, to contemplate them, and then to say them aloud. Even if weekly psychoanalysis was dramatically classed, confession wasn't, and so a particular brand

of self-knowledge emerged from this fact of weekly confession. It was an endless unfolding glimpse into previously un-verbalized emotions and thoughts that were, afterwards, somehow more available for having been said aloud. (The burden of social correctness, church attendance, and acceptance of the sacramental bread fell more heavily onto the woman's shoulders.) This had also to do with a particular form of identification. Antonio had deceived himself (the priest) once, he said, and he would not do it again. His story was thus based on the style of confession he had learned in the Catholic Church, but it was also punctuated with a struggle that was emblematic of globalism. It was a coming to grips with a force that will rip apart the world, driven by desires we all recognize, desires that foment affective ties and pleasures.

So, he said, he swallowed the big lump of pride in his throat. He went to his old boss and asked for his job back. He started working as the machinist again. His first wife, who had been working on the same estancia for over twenty years, was there. He realized he was still in love with her. They got back together. He got his first tattoo when he was forty-four. It was the thorny crown of Christ, wrapped around his wrists, a sign of his newfound religiosity, stigmata. A fall, and a recuperation from grace.

Antonio's desire to plant soy had diminished when he went bankrupt, but he was still caught in the clutches of the soy queen. He was now a full-time employee on the farm that David owned, and he also embodied the new figure of the contractor that sows soy for others. His tattoos reminded him of what he considered his own fault, they were his burden to bear. Still, he could not shake the sense that he had been promised something, and it had been taken away. Genetically modified soybeans had promised

him prestige, they might have allowed him to craft belonging in the Pampas, he could have been a man who had owned his own machines and therefore a man who was in charge of his own fate. He was part of the soy rush but not his own boss, and he detested his boss's management style. He was subject to another man's wishes, and therefore unhappy because he was less of a man because of it. To make up for this humiliation, he was full of bravado. It was a bravado that masked unease.

In the field that hot windy day, as the men loaded genetically modified soybean seeds to be planted into scorched earth beneath a muggy sun, the scope of their desires in relation to the world was shifting, yet also digging in. At lunch Antonio described why they had continued instead of taking him to the doctor in Pico to stitch the wound on his hand: "they had to." It was already December, and this was a rented plot. That meant that they needed to get the seeds in the ground, because of the light – the days would start to get short on December 21<sup>st</sup>, and the soybeans would not flower or fill their pods at the right time if they were planted too late – and because they had a contract with the owner of this plot, from whom they were renting. After the harvest they would split the profits with the landowner, but if there were no soybeans in the ground, there would be a real problem with the contract. "And so," despite the flesh of his palm being gashed, despite the weeds, "we had to continue," he said gravely.

As Antonio had stood in that field looking out at the rash of herbicide resistant weeds, he felt that he had not made a decision to continue as much as he was pulled into continuing. Antonio's imagination was expanding to absorb the reality of what it meant that the chemicals they had been using were not as effective as they once had

been, evidenced by the fact that there were weeds that were coming into the world which could withstand these potent chemicals. He called David to tell him the bad news, and privately struggled with something he felt shifting inside him, something that had no clear outline, but that he felt nevertheless. It was the feeling that something he knew was slipping away, which made him grip even more firmly to those affective registers that were familiar.

Antonio expressed this through his stories about his commitments to his workers and to his family. Antonio cultivated an ethic of honor with himself and with his men. He told me once that a good boss was someone who greeted people when they entered a room and greeted people when they left. This was a very local politesse – it was tantamount when you entered or left a room to go around to each of the people and kiss them once on the right cheek. A good boss also took the time to ask how you were doing, and to ask how your family was. Antonio took hierarchy very seriously. Not only did his boss not greet him properly or ask of his family, his boss often forgot to ask him to sit down, and he often ended up standing in front of his boss's desk. This Antonio considered an affront, as if he was so lowly that he was not even invited to *sit*. But the point was also that Antonio continued to respect the hierarchy and would never sit if he was not invited to do so. Furthermore, it was important that the boss ask about the family because that is who Antonio was doing this for. Antonio often told me about how he visited his aging mother every morning, about how much he loved all his children – it made him unbearably sad that he couldn't afford to bring his daughter to

Disneyworld, which was a supreme fantasy in Argentina<sup>97</sup> – about how his father used to own a bakery. Antonio had loved the bakery, and had, in his humble opinion, made the best croissants in the world. He held his hands out in front of his face, all ten fingers splayed. They were full of machine grease, callused and wrapped with a dirty rag, with grime beneath the nails.

“I used to have the most beautiful hands,” he said, sighing.

When he ran his father’s bakery, he had to keep his hands clean, and the dough softened them so that they were like “the hands of woman.” But now, he boomed, laughing bitterly,

“Now look at them!”

Antonio was striving, in the stories he told me about his life, to grasp the injustices of the world, to show why he had done what he had done in his life, at the same time that he was also coming to terms with an internal struggle about what was really going on. He understood himself as a warrior, a zealot against an unjust world, and in quiet moments when the battle had subsided, as during the summer when all he could do was wait for the soybeans to grow, he became more aware of the way in which the soybean project depended upon him at the same time that it denigrated him to a lowly machinist. All these structures surrounded him which compelled him to set the dirty rag down, turn to Carlos, and say, “Load the seeds.”

The polity, the landscape, brought into being by the self-named gladiators were mono-cropped soybean plantations and agriculture dependent upon pesticides. Like the

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<sup>97</sup> See Maureen O’Dougherty’s *Consumption Intensified: The Politics of Middle-Class Daily Life in Brazil* (2002) for an exploration of this same consumptive desire in Brazil.

cattle project, the soybean project depended upon their marginalization, upon the idea that they mattered less in the scheme of things. Like Ceferino, both Carlos and Juan had Indigenous ancestry although did not identify as Indigenous. To feel the weight of this classism/racism was a heavy burden, and to correct against it they fought together. “La sangre de la alianza es más espesa que el agua del útero,” they told me, *the blood of the alliance is thicker than the water of the uterus*. To fight together was to be bound by a pact stronger than blood brothers. The men worked together, they depended upon each other, and they looked to Antonio for tactics. They trusted him. He made sure that they were fed, that their trailers went with them, that they had time for naps, that they were paid commissions. He used his body as a shield to protect them from the inequalities that they were exposed to. He did the work right alongside them, he submitted his body to the fight to show them that he was one of them, that they were in it together. All this depended upon his understanding that the odds were already stacked against them.

It was through the dualism of a brief and incandescent hustle compared to usual stillness, an uncanny pastoral, that the men showed me a primal global scene. That spring the machines clacked and rolled across the surface of the earth, shuttering their metal mouths. When Antonio and Carlos and Juan mixed in the red inoculant that would help the soybeans create nitrogen-fixing bacterial attachments, they did it through a long vacuum-like tube. The mixer rumbled and roared, trembling the soybeans through a spin cycle until they were all evenly coated, then spilling them into the combine in a gush of sheeting red soy. The drill gobbled and obliterated, driving

fine lines in the soil with sharp rotating discs. It dropped the seeds in at regular intervals so softly there wasn't even a plunk, just a steady opening of the earth. Two more round discs rolled on the outside of the line, disturbing with their tiny jaws just a bit of earth to cover the seeds back up. The combine driven by the men would trundle on for hours, back and forth, dropping the seeds into the earth. By hour twelve the sun would set and the machine's eyes would come on like flaring glows in the middle of the dark plains, like two suns blazing in a dark electric, and only when the end of the field was reached would they climb back on themselves, turning like some momentary combustion glowing and then gone, going back the way they came into the night sky.

The scene was not a "moving chaos," nothing so overwhelming, nor an assembly line. It was a particular organized motion that rolls across the earth, marking a new rurality. Not just an absence of humans, but a commitment to a vision that removes them altogether. Antonio showed me that it is this vision which opens up a division within the self, absorbed by desires he didn't even know he had, suddenly brought into the world through new techniques that he himself is implementing. This vision, which wants to take humans out of the scene, wants also to remove oneself from the scene, at the same time that it depends upon the globalization of rural space for identity.

The rhythm of their days created the landscape around them: the crisis of broken-down machines contrasted with the monotony of repetitive motion instituting mono-cropped plantations. There was, on the one hand, drama. On numerous occasions the tractors, drills, and combines would break down and need to be serviced. One night

when Carlos was driving the seed drill along the potholed road it slipped into a hole covered with grass and the drill tongue hitch snapped, said Antonio, “like a toothpick.” They had to get the part from Pico, delay planting by half a day trying to fix and re-attach the drill, then by the time they got to the fields they found another problem with the cylinder depth stop. On many occasions the ancient grain elevator running seeds up to the grain cart spluttered and stopped. On one egregious day, the combine suddenly slowed and stalled in the middle of the field and Antonio, after one hour of tinkering with combine parts spread all over the earth, found a snapped washer. Coronel Vallejos’s supplier did not carry the part and so that afternoon he drove 400 kilometers east to the only town that did.

There was, on the other hand, monotony. There was the inescapable material fact that several humans and their machines were responsible for the movement of billions of tiny soybean seeds from bags into the ground into the harvester into the silo bags into shipping trucks. The seeds were bagged because David was authorized to save and sell seed, but this meant that oftentimes the seed that they used for the following spring sowing had to be siphoned out of the bags and back into the grain carts and the combine.

*Antonio is loading seeds into the grain cart again. Hundreds of white 50-kilogram bags are piled up in the galpón, the large hangar that serves as a machine shop and a grain store. The Golondrinas came with their ancient bagging machine to sort the seeds that they will use from last year. David decides which ones to sell and*



*which ones to bag based on a variety of factors. How many hectares should he plant this year? What is the price of seed?*

*The grain shuttle is an old, rusted contraption that breaks at least once a week. Antonio has rigged a lawnmower motor to the large pipe. It sputters and chokes and roars when Antonio pulls on the string to get it going. Antonio is wearing a sweat stained red t-shirt tucked into khaki pants that are too short for his large frame. Sweat drips from his brow onto the concrete floor as he bends over. Throwing the sacks onto the ground, Antonio takes a serrated kitchen knife and slices the zigzag stitch at the top of the white seed bag. He pulls the thread out and then, lifting up the bag from the bottom, pours the soybeans into the opening of the grain shuttle. The funnel is attached haphazardly to the pipe, and is in fact too big, so Antonio has stuffed a bunch of plastic grocery bags into the side so that all the seeds don't spill out.*

*The grain shuttle moves these seeds up the pipe and then spills them into the grain cart. The cart is a large rusted metal container that can attach to a tractor. Bag after bag, Antonio counts and loads. Grab, slice, pull, lift, pour. One. The bag gets lighter as the seeds spill into the funnel. It is immensely satisfying to feel the last seed spill out of the bag, to toss the empty sack to the side. But then it is the same motion all over again: grab, slice, pull, lift, pour. Two. The bags are heavy, food-grade thickly woven white plastic. Each year the team recycles them. Almost nothing is wasted on the farm. Grab, slice, pull, lift, pour. Three. The grain shuttle is sputtering and chugging. Grab, slice, pull, lift, pour. Four. Grab, slice, pull, lift, pour. Five.*

*Antonio bends his knees and uses his brute strength to push through the heaviness of the sacks and the thickness of the heat. Grab, slice, pull, lift, pour. Six. His wrapped palm hurts. Dust and dry plant particles are impossible to keep out of the wound. It is infected, and he cannot put as much weight into that palm. He winces and wipes his brow. Grab, slice, pull, lift, pour. Seven. He is aware of his lower back, which has been aching. Grab, slice, pull, lift, pour. Eight. Grab, slice – suddenly the grain shuttle splutters, spits, and stops. Antonio straightens up and considers the machine. He is in a rush today and has no time for dramatics. He pulls the string over and over again, but the motor will not start. He mutters curses under his breath and strides over to the corner where he keeps his tools. He grabs a wrench and some oil and walks back to the shuttle. He dismantles the top of the motor. Using a bit of wire that was wrapped around the pipe, he pokes around, wraps the wire tighter, screws on a cap that was loose, hits the motor on the side with the palm of his hand, tugs hard on the string, and the motor once more gasps to life, popping and snorting loudly.*

*Antonio shakes his head and grabs the bag he had just opened before the shuttle broke. Pull, lift, pour. Nine. Grab, slice, pull, lift, pour. Ten. Each bag is slightly heavier than the last. Grab, slice, pull, lift, pour. Eleven. He is accustomed to counting bags off in his head. Grab, slice, pull, lift, pour. Twelve. He has to load sixty of these soybean bags into the grain cart. Grab, slice, pull, lift, pour.*

This monotony extended to the hours, days, and weeks that they sat in tractors until their hips and shoulders were sore with immobility. Antonio told me that the kind of solitude emerging from these long days shared only between a man and his machine

was the kind of solitude that made people “go crazy,” so he made playlists for himself and he tried “to meditate,” to slip into a kind of sublime where he became the machine. He felt his body adjusting to the levers and pulleys, to the computer readouts. The bucket chair became a perfect indentation of his rear-end and thighs, the handles began to bear the imprints of his large hands, he melted into the machine at the same time that the machine became him. Antonio watched the numbers on the screen that lit up his face with a glowing aura at night. Both the new tractor and the harvesting combine had sophisticated data collection devices that gathered information that the onboard computer transformed into statistics based in part on GPS coordinates and/or GNSS (satnav systems). The seemingly infinite number of variables that could be measured – crop yield, topography, organic matter, moisture, nitrogen, phosphorous, etc. – were transformed into graphs as well as false-color images that demonstrated vegetation density, water deficit, and crop stress in bright reds, blues, and yellows. Antonio watched the elevation, learned to move his body according to what he was reading, intuited the minute shifts, the limits of the hydraulic leverage he could push the machines to perform in order to lift up out of the mud.

He and the machine were not a unity, it was their differences that made them open vast new tracts of the world together, that made Antonio’s line of vision two houses tall, that made the machine move forward to sow – and eventually harvest – the fruit of the soy queen. When the combine or the tractor broke down Antonio tinkered with them knowing he would go into the fields with them, knowing he would in understanding how they worked also in some sense understand how he worked, how

the world worked. The machines took on the shape of beasts beneath his callused hands, bucking and spitting and gasping as he cinched their belts tighter and rode them hard until they sputtered again. He knew tractors, engines, drill bits, reels, cutter bars, header augers, grain conveyors, threshing drums, grain pans, pans, sieves, and impellers the way Ceferino knew grasses, saddles, stirrups, halters, bits, reins, hackamores, tendons, ligaments, and hooves. Antonio entered the belly of the combine harvester a hundred times that rainy season, pumping up the hydraulics to grind through the mud and harvest the seeds of the queen who had betrayed him.

Antonio was part of the soy rush, he was an essential part of the story, even as he and Juan and Carlos struggled together against the glaring inequalities. He understood that every primal global scene has violence in it, that in its obfuscations there are whole stories waiting to be told. That hot spring day when he had knitted his eyebrows together to look out at the rash of herbicide resistant weeds, Antonio instinctively felt the spiritual and material forces of a life tottering on the brink of a new era. In both his ecstatic faith and his bodily submission to the soy queen's betrayal, he was coming to grips with globality.



Figure 15. Asado at night.

## Chapter 7: A Purple Land

“After she left me I lit my cigar. The night had lost its ghostly character and my fantastic superstitions had vanished. I was back once more in the world of men and women, and could only think of the inhumanity of man to man, and of the infinite pain silently endured by many hearts in that Purple Land.” W.H. Hudson, *The Purple Land*

The monte existed as a place apart from the campo for the men to go adventuring, a place that held the promise of wild adventures and late evenings smoking while the fire died down and the shadows of trees rose into the inky night. The monte was the other side of the dual world the men occupied, a place in which the men could fulfill their deepest needs.

There was a night Carolina had called Diego when he was in the west, in the monte, and the service kept breaking up and he said to her I'm sorry I have bad service I can't hear you. I love you. Te quiero. Todos los besos para vos. All the kisses for you. She tried to say something, to say I can hear you fine, she tried to keep him on the phone, but he was already saying goodbye. I'll call you tomorrow on the way home. Te amo, te amo.

It was neither the first nor the last time Diego had gone to the monte to check on the cattle, to stay the night in Victorica, in that small pueblo that she had only ever heard about and never visited, in that town with just a handful of inhabitants that, according to Diego, was where "La Pampa had been born." He told her about how going west the soy fields began to be dotted with trees, he told her about the way the forests began to rise up around you, he told her about the several thousand heifers grazing amongst the mesquite trees full-bellied and pregnant with calves that would slide into the world the way nature intended, amongst a herd in the wild quick and slick onto a bed of grass. It was best, he said, for them to be born in the spring. It gave them a better chance at life.

She tried to train her heart like a dog but instead she found it weeping in the street, and it was the monte above all else that allowed her to articulate her sense of foreboding. She imagined the shadow shapes of trees, the men around the fire at night smoking and drinking, the men hunting dark at the water holes coming home slippery with entrails and the heavy carcasses of red deer and wild boar and puma, the heads rolling away from the hides that they stretched out upon the ground between wooden pegs to dry. She saw photos of the mud-brick huts with speared pig heads hanging from the porch rafters heavy with flies and eyes glassy to the world. She saw photos of the massive black steers the men trucked to the monte, she saw a video of the steer mounting so many heifers that it became sick and broke its hind leg and stumbled around limping and lame and angry. She saw a photo of Diego's father's cattle auction, and in the corner of the photo she recognized his father's lover with long black hair and a delicate face just slightly turned away. She understood that the monte was the place where the men were more fully who they were. She understood that she did not belong.

I spoke with Carolina about the monte long before I was able to visit, gathering from her descriptions that it was a rough and feral place, harsh and remote and dangerous, especially for women. Within her descriptions there was a sense, too, of critique and longing. Her rage emerged in part from the feeling of being powerless in the face of a patriarchy so strong that it was embedded within the very landscape all around us. When I finally was able to go to the monte I saw the dialectic between the forests and the plains, the way they brought each other into being, the way the calf-heifer breeding in the monte existed in tension with the spread of plantation agriculture

in the plains. I saw the way the men put up their feet, the way the monte existed as a place in suspension, the way it somehow held for the men those dreams vibrant at the end of the 19<sup>th</sup> century expressed through nights with cattle on the edge of the world in W.H. Hudson's *The Purple Land*. And the way it held, too, the promise of Carolina's waiting.

In *The Purple Land*, whose subtitle was originally ...*That England Lost*, Richard Lamb adventures into the pampa hinterland and has a dangerous, romantic adventure so enviable Ernest Hemingway famously wrote that it was "a sinister book" if read too late in life for the ostensible regret it would provoke in an older man. It is one of the first modern and now classic on the road genres that describes a man from civilization going into the country and encountering all sorts of incredible things. Jorge Luis Borges described the text as perhaps the "best work of gaucho literature," while Ezequiel Martínez Estrada wrote that the novel contained "the supreme justification of America compared with western civilization." For most of the book the protagonist Richard Lamb is extremely uncomfortable – whether from riding his lame horse, being attacked by flesh eating insects, sleeping with fleas, being subjected to the debauchery of Englishmen while trying to sleep on his saddle, breaking his arm, or being challenged to a duel to which he will undoubtedly lose – but it is precisely his attitude toward these discomforts which makes the story comical. He is judgmental, makes bad decisions, and constantly gets himself into trouble at the same time that he unwittingly falls in love with three women along the way (some have called him a Scottish Quixote).



What makes his love affairs full of narrative tension is that he is married to another woman, Paquita, who awaits his return in Montevideo. He is in the countryside looking for work and in one final scene with Dolores, a woman whom he falls for, it is possible to see how necessary Paquita is to the plot – to the very social world itself – for without her he would be little else than a meandering purposeless vagabond, which no good Englishman would ever deign to be. Paquita makes his escapades possible through her waiting presence, through the reader’s understanding that he must return to her, since, as he says himself, “all men marry.” Indeed, he narratively breezes through his courtship and matrimony to her, about which “a word only need be written” because what he really wants to focus on are the adventures he has when he is away from her. The ongoing dichotomy of the country and the city is upheld through his wanderings and her staying put. Like the farmer-ranchers of the 21<sup>st</sup> century, who continued to exploit this dialectic through the campo and the monte, the world he occupies has a dual nature and it depends for its existence on an impending sense of duty, the necessity of *return*. We see this clearly in Lamb’s dialogue with Dolores when they are admitting to each other of their passion.

Dolores, who has dark, luminous eyes, lifts them to look at her love and says, ““Let me open my heart to you now...When you took me in your arms and held me against your breast it was a revelation to me. I cannot love or give my hand to any other man. You are everything in the world to me now, Richard...””

Lamb trembles because he has decided to reveal to her his secret, and he does not want to give up his fantasy of being with this beautiful woman. She implores him

to answer her and finally he says, “For God’s sake, have mercy on me Dolores. I am not free – I have a wife.”

She is enraged. She curses him, and especially curses the way that he has joined the army on her behalf. He, in turn, is stung by her words, and becomes angry because he is “an Englishman” who has honor. The tension rises to a pitch until finally Dolores begs for his forgiveness, confesses her undying love, and they hold each other until the dawn comes. After he leaves her, Lamb engages in all sorts of debauchery that lovesickness invariably excuses – for men – while Dolores is left behind. All the while Paquita’s absent presence makes the whole scene – and the whole book – possible. For it is Paquita who dutifully awaits her husband’s return, Paquita who holds the burden of civilization upon her shoulders, Paquita who, because she is a woman and a wife, creates the very condition of possibility for the wild adventure.

Like Lamb, who finds freedom in the pampas only in comparison to England, the farmer-ranchers who sought freedom in the monte saw it as freedom only in contradistinction to that which existed in the plains. The monte was a contested space, it was purple – neither blue nor red – and it was in that murk of possibility that freedom could be found. When I tested out this hypothesis on Ricardo Ruben, he pointed out that many men did not bother to travel as far as the monte, finding adventure even on the outskirts of towns where all the telos (pay by the hour hotels) clustered. But still, the location was telling. The telos were always on the route outside of town, easy enough to stop in on the way home from a long day on the road away. After several

months what was one more week for Richard Lamb? After a long day what was one more hour for the men?

“The charade is tiresome,” Carolina spit bitterly when I asked her about being left behind.

She threatened not to wait, and within her heart began to grow something bitter. Still. The whole region was alive with possibility because of the monte, because the monte was the quintessential place in which to have an escapade, a dynamic place full of possibility. It was romantic, a world apart, a place of sunsets and shadows. And Lamb, rather than being irresponsible or imprudent, was merely a passionate young man. That was the phrase used to describe him – *full of passion*.

When I went with Diego to the monte to check on the heifers he was keeping amongst the mesquites I saw how the promise of adventure in a purple land was still vibrant in the hills. We stopped first at the feedlot to grab a couple *rollos*, big rolls of hay to supplement feeding, latching them on to the trailer behind the truck. Watching the pampas flicker by out the window I tried to put my finger on the transition that had become familiar after a few trips to the monte, the one where the grasslands slowly but surely assumed the shape of a forest. We drove past Coronel Vallejos, past the big grain mills on the outskirts of town, through the centurion rows of eucalyptus, over the rusted and unused railroad tracks.

As we drove past the rusting rails Diego described how the railroad had reached Victorica and Telén by 1910, and how for over fifty years it continued to bring to the small towns on the very edge of the pampas the only form of communication they had

with elsewhere. The railroad was their lifeline, and the railroad station the center of activity in a place that was otherwise far from the metropole. Diego, even though he was young and barely remembered the working rails, spoke with pride of the Argentine railroad system, a pride that I had heard others echo: “We had the most extensive rail system in the world.” Then Perón nationalized the railroads in the 1940s post World War II, and “That was the beginning of the end,” an end that was crystallized with the shuttering of over 500 train stations during the military junta in the late 1970s. In the early 1990s Menem sold off state assets, including railways, as part of the Washington Consensus’ neoliberal reforms, and almost all the long-distance lines were closed, including the ones going into the monte. The monte had always had the feeling of a frontier, Diego said, but it was when the trains stopped running that it really became a frontier again.

By the time we got to the last gas station outside of Eduardo Castex it was already 5 PM. Diego bought gas and two espressos that came in miniature Styrofoam cups and we continued driving west into the afternoon sun, driving west into the monte.

When we arrived to the ranch we saw the breeding herd (*rodeo de cría*) dotted amongst the trees. We unloaded the rollos next to the water tanks where the cows ambled every day to fill up with water, drinking deeply and filling their bellies before they roamed back to the grasses and the trees. One cow stood nearby bellowing and headbutting another cow near her.

“That’s a cow about to enter heat or maybe is already in it,” said Diego.

Estrus in general occurred every 21 days in nonpregnant cows and lasted a total of 18 hours, he went on to explain, and it was during this time that she would be receptive to the bull mounting her.<sup>98</sup> We could see the bull standing to the side near a calden tree, his heavy testicles swinging between his legs, his nostrils flaring and his whole thick body rippling with tension and weight. Diego pointed out how the cow's vulva was slightly swollen and although we didn't see it sometimes you could see, Diego said, a clear discharge from the vulva. She was one of the vaquillonas, the heifers just on the other side of puberty's onset between 12-14 months, at the very beginning of her reproductive cycle. The bull moved closer to her, reaching his head out to smell her behind and as she continued to stand still he shifted his weight to his hind legs and reared up thrusting out his long, thin, pink penis and humping her just once before dropping back down to all four legs. There was a kind of heart flaring electricity in the air.

“Ah, well there you go,” said Diego, “only twenty-nine more to go.”

He turned away as if to be polite, as if to put the image out of our minds, and to return to the dry facts. He didn't, he clarified, really know how many cows the bull had already serviced, but in general the bull might average around thirty females in one breeding season, which lasted for three months between November and January (summer in Argentina), so that the calves could be born in the spring. Facts, facts, facts. Since he would not wean her calf from her until six months, that meant that even as she was still lactating she would be serviced three months in, and, ideally, be three months

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<sup>98</sup> Coming into heat lasted an average of 8 hours, standing heat up to 18, and leaving heat about 14.

pregnant at the time that she would be separated from her calf. We continued walking through the bunched native grasses and the trees that were spaced out from each other with most canopies touching. He kept reciting numbers as if the numbers might make it all seem managed and humdrum, as if the numbers might somehow stand in for the bull and the cow and the hubris that believed it controlled breeding. Cattle have a very similar gestation cycle to humans, averaging 283 days, and he would try to service her seven times in a (on average) seven-year period, after which she would be sent to slaughter for processed meat (not steak). But her teeth might wear out before that. In the monte, Diego explained, the limiting factor was the cow's teeth. Their teeth were worn down by the rough grasses until they were just nubs. In the grasslands, where the cattle subsisted on alfalfa or grains, this was not an issue.

While Diego kept talking away the feeling of the cow and the bull we reached the edge of a field that had been deforested a century before and was now a meadow planted with supplemental winter feed including weeping lovegrass (locally called *pasto lloron*) and alfalfa. An electric fence separated the forest from the meadow. We hopped the fence, skirted the side of the meadow, and passed through a fire break and into a forest with tall, well-developed trees and a thick green grass understory. Here was a forest, explained Diego, that had been managed with fire, electric fences, and rotational grazing in order to keep the palatable grasses. Here, too, was evidence of the forest that surveyors had described after the Conquest of the Desert, a forest that was open with thick trees and rich grasses. This was the sort of landscape that was good for ranching and good for hunting, said Diego.

As we walked through the property admiring the forests there was a kind of quiet and vibrant feeling of possibility. I heard the hum of the electric fence and the swish of the green grasses around our ankles, the occasional birdsong ringing out through the falling light. Diego was talking about something that I had missed at first but suddenly his words came into focus as we rounded the fire break to come back to the main deforested meadow on the edge of which stood the peon's hut and a tree layered in carcasses. He was saying that his father had a lover here, the relation of someone I knew, and that he knew I would be surprised to learn this. His father had met her when he started the auction in the forest, the auction that created a fulcrum between the monte to the west and the plains to the east. For the decade that they were lovers, said Diego, Thomas drove in and out of the thorn forests. As he told the story I understood that through his movement he gathered power to himself and through his movement he shaped the land. His lover made few demands and for that reason he was sharply drawn to her. Because she was compliant, said Diego, she aroused him. When Diego said this, I understood that he was talking about himself and his own lovers, that through his father he was also telling a story about himself. It was about his own reckless desires, his own disheveled charm, his own untamed yearnings that were somehow sharper for being in the forests.

That night sleeping in a puesto in the forests I felt the imagined shadow shapes of forests and men, the smell of damp earth coming in through the cracked window, the decay of something only half-started, the possibilities sprouting up from a place sacked, abandoned, and then slowly overtaken again but in a different way. At night I

thought of Carolina's panic and of her fear as the inky darkness closed all around so that when you opened your eyes it was snuffed out, no light without the moon, and only, when opening the door, cold rashes of stars rubbed across the sky. This was a land stained with blood, a haunted place that had been crisscrossed by thousands of Indigenous cattle drives emerging from an enduring spirit of survival that made a wide region of refuge. Guanaco, ñandu, native birds and grasses, all sheltered amongst the thorn trees. Perhaps the forest had assumed a different shape in order to survive. And it was because of all this that the men had moved their cattle there, it was because of this that the men hunted there, it was because of this that the men went there to forget the undertow of globalization in the plains and to remind themselves of rurality's promise that had made the plains pregnant with possibility so many decades before. Contemporary rural life in the plains was socially and spiritually dead – they had themselves made it that way – and to remember their bond with the rushing of modern energies they sought out the tangled, brambly, complex troubles of the forests.

I was never invited on or allowed to attend a hunt, but I was aware of how hunting combined with ranching was part of what continued to enact massive disturbance regimes that the men exploited to occupy the rolling forests. One night we were all together eating dinner and a friend decided to go hunting with several other men and even though I begged to tag along it was clear that I was not going on the hunt. They were gone all night. To try to make up for the fact of my gendered exclusion Diego sent me a hunting report prepared by a bowhunter who spot-and-stalked a blackbuck in the forests. I scrolled grumpily through the report, having to content



myself with the bland descriptions and photographs even as I, taking a cue from Carolina, imagined more interesting things between the lines.

La Pampa, he wrote, is currently known among hunters as having some of the best free-range hunting grounds in the world, especially for red stag – the descendants of those red stags that Pedro Luro imported from Europe. For many hunters La Pampa is precisely the place in which to “do it all.” One well-known hunter, for example, suggested that the perfect “first hunt in Argentina” would be in La Pampa, “combining hilly ranch country where red stags were first released nearly a century ago with extensive farmland plagued by doves, pigeons, and other airborne pests!”<sup>99</sup> One ranch that catered to this sort of clientele offered 50,000 acres of free-range hunting for red stag and a 1,000-acre fenced preserve where they bred exotics and other trophies while maintaining cattle at about half the carrying capacity. In the report, the hunter wrote that the wild boar hunting is particularly good, that “natural and manmade waterholes are plentiful, creating excellent ambush points for hunting from a blind in the afternoons or at night in the European style,” and that the name of the ranch is La Mota, but “goes by Caza Pampa on the web, which roughly translates to: ‘He hunts the Pampas.’”<sup>100</sup> Caza Pampa translates as “Pampa Hunting,” Diego answered after I asked. But this bowhunter had somehow triumphantly distilled a self-definition, envisioning himself as well as the other men as predators stalking not just the animals or the forests but the whole Pampas, the weighty and magnificent South American hinterland.

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<sup>99</sup> <https://www.craigboddington.com/endorsed-outfitters/hunting-tips/best-hunt-argentina>

<sup>100</sup> <http://huntingreport.com/free-range-argentina-red-stags-with-caza-pampa-hunting-lodge/>

The men identified with this vision but it was not the sort of blatant muscularity that I had seen in the feedlot. It was more shadowy, more obscure for being away from the plains. Where in the feedlot the prey were penned and available for the taking, in the forests the prey was to be found amongst the dunes, at watering holes. It required a different kind of mentality, a stalking mentality that both took what was there for the taking at the same time that the activity held the land. To breed and kill prey is to become a participant in proliferation and a bystander in assassination. To stalk and kill prey yourself is to become a hunter, not alienated from the slaughter of production. Blood on the hands incites its own set of hungers. But not just that. It was the vision that they were stalking the whole hinterland, that they were holding open the land with their activity, that they could become themselves – hunters – in this place as long as they could keep it “the Pampas.” And “the Pampas,” that symbolic hinterland that had eulogized the gaucho long before the North American cowboy became emblematic of masculinity, “the Pampas” as a way of life, was no longer visible in the plains. “The Pampas” had moved to the forests. In the forests one could find romances characteristic of W.H. Hudson’s *The Purple Land*, in the forests the cattle had to be stalked, just like the other prey.

Diego’s father’s auction exploited this dynamism, as all auctions do, exploited the possibility of cattle accumulation in the surviving forests that still existed in contradistinction to the sacked plains. At the auction the morning after the hunt I saw this dynamism the way I had seen it at the Mercado de Liniers in Buenos Aires, but here it had a different tenor. The auction was small – averaging about 2,000 heads per

auction – and bristling with masculinity, alive with the possibility of participating in a bidding market that paid immediately, alive with the way men sized each other up. It was held right outside Victorica. Some of the men lived in the forests, while others had come from the plains to see what they might buy. Many of the cattle were scraggly and skinny and scared, with hair matted from the rain drizzle and the long truck ride to Victorica. The auctioneer pounded his gavel calling out through the megaphone ascending prices. It resounded throughout the muddy pens, clanging indifferent to the huddling calves against the fences. The sound called forth a kind of old world, said one rancher, and even though I knew what he meant – I had seen the way many of the ranchers bought cattle online or from watching La Rural auctions on television – there was also a kind of way in which the sound, too, called up the thing that the men were seeking in the forests. A bond with the sort of place that made them feel alive. A bond with a place that allowed them to cultivate the inner strength to keep on changing the plains.

But when the auction ended and the day was done the men always returned to the plains. Like Paquita, who was both Lamb's point of departure as well as his destination, the wife in the plains created the possibility of the journey. Without her the adventure would be less exciting. I saw this both in the enthusiasm the men held as well as the disgruntlement of the women, who had warned me not to go to the monte in the first place. The promise of domesticity made the escapade into the country thrilling because the man was getting away from the duties of the household at the same time that he fulfilled his duty of providing for the home. This is an old plot device, an

old story we all know about the traveling man, the Odysseus and the Gilgamesh and the Quixote. As in these tales, love and war are intertwined with one another. The metaphor of a “purple land” is a reference to love and war, to bruised passion, to a land that Lamb describes as “stained with the blood of her children,” captured best in “that fine old Spanish song of love and war,” *Cuando suena la trompa guerrera*, whose chorus lyricizes passion, the nation, and death all at once:

*Soldados, la patria*

*Nos llama a la lid.*

*Juermos por ella,*

*Prefiero vencer o morir.*

Soldiers, the homeland

She calls us to the fight.

Let us cheer for her

I would rather win or die.

Love and war, love and the hunt, justify the freedom Lamb seeks in the interior, the freedom the men sought in the forests. The men were responsive to this emerging landscape, alive to its possibilities. There was so much more than what the ranchers saw in front of them, so much more than the place which enabled them to develop themselves into the sort of men that ranched and herded cattle, but they mocked those

places when I asked about them, revealing in their dismissal an uneasiness. Were they threatened by these traces of the men and women who had lived in these forests? Had they wanted to erase all evidence of the previous inhabitants by erasing the landscape, even as they realized that it was precisely that landscape that made them alive? Did they only want to visit the forests, and not actually live there?

Part of the rancher's dismissal came from a prejudice but it also came from a fear, a fear buried tightly and deeply inside, that they did not belong. No one would have ever said this aloud – probably even reading it they might find it ludicrous – but, like the total dismissal of race and class in a place that is mightily attuned to such things, it remained unsaid. Within this fear there existed a dichotomy. On the one hand there was a deeply buried fear of not belonging, and on the other hand a claim to belong by being from elsewhere. Immigrants even four generations in were deeply proud of their Italian, Spanish, English, or German heritage. On every estancia it was possible to see whose ancestors had established the home a century before. Around La Josefina, for example, there was a sprawling lawn, a clay tennis court, and a Victorian garden with hedges.

It was in the forests that the impossibility of control was more obvious, that belonging was, in a sense, up for grabs. Cattle had been powerful agents of conquest wherever they went, transforming whole biomes, but they also had the power to transform landscapes into places that the ranchers did not like. When I went with David to his ranch in the forests, for example, he showed me the form of woody shrub encroachment locally called *fachinal* that was a thorny impassable bramble. The cattle

had also made this landscape, he explained, because they had been overstocked by ranchers, and nobody loved the fachinal. It competed with grasses and was impenetrable even for cattle. This was the potential of which the ranchers were aware. In the forests, settler ecologies of belonging were not really so obvious, and as a result the identity of the men was also at risk. The thicketed caldens existed in powerful juxtaposition to the tree-shaped caldens that rose up as reminders of the landscape that had once been an Indigenous region of refuge.

Before leaving the forests I stopped once more at the gas station at Eduardo Castex where I had stopped with Diego on the way there, buying an espresso in a Styrofoam cup. The shadow shapes of men and trees that Carolina had warned me about receded into the forest around the asphalted parking lot and low-roofed comedor. I sat on a concrete wheelstop in the shade of a calden tree decorated with Gauchito Gil red ribbons and an altar upon which were placed offerings of flowers and cigarettes. A dusky smell came up from the earth. Looking up into the branches of the trees I saw the darkening purple sky through the gnarled canopy. What did it mean to return?

In *The Purple Land*, Paquita makes the social world and narrative possible because the reader is aware that Lamb has to get back to her. The vast energy that he expends exploring the countryside is not tempered but is actually revived by the ceaseless knowledge of his duty. He must get back because it is there, in the intimacy of the home, where he can be restored to his full self. The personal and human energies of the home remind him who he is, and since he performs through this action the dutiful man who brings into being the patriarchal social order of “civilization,” everyday life

can resume. It is a paradoxical position for the wife who has been waiting for so long, even as she, too, has had new encounters. Carolina, for example, discovered new parts of herself she did not even know had existed, discovered someone inside her who dared to reject the position Diego had given her. This is part of the risk. It would be ludicrous to believe that both parties have remained unchanged. And so even coming home, although the duty of return assures social continuity, the partners may find themselves strangers to each other.



Figure 16. Cattle in the monte.

### **Metamorphosis 3: Monte**

The third Pampean metamorphosis begins in a moment of astonishing duress. Four centuries before the ranching men occupied the forests with the heifers, far beyond the reach of the Spanish Crown, Pampas Indians took up the horse and established cattle trading routes around the edge of the grasslands into Chile. In the face of deadly European diseases, death, and enslavement, they sought out those places still unnavigated by the criollos and Spaniards who were lost at sea in the Pampas



grasslands. While the nomadic origin of Pampas Indians is disputed – it is possible that they were originally sedentary agriculturalists driven from their settlements by European disease and violence, becoming nomadic in order to survive – it is clear that they became consummate horsemen and cattlemen over the course of two centuries. They established a vast region of refuge in the western Pampas.<sup>101</sup>

As they herded cattle east to west through the Pampas, tallgrass prairies and ephemeral lagoons gave way to a series of sloping and transversal valleys covered in upland xerophytic grasslands and lowland woodland patches where ancient sand dunes were covered over with trees and grasses. These dunes gradually gave way to the semi-arid scrub, becoming a sparse highland chapparal reaching up the dry slopes of the Andean foothills. The Pampas were and are characterized by a gradual diminishment of rainfall toward the Andes, an east to west precipitation gradient similar to the Great Plains and the Rockies, dropping from about 1200 mm to 90 mm in the very western reaches. The singular characteristic that made the western Pampas particularly daunting was the lack of surface water. In a country where the rivers ran deep and full, this wide tableland between the Río Salado and the eastern foothills of the Andes was shockingly devoid of permanent streams and rivers. To the south curved the Río Negro, and to the west the Río Atuel, but in between there was very little water except seasonal lagoons that came with the summer rains.<sup>102</sup>

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<sup>101</sup> Gonzalo Aguirre Beltrán describes Indigenous regions of refuge in the Americas as the hills and the mountains and the deserts, difficult environments in which to survive and the very reason they became places of Indigenous survival (Beltrán 2000).

<sup>102</sup> Geologists describe the lack of drainage in this region as characterized by numerous endorheic basins, drainage basins that retain water without flowing into rivers or oceans, converging into permanent or seasonal lagoons and swamps. As detailed in Chapter 3, the only permanent drainage basin is technically the Quinto River, although it is seasonal and often runs only underground, which was in part why everyone was so surprised by its resurgence in 2016. Note also that the Río Atuel was dammed in the 1950s by the province to the north, Mendoza, which I will detail later.

For several centuries Indigenous groups exploited the lack of surface water to their advantage. Because the soils were mostly medium to fine sand, if one knew how to read the landscape it was possible to descend into low valleys and ephemeral creeks where water collected just belowground.<sup>103</sup> By marking out these places, Pampas Indians established an ingenious system for navigating the vast otherwise dry region. When Mapudungun became the lingua franca of the region, every place name that ended in -co – of which there were hundreds – signified a place that either had a temporary lagoon or could be plumbed for water just beneath the surface. Place names unchanged after colonization attest to this vast water network dotted along old rastrilladas turned railroads, including Realicó, Condarco, Naicó, Cuchillo-Có (a hybridism), and more.

Besides establishing water routes for the cattle trade, Pampas Indians regularly set controlled, low-burn fires to keep the grasses young, fresh, and palatable for the cattle. Periodic fires helped to create a mosaic of fire-maintained grasslands with patches of hardwood (Bucher 1987:270). Pampas Indians were, writes Argentine ecologist Enrique Bucher, “extremely skillful at managing fire,” and the frequency of fire – from one year to 25 years – depended on the geomorphology of the landscape (Bucher 1982;1987).<sup>104</sup> Hills needed more fire to maintain a grassland state, while

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<sup>103</sup> The region is covered with “loessic sandy sediments of eolian origin. The dominant soils are Calciustolls well drained with a petrocalcic horizon (“tosca”) at an average depth of 40-60 cm” (Peláez et al. 2021:50). The locally called “tosca” is the hardpan beneath the soils.

<sup>104</sup> “Periodic fires produced by lightning or by Amerindians (who were extremely skillful at managing fire) maintained grasslands in the past, preventing woodland colonization of open areas. The necessary fuel was provided by a considerable grass biomass accumulated in periods that varied from a year in certain fire-maintained grasslands up to 25 years in edaphic grasslands of *Elionurus muticus* (Morello and Adamoli 1968). After colonization by Europeans, fire intensity and frequency decreased, particularly in the dry western chaco, owing to the withdrawal of Indians and overgrazing by introduced domestic cattle, which eliminated the necessary fuel. Consequently, the grassland patches were rapidly invaded by woody vegetation in all western chaco to the point of complete elimination” (Bucher 1982:65). Note also that more studies need to be done on this. Over and over, the impact of Indigenous land management was severely under-reported and disregarded. Even in one of the best and most

edaphic grasslands in flood-prone lowlands could remain grasslands for at least 25 years without fire.<sup>105</sup> Because the range of ecologies that the cattle trade route covered was enormous and varied – from the wetter marshy lowlands of the eastern Pampas through the tallgrass prairies into the gently undulating valleys and xerophytic woodlands of the western Pampas – these fire regimes varied in time and scale, and changed depending on the grasses as well as the grazing behavior that had modified those grasses. Cattle are selective grazers, usually eating certain palatable grasses and avoiding others. They do not graze native grasses including *Stipa gynerioides* and *Stipa speciosa*, meaning that over time these perennial bunchgrasses accumulate dead plant material near the base of their stems. When these grasses are fired, the dead plant material generates high-burn temperatures and often kills their basal stems due to the high heat. In contrast, cattle do graze native grasses *Stipa longiglumis*, *Stipa (Nasella) tenuis*, *Piptochaetium napostaense*, and *Poa ligularis*, and all of these show a much lower mortality rate after fires.<sup>106</sup> It is probable that these cool-season perennial native

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extensive studies of the forests, they write: “Estos pueblos, que tenían una economía de subsistencia, hacían un uso extensivo del bosque y su impacto probablemente haya sido mínimo, siendo los principales disturbios ocasionados por la utilización del fuego para la caza, esencialmente ñandú y guanaco (Kraus et al., 1999)” (*Estado de Conservación del Distrito del Caldén*).

<sup>105</sup> “Fire-maintained grasslands occur in any community subjected to fire, but show a tendency to occupy depressions within the forests, where productivity of the herb layer is greater and provides more fuel. They are also found in the contact zone between forests and edaphic grasslands. Fire is an essential factor in maintaining grassland savannas – including some edaphic grasslands – as a ‘fire climax’ in the chaco. Very few woody plants are adapted to resist repeated exposure to fire, and even fewer are favored by it (Morello 1970). In contrast, grasslands respond positively to fire, through rapid germination, vegetative growth and reproduction” (Bucher 1982:65).

<sup>106</sup> Daniel Peláez et al. 2021 conducted an excellent investigation of these important grass species and their relationship to fire in the western Pampas over a 20-year period. They concluded that “High (controlled fire every 3 or 5 years) and low (controlled fire every 8 years) fire frequency treatments induced an increase in foliar cover and density in desirable grasses, no changes in intermediate grasses, and a decrease in undesirable perennial grasses” (2021:53). These included native grasses classified as follows, with desirable meaning those grasses favored by cattle. Desirable: *P. napostaense*, *P. ligularis*, *N. clarazii* and *N. tenuis*. Intermediate: *Poa lanuginosa*, *P. speciosa*, *Jarava plumose*, *Nasella trichotoma*. Undesirable: *J. ichu*, *Amelichloa brachychaeta*, *N. tenuissima*, *Melica argyrea*.

grasses were selected for over several centuries of Indigenous grazing and burning in the western Pampas, but more work is also needed on this topic.<sup>107</sup>

In addition to selecting for certain grasses, firing and grazing also selected for certain trees, as well as the shape of a savanna ecosystem. As the cattle trade routes traced their ways west and south, and as the precipitation dropped off, the prairies gave way to varied vegetation including a shrub layering of mixed density as well as a sparse savanna of *Prosopis* thorn trees. Here you might remember the character we met in the first metamorphosis, the king of the forest, the calden (*Prosopis caldenia*). The calden, along with other *Prosopis* species including *Prosopis algarrobo* and *Prosopis negra*, is an extremely important character in this story both because of the resources it provides – shade, firewood, beans for both cattle and human consumption – and also because it helps us to trace Indigenous land management through the historical dispersion and spread of the forest. To follow the outlines of old Indigenous routes and to see the curvature of the espinal is to realize that much of the caldenal was, as Bogino et al. suggest, “driven by anthropogenic land use changes” (Bogino et al. 2015:59). Indeed, some of the oldest remaining calden trees have been dated to the 1790s, coinciding with the establishment of Indigenous settlements (*cacicazgos*)

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<sup>107</sup> Part of what makes the reconstruction of the fire regime abundantly difficult is the ongoing misunderstanding that livestock entered the region only a century ago, and that wildfires before colonizers were started largely by lightning (e.g. Bóo 1990; Lell 1990). In the otherwise wonderful article on the fire regime of the caldenal, from which I have been drawing information about the above-mentioned grasses, Daniel Peláez et al. write: “Before the introduction of domestic livestock in the region, occurred [sic] at the beginning of the last century, historic fire frequency was 5 years. The present-day interval between fires is 10 years or more...” We might infer, then, that during the period when Ranqueles kept livestock in the region and practiced fire management, that they fired various upland grasslands every five years or so. The authors continue: “It has been suggested that the reduction in grass biomass due to long-term overgrazing and the building of fire breaks have increased the fire free period...” Although this, too, must be met with the caveat that the fire free period has been because fires have been outlawed and fire management marginalized. They go on to describe the subsequent woody shrub encroachment: “Overgrazing not only increases the fire-free period, but also reduces the competitive capacity of the grass strata favouring recruitment of woody seedlings mainly in years with above normal and well-distributed rainfall. In consequence, sites dominated by preferred grasses by cattle as *P. ligularis*, *N. longiglumis*, *P. napostaense*, and *N. tenuis* have been transformed in dense shrublands (“fachinales”) or sites dominated by non-preferred grasses as *J. ichu*, *S. tenuissima*, *S. ambigua* and *S. brachychaeta* (“pajonales”)” (2021:50-51).

commercializing an estimated 20 to 40 thousand head of cattle from the Pampas across the Andean cordillera into Chile each year (Bogino et al. 2015; Dussart et al. 2011).<sup>108</sup> In both central Argentina and northern Mexico where native mesquites were noted in the 16<sup>th</sup> century, the 18<sup>th</sup> and 19<sup>th</sup> century cattle trade – along the Shawnee Trail and the Goodnight Trail in what was once Mexico and along the Trail of Fleas in Argentina – spread mesquite widely. This is because cattle are consummate dispersers of *Prosopis* trees through four mechanisms.<sup>109</sup> First, cattle grazing limits herbaceous competition and through both grazing and trampling creates spaces with access to sunlight. Second, cattle ingest calden pods and scarify the seeds, passing them through their digestive tract into a fertile environment.<sup>110</sup> Third, they tend to gather beneath the shade of trees and create conditions for germination below *Prosopis* trees, in many cases leading to bushy forms due to intra-*Prosopis* competition. Fourth, the trees gradually begin to occupy more of the grassy uplands whereas before they were only found in drainages, and this begins to put more grazing pressure on grasses that are surviving.<sup>111</sup> All of

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<sup>108</sup> Stella Bogino et al. describe how calden “recruitment in the 1790s coincided with the establishment of the first aborigine *cacicazgos* in the area that commercialize[d] wide amounts of cattle, driven by foot, from the pampas to Chile crossing the Andean cordillera walking about 40 km per day which signified a means of calden’s seed dispersal for long distances...” (2015:63). They go further and claim: “Calden recruitment should be considered a multi-causal process that integrates the effects of several factors mostly driven by anthropogenic land use changes” (Bogino et al. 2015:59).

<sup>109</sup> Note that studies in a strikingly similar ecoregion in southeastern Arizona, where Indigenous herding was also supplanted by settler ranching in the past century. In a study looking at the dispersal of *Prosopis* species – called in this region and in Mexico by the name mesquite (from the Spanish *mezquite*, borrowed from the Nahuatl *mizquiltl*) – the authors describe how cattle grazing has spread mesquites in the past century (Wilson et al. 2001).

<sup>110</sup> “When fruits are not consumed, seeds remain inside the indehiscent endocarp, which delays germination at the imbibition phase because of the endocarp and the hard seed coat (Peinetti et al. 1992). However, when ingested by cattle, germination is increased because the seeds are both separated from the endocarps and scarified when excreted (Peinetti et al. 1993). Effects of increased longevity in the soil bank have also been hypothesized, as livestock may disperse consumed seeds to places where they would otherwise be unlikely to arrive, e.g. away from host-specific predators harbored by parent plants (Lerner and Peinetti 1996). Indirect effects of cattle grazing by reducing grass competition may also aid woody weed invasions...” (Dussart et al 1998:690).

<sup>111</sup> Many studies have also hypothesized that in these regions this particular relationship – between a large ungulate and a leguminous tree – has a historical precedent that predisposes the relationship to modify the local environment. In both the United States and Argentina, where there once existed massive megafauna, researchers have suggested that in fact “cattle are surrogate megafauna, resuming the relationship between mesquite and large mammals that last existed in the latest Pleistocene” (Wilson et al 2001:14; see also Brown and Archer 1987; 1989; Marcos Cenizo *pers. comm.*).

these characteristics are significant because accepted wisdom in the region never attributes to Mapuche and Ranqueles this rather extraordinary fact: Indigenous land management was actually *growing the forest*. The villainization of our beautiful protagonist, the calden tree, has been part of the purposeful and destructive settler *modus operandi* which persecutes that very species that might prove Indigenous management otherwise, as I will get into more below.

By the 18<sup>th</sup> century, the Chilean military had begun to increase aggression against Mapuche and Ranqueles south of the Bío-Bío River (Klubock 2014), and in response some groups began to migrate down the eastern face of the Andes and into the western Pampas. Interethnic conflicts with Pampas Indians led to the eventual dominance of the Mapuche and Ranquel language, Mapudungun. Numerous factions continued to exist within a large region of refuge that was basically an Indigenous sovereign territory that maintained its power largely through the control and trade of massive herds of cattle. Famous caciques such as Juan Calfucúra were able to amass an extraordinary following in part through massive control of cattle – in one year he and his men were rumored to have rustled 100,000 head of cattle – not unlike Argentine strongmen and generals. Calfucúra occupied the Salinas Grandes along with an extensive territory throughout Wall-Mapu for much of the first half of the 19<sup>th</sup> century, by 1840 making pacts with Cacique Painé and the Ranqueles, with the manzaneros of Valentín Sayhueque, and cacique Casimiro Biguá of the Tehuelches to maintain a sovereign Indigenous territory that still existed outside the hand of the Argentine state.

Multiple rastrilladas wove throughout the region and there were numerous permanent settlements. Surveyor Diego de las Casas visited the region in 1779 and recorded at least forty-six villages, twelve of which had wells and cultivation (Bogino et al. 2019), such as Leuvucó and Toay, where observers recorded exact descriptions of land cultivation. In 1847 in the valley of Toay, for example, surveyor Del Busto described large fields sown with corn and squash as well as corrals with domestic livestock and spaces for breeding; from Toay the expedition captured 630 horses, 987 sheep, and 285 cows, indicating that there were obviously more (Del Busto 1847, quoted by Dussart et al 2011:58). In general, beyond these settlements, the vegetational mosaic was dynamic, and the forest was spreading.<sup>112</sup>

Then, in 1878, General Julio Argentino Roca and the Argentine military began an offensive against Wall-Mapu that would be the last. Conflicts between settler and Indigenous settlements had been increasing, and Buenos Aires had begun to receive pressure both from outside investors in Britain as well as from advances by the Chilean military along the tenuous border following the backbone of the Andes. Between the end of 1878 and 1885, in what was called the “Conquest of the Desert,” the Argentine military systematically worked their way south and west from Leuvucó to Neuquén and Río Negro and finally to Chubut, destroying Indigenous settlements, murdering whole villages, capturing prisoners and livestock, and occupying and renaming

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<sup>112</sup> Both historical observations as well as tree ring reconstructions indicate that there was probably already some morphology shifts in the calden trees by the 19<sup>th</sup> century from tree to shrub form (Dussart et al. 2011; Bogino et al. 2015), but for the most part ecologists posit that the dominant state before settlers arrived was an open forest, where trees reached 10 to 12 meters in height with 1.5-meter trunk diameters (Peinetti et al. 2018:231). More research on the shape of the forest at this time is needed, especially with regard to how it was shaped by fire. One wonderful article by Carlos Kunst et al. on the Chaco, to the north, estimates that fires due to lightning – the “fire return interval of the savanna” – was every three to four years (Kunst et al. 2014). This is the average for other herbaceous biomes of the world to also maintain savanna structure, e.g. the “parkland” settlers described.

settlements as their own. Indigenous groups had up to this moment been managing Wall-Mapu with fire and grazing, which had most definitely changed the vegetation in the region as well as the species community composition and structure. Management had ensured a savanna-like canopy with abundant cool-season perennial grasses that settlers described as a “parkland” when they first arrived. But it was with the settlers that the region was definitively degraded in just a few short decades.

Between the 1880s and the 1930s, a few hundred thousand settlers arrived to this region, promptly settling, farming, grazing, and denuding the land until many abandoned it with the Pampas Dust Bowl. The denudation and exodus was not inevitable, it was the ongoing thrust of ecologies of belonging through which settlers claimed their own native-ness, and in so doing destroyed the resource base. The train arrived in the 1890s to the western Pampa and its final westernmost stop was constructed at Telén in 1910.



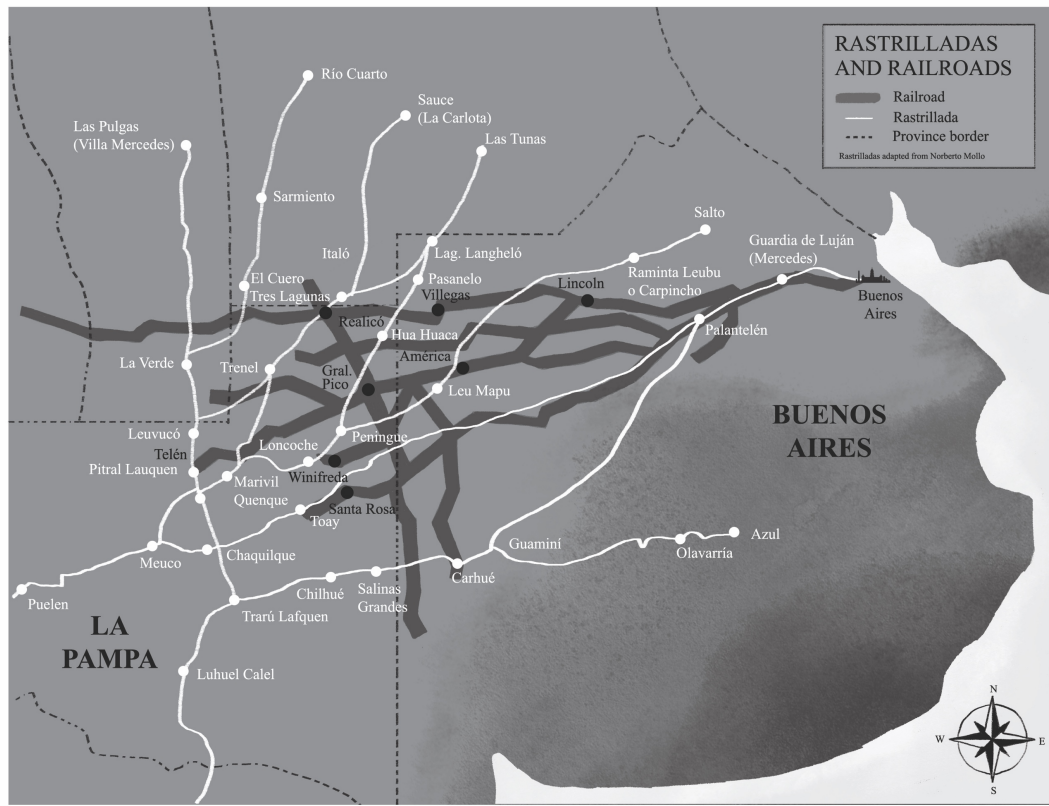


Figure 17. Indigenous rastrilladas overlaid with railroads. Illustration by Nguyen Tran.

It was with the train that sharecroppers poured in, recruited and contracted in Buenos Aires to plant wheat in settlement colonies. By 1900 at least 1.5 million hectares of calden forests were logged to make grazing pastures (Velasco Sastre et al. 2018), and by 1910 at least 90,000 settlers had arrived, planting around 435,000 hectares with wheat and 435,000 with alfalfa for pasture (Gaignard 1966:66). Many of the large farms were mixed, as they are today, meaning that because the tracts of land were so big some fields were planted in wheat while others were reserved for sheep. In some cases, as in the properties that I profile below, the farm began with wheat

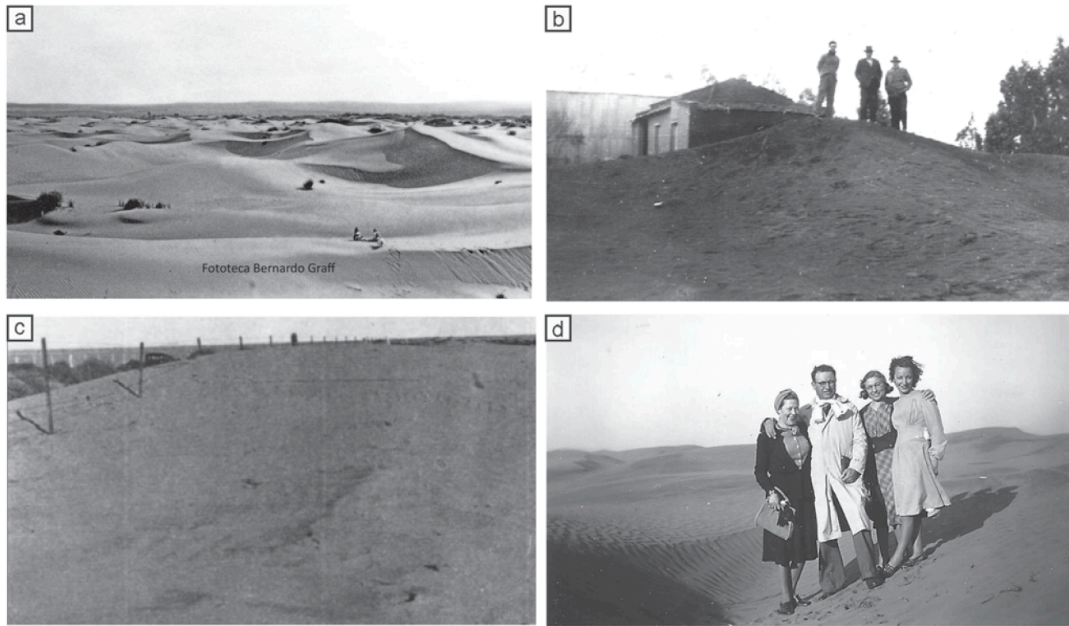
monocultures, moved to sheep after the soils became too desiccated for wheat, and then switched to cattle grazing starting in the mid-20<sup>th</sup> century.

In 1900 Argentina annually imported 50,000 plows from the US and England (Scobie 1964:82) and tenant farmers went to work plowing and harrowing the fragile soils at a grander scale. Between 1915 and 1927, another 50,000 immigrants arrived through colonization societies as sharecroppers and tenant farmers (Gaignard 1996:69). With the moldboard plow they turned over the earth from 4 to 12 inches, exposing soils, drying them out, harrowing them and planting them with only wheat, and forgoing a cover crop. Most farmers were in a system of tenancy, were not familiar with the landscape, and became even more indebted as they continued to take out loans for tractors, threshers, and reapers, reinforcing the pervasiveness of tenant farming on the pampas (Scobie 1964:84) as well as reinforcing practices of farming that worsened topsoil loss, including leaving the soils bare during the winter and thus vulnerable to high winter winds. The dunes covered in extensive forests, which during observations in the 1840s and 1870s been considered stable and inactive geoforms, were reactivated (locally called *medanos vivos* – live dunes).<sup>113</sup> Intense logging coupled with burning, ploughing, and year over year of wheat plantings was largely responsible for this shift in aeolian processes (Tripaldi et al. 2013). Wheat farming reduced organic matter content, making the soil vulnerable to wind erosion, giving rise to more sand dunes and unstable soils. While the drought that began in 1929 worsened these conditions,

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<sup>113</sup> Tripaldi et al. note: “Stabilized dune fields were documented by the first military surveys (1840s and 1870s) into the western Pampas and by topographers who surveyed and mapped this province between 1881 and 1885. According to military diaries, the area of Toay was surrounded by stabilized dunes covered by extensive, tall and dark forests in 1846 (Dussart et al., 2011)” (Tripaldi et al. 2013:1741).

Alfonsina Tripaldi et al. have in an excellent study of wind patterns in the western Pampas determined that the extraordinary reactivation of the dune system, in some places migrating up to 30 m high and covered with “aeolian ripples and the dominance of blowouts and dune crest forms,” was due almost entirely to “agricultural overproduction, poor soil conservation practices” and “unprecedented land use changes with a significant increase in population and expansion of wheat cultivation into this fragile environment” (Tripaldi et al. 2013:1744). With so few white settlers in the midst of hundreds of thousands of hectares that were still symbolically liminal, the compulsive and feverish need to bring land under forms of Europeanized cultivation in order to establish ecologies of belonging brought dust storms to the region, as in the United States and Australia. By the 1930s whole fences had been buried beneath the sand dunes forming vast dune fields where nothing grew at all.



**Figure 7.** Historical photography of the 1930s drought at La Pampa and San Luis provinces: (a) panoramic view of a dune landscape at Toay, La Pampa Province, c. 1939 (source: Photograph Library Bernardo Graff); (b) sand accumulation almost covering a house at the town of Toay, c. 1930s (source: Provincial Historical Archive of La Pampa); (c) wire fences covered by aeolian sand along a route in northern La Pampa Province sometime in 1939 (source: Guñazú, 1939); and (d) a family portrayed in a dune landscape at Lavaisse, near Nicolas section (Figure 5a), last years of the 1930s (Giraudi M and Geuna S, 2012, personal communication).

Figure 18. Pampas Dust Bowl. Taken from Alfonsina Tripaldi et al. 2013 “Geological Evidence for a drought episode in the western Pampas (Argentina, South America), during the early-mid 20<sup>th</sup> century.” *The Holocene* 23(12) 1731-1746.

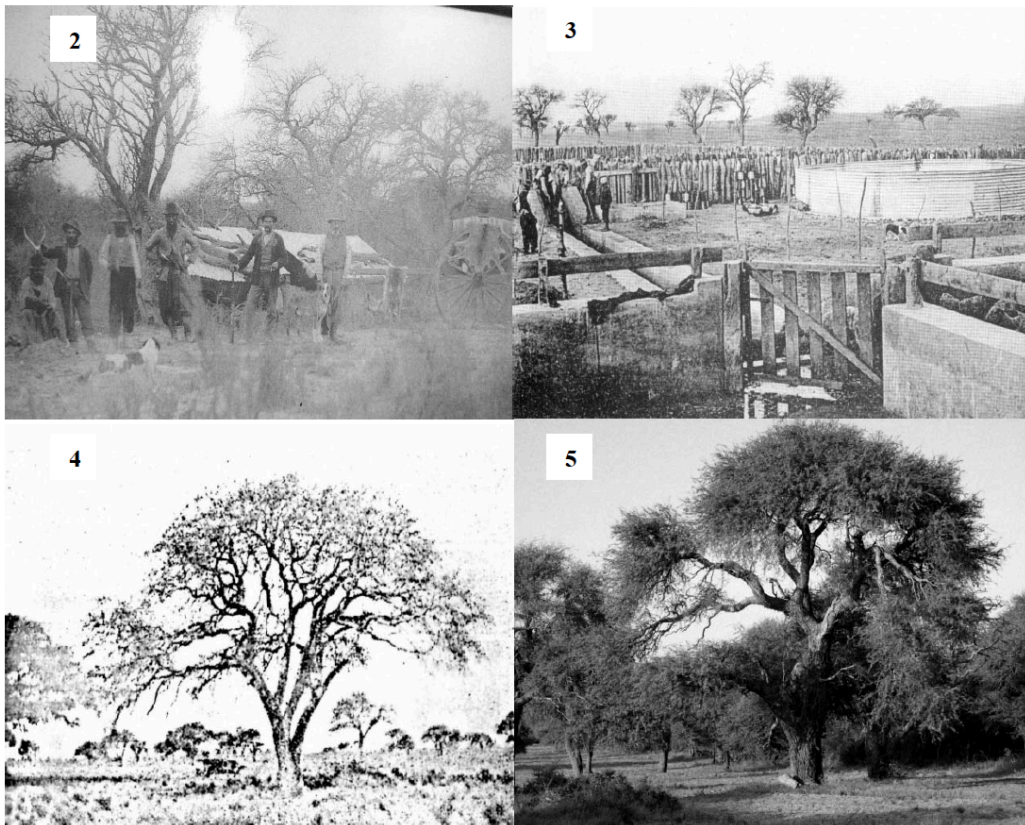
The region became famous for being semi-arid and unsuitable for anything besides livestock, “una reputación de tierra maldita” (Gaignard 1966:71).<sup>114</sup> In previous metamorphoses I have sketched an outline of the rest of the story – the way the Pampas Dust Bowl gave way to a massive settler exodus, how cattle came in to hold the land, how genetically modified soybeans pushed cattle to the peripheries, how savvy ranchers decided to move their calf/heifer operations into the forests in the aughts, and

<sup>114</sup> Paul Sutter’s excellent environmental history of Georgia’s “Little Grand Canyon” describes a similar and shocking process where human-induced soil erosion led to massive gullying and the now preserved network of erosion gullies within Providence Canyon State Park (2015). We assume that environmental disasters on such a massive scale take centuries if not millennium, and his book shows that in fact they can occur in just a few decades. His provocation also leads us to think about the scale of environmental disaster in La Pampa, as well as whether the so-called “tosca” or hardpan just below the surface is human-induced. More research is needed.

how the ranchers are now faced with a dilemma whose ecological form they call “fachinal,” scientifically known as woody shrub encroachment. To get a grip on these monumental events I want to step back from general claims and zoom in to look at the monte through a case study by ecologists Esteban Dussart, Pamela Lerner, and Raul Peinetti, of the long-term dynamics of two *Prosopis caldenia* populations on two ranches – one near Quehue and the other near Luan Toro (1998:685-691).<sup>115</sup> Both are now beset by the form of shrubby caldens (what ranchers call “woody shrub encroachment”) plaguing much of the monte. The history of settler land management on these ranches is emblematic of the history of the caldenal in the past century, and it helps us get closer to the monte’s ongoing metamorphosis.

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<sup>115</sup> The average annual temperature in both sites was 16 degrees Celsius with annual precipitation between 550-600 mm.



**Figura 2.** “Selvas” de Toay en 1893 (Sitio 3). Gentileza Sr. Pedro Vigne. **Figura 3.** Campos limpiados en 1907 (Sitio 2). Extraído de Lasalle y Lluch (2000). **Figura 4.** Monte Puro en los años 1930. Extraído de Koutché y Carmelich (1936). **Figura 5.** Caldenal actual en 2010 (Sitio 4). Individuos dominantes aislados sobre estrato secundario cerrado.

Figure 19. Calden trees in different forms. Figure 2 are the “Forests” of Toay in 1893. Figure 3 is of a “cleaned” i.e. logged and burned field/ranch. Figure 4 is of so-called “pristine” forest (the original parkland) that still was surviving in the 1930s. Figure 5 represents the current closed form of the caldenal, photo from 2010. Taken from Esteban Dussart et al. 2011. “Reconstrucción del paisaje del caldenal pampeano en los últimos 250 años.” *Quebracho* Vol. 19(1,2):54-65.

The ranch near Quehue was situated on a treeless grassland plain of important forage grasses including *Stipa tenuis* and *Piptochetium napostaense* and *flechillas* surrounded by valleys with mature calden trees. The upland plains were tilled and colonized for wheat monocultures starting around 1910 in small fields of about 50

hectares each. This approach was abandoned in 1933 – most likely due to the aeolian erosion that resulted – and 5,000 sheep plus about 20-40 cows and horses were brought to the site to graze until 1949 when the lessee family converted the ranch completely to cattle grazing. They overstocked the ranch at one so-called “Livestock Unit” (L.U.)/5 ha. instead of the recommended 1 L.U./10 ha., resulting in vegetative degradation. There was no logging on this ranch and locals remembered only one major fire event in the summer of 1980 which the main stems of trees had also recorded (Dussart et al 1989:687). This ranch was representative of settler ranches all over the monte, which began with wheat monocultures in the early 20<sup>th</sup> century, moved to sheep farming when the soils became desiccated, and then finally switched over to cattle grazing from about the mid-20<sup>th</sup> century on.

The ranch near Luan Toro followed a similar pattern but due to local laws forbidding agriculture was not planted with wheat to begin. It was a savanna parkland with a grassy matrix of *Poa ligularis* and *Piptochaetium napostense* and scattered large calden trees. Two logging periods corresponding with WWI and WWII were recorded for the region based on sawmill activity, but because agriculture was illegal tree stems were cut at 60 cm aboveground (ostensibly so that the owner could claim that they were not “harvesting”). The owners also logged for fence posts (about 6 trees per hectare) every ten years since 1975. As with the other ranch, sheep farming between 1945-1960 preceded cattle raising from 1968-1980 with stocking rates of 1 L.U./2 hectares leading to massive degradation. There was one fire in 1964. From 1985-1992 the ranch implemented a rotational grazing pattern holding to 1 L.U./5 ha.

Due to both fire suppression as well as overstocking, the settlers created a feedback loop that led to a shrubby-shaped forest. Cattle reduced grass competition by grazing, fire suppression meant that the fires did not clear out old grasses or new tree growth, and cattle scarified and activated the calden seeds through their digestive tracts, creating in the very spaces that they had cleared fertile opportunities for calden seeds to sprout and grow.<sup>116</sup> With the ranches at Quehue and Luan Toro there was probably only one large fire in the past century, showing how systematically the settlers suppressed fires.

And here we come back to our most extraordinary protagonist, the calden. The other wonderful thing about caldens, besides their extraordinarily deep root system, is that they are shape shifters. Many trees shape shift, adjusting to pruning, firing, grazing, climate, and community structure, among other factors (see Mathews 2018; 2022; forthcoming). The shape that the calden tree assumes – whether a tree or a shrub – is determined largely by the ecological niche in which it grows as well as the historical events that happen over time – such as lightning, anthropogenic fires, or grazing. After a century of intense logging, abandonment, overstocking of cattle, and fire suppression, the current shape of the calden forest is surprisingly dense. In many places trees have grown back, but not in the shape of the savanna parkland that the settlers lauded when they arrived to the region. Instead, they have grown back in a dense, bushy, shrubby form.

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<sup>116</sup> Caldens on the ranch near Quehue averaged about 586 +/- 34 shrubs per hectare, with age ranges from 3 to 65 years, while on the ranch near Luan Toro the ecologists counted 1,259 +/- 129 shrubs per hectare, with age ranges of 8 to 55 years (trees with basal stems larger than 30 cm in diameter were not sampled, since the study sought specifically to understand woody shrub recruitment). In both sites they found that there was high calden recruitment after the introduction of settler cattle into the region.



This situation is not unique to this region. The exact same thing has been happening in what was once northern Mexico, and is now the southwestern United States, which experienced a similar pattern of mesquite forest dispersion due to the 19<sup>th</sup> century cattle trade. Because of the bias against Indigenous land management, as well as the astonishing destruction of native habitats through settler ecologies of belonging, it has been abundantly difficult to determine what has led these mesquites to shape shift from a tree form to a shrub form. Ranchers in both Argentina and the southwestern US and northern Mexico have waged a so-called “war against mesquites” in the past fifty years, hand grubbing, chopping, spraying seedlings with herbicides such as glyphosate, applying herbicides such as 2,4,5-T on foliage or basal stems, pulling a chain by tractor through the forest, and burning these trees. They have villainized this tree, calling it “trash tree” and “devil tree,” and the most extraordinary thing is that the mesquite doesn’t just grow back after all these treatments, *it becomes stronger*. The regrowth becomes thicker with more basal sprouts – more “shrubby” in other words – leading managers to refer to the extraordinary regrowth of mesquites as “woody shrub encroachment” – when in fact it might be renamed “astonishing regeneration and profusion of the forest.”

Some managers do indeed admit astonishment – “it just won’t die” – however begrudgingly. Amazingly, these techniques of mesquite eradication have thus worked to create the opposite intended effect. Ecologist Gary Nabhan sums it up in the case of Texas: “Ranchers in Texas have been eradicating mesquite for 65 years with *serious money* – billions of dollars spent to eradicate it - and they now have 20 percent more

mesquite today than they did 65 years ago” (2019:123). Thus in both Texas and Argentina mesquite has become dense, but the actual dispersion has not necessarily spread.

This “astonishing regeneration and profusion of the forest” – the form of which was locally called *fachinal* in La Pampa – helps us to better understand, in turn, the Indigenous land management practiced when the settlers first entered the region. The savanna’s dispersion was increasing, and yet for the most part it had not assumed such a shrubby form. Indeed, the landscape the settlers found – the very one that was being managed with fire and mobile pastoralism – they praised as being fertile and productive. Why was this the case? On the one hand, Indigenous land management was certainly not trying to remove mesquites the way that ranchers in the 20<sup>th</sup> century have attempted to do so. On the other hand, they also were not overstocking or keeping cattle in fenced fields, and because the cattle were being herded on cattle trade routes that were blocked in the winters by Andean snowfall, there was necessarily a kind of “pastoral nomadism” or “rotation” happening which allowed the grasses to regenerate during the winters. Grasses necessarily block mesquite seedling germination, especially when they are allowed to time to reproduce and create a thick soil covering. There was also probably some intermittent firing of meadows to encourage grassland regeneration, which also helped grasses and indirectly impeded mesquite germination, although more research on this is needed.<sup>117</sup> At the same time, the majority of the cattle

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<sup>117</sup> As I described earlier, low-heat burns help maintain grasses as well as the savanna structure. However, a new fire-growth feedback loop begins when the fires burn too hot, which is what happened after settlers suppressed fires. It is possible to see what happens after the two fires at Quehue and Luan Toro, as well as in other parts of the caldenal. After many years of fire suppression, there is a large fuel load. This means the fire burns hot. And when it burns hot, it will kill all aboveground portions of the calden, but often not the stem and taproot. When this occurs, the calden creatively responds to extraordinary conditions in

were a breed known as criollo cattle, hardy ungulates that can walk for long distances and are not as picky as modern breeds about their food sources. Unlike Shorthorn, Angus, and Hereford breeds, criollo cattle will happily browse – meaning they will eat shrubs as well as the undergrowth of trees. It was thus criollo cattle – their behavior, their specific interaction with mesquites – that created the beautiful “parkland” that the settlers praised when they arrived to these western regions.

The shrubby shape the forest assumed after a century of misuse – from wheat monocultures to logging to prohibiting fires to overstocking of sheep and cattle to attempted eradication – was a mechanism of survival in the face of extraordinary circumstances that had dramatically changed ecological relations all at once. What had once been a parkland became a shrubland. What I am proposing here is significant because I am arguing that the forest the settlers found was anthropogenic, a survival ecology made in the pressure cooker of an advancing ecological imperialism. Amazingly, this survival ecology was still ongoing, even in a shrubby form. That the monte was an ongoing survival ecology was evidenced by the native flora and fauna still sheltering amongst its thorny brambles, by the guanaco seen crossing the badlands at Lihuel Calel, and by the multiple native plants that had sustained Indigenous populations and that continued to shelter in the monte. Bogino et al. describe what an important and critical region the caldenal is, supporting 931 wild plants, 59 of which are medicinal, and 333 species of vertebrates, many of which are endemic to Argentina.

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order to survive by putting out basal shoots, multiple shoots that grow from buds on the base of the tree, and each of these shoots grows, leading to a shrubby form because it has multiple stems rather than just one. When a fire rushes through again, the same thing happens, creating a fire-shrub feedback loop.

Still, only 18% of the original woodland remains, covering about 8438 km<sup>2</sup> (Bogino et al. 2015:59). While the Law of the Forest outlaws future deforestation, the entire region still hangs in the balance, and it is clear that ongoing land management will determine the outcome of the monte's future form. This management must be social, too. As I have been arguing, social and environmental survival go hand in hand, and must be read together. The monte was also a survival ecology because it was within the monte that a movement for Indigenous recognition had unfurled. The region of refuge that had once sheltered Pampas Indians, Ranqueles, and Mapuche was by no means the same, but it is significant that it was within this same territory that Ranqueles began to “re-emerge” and reclaim their territorial identity. The final part of this metamorphosis, then, describes a tenuous social survival within the monte.



Figure 20. Ceremony.

When I asked the farmhands with Indigenous ancestry who lived in the monte, they told me that I needed to go to the “Indian tomb” of an Indigenous cacique in order to find out. The first time I went to the Indian tomb it was with Marisa Serraino, then a founding member and now the lonko (leader) of the Indigenous community Rosa Moreno Mariqueo in Victorica. The sky was high and uneasy and the road to the tomb tortuously thick with dust kicked up from the sandy tracks that wove their way through the valley plain. The tomb sat on a six-hectare parcel donated to the Ranquel Indigenous community by the landowner, fenced in on all sides by thousands of hectares of settler

ranching land. All around spread the calden forests reaching west toward the foot of the Andes that we could not see. Cicadas hummed hot and thrumming.

The man in the tomb was Ranquel cacique Mariano Rosas, said Marisa, whose bones had been taken and only recently repatriated. He had been betrayed. He had been made into a curiosity, he had been taken back only with great effort after a long century during which Ranqueles made from the dry baked cracked earth a place in which they would find shelter and survive. Indeed, she said, much happened after the tragedy of the Conquest of the Desert when so many Ranqueles were murdered, taken prisoner, and relocated to a western wasteland called a “reducción” meaning Reduction and precisely that in every sense. The calden forest, their home, was logged and in many plots completely cleared. But to end the story there is to repeat the modernization story where everything gets destroyed. In the uneven and parched world of the Reduction in the west Ranqueles survived and, according to the Ranquel prophet German Canuhé, flourished (Lazzari 2003). Then, in the late 1980s, the whole world changed. Modernity withdrew from the Pampas. The railroads stopped running. The rails rusted and calden trees grew back amongst the wide gauge tracks. Settlers left in droves for the city. The forest regrew. Amongst the timbered meadows Indigenous peons had been managing the land for a century with fire, and in those places the forests still resembled the savanna the settlers had so desired. Ranqueles began moving back in, and for the first time in the early aughts buried their ancestor Mariano Rosas next to the place where he had lived at Leuvuco. And so, Marisa said, the end of the story is not the murder of

Ranqueles but their survival and the strong yet tenuous link with the forsaken forests and the forest's future.

We traced the calden's dispersion through the villages, around the abandoned railroad tracks, at the edge of lagoons, and finally to a parcel that the municipality had recently granted to her community on the outskirts of town. Traveling to the parcel involved bumping down more dirt roads past ragged buildings and there sandwiched between the slaughterhouse and the burning landfill and pitched against the sky was the parcel of land. Spindly young calden trees rose up from the hills. To the west over the fence rose a pile of bleached cattle skulls as big as a house. To the east the black fanning fumes of smoldering trash. It was six hectares, she said bravely, much more than they had asked for. They planned to move their Ranquel community center here, to cultivate the savanna, to bring their criollo goats to graze on the grasses.

There, on a parcel sandwiched between the waste sites of modernization, Marisa mapped the contested spaces of conquest and challenged the discourses of desire that other women in the plains had sketched for me. Maybe for the men the forests were a purple land, a place they visited, but Marisa lived there, "Yo soy oriunda de Victorica," she said, I am from here, I was born here. Her lyricism and bravery offered a critical alternative perspective that refused the conventions of *The Purple Land*, contesting the diminutive role of the submissive dark-eyed beauty left by the male adventurer, as well as contesting the fate of the forests. She described the way that she was accustomed to walking in men's worlds, and the way that she had to find a way, *un camino*, in this *mundo machista*, in this macho world. She was both the Director of the Salesian school

as well as the lonko of her Indigenous community. Through these roles she refused to be siloed into any conventional notion of singular personhood, adopting multiple identities that for her were productive of each other, even though for others they were at odds (she would good naturedly chuckle at their discomfort). She was lucky, she said, because she had strong female role models. Marisa's grandmother, Rosa Moreno Mariqueo, was the Ranquel woman after whom they had named the local community, risking their reputations and lives to gather strength from saying *this is who we are: Ranquel*.

As I traveled back and forth from the plains to the forests to spend time with her, she did not scorn my mobility the way folks in the plains did. Rather than being a purple land, a place where women should not travel, for her the forests were home. She knew their seasons, how they were green and vibrant during the summers, how in the winters they were skeletal and dark against the low grey skies. Perhaps for the men they were a wild space where I shouldn't have traveled alone, but for her they were a place of survival. "For Ranküles," she wrote to me, "the calden is much more than a tree, it symbolizes the strength of the race, the prolongation of life, the children's children who multiply as branches." She went on, lyrically invoking the importance of the tree: "At night its ghostly figure resembles men wandering on the paths, in Spring its bloom indicates that there will be no late frost, its fruit is food for cattle and a sign of drought or abundance, its shadow is rest for travelers. When it becomes a forest, it is the guardian of solitary animals and the secrets of the earth." She was a leader in the struggle against dominant logics of ecological racism. Still, she wasn't immune to the



asymmetries in gender. She too was excluded from ranching activities and hunts, as I discovered one evening when we were left with her sister and niece to while away an evening while the men hunted boar in the dark. But rather than describe herself as a victim of these asymmetries, she exposed them. Through her dual leadership positions she turned traditional gender roles on their heads and contested the spaces into which she might have been contained. It was also through her stories and verses and poetry that she challenged the alleged docility Diego's father had described as arousing. She knew in her bones what she called "The Truth of Ranquel" and the vital bond with her grandmother and her mother was rather than a call to tradition a source of energy and strength.

She and her brother were still piecing together "The Truth of Ranquel" but this truth was not singular, and it was the fragmented nature of the journey that made it vibrant. As I spent time with her in the forests, I began to better understand the subtle critique she was making. I learned about this especially through the way she cultivated the New Year Ceremony on the southern hemisphere's winter solstice that celebrated the moment when the days would once again begin to lengthen. Ceremony was held at the base of Mariano Rosas' tomb both times that I attended it in 2016 and 2017, and by 2020 she had moved it to the parcel on the outside of town where she also hosted the Ranquel marriage of her niece.

Ceremony, unlike breeding and hunting, was an activity that brought the spaces to life in a different way, emphasizing the healing and horror within the ruins of a conquest that continued to press firmly on this region. In its form it replicated the shapes

of native fauna that had once been prolific, it replicated rites that brought alive the forest forms in ways the ranchers found if not offensive, bland and small and unworthy of consideration. It was a spitting in the wind, to be sure, but in part because of their dismissal – how powerful it is, to dismiss something, to look away – Ceremony seemed even more important, even more brave.

The first time I went with Marisa to Ceremony we bumped down sooty roads in the dark, headlights passing through the clouded phantom dust. At the base of Mariano Rosas' tomb grasses had been cleared, tents had been erected, and massive fires smoldered on top of which big slabs of cow and horse meat dribbled fat. In much the same way that Marisa had reinterpreted the forests for me, so too did she interpret Ceremony for me in her own way. She was quiet in the car on the ride there, and was meditative almost the whole night, later writing to me how her thoughts circled through the long dark night. Ceremony for Marisa had gender at the center, as well as the impossibility of reproduction. For her, marginality – as a woman who could not bear children, as Ranquel, as an *oriunda* of the forests – was survival. Because she challenged gender conventions to maintain her status as leader in both communities, her descriptions crystallized the tenuous connection Ranqueles had with the forests from which they had been expelled. Marginality and survival were woven together to espouse modes of living not recognized by settlers, presenting immanent alternatives to dominant logics. Here is an excerpt from her letter, printed with her permission (my translation):

*As we traverse the distance that separates Victorica from Leuvuco, it is as if time is coming back and suddenly the Caldén is the refuge of my race again. There among the thorny forest the Rankül learned to survive, to protect themselves, to find water and food.*

*I once imagined myself in the midst of this landscape full of sand plungers from which the water silently emerges, the canopies near these natural lagoons, the fires lit, and all around the pampas grass flirting with the hares or with the stars of the night.*

*It is this smell of the past that transports and transforms the body and soul.*

*Mari mari whispers the night,*

*mari mari responds the moon (Kuyen)*

*hidden between the orders.*

Marisa pulled me in but also made me aware of how I should not remove the sacrality of ceremony from the time and place. There was a way in which this caution, too, constituted the survival of the forests. So much had been taken from them, and she was wary of the capacity for the Ceremony to be taken out of the forests. Rather than describe what happened in Ceremony here, then, I want to call attention to what it was doing. The cultural performance of the New Year expressed the social drama of the Ranquel predicament through the juxtaposition of many elements, especially the territory itself. Ranqueles symbolically worked out social stresses in this calendrical

rite of time, but it was not significant of an agricultural season, that is, a passage from winter to summer pastures. Instead, the social tension it highlighted was the loss of a landscape in which this precise calendrical rite had meaning. There was community catharsis – but only to a point. The landscape was the shared frame of reference, and it was the degraded landscape all around the parcel that showed the evacuation of Ranqueles.

The Ceremony lasted all night. When the pre-dawn light began to move through the whole landscape, everyone gathered to face the east. The outside light moved into the inside space of the parcel. The fire no longer cast shadows, and it was no longer so obvious where the space of the Ceremony was contained. *We tripantu* means that the sunrise returns, and it is assured that the next day has come. They sang and prayed.

Akuy we tripantu.

The new year has arrived.

Wiñoi Tripantu

Sunrise Returns.<sup>118</sup>

The wail of the *tutruacas* sounded into the morning air: it was a song full of mourning. It echoed the terrors, the horror of an erased history, of a denied past. But it was also a song of determination, and dignity. Marisa raised up the palms of her hands

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<sup>118</sup> There are beautiful resonances between this invocation and the one made famous by Leslie Marmon Silko in *Ceremony* (1977). Silko described how powerful ceremony is for healing in the face of violence, and Marisa's ceremony was similar.

to face the light, welcoming the lengthening days. As the sun rose a pressure lifted up and expanded into the territory. Breath returned to the throat and exultation filled the air. To begin again, to feel first light on their cheeks, to tell their history, to be able to speak their given names, they sang into the cold daybreak.

“Wewewewewewewewe!!!”

The dawn was a chronicle of what was to come.

Four years later, in 2020, Marisa and the community of Rosa Moreno Mariqueo would host Ceremony upon the plot of land sandwiched between the slaughterhouse and the landfill, the piece of land abandoned in the wake of the cessation of the railroads and the withdrawal of modernity. It was a place that had been sacked and discarded by the pulse of modernization, a place where calden had begun to regrow. In various circles what was happening on the land might be described as “rewilding.” In Argentina, and in places throughout the world, there is a growing consciousness about what is happening to places abandoned by the rush of modernity, and a nascent commitment to, as the Foundation for Rewilding Argentina asserts, “reverse the wildlife extinction crisis through rewilding.” Marisa helped me to see that the “rewilding” landscape was still made by dreams of male conquest, and that this did not go uncontested. It was widely accepted, the way it is in North America, that Indigenous peoples had adopted the horse and become consummate horse people, more talented even than the settlers. And yet, this mythicization ignored Indigenous ranching, ignored the fact that they practiced forms of mobile pastoralism that had changed the landscape.

The Indigenous management of the land was one of those modes of living that was not recognized by settlers.

This is why to describe what was happening on the plot of land as “rewilding” or as “nature rebounding” is to continue to espouse the logic of ecological imperialism. When the settlers had encountered the monte they had described it as pristine and parklike, and as I have been arguing in this metamorphosis, the landscape they found was in fact a survival ecology. To rewild, to “restore” the place to the survival ecology lauded by the settlers, it would have been necessary, too, for Ranqueles to move back in. The reoccupation of land by the community Rosa Moreno Mariqueo did not guarantee that it would become what the settlers had discovered over a century before. Relationships between plants, animals, fences, and trees were shifting. And the abandoned parcel on which they might practice pastoralism was so small that it was not even able to support more than two cows. Still, it opened a critical space for considering “rewilding” in the context of the ongoing evacuation of humans who once lived there, who once cultivated a region of refuge, who created for themselves and for the native flora and fauna an ecology of survival.



Figure 21. Worm-eaten soybean leaves. Photo by Laura Viñas.

## **Chapter 8: Fever Dreams**

There was a damp, pressing fever that spread throughout Coronel Vallejos during the summer. It came with the floods and the heat. The heat was a suffocating humid warmth like hot wool in the mouth. The upper lip was always slick, the forearms damp with sweat, and the pores were so open that sickness passed into the body. It wilted women and children with fever and madness. There were whispers that it was Zika. The fear that some kind of terrible disease could be passed on from mother to fetus threw the pulsing mirage of soy plantations into question. The cicadas became deafening.

Diego and Carolina had ended their official status as *novios* but were still sleeping with one another when Carolina discovered she was pregnant. She looked at Amancio, her four-year old son who was the center of her world, and decided she did not want to raise another child alone. She swallowed Mifepristone and hemorrhaged blood for a week. She did not articulate exactly why she could bring Amancio into the world four years earlier and not this new child, but it had something to do, she was sure, with what was happening. But *what was happening?* That was the question. No one knew.

“*They’re like worms,*” says David, in an attempt to describe what is happening. David is a protagonist of Samanta Schweblin’s *Fever Dream*, and he is trying to help Amanda understand what happened when she became ill from the chemicals dumped on soybeans.<sup>119</sup>

“What kind of worms?” Amanda asks. “Worms in the body?”

“*Yes, in the body,*” he says. He asks her to be patient and to wait, to answer his questions, because they have to find the moment when the worms come into being, the moment she got sick.

Schweblin pioneers in *Fever Dream* a global pastoral horror, a new sound and a new fury, through an innovative genre that deals with precisely that feeling of the undetermined. Even when, after one-hundred pages of mystery and agony, Amanda and the boy finally discover the moment when the worms entered her body, it is still unclear what happened. She and her daughter sit on the lawn next to the soy fields

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<sup>119</sup> English translation by Megan McDowell (2017). The original title is *Distancia de Rescate*.



where the men had been unloading barrels of agrochemicals, and when they stand up the backs of their dresses are wet. She thinks it is dew. Through a pitched nightmare that tries to make sense of something that doesn't yet have a name, she tries to account for the events leading up to that moment – for the boy she is speaking to, who has been cured from his own encounter with agrochemicals by the local witch, for the fact that the prized stallion drank from a poisoned stream and was found prone in the wet grass, for the strangeness of a place that appears bucolic but whose underbelly is slick with venom. “The soy fields stretch out to either side of us. It's all very green, a perfumed green...”

Amanda is motivated, above all, by what she calls “rescue distance” – a measure of how far away she is from her daughter, so that in case something happens, she can get to her. She's dizzy with fear because she finally realizes that the danger is right there, she is sitting next to her daughter when it happens, and she can't do anything about it.

“The soy,” she says, experiencing vertigo, “leans toward us now.”

Everything leaned in toward Carolina. She left the dishes piled in the sink. She turned on the faucet and trailed her fingers beneath the bathwater to make sure it wasn't too hot for her son, then wiped her wet hands on the back of her jeans. And in quiet moments after putting Amancio to bed, she tipped her head up to the ceiling and unbidden warm tears spilled down the sides of her face. Months later a debate raged in the Argentine Senate over whether a woman should have a right to a safe and legal abortion. Carolina shared a photo of a poster that was circulating: *When a man decides*

*not to be a father, it never generates the uproar that happens when a woman decides not to be a mother.*

In *Fever Dream*, Amanda is unable to protect her daughter because the rescue distance is an anachronistic understanding of the way events proceed. In this new world, in the global pastoral, things can happen without historical reason, mutating the body at a cellular level. “How can a mother not realize?” Amanda asks. David answers, “...*Some of them were born already poisoned, from something their mothers breathed in the air, or ate or touched.*” The dense confusion makes everything suspect: air, food, the materials of everyday life, all have the potential waiting within them. David tells Amanda, “*It’s not dew,*” and he asks again exactly what she feels in this moment.

“Just that slight tug in my stomach,” she answers, “from the rope, and something acidic, just barely, under my tongue.”

David asks if it is acidic or bitter.

“Bitter, bitter, yes. But it’s so subtle, my God, so subtle.”

*Fever Dream* takes place in the country, but rather than being bucolic it is a country that is dangerous. It is a nature that has somehow morphed, a poisoned nature, a feral nature that molds inhabitants in its own image, leading strange things to occur. The world feels mad, but not in the breathless modern way. It is instead quiet and seeping, a horror, a coming to grips with the sense that something terrible has happened beneath their feet, so subtle that it can barely be sensed. That is why Amanda describes it first like worms. Something is happening – the experience of nature as *outside* of her is breaking down. It has come inside.

A decade before Schweblin crystallized the emergent horror of the global pastoral, before she articulated the way women were coming to grips with being subjects of a new nature, Juli moved her four daughters and her husband out of the country and into Colonel Vallejos. They had four schedules to take care of, field hockey practice, after-school English lessons, dentist appointments, and friend's houses to drive to, but it was also that something else was happening. Juli did not call that something else *worms*, but she described it as a need to get out of the country. It was an indefinable yet urgent feeling that David did not share, nor did the men of his CREA group. But the wives did. One wife simply did not like and would never live in the campo. Others professed a certain desire for sociality that the city promised, since all that the campo promised was isolation. But there was another one who captured for me what no one else was saying. Even she did not say it. Instead, she took photographs.

The first time I visited Laura in her studio and she showed me her photos, which had been displayed in galleries all over Buenos Aires, I was astonished. She showed, through art, what was happening. In tens of stunning black and white photographs she reveals an evacuated, haunted, mist-filled place. And in tens more photos, she goes in for a closer look at those global pastoral landscapes. Over and over, with an eye for detail that clearly became an obsession, she took and printed photographs of soybean leaves eaten by worms.

The photos had an eerie prowling quality that drew the spectator in to the textures of the soy leaves. She had manipulated the light to make evident the contrasts between light and dark and to draw out the slashes and rips in the leaves. In one photo,

shot from below, looking up at the tiny gaps and chasms of worm holes through which the Pampas sky comes through, the plants appear bigger than the human viewer. They are outsized, like rhododendron leaves, taking over the whole sky with their presence, and the person who sees them is small.

Something, in these scenes, is being eaten away. It is the soybean leaves but it is also something else. What had compelled her to take so many photographs of the worm-eaten soy plants? I asked. We paused, lingering over the photos as Laura held the soy portraits up for me, showing me the patina of her own understanding. She said she had watched the opening of a David Lynch film, *Blue Velvet*, where the camera goes so close to the blades of grass and finds an *ear* being eaten by ants. Then she went out into the plain. She took all the photos of the leaves in one afternoon. She laid down with soy in the fields and looked up at the underbelly of the leaves. She got close to them, so close she could hear them. The photos posed a question. Who must she become in relation to this plant that “we don’t even eat,” in relation to a new nature?

There was something about the photos that struck a chord in the popular imagination. They both memorialized an environment that had become familiar to Argentines at the same time that they showed the holes in the system, the cracks in the surface of the soy project. On the one hand, in the photos of the landscapes, there was a sense of decay. It was a feeling that I had become aware of through women, through a word that they used that was more specific and, I think, illuminating: *podrido*, rotten. It is a word and concept we hear in Lucrecia Martel’s *La Ciénega*, *The Swamp*, a stunning portrait of Argentine bourgeois decline that made Martel one of the top

filmmakers of Latin America. *La Ciénega* is set on the decaying estate of a once-wealthy family whose family business is selling peppers. They haven't entered the soy world yet, and in fact, the movie came out at the same time that Argentina's economy crashed in the 2001 debt default. Like *Fever Dream*, the setting is uncanny and blurry, with ill-defined boundaries and an almost sickening inability to see beyond the edges of the camera's frame. As in Alfonso Cuarón's *Roma*, but treated with less presumption, one of the main relationships is between one of the children and her nanny/maid Isabel, the only person in the movie who seems to have any sense at all.

"Don't swim in the pool," Isabel warns the daughter, "está *podrida*," it is *rotten*. The pool, muddy and putrid, is a symbol for a rotted society, for a family whose wealth was predicated upon the denigration of the *Indios* and the women, and which now bears the consequences of such reckless, masculine indulgence. Even if other families who had once farmed peppers, tobacco, or cotton had moved on and begun to plant soybeans, Martel's film does what Laura's photos also do: it makes the viewers aware of themselves as something else. Not modern or even postmodern, but something else, somehow aware of themselves occupying a rotted landscape, whether the swamps or the plains.

On the other hand, in Laura's photos of the soybeans, there is a sense of vast profusion, proliferation, and accumulation. She has an instinctive vision for bringing together both the spirit and the economics of globality. Here is a landscape that simply would not exist were it not for the multiple world-spanning connections of markets that have made glyphosate cheap, carried weeds and pests from the US, and shipped

soybeans. In many of the photos, the soy plants have dropped their worm-eaten leaves and their heavy pods stand multiplied by a trick of the film development.

Laura increased the already astronomical replication. In this case it didn't matter that the leaves were defoliated; the pods still made it through, and there they are, just waiting to be harvested, millions of dollars sitting on stalks in the campo. Here is the fusion of material and spiritual forces, a woman coming to terms with the global environment, an uncanny expression of globalism – as spirit – and globalization – as material and economic process – as if the two could be distinguished or separated.

The feverish dream which calls an unidentifiable and dizzying sickness “worms” was the dream that also imagines immense accumulation. Gesturing to but not speaking about a form of suspected pollution was part of the power that the soy queen held, for it was through her that unimaginable riches were possible. It was Laura's land that her husband was farming, and it was Juli that made sure the books were always in order. She was essential for the accounting, and she always made sure the numbers were right. Their simultaneous precautions – rarely venturing into the fields – as well as their endorsements enabled the farm to reproduce itself. It was this mode of reproduction, the simultaneous performance of motherhood and caution, that enabled life to go on.<sup>120</sup> They knew where they belonged – the pueblo, the city – and it was there that they could contain themselves as well as their children.

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<sup>120</sup> See also Amalia Leguizamón (2019, 2020) for an excellent analysis of the gendered dimensions of soybean extraction in Argentina. In her text, she asks a fundamental question: “Why are rural inhabitants of the Pampas acquiescent in the face of soybean expansion when they are the ones who bear the toxic burden of agrochemical exposure?” (2020:140). She found a similar pattern in her interviews with women in the Pampas who were worried about poisoning even as it remained unsaid. Women “behind the scenes” – in the kitchen washing dishes, for example – would sometimes voice doubts to her, but their performance at the table was always supportive. Women who benefited from soybean extraction also had a different perspective from those who had no economic dependence on the soy boom (2020:127). She found that “feminized subjects present a way of

In all this it was possible to see that the soy queen had a polluting power that was partly released by human action. Nowhere was the ambiguous nature of this relationship more evident than when the technicians fumigated the fields. Although most of the workers on the farm inevitably went out to spray the crops once or twice a planting with various herbicides, it was the fumigator team that did most of the spraying, and the fumigator team that was untouchable. They held polluting power, and they knew it. They were a team of two men in their late twenties. The leader was Cristobal. He had a cheeky face, a faint shadow of a moustache, and a hairy belly that bulged over the belt of his pants, causing him to have a nervous habit of always pulling down his t-shirts. Cristobal's father was the one who had taken out a massive loan and decided to become a contracted fumigator for the plains. As a result, Cristobal had a sense of importance. His partner, Enrique, was a thin man who always wore jeans and black converse, and he was the one who drove the "mosquito," their half-million-dollar machine that was so named because of its nimble body and the great unfolding wingspan of the sprayers.

One spring evening, after the wind had died down and a rosy pink blushed on the west horizon, Cristobal and Enrique drove down the driveway of the estancia past the pines to the side of the corral where they mixed the chemicals. I was already at the corral with Marcos and Ceferino, watching them sort cattle, and I wandered over to the mosquito. Cristobal pulled on thick hazmat gloves while Enrique emptied the belly of the mosquito and began washing it with a hose. The runoff spilled down the dirt

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knowing that arises from affective emotions" and that "Women's role as primary caretakers of the family leads them to be more aware of the real and potential health risks of polluting industries" (2020:102).

causeway into a sandy bajada full of old wastewater and kaleidoscope residue. Cristobal filled a blue plastic 25-gallon drum with water and a synthetic pyrethroid insecticide, stirring the mixture with an old branch he found nearby. The smell was bitter. The chemicals had an acerbic odor that got between the teeth, shuddering the back of the low jawbone. When Cristobal was done stirring, he attached a tube to the mosquito belly and sucked up the mixture. Enrique capped it and climbed up a small ladder into the driver's seat, gesturing that I should follow if I wanted. There were worms in the soy, he said.

Inside it was commodious and air conditioned, and it was double the height of a normal truck. We glided across the plains toward the west, between soy fields that stretched for miles. So high up, surrounded by the mists of pesticides spraying from the wings on either side, the feeling was weightless.

"Es impresionante," I said, it's impressive. He grinned at me from the side of his mouth.

"Yo? O la maquina?" He asked, laughing. *Me or the machine?*

He was joking, but as I watched him handle the machine, as we floated over the soy fields and the fine mists evaporated from sight, he was showing me in part the power that the soy queen held, that he was helping to unleash. He was demonstrating who he had become, who he was becoming, and the power imbued within him as a result. He was still poor, especially in comparison to the *chacareros*, but he had a job, he said, at least he had a job. I asked him what sorts of worms were eating the soy. No kind in particular, he said, just worms. Some of them might be the kind that turned into



butterflies in the summer. You'll see, he said, all over the road there will be white and yellow *mariposas* fluttering, so thick they will be like snow.

When I asked Laura about the worms that had defoliated the leaves, she gave me an essay by Spanish philosopher José Ortega y Gasset called "La Pampa...Promises." It appears in his *El Espectador VII* and is one of his best essays on Argentina, the place from which he gathered inspiration for "The Revolt of the Masses" as well as his other better-known works.<sup>121</sup> Ortega y Gasset has clearly fallen in love with the Pampas, which he indicates from the outset. He writes that he has felt the "invasion of the Pampa" in his very soul. It is an abstract geometric landscape, much the same everywhere, *igual acá que allá*. It is a landscape that promises, promises, promises, *hace desde el horizonte inagotables ademanes de abundancia y concesión*, which makes from the horizon inexhaustible gestures of generosity and concession. He calls the Argentine way of existence in the Pampas *futurismo concreto de cada cual*, concrete futurism of the individual. This is "not a generic futurism of a common ideal or collective utopia," he takes pains to make clear, "but a concrete futurism in which each person lives from his illusions as if they were reality."<sup>122</sup> It would be easy to say that this was a kind of classic modernist essay trying to come to grips with the mutilated modernism that emerges from Latin America. But it was Laura's notations that made it come into the present, the way almost every passage about La Pampa was underlined and circled and starred and circled again.

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<sup>121</sup> See Kessel Schwartz, "Ortega y Gasset and Argentina" (1983) on the enormous influence Argentina had over Ortega y Gasset, greater even than Germany.

<sup>122</sup> My translation. He follows this up with: "The sound of the wheels of the mechanical mills, like numberless beetles, rise in the Pampas, promising all and aspiring to be the authentic wheel of fortune."

With Ortega y Gasset's essay as the caption to her photos, the portraits of haunted landscapes and worm-eaten soy leaves exhibited the illusory energy of the promise of the Pampas. Laura's optic highlighted the globalism emerging from the unfulfilled promises of modernism, promises that were eaten through. The leaves are themselves a product of thought, of the illusion of thousands of individuals. From below we could see the slick underbelly of an otherwise bucolic plain. Something has been released, and, as in *Fever Dream*, it was recognized especially by those who stood outside the outline of the project. "I don't want to feel like this anymore because it is horrible," says Karina, a woman in Javier Auyero and Débora Swistun's *Flammable: Environmental Suffering in an Argentine Shantytown* (2009). Auyero and Swistun are working in a contaminated urban area, where the inhabitants expect toxicity: "I've been here forty-three years," says one interviewee, "I should be poisoned by now." The temporal dispersion of contamination, the inequality of exposure for the poor, and bodily registers of something being "wrong," as well as uncertainty about the cause, unites those subjects trying to come to grips with the chemical body burdens they bear. Nicholas Shapiro calls this attunement to the "chemical sublime" a "late industrial experience," temporally situating it in relation to the great thrust of 20<sup>th</sup> century energy that released so many chemicals into the air, especially, in his case, formaldehyde (2015). These scholars join a proliferation of work dealing with toxic subjectivity – with who we become and how we socially organize in relation to that which is being unleashed (e.g. Fortun 2001; Masco 2006; Choy 2011; Brown 2015). The ineffability is a uniting feeling.

Several dimensions open out from these attempts to situate the understanding of the subject in relation to that which has been unleashed. It is, most of all, a new experience, a new way of understanding the self in relation to the environment. It is an environment that cannot be trusted, that must be, according to those who live with it, regarded with a kind of wariness. There are places that children and women should not go, because rescue distance has collapsed, because it is possible for nature to come into the body in new ways. Nowhere was this more apparent than in the relationship between a mother and her unborn child, something crystallized for me by Carolina, who had suffered mightily, by the Zika epidemic, and by the Mothers of Ituzaingo, who had modeled their name and organization after the Madres de Plaza de Mayo, the Mothers of the Disappeared.

Sofia Gatica, one of the co-founders of the Mothers of Ituzaingo, had suffered the death of her infant daughter just three days after her birth, likely due to pesticide exposure in their rural town of Ituzaingo. When I visited her in the winter of 2013 she described to me how terror was no new word to Argentina's mothers who had lived through the regime of terror in which tens of thousands were kidnapped and "disappeared." Between 1976 and 1983 a military junta backed by the United States hunted down thousands of political dissidents associated with socialism and murdered them, often disposing of bodies in mass unmarked graves and in the sea. In response, in 1977, a group of mothers joined together in the Plaza de Mayo and walked the annual pilgrimage to Our Lady of Luján wearing their children's cloth diapers as headscarves embroidered with their names and "Aparición con Vida," meaning demand for safe

return alive and alluding to the apparition of the Virgin to whom they supplicated. Mobilizing their gender to frame the protest within a political space that was traditionally patriarchal and male, they also moved motherhood from the intimacy of the home into the intimacy of the public sphere. This was not, for them, contradictory, and this framing of motherhood was consequential for the collective consciousness, and for future women such as the Mothers of Ituzaingo who would also mobilize gender to critique an ongoing colonial reality. It was revolutionary because rather than sitting at home a mother could mobilize, she could, as my Argentine psychotherapist put it, “make a fuss.”

Sofia had long since departed from Ituzaingo, but one of her female compatriots still lived there. I visited Maria Godoy and she welcomed me into her home filled with potted ferns. It was clear that something had happened in Ituzaingo, where the agriculture used to come up to the edge of the village, where, she said, babies were born with birth defects because of the pesticides. She showed me where the fields had touched their houses, the now-empty houses of Sofia and other mothers who had moved out, but she didn't want to move, this was where she was from and this is where her bones would be buried. She also brought me to the protest in town where they were holding banners against Monsanto's proposed factory in the Malvinas, showing through their marches and through their encampment where the factory was slated to be built that these spaces were theirs, that they wouldn't let happen to others what had happened to them in Ituzaingo. And, incredibly, in 2017 after five years protesting the factory, Monsanto pulled out and sold the land.

It was in this sense that the women mapped contested spaces at the same time that they performed through motherhood an emotional dilemma at the heart of male conquest – the dilemma of *reproduction*. Michael Taussig argues that terror was a key element in the creation of colonial reality, that if we want to know “how that hegemony [of a small number of white Christians] was so speedily effected” (1987:5) that we must look at terror and ineffability. He begins with a description of the Southern Cone folk tale of the *Imbunche*, a child taken by witches and pulled apart and stitched back together in abnormal ways. The deformed child represents a malformed society, the child herself is a representation of society’s ills. For the Madres de Ituzaingo and the other women protesting the imposition of chemicals in the countryside, it was clear that children born with deformities and dying from disease ecologies were ongoing instantiations of colonial reality. The chemicals gathered power because they produced obscure and ineffable spaces of death – but they were all the more powerful for the very ecology that they created, the ecology that made reproduction impossible. The *Imbunche* was not a metaphor for ineffability but for the very dilemma at the dark heart of colonialism. What happens to a society that deforms and kills its own children? That is what they asked. Flesh of my flesh, the Madres said. *How dare you tell me what I can do with my body*, Carolina said. They had grown and carried children in their wombs, they had nursed babies at their breasts, they had shared the same field with another human, a pull somewhere that would tug forever in their whole being. They had been named *hysterical*, from *hustera* meaning womb, because they refused to be tied down, they refused to sit still and quiet and they refused *to behave*.

The women thus put gender at the center of terror and in so doing asserted a trembling power, one which critiqued the patriarchal society itself – the one of male conquest in the shape of imperialism, of the US-backed military junta, of Shamanism guarding itself so carefully as male domain, of ongoing ecological imperialism. Disease ecologies spread with dreams of male conquest. The women’s critique was powerful both for the affect they stirred as well as for the simple fact that they exposed the infrastructure of disease environments. Worms are ineffable, exposing the terror of that which is not yet known, but it is clear at the end of *Fever Dream* exactly where the sickness comes from. Genetically modified soybean plantations *require* herbicides. Soybean plants modified to live with glyphosate need glyphosate in order to survive the onslaught of weeds that will invariably shade them out. The monocrop structure in which soybeans were planted was thus part of an infrastructure that bred weeds and pests and that exposed certain humans to the risks of industrial agriculture.

When the 2015-2016 Zika virus epidemic swept through South America, alarmingly leading to microcephaly in thousands of fetuses, the heat wave and flooding created an environment conducive to Zika’s spread. Plantations as vectors of disease ecologies is a historically informed landscape of conquest. As Paulla Ebron has shown in her work on the plantation system in South Carolina, landscapes remade by plantation systems are disease ecologies in which mosquitoes thrive. In the region where she is writing, the rice plantations that had standing water permitted the *Anopheles* mosquitoes rampant reproduction and the spread of the *Plasmodium falciparum* parasite that transmits malaria, thus leading to one source of the “fevers”

from the 17<sup>th</sup> through the 19<sup>th</sup> centuries. Cholera, too, a dangerous infection leading to diarrhea and dehydration and spread by the bacterium *Vibrio cholerae*, is spread by unsafe water. Although often linked to the spread of modern urban environments and poor sanitation, it was directly linked to the massive transformation and destruction of South American environments in the 19<sup>th</sup> century. In 2015 throughout Brazil where Zika was first isolated and down through Uruguay and into Argentina, thousands of soy plantations were inundated with puddles and lagoons of standing water that created a perfect breeding environment for the *Aedes aegypti* mosquito which spreads the Zika virus. It was a hot feverish summer made worse by the monocrop infrastructures, the ecologies of ongoing conquest that contributed to the globalized spread of disease.

And so when on the estancia the worms came and turned into butterflies that were, just as Enrique had promised, so thick they looked like trembling snow, other plagues and sicknesses began to sweep through the prairies. It was the heat and the storms and the rain, stirring the air into a hot fever that bred disease. One day we awoke to find the sunflowers dead. I walked out to the field to see what had happened. David said it was a mildew that ravaged them before he caught it in time. They stood black, with heavy heads bent over their tall, black stalks. The next week three cows died. Everyone blamed Ceferino. He and I rode out to see them, bellies bloated and busted open, with a mass of wriggling maggoty worms so thick they were as high as a boot. That night when there was a gray reef across the western part of the sky and dry lightning 20 miles off and advancing, Ceferino took me out to a red Gauchito Gil altar on the side of the road. Ceferino placed a cigarette at the foot of the Pampean folk saint

and kneeled for just a moment to pray. The storm walloped and cracked across the sky and we ran in as the rain started to sheet down. When, several weeks later, Zika came to the southern cone, men in white hazmat suits sprayed out of plastic hoses pesticides to prevent larva from hatching. But women in Colonel Vallejos said that the babies born with deformities in Brazil were *because* of a pesticide the authorities had put in the drinking water.

*It's happening,* says David to Amanda in *Fever Dream*.

“What is, David? My God, what is happening?”

*The worms.*





Figure 22. Dwarfed by silage.

## **Chapter 9: Warrior of Love**

As the very world the farmer-ranchers had thought was stable changed all around them – as they themselves changed the world – they found themselves at a

flashpoint in which they had to adapt or perish. Many landowners sold out to corporations, exhausted from the effort of it all.<sup>123</sup> But the men I worked with had chosen to adapt, and this was accomplished through a particular brand of masculinity as well as an astonishing ability to see and experience anew the feral ecologies rising up all around them, making them who they were.

The last time I went to Diego's feedlot it was the winter of 2017 and the world was soaked through with water and all the cattle had been moved from their pens to higher ground so they didn't drown. It was foggy, the kind of white fog that closes in on the pampas in the winter. Hundreds of cattle huddled together wet and chilled with their breath heaving steam into the air. The muddy panicked blaze I had seen in the eyes of the steer had not been extinguished by the rains. The men kept fattening cattle and sending them to slaughter weekly by the thousands. The world was disturbed, and because of that it was alive and well.

Standing there I remembered the first time we went to the feedlot and I had come face to face with the steer. *In his eyes, I had written, which were my own, I saw the panorama of the twentieth century, the fervent blazing gust of light that humans had somehow ignited in the world, I saw a kind of feverish story.* Was this flooded world, I thought to myself, the end of the story?

While we observed the steers from afar, I offered my condolences to Diego for the loss of the baby, which he had decided that he wanted, and he responded with a strange yet entirely characteristic phrase.

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<sup>123</sup> Carla Gras and Valeria Hernández estimate that "between 1988 and 2002, the number of farms was reduced by 21 per cent" (2016:678).

“I’ll be ok, because soy un guerrero de amor,” *I am a warrior of love.*

There was something about this phrase that echoed the heart-stopping masculinity of the protagonist in *Love in the Time of Cholera*, who tries over and over to impress a woman and in so doing destroys the world he himself inhabits. He had used his mind to transform the world, and himself in it, and as the years went by he thought to himself that he could continue to do so. He, too, was a “warrior of love,” a man who knows what he wants and does anything to get it.

There was a way that the men adapted themselves to the rapidly changing environment which was emblematic of this affect. Ferality was rising up all around them, flooding the world, bringing new weeds and pests into existence, and to revive their energies they had to remind themselves of their passion, of the limitless horizon, rather than falling prey to melancholy. To avoid being enveloped by the increasingly feral nature, Diego, David, and the other farmer-ranchers tried hard to become sensible to the nature they were themselves creating. They did this especially in order to avoid engulfment, a real danger when one is confronted with something so new and wild that it threatens one’s being. This danger was traditionally seen on the frontier – a reason the frontier is both treacherous and exhilarating – but feedlots and sowing pools had essentially created frontiers everywhere. The fallow, weedy plots of land that were leased year over year to be planted with soy, or else abandoned in bust times, were frontiers because they were risky and available for the taking for men who wanted to shoulder that risk.

When I went to David's leased fields with him in the spring, he drove across the earth, examined the weeds Antonio had called him about, and shook his head. Everywhere were scattered outbreaks of three-inch herbicide resistant *Amaranthus* and *Rama negra*, already with several leaves. David spotted one that had been killed, and one that was thriving, right next to one another. He pointed the plants out to me, to show me how he was drawn into the world where some plants live and die. The live amaranth, he explained, was probably the offspring of another amaranth that had rapidly evolved to be able to withstand the chemicals in the fields. He couldn't be sure, he said, but he thought perhaps it was *Palmer amaranth*, which he had been reading about and hearing about at the agricultural expositions sometimes held throughout the province. Some of the scientists David chatted with at the Expo called this plant's ability to survive glyphosate and Dicamba "rapid evolution." This extraordinary plant was decimating soybean and cotton crops in the US, where it had most likely evolved resistance. It produced hundreds of seeds per plant and could easily outcompete shorter plants through its rapid growth rate.

What happened next was illustrative of the ways that David, Diego, and their cohorts were coming to grips with what it meant to be subjects and objects of industrial agriculture. We got back into the car and David called up the local dealer on speakerphone to see if he had any Dicamba and 2,4-D. Dicamba is a potent agrochemical that works by increasing plant growth, forcing the plant to basically outgrow itself. It is volatile, and often responsible for chemical drift. 2,4-D, David said to me as he was waiting on hold for the dealer to check, is a main ingredient in the

infamous “Agent Orange,” also causing uncontrolled growth in plants. David explained the predicament he was in while we were waiting. Since the post-war Green Revolution, and especially since the end of the military dictatorship, farmers had been steadily increasing their inputs, applying potent agrochemicals and fertilizers onto their fields in order to increase yields and not lose the farm.<sup>124</sup> Weeds, pests, and pathogens began to rapidly adapt to all the agrochemicals. It was with weeds, especially, that plant scientists began to observe evolution at light speed due to over-reliance on herbicides. Farmers had used the first commercially available herbicides, atrazine and simazine, in the 1970s. A new class of resistant plants emerged in response to their repeated applications of these chemicals. So the farmers turned to ALS and ACCase inhibitors in the 1980s and 1990s. Plants responded by developing resistance to these as well. In the 1990s farmers turned to glyphosate. But now they were operating in an ecosystem that had adapted itself to glyphosate. And so they were returning to more potent and volatile agrochemicals like 2,4-D and Dicamba.

The dealer came back on and said he was sold out. Herbicide resistant weeds were all over the province, and everyone wanted something other than glyphosate. I looked out at the landscape that was rushing by the truck window, past feral weedy fields tall with weeds that had evolved to live through lethal chemicals, past fields that had been leased for ten years and planted only with the soy queen. David hung up and

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<sup>124</sup> During this time, in 1971, Eduardo Galeano published a seething critique of North American and European predatory tactics that extract as much value as possible from Latin America without giving anything back, a bad bargain that Galeano magnificently captures in the image of *open veins*. This extraordinary text, which inspired activism as well as scholarship on extractive industries and extractivism, was so influential that it turned a whole generation of scholars away from a central question: what is being put in? Phosphorus from open-pit mining in Florida, nitrates, other fertilizers and herbicides like atrazines, all were re-routed from their WWII uses into agricultural fields, in a process of *intraction* that always goes in tandem with extraction. Intractivism pays attention to the cultural organization, the inputs, and everything else that goes *into* the process of extraction. See for more on intraction Cypher and Rofel, 2022.

called the other dealer, who did have some left, although he was almost out as well. David ordered both. David did not want to use these chemicals. He felt, though, as if he had no choice.

In these moments the world-making apparatus David was drawn into was above all a social one, it was the one that was terrified of being subsumed, the one where together he and the Pampeans all learned how to adapt to the constantly changing nature that over and over evolved to live through the chemicals. In coming to grips with industrial agriculture, David and his cohort were also beginning to conceptualize the new nature that grew back, that thrived in industrial conditions, challenging the very understanding of “nature” that 19<sup>th</sup> century inhabitants had so easily taken for granted.<sup>125</sup> Their cohort’s conflict, between globalizing and saving the world or at the very least the farm, was an internal tension evident in the feral fields and the feedlots. They were part of the techno-pastoral vision that brought monocrops into the world, over and over again. This vision combined with their intense personal investments into the farm was channeled through and into the crops emerging from their fields, most of which, they knew, depended upon a larger global project that had made glyphosate – a once-expensive substance – criminally cheap.

The contrast between fear of an unchanging nature and adaptation, submission, to changing nature should help us to see the development of this globalist vision. Silvina Ocampo was one of the first Argentine authors to capture exquisitely that male

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<sup>125</sup> Historian J.R. McNeil calls it “something new under the sun” (2001). Anna Tsing suggests the useful category of *third nature* to refer to that which manages to live despite capitalism (2015), and this dissertation shows what happens when third nature is pulled back into an industrial paradigm and exploited again.

fear of engulfment which we usually find most potent and most threatened on the frontier. In her short story “Men Animals Vines” the protagonist, a survivor of an airplane crash in the jungle, is thinking about the dizzying transformations of the world and the booming overpopulation. While he is thinking about these things a sweet-smelling vine takes advantage of his distraction and begins to wrap around his left leg, “weaving a fine net around each toe.” For some reason this doesn’t surprise him. “The vine does its job in various ways; for the smaller toes it uses a stitch that looks like the slats of modern wicker chairs, for bigger surfaces it uses a strange mixture of arabesques that imitate plastic car seats.” As the days and nights pass, the vine begins to wrap itself more fully around him. One morning he awakens to find it wrapped around his left thigh. He tries to weave knots like the vine does, but “Who can compete with a vine?” he asks. He is so busy that he forgets to drink and eat. The vine curls around his arms, then around his neck, then around his tongue. “Human gender,” he says abruptly and finally, “oh so changeable! I, suddenly female, wrap the pen in my green folds, like the pens that prisoners wrap with silk and wool thread.”

Ocampo, who Borges called “one of the greatest poets of the Spanish language,” is at her best and most prophetic in this story, which formed part of a forty-two-year body of work denied Argentina’s National Prize for Literature in 1979 because they were “Far too cruel,”<sup>126</sup> too close, in other words, to the grotesque truth. Writing from the 1940s through the 1980s, Ocampo captured through the small horrors of everyday life the feeling of a world in flux. The final sentence of “Men Animals

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<sup>126</sup> INTRO, ix Helen Oyeyemi for *Thus Were Their Faces* (2015).

Vines” is startling – the metamorphosis seems abrupt, but we can look to the text for clues. It is no accident that he is contemplating overpopulation when the vine first begins to wrap around him. He had “entered this vegetal realm in complete ignorance,” thinking wrongly that “Lucky is the tree that is barely sensitive.” This line, which comes from Rubén Darío’s famous poem “Lo fatal,” belongs to a masculine modern world that believes in unchanging nature. The protagonist is terrified to realize he was wrong, that the world is changing so fast he cannot even keep up. Who is he? Is he even a man anymore?<sup>127</sup>

Rather than railing against an unchanging nature, the men who had survived the agrarian revolution were submitting to the fact that nature was constantly changing, constantly evolving. To avoid the fate of engulfment the men tried hard to learn how to be subjects of the new ferality, the new rapidly changing nature. This was how to belong in the pampas, and there was a whole apparatus dedicated to the prediction of rapidly evolving weeds and pests in order to avoid being swallowed whole by the new nature. As David demonstrated on multiple occasions, knowing how to order chemicals and which ones to order was part of the agriculture that they were all learning how to do. The men were invited to hundreds of demonstrations put on by various companies and organizations each year. We went to demonstrations hosted by Don Mario, Nidera, AACREA, AAPRESID, agricultural schools, and agricultural EXPOs with a variety of sponsors including John Deere and Monsanto, and the large La Rural show held in Buenos Aires. The demonstrations varied based on whether or not they were also

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<sup>127</sup> Ocampo plays into the masculine fear of engulfment and enacts his worst nightmare. Her pen is poised. Careful, she seems to say, I will do exactly what I promised.



showing “pruebas,” how new seeds were faring, but for the most part these were places and days when the men could *charlar*, chat between each other, in addition to seeing the newest and latest chemical, seed, and machine. Beneath the white vinyl tents at several *pruebas* we learned about potential new threats to the soybeans plants, we held in the palms of our hands specimens of *Helicoverpa gelotopoeon* and *Helicoverpa armigera* and as we did the threats became more real. Diseases and plagues were emerging from all sides; the men beneath the white vinyl tents assured us that if something had just been found in the US or in Asia, the farmers could definitely count on it appearing in the southern cone. Soybean rust caused by *P. pachyrhizi*, for example, was so serious and explosive that it was considered a possible weapon of bioterrorism. It had been a known disease in Asia for decades and had been brought to the Americas in 2004 by a hurricane. It was one of the most serious diseases for soybeans because it caused a rapid loss of leaves. At the same time that the scientists were alarmist, they were also reassuring. They showed us new fungicides, they said Monsanto was coming out with a seed with more stacked traits, disaster was coming but it was predicted. This was just part of doing agriculture in the 21<sup>st</sup> century, and there was a whole arsenal of chemicals that could be marshalled against the threats. It was the same with cattle – because of the rampant risk of infection in feedlots, the cattle were pumped with antibiotics, dewormed, and injected with all manner of vaccines for blackleg, bovine viral diarrhea, influenza, E. coli mastitis, and others.

The globalist vision that saw the herbicide resistant weeds, rapidly traveling rusts, and other diseases as necessarily being in the pampas because of global supply

chains was the same vision that speculated as to how the world would be “saved” through rapid evolution. I saw David adapting himself to this globalist vision both in the fields as well as in the last remaining “wild” places in the pampas, “home parks” and boneyards. Home parks were forest islands that rose up around houses all over the pampas, tiny riots of vegetation that signaled habitation in an otherwise flat plain. These islands were decidedly feral, full of tottering Araucaria, centurion Eucalyptus, toppled pines with heavy boughs that grazed big oaks, elms, bamboo, poplars, oleander, and, of course, lawns. They had grown up out of a violent encounter, much like the hedgerows of England that harbor most of the region’s biodiversity.

On the farm where I lived the Home Park was a fifty-hectare parcel composed of numerous trees and birds, as well as corrals and dwellings. As David told me the story of how they shipped the Eucalyptus on a train at great cost from Buenos Aires, as he showed me the circle of poplars and the clay tennis court, he was showing me how he crafted belonging in this place and in so doing becoming a subject and object of what it represented, of the salvation that this riot of globalist vegetation would bring to the world.

Many months after I came to know the Home Park, David and I would walk out to the hundred Elotes pine trees he had sown next to the feedlot. He had transplanted the pines in a fit of inspiration, as an experiment to see whether he might grow a pine plantation like his Chilean neighbors to the west, who were at the same latitude. It turned out that their proximity to the Pacific, from which he was blocked by the towering Andes, made all the difference. However, he did not cut the struggling pines

down. He allowed them to grow, to become, as he called it, the metabolism of the farm, the place where he deposited cattle carcasses. We picked our way through the boneyard over to a small crest that looked over a lower depression sheltered by pines. Scattered all over the forest floor were white cattle bones bleached from the sun and wind, pecked clean by critters living in this feral forest.

“Over there,” gestured David, was where he had wanted to “bring his girls camping.” It was a tiny meadow full of tussock grasses and yellow-flowered bushes. Still, it didn’t quite strike me as the sort of place one would want to *camp*. Right behind the meadow was the feedlot and the boneyard, and to my un-developed sensibilities it seemed a rather dismal choice, despite the cheeriness of the yellow flowers. Like the forest island, it was a feral place which David had molded, and to which David had molded himself. The nature to which David was adapting himself was expressed in the weedy mutiny of those forest islands and the riot of the boneyard: Eucalyptus from Australia, Araucaria from South America, Mediterranean oaks, North American poplars, all smooshed together, surrounded by mono-cropped plantations, creating a place where you might take children camping.

To walk through the farm with David, to examine the rusts in the corn and the worms in the peanuts and the weeds in the soy, and then to see him think of the boneyard meadow as a campsite, was to see the way he was adapting himself to a new rapidly shifting vision of nature. The globalist vision was the one where the world would be saved by everything the men were doing, by the brave new nature, and nowhere did I see this expressed more powerfully than in the way scientists and

ecologists described these hodgepodge feral islands surrounded by plantations. Echoing everything the Home Park invokes, ecologist Chris Thomas calls our new home “Anthropocene Park.” For Thomas, the Anthropocene Park is a place that we must accept in order to survive. We must abandon the “doom and gloom” rhetoric. Humans, Thomas proposes, are increasing biological diversity by turning the world into a global archipelago. Landscapes of what he calls “ecological despair,” contrary to what we think, have quite a lot of biodiversity. He describes the way, for example, an astounding 375 species of rats and mice evolved after they reached South America, although who wants to live in a place where rats and mice count as the supreme example of biodiversity is open for debate.

Anthropocene Park, the so-called New Pangea, the biological joining of all the continents after hundreds of millions of years of being apart, promises for Thomas and other biologists a new union. For the scientists heralding the New Pangea, we are going through a period of evolution at light speed, and this evolution at light speed is the thing we must embrace if we are to survive. This “truly global episode of rapid evolutionary transformation,” the way that “everything we are doing to the world is forcing evolution into overdrive,” is the way the world will be saved (Thomas 2017:158). In one of Thomas’ more shocking passages, he naturalizes plantations without any apparent understanding of the enormous work that goes into making sure that plantation plants – soybeans, corn, cotton, wheat, pines, rubber, coffee – actually survive. Take the Monterey Pine, he writes, which was endangered in its local habitat in central California. Landowners began to plant pine plantations with this tree and it turned out

that the tree thrived in both Australia and Chile. This is our global hero, Thomas suggests, “*a global colonist, an endangered species converted to an heir of the world*” (Thomas 224, my emphasis). Using his logic, soybeans are also a global colonist, an apt image if there ever was one.

David and his cohort’s salvation narratives matched neatly with these biologist’s rendition of feral nature. If the rapidly evolving weeds were all part of the plan, then they could be incorporated, in the sense that they could blend into the landscape as something to be dealt with. This image of a globe unified by a sprawling feral nature was one of the most powerful images of globalism that I encountered, and the men in the pampas were coming to grips with the experience of this new union, a New Pangea. They were surrounded by danger. But this was what they had been bred to do. They were warriors of love. Without the possible peril, their lives would have been less meaningful.

It was not surprising, then, to learn that several years after the floods a few of the young ranchers had begun to implement another masculinist vision which would also save the world. This one, espoused by Allan Savory, promised a holistic form of management that would permit more cattle to be grazed on smaller tracts of land. Diego was extremely excited about this mode of management. There were detractors, to be sure. George Monbiot, for example, prominent British journalist and author of *Feral: Searching for Enchantment on the Frontiers of Rewilding*, was critical of Savory’s method. And yet, even in his own text, which uses the same word – feral – that I have been using in this chapter, Monbiot is consummately interested in what happens *to*

*himself* when confronted with a feral nature. To read between the lines of these arguments among men is to be astonished by the way they replicate the same affect at the heart of the cattle project. Perhaps they are coming to grips with the forces of modern industrial agriculture on the one hand, and coming to grips with the edges of rewilding on the other, but in both cases – as with the forests and the plains – the dialectic between the two is exactly what reproduces that same masculine world. *It was love for his own sake.*

The feedlots, feral fields, forest islands and boneyards thus gave shape to David, Diego, and the other farmer-ranchers internal conflicts. David brought me to the field that day, and put the agents on speakerphone, and showed me his struggles every day for the rest of the planting and harvesting seasons, because he wanted me to see what he was up against. David's internal conflict was most evident when he examined rusts and ordered new potent chemicals at the same time that he professed an admiration for the chemicals and a pride in his own understanding of how to concoct them. The men gathered power from the fact that they were changing the world at the same time that they evolved practices which would predict the emergence of a constantly changing nature. And, with their unceasing and ever-expanding horizons, as they moved easily between the plains and the monte, they found holistic management styles that would permit them to graze more cattle, to bring them back to the plains.

They had been prolific in constructing and expending energies to transform the plains, and in so doing to transform themselves. Their quest for more was working itself out through the romance that was always at the root of modern life, that had enabled

them to from the semi-arid lands create vast green fields of legumes destined for animal feed. The key to their achievement was passion and desire, modes of self-development that enabled them to avoid engulfment, to be warriors of love. The feverish story I had seen in the eyes of that steer was a love story. It was a story about the love between men and cattle, a story about the way this love brought into being a whole world.



Figure 23. Riding through flooded fields.

## **Conclusion: Love in the Anthropocene**

Later, years after Diego and Carolina had ended their love affair and Diego had married another woman with whom he had a baby, he told me a story.

Once there was a young man who fell in love with a woman. He played songs on his guitar for her in the central plaza and tucked pages filled with poems into the crevices of her windows and eventually she began to love him, too. But the young woman's father did not approve of the young man, who was in a class below his



daughter, and who was thus not a worthy recipient of her attention, much less her love. She married a doctor instead and made a family with him. In the meantime, though, the young man decided that he would dedicate his whole life to being worthy of her love. This was not a moral endeavor. He had one goal. To be wealthy.

He started working as a clerk at a well-respected company. Every few years he was promoted, with a consequent increase in salary, so that after many decades he finally occupied the uppermost position in the company and was devastatingly rich. By this time the young woman he had fallen in love with was no longer young. She had grey hair and grandchildren, and her husband had passed away. The man, who was also now old, confessed his love to her. She learned to love him again. And they took a trip together down a river on a steamboat. What they saw on the trip was neither beautiful nor reassuring. To make his money, he had committed his company to cutting down vast swathes of forest around the rivers of their country, leaving nothing but sharp trunks and muddied slick hills that poured silt into the waters. He looked at the old woman. He barely saw the devastation. He was sick with love. They turned the boat around to come back the way they had come, and when the captain asked how long they could keep up this coming and going the man had his answer ready.

“Forever.”

When he finished the story, I said to Diego that it wasn't a particularly satisfying ending. Diego said to me that it was considered one of the greatest love stories of all time. I asked what the title was. *Love in the Time of Cholera*, he said, by Gabriel Garcia

Marquez. The thing is, he said, Marquez uses cholera as a metaphor for the affliction of being in love.<sup>128</sup>

After I read it, I recognized the places where Diego had taken small liberties, or invented small fictions, leaving out the more horrifying details of the man's life – such as when he rapes a young girl and kills another – but even without reading it I understood that he had told me the story because he felt that it somehow mirrored his own life. His and Carolina's love had blossomed during the Zika epidemic that swept through the Southern Cone in 2016. Zika, the virus born by *Aedes* mosquitoes with the potential to cause microcephaly in fetuses, had arrived swiftly and suddenly to Argentina in 2015 and 2016. Originally isolated in Brazil, mosquitoes had managed to bring the virus down through Paraguay, Uruguay, and finally into Argentina. Thousands of women had been afflicted with the disease and the Argentine government was desperately scrambling to find ways to mitigate the rapid transmission of the virus. The fear of Zika's consequences as well as the imperative to continue everyday life was captured by what Diego and others referred to as “love in the time of Zika.”<sup>129</sup>

The phrasing “love in the time of Zika” framed a particular story by invoking Marquez's classic – Diego was obviously not the first one to make this connection – indexing the rapid spread of disease ecologies as one of the major dramas of our times. The narrative stringing together cholera and Zika was illuminating. Cholera is a

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<sup>128</sup> In addition to denoting the sickness itself, “*cólera*” in Spanish and “choleric” in English denotes passion or rage. The word “cholera” in the title thus has a double meaning, which Marquez exploits in the text when, for example, the protagonist wonders whether he has cholera when in fact he is just in love.

<sup>129</sup> “Love in the Time of Zika” caught on as an allegory that was astonishingly ubiquitous, the examples too numerous to list. A cursory Google search yields hundreds of results, including perhaps most famously the Dateline Special following three young mothers whose children were born with birth defects.

distinctly modern malady, an acute diarrheal infection caused by the bacterium *Vibrio cholerae* spread primarily by unsafe water, while Zika is a virus spread primarily by the female *Aedes aegypti* mosquito, which must feed on blood to lay eggs. Just as cholera was considered modern, zika was considered global. During the height of the Zika epidemic, it was acknowledged that the global distribution of these mosquitoes had reached numbers never seen due to expanded global trade and travel, as well as rising temperatures that allowed them to expand their range and survive in places where winter would have otherwise reduced their numbers. But it was not, of course, just about distribution. The destruction of environments that would have previously absorbed standing puddles of water, the annihilation of semi-arid environments from Mato Grosso in Brazil to the southern edge of the Argentine Pampas all in the name of soy, was central to Zika's spread.<sup>130</sup>

Indeed, the year of 2016 was the pinnacle of the soy queen's reign in Argentina. That year farmers planted almost 20 million hectares in genetically modified soybean plantations, more than ever before or after. "We have done this to ourselves," admitted one farmer to me as we looked out at the flooded world that Diego indexed with his story linking the biological destruction of worlds and the emergence of disease. Diego, along with the other farmer-ranchers, had brought into being plantations that breed disease ecologies. Plantations simplify the biodiversity that usually protects against disease – both in plants and in humans. In the Pampas, the simplification meant that

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<sup>130</sup> For more on the spread of soybeans throughout these temperate regions of South America, see Gustavo Oliveira and Susanna Hecht's *Soy, Globalization, and Environmental Politics in South America* (2017) based on their special issue in *The Journal of Peasant Studies* from 2016.

wetlands, pastures, and semi-arid thorn forests had been cleared out and replaced with rows of soybeans. Whereas grasslands, pastures, and woodlands have an extraordinary and complex soil structure that has a strong absorptive capacity for water, thus holding precipitation where it falls, soybean fields have in comparison shallow and thinly developed root structures that, especially when row-cropped with bare earth between the plants, reduce the water-holding capacity of the soils. What the farmer meant when he said “we have done this to ourselves” was that farmers had drained and channeled millions of hectares of wetlands throughout the course of the 20<sup>th</sup> century, and then replaced millions of hectares of pastures with soybeans in the previous decade. Extensive cultivation and channeling coupled with excessive rainfall thus led to soil erosion and extensive water runoff, to flooding, overflowing rivers and channels, and thousands of standing lagoons dotted throughout these areas of massive soybean cultivation. And it was within these pools of standing water that the *Aedes* mosquitoes found perfect breeding grounds.<sup>131</sup>

I remember that hot wet summer so vividly I can feel the shudder of anxiety rip up the back of my spine when I conjure the heat. I was living on a ranch in the far western reaches of the Pampas where the soy plantations met the semi-arid forests in which the cattle grazed. It was impossible to go outside without being attacked. Tiny black mosquito bodies blitzed cheeks, the palms of hands, eyelids, earlobes. I couldn't

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<sup>131</sup> See Paulla Ebron's extraordinary forthcoming work on the spread of disease ecologies in the lowland plantations of the southern United States, in which she details both how race was remade within landscapes of disease as well as how the *Aedes aegypti* mosquito was domesticated through the making of tropical empire (forthcoming). See also J.R. McNeil, *Mosquito Empires* (2010), for an account of the ecological changes that made Caribbean landscapes breeding grounds for mosquitoes carrying yellow fever and malaria, diseases which confer immunity and resistance on survivors, aiding first the Spanish and then the revolutions in the region.

even hang up my laundry to dry outside. By January (the hottest month) it had already set records for high rainfall. But it was not until I returned from fieldwork over a year later that Diego and Carolina's fear was driven home for me, and that I began to think about what Diego really meant when he described "love in the time of Zika." I came home from Argentina sick with something undiagnosable, which may have led to a fetal abnormality we found nearly twenty weeks into my first pregnancy that made the baby, the doctor said, "incompatible with life."

The loss of the baby made me think differently about the story Diego told. So many of the people that I talked to in the Pampas were trying to construct narratives about what was happening, to connect loss to larger forces. The women who had lost infants only a few days old seeking to connect their losses with pesticide use. The ranching men connecting their current predicament with the global forces compelling them to feed a hungry world. The Indigenous group in the forests drawing lines between their ancestors and themselves. Diego tracing a line between disease ecologies of cholera and Zika. I began to think of these attempts as short stories that did not conform to our understanding of *story* – beginning, middle, end – but as moments that nevertheless lent a shape to something. As other scholars trying to describe agribusiness (il)logics have also argued, the way to write about these processes requires something different than the traditional liberal exposé (Hetherington 2020; Blanchette 2020; Bessire 2021). It is not enough to describe what is happening in the mode of exposure, where certain facts are presented as if self-evident from which specific lines of moral action are assumed to be taken. Did my inhalation of pesticides lead to a fetal

abnormality? Did the men flood the Pampas by planting only soy? Does extended glyphosate exposure lead to cancer? Rather than the answers – which are stories contested and multiple – it was these questions themselves that lent a shape to a world that they formed even in their asking.

At its very core the shape of this world had a dual nature. Diego and the other farmer-ranchers were, first and foremost, cattlemen – that is what Diego called himself, a Cattle-Man, a being that was not one without the other – and it is a fact that the shape of this world was impossible to understand without cattle. Men lived and died for cattle. When they were forced to plant soybeans, they moved cattle to the hills so that they could hang on to the cattle part of themselves. The dual nature of this world was thus characterized by the plains and the hills. In melodic and lyrical Rioplatense Spanish the men called the plains “the campo” and the hilly forests “the monte.”<sup>132</sup> These categories had histories of settler contact, they were made in the interstices of war, immigration, and settlement. The campo was where they grew soy. It was, for them, the place where they performed the duties of the household. It was where they found themselves and their properties in a state of becoming with globality, with the multiple and fragmented forces at work in the world. The monte was where they had moved their cattle. It was the place where they could get away from it all, where they could have pet projects,

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<sup>132</sup> Monte was, in La Pampa, the colloquial word used to refer to everything west of the grasslands. In Rioplatense Spanish monte translates best as the Australian English vernacular “bush” used to indicate backwoods, hinterland, or a natural and undeveloped area. Ecologists with whom I worked would often be more precise, referring to the thorn forests west of the grasslands as “espinal,” and referring to the scrublands west of the espinal as “monte.” In the dissertation I use the word “monte” when necessary to indicate an emic “bush,” but when I want to specifically indicate the region of the “espinal” I translate it and refer to it as “thorn forests.” I follow this same pattern with the campo, using campo in colloquial expressions when necessary to indicate an emic “countryside,” and translating “pradera” or “llanura” into “grasslands” or “plains.”

where they could live out a life reminiscent of the protagonist in W.H. Hudson's *The Purple Land*.

The men that I worked with straddled these two worlds because they were being displaced. There is no other way to describe it. They had established ways of working within a system, but the odds were stacked against them, and they knew it. This knowledge was a source of continual anguish and despair. Agribusiness conglomerates were coming in and displacing small and medium sized farmers, and the only way to compete with rising prices was to do what the corporations were doing. The men decided to plant soybeans. But they were not attached to soybeans the way they were attached to cattle. This non-attachment was cultivated but it was also because soybeans were a *fait accompli*. The soy boom came on the heels of an ecological invasion begun by conquistadors and cattle hundreds of years before. The massive land occupation Spaniards began in the 16<sup>th</sup> century required a certain attachment to place – and it was cattle that had provided the perfect ethos of attachment. Cattle allowed the settlers to claim belonging in a place that was decidedly not theirs. Cattle, horses, and other European species together created ecologies of belonging for the settlers, created spaces for the settlers to claim their own native-ness.

I take my cue about attachment, belonging, and love from Diego's rendition of *Love in the Time of Cholera*, where the protagonist was motivated by emotion above all. Diego called it love to claim innocence, but the truth is that the emotion was complex – love, as it always is, was a mixture of motivating and overlapping affects – a passionate mix of upper-class disdain, masculine pride, patriarchal desire, sickening

domination, heart-dropping inadequacy, and willful blindness (*obcecación*). Love was a sickness. Love was enmeshed in a kind of affective system shaped by class and race and gender, a system in which worth was measured by wealth. In *Love in the Time of Cholera*, the feeling was feverish and the aesthetic so tricky that the reader could be easily seduced – Marquez once warned the reader not to fall into his trap. Even though the main character is objectively despicable, even though he rapes a young girl and kills another, the book still continues to be called “the greatest love story of all time.”<sup>133</sup> This reveals more about how we see love, how anything is justified in the name of a feeling everyone knows to be all consuming without thought to the consequences. In case it is not yet clear, “Love” in *Love in the Anthropocene* is a powerful and explosive affect that nourishes vast world endings, while “Anthropocene” is Zika in a more general form that cuts across both the social and environmental sciences – ecological destruction, the rapid spread of disease ecologies, the global distribution of shipping routes, the warming of the world. It describes a moment as well as a modern environment, it indexes a mode of vital experience that, I argue, has shifted over the past two centuries. What I am calling “Love in the Anthropocene” exploits Marquez’s insight to draw out the infatuation of modernity, and it also draws out the tragedy, the increasing sense of dread that the environment brings.

David, Diego, and the other rancher-farmers felt in the dynamic and dialectical struggle between the plains and the forests on the brink of a new era. Modernization had ripped through the pampas and changed whole worlds, and in the nexus of the soy

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<sup>133</sup> Many authors, book clubs, critics, and reviews have called it this, including perhaps most recently Oprah’s Book Club: [https://www.oprah.com/book/love-in-the-time-of-cholera-by-gabriel-garcia-marquez\\_1?editors\\_pick\\_id=26790](https://www.oprah.com/book/love-in-the-time-of-cholera-by-gabriel-garcia-marquez_1?editors_pick_id=26790)



project the men found themselves face to face with a dilemma felt by farmers the world over. Could he live without soy? Could he live without pesticides, without committing himself to a project that could also be his undoing? His internal struggle was made material in the struggle between the two ecologies. This struggle illuminated the contradictions alive within the pampas and within the world, the desires and urges no less vibrant for being in the plains, the emotional attachments to cattle and the attendant western fantasies. This dissertation unravels that struggle through cattle and soy, through infatuation and tragedy, tracing the dizzy feeling the men and women of the pampas had as they were propelled into a global pastoral. “She knew” writes Marquez, “that he loved her above all else, more than anything in the world, but only for his own sake.” *Love in the Anthropocene* is love for his own sake, and it will not save the world.

One afternoon before I left the ranch I accompanied the men out to the sorghum fields to move the cattle and there was something in the repetition of the movement and something in the devotion of their cowboy song that startled me into feeling the monotony of it all. Not that it was tedious but that it all kept going, somehow, and there was no accounting for the ongoingness of it. Later I imagined standing in that field watching the seasons flash by. *The night and day flash on and off like clouds hiding the sun and we are just standing in their coursing shadows. Then it is winter and the closed fog moves in and then the days get longer and the men go out to sow the soy and it grows bushy and thick on the stocks and again it is summer and at night the air is heavy with moisture and with heat even though it is dark. The cicadas and crickets sing and the lightning bugs flash and I smell the sea, salty and grassy.* I imagined the cycles and

the mad love that animated us and I wondered what sort of story someone might tell about this moment in time.

Maybe someone would tell it like this.

Once there was a man who fell in love with cattle. One summer when he was young he visited a ranch and fell in love. For the rest of his life he tried to make himself worthy of cattle love. This was not a moral endeavor. He had one goal. To own massive amounts of cattle. After many years he owned thousands of animals and he was old and grey. One year floods came, floods not seen in over one hundred years, floods that drowned the cattle and threatened the object of his affection. Over and over he kept moving the cattle from field to higher field to save them, to save himself. One afternoon in late winter he and the men went out to check on the cattle in the lower sorghum field and move them to higher ground. Later after dusk while waiting for their lamb ribs to cook the men voiced their concern because the water was saturating the ground and over the flames of the fire they talked about the cattle and how long they could keep moving them from field to field and how long they could keep this up. And every man down to the last had his answer ready.

“Forever.”



Figure 24. Song for tango.

### **Epilogue: Blame That Tango**

I will always blame that tango  
and the wooer with his wiles,  
once he'd made my heart break  
all he told me was good-bye.

- From Roldan's "Blame That Tango" (trans. Suzanne Jill Levine)

“One never means to fall in love,” Carolina told me during the floods, speaking of her love affair but gesturing to a larger question. It isn’t as if we have chosen any of this, she continued, sweeping her hand over the flooded town, the country. Daniel posed it in a different way: *the illusion is that we are free*. “We must accept what is given to us,” he wrote in a longer letter to me. “To live free is to live subject to our own desire and this sometimes enslaves us without end.” They both wanted to communicate the folly in imagining that we have anything to do with what we desire. To describe this illusion, Diego gave me a short story written by Jorge Luis Borges called “The South” in which the protagonist travels south of Buenos Aires into the campo and, without really having any choice in the matter, gets into a knife fight. The story captured something important about the campo that I needed to understand, Diego said, even though it was written in the early twentieth century.

“The South” is Borges’ best southern cone gothic, and one of the few stories in which he ventures out of his beloved Buenos Aires.<sup>134</sup> In the story the protagonist Juan Dahmann describes the family country house he wants to visit but then is bed-ridden by grazing his head on the edge of a just-painted casement window. In the confines of a sanatorium he lives a waking nightmare from which it is unclear he will recover. When he finally does improve he takes the train south to his country house to convalesce and we see the Pampa through his eyes: “He saw long, unplastered brick houses set at an angle watching trains pass without ending. He saw horsemen on dirt

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<sup>134</sup> See for an excellent discussion of the Gothic mode in Argentina Inés Ordiz, “Civilization and Barbarism and Zombies: Argentina’s Contemporary Gothic,” in *Latin American Gothic in Literature and Culture*. 2017. Eds. Sandra Casanova-Vizcaino and Inés Ordiz. Routledge.

roads. He saw ditches and ponds and ranches. He saw long, luminous clouds that looked like marble. And all these things were random, like prairie dreams.”

Dahlmann disembarks at the train station, walks ten blocks to the general store, and decides to eat dinner there. After eating he feels something lightly brush his face. He looks down to see a small ball of bread that someone has thrown at him. Three farmhands (*peones*) at another table are goading him on and although the store owner tries to intervene one stands up with a knife and challenges him. A gaucho slides his dagger across the floor to Dahlmann and when he picks it up he realizes that it will justify the other man’s killing him.

“Let’s go outside,” says the farmhand, and in this moment Dahlmann thinks to himself that he would have rather died this way, “in a knife fight under the open sky,” than in the sanatorium: “He sensed that had he been able to choose or dream his death that night, this is the death he would have dreamed or chosen.” His musings draw out the strangeness of both events – his sickness as well as his journey south – and throw into question whether or not he has really taken this trip south or if it is just a hallucination, even as he “firmly grips the knife, which he may have no idea how to manage, and steps out into the plains.”

“The South,” what Borges once called “perhaps his best story,” is at first glance a Pampa genre, the knife fight, that is both expansive and tragic. Borges’ story portrays powerfully the masculinity, the saving face, the following-through with a macho subjectivity even though the outcome it brings about does not feel chosen. Indeed, the story captured “something I needed to understand” about the Pampas, as Diego had

said, because it was a mode of recognition. When Dahlmann picks up the knife he knows it means he will have to fight. Picking up the knife demonstrates his desire for belonging in the Pampa, and it also reclaims in a roundabout way his desire to live. But there are two other aspects to the story that I want to pull out: the geographical and the uncanny.

Borges locates the fight in the “South” outside of Buenos Aires precisely because it is there, in that mythological place, that the knife fight lives on. The South is a place that, even when Borges was alive, existed precisely because there was a sense that it was receding. At the same time, Borges puts little clues into the text to make the reader wonder if this idealized death is really happening at all. The reader, for example, remembers that in the beginning of the story Dahlmann had expressed pride in his criollo grandfather, who had died fighting on the frontier of Buenos Aires, “run through with a lance by Indians from Catriel.” What these clues do is to make the reader feel as if they have entered the uncanny. It is a disturbing feeling because we are depending upon the narrator to be a faithful scribe, to tell us what has happened. It isn’t even that we suspect a literary device – that of the unfaithful narrator – but rather, we suspect that Dahlmann may be living out this fantasy while he lies dying on the bed in the sanatorium. Maybe even he himself does not know if it is real.

“The South” thus describes a place where the uncanny is not just a strategy for dealing with the more painful real. It is, instead, a communally held form of recognition. Because the uncanny is widely recognized as a shared figure for world making, fictitiousness becomes a scene for belonging. Dahlmann wants desperately to

belong in Argentina and to do so he travels south and picks up the knife and steps out into the plains. Or maybe he just hallucinates that he does. In the final scene, Borges asks, aren't all desires fictive? This was one of his primary insights into the psyche: everywhere we go, we bring our own fictions with us.

I learned from Carolina about the privilege some fictions have over others, about the power of desire and the way it collapses under scrutiny. On chilly spring weeknights in the local dance hall she hosted community tango classes with two other instructors. The floors were imitation speckled Venetian and the unheated rooms echoed. When the light fell they lit candles. Here, she said, and put my right hand in her left one, placed her right hand on the space between my shoulder blades, and pressed her chest against mine in the Argentine style of tango called close embrace. As we crushed our chests against each other she moved subtly. She could see that it embarrassed me. Tango, Carolina said so that I would understand, "Is all about seduction." Eduardo Archetti's masterful analysis of Argentine masculinity reinforces this thesis. Quoting the historian Savigliano, he describes how tango is different from other dances: "'Tango did not perform 'instinctive sensuality', rowdy excitement, or overt impropriety, cynicism, or defiant aggression toward the upper classes. Nor did it focus solely on the erotic powers of the female body, like other 'traditional' erotic dances. *Tango's sexual politics were centered in the process of seduction...*[the dancers'] mutual attraction and repulsion were prolonged into an unbearable, endless

tension. And everything took place, apparently, under male control” (1995:110 in Archetti 1999:122, my emphasis).<sup>135</sup>

When I asked friends about seduction and suggested as Savigliano did that it all took place under male control, I was chastised and told that tango (seduction) was modern now and that women and men were both responsible for creating that heightened tension – a genre of the historical present that I ended up calling “Hysteria” for reasons I detail in the eponymous chapter. Being hysterical was seducing for seduction’s sake, but it was still gendered. When Diego told Carolina, “You tame me,” he was acting out the part of a seducer in a relationship in which the man is tamed by the woman. He is the beast, the wild and wayward creature that is pardoned for his ways simply because it is “in his nature.” The woman’s desire is stirred by this simple phrase. She feels powerful, and this power infuses her with wanting. But this desire relies on the man’s mutinous nature. It depends on his continuing to be rough. It depends on an image he cultivates which disallows intimacy or scrutiny, which hews close enough to fantasy as to be always full of wanting.

I went back for several more classes with Carolina, hoping to understand what it meant to locate sexual politics in the process of seduction. As she led me across the room with her chest, she said to me that the premise was to *feel* what the other person is doing.

“Stop thinking so much.”

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<sup>135</sup> Later, when I was watching “Lunching with Mirtha Legrand” (*Almorzando con Mirtha Legrand*), one of the most watched shows in Argentine television, I perked up when I heard the hostess Mirtha say to her six lunch guests, “A mi me gusta seducir.” I love to seduce. “Si todos nos seducieramos más, seríamos más feliz...” If we all seduced more, we would all be happier. Seduction, she went on to say, is something beautiful. All her lunch guests nodded, agreeing and adding their own stories about seduction. See for the full program: <https://www.youtube.com/watch?v=znMz1kvGKRM>



And she closed her eyes with none of the self-consciousness I felt and moved across the floor first with the center of her body, and then with her feet. I followed, swept up in the movement, trying to mirror the positions of her feet even while I sweated with embarrassment. Then I accidentally stomped on her right foot.

“Now we are dancing tango,” she said, laughing and stepping back from me but still hanging on to my hands.

You do this, I do this, and now we are dancing. We were improvising within the form of the dance, caught up in structures not necessarily of our choosing, responding to the politics of seduction even as we were vaguely aware that we had never committed to desiring any of this. This is what Borges captures masterfully in “The South.” Does Dahlmann really have any choice in the matter? Isn’t it what he wants, anyway? Perhaps he grasps the tragic nature of his actions, but at least he knows who he is. He is a man with desires, a man who understands what is at stake. He leans down to pick up the gaucho’s dagger from the floor and in so doing writes his own death on the plains.

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