

Working Conditions

When I met him, Yadier—whom I introduced in the last chapter as a photographer of pesticide helicopters—was in his late thirties. After he came down with CKDnt, one of the first things he did was visit his local branch of the National Institute of Social Security (INSS). An INSS doctor took a detailed case history, asking him about his work and what it entailed. Yadier told him a typical story. He had started working as a teenager and had been given various tasks at Montelimar, many of them involving long, arduous hours, and nearly all of them putting him in proximity to agrochemicals. Based on this history, the INSS officially classified Yadier's condition as "work-related" (*laboral*). This classification entitled him to a small subsidy for hemodialysis treatment and medications. Yadier was fortunate. With the money he was saving on health care, he could plausibly imagine what the CAO, the Montelimar Corporation, and residents of the sugarcane zone blandly termed *alternatives*, economic projects beyond the plantation. After his CKDnt diagnosis, Yadier was no

longer able to earn money working in the cane fields, so he started raising chickens in a loose cooperative association with his neighbors.

Actually, even before he got CKDnt, Yadier already had a few chickens on his small farm, which was located a few miles from the Montelimar mill. For years, Yadier and his wife had kept a fluctuating flock of *gallinas indias*, free-range yard chickens whose colors ranged from brown to black to red. Anyone in the area could tell you that the meat from a gallina india was superior in flavor to the meat that came from the commercial chickens—uniformly white-feathered—that Yadier was now raising in a coop he had built with the assistance of Nicaragua’s Ministry of Agriculture and Forestry. While the *gallinas indias* were feisty, multicolored fixtures of the domestic landscape, destined for Yadier’s wife’s stewpot, the commercial chickens Yadier and his neighbors were growing were uniform and fungible, not unlike the stands of sugarcane visible on the horizon. They were destined to join thousands of others on the wholesale market.

Yadier kept meticulous records about his commercial chickens. He could tell you how much he invested week by week in specialized feed, in the construction and expansion of the coop, in special warming lights for newly hatched chicks, and even in vaccines to prevent viruses like influenza. The life of the flock was mapped out in budgets, projected growth charts, and market trends, the software and hardware for an agrarian future. Here was a scaled-down version of the kinds of accounting and measurement technologies being used at the Montelimar Corporation to track both the steady growth of the sugarcane monoculture and the health of the workforce.

This little chicken business was aimed at economic growth and a modicum of profit, but its viability depended on cooperation between Yadier and his neighbors. Each associate in the enterprise had to dedicate land to the project, and each had to do the kind of close accounting that Yadier showed me when I visited him to see the operation for myself. Like so many cooperative associations across Latin America, the enterprise relied on a dynamic process of “commoning,” a diverse set of exchanges of labor time, money, land, paper, accounting skill, and much more. The market value of the chickens depended on a host of nonmarket exchanges.¹

There were limits to this project. Yadier figured that if he and his neighbors were successful, they might be able to raise a few hundred chickens at a time, maybe as many as a thousand, but space was not infinite. He still grew corn and squash, and he kept a few pigs and a horse or two in addition to the *gallinas indias*, which did not demand the careful financial investment required of the commercial flock. The *gallinas indias* would subsist on foraged bugs

and cast-off corn kernels, and if they were going to die prematurely, the culprit would most likely be a predator, not a virus. If the white commercial chickens seemed like the animal avatars of an entrepreneurial future, the multicolored gallinas indias seemed like those of a passing campesino lifestyle, preserved for the sake of nostalgia, or at least better-tasting soup.² Another way of seeing the relationship between these two kinds of chickens is as a coexistence between two forms of social security. They seem to fractally encompass the divides between capitalist and noncapitalist safety nets; between the working conditions of the campesino landscape and those of the manufactured, standardized, and closely audited plantation.

More than twenty-five years after sugarcane companies first started collecting data on workers' kidney function, CKDnt is still not definitively considered an occupational disease by the INSS. Throughout the period of my research, the INSS continued to designate some CKDnt cases as occupational (*laboral*) and others as nonoccupational (*común*). Those like Yadier, whose disease was classified as laboral, could claim free medical benefits, while those whose disease was classified as común could not. This chapter is about how people at Montelimar reckoned with this bureaucratic division, and how the onset of CKDnt rearranged not only workers' understandings of the ethical obligations of corporations and the state to provide them with care but also their understandings of their obligations to one another.

In a general sense, people facing CKDnt were concerned about what caused the disease, but in a more specific sense, they were concerned about working conditions, the terms under which bodies are recognized as working bodies, and environments are recognized as occupational environments. Knowledge about working conditions is produced in several places at once: by corporate management, by the state institutions that regulate them, and by workers themselves. One way of defining social security is as the setting and maintaining of working conditions. Social security becomes all the more complex when, as in the sugarcane zone, individual work histories (and by extension individual medical case histories) blur standard sociological and medicolegal binaries: corporate and collective; wage work and piecework; subsistence and market; occupational and nonoccupational.

This blurring is evident in individual stories like Yadier's, and in intergenerational stories like that of Don Tomás, a forty-seven-year-old man who had stopped working at Montelimar around 2010. When Saúl and I met them one late September day in 2017, Don Tomás told us about the pressures that had led him to abandon his job at a relatively young age, before the onset of CKDnt. Like others in the Nicaraguan cane industry, Montelimar workers only get

paid a full day's wage if they harvest a daily allotment, what they call a *tarea*. If a worker fails to complete their *tarea*, a field manager can cut their daily pay in half. As in other agricultural contexts, this piecework system incentivizes dangerous levels of exertion in extreme heat.³ Much like Yadier, Don Tomás recalled being denied personal protective equipment when he worked as a fumigator and herbicide applicator, and he told stories about field managers encouraging people to return to work even when they felt sick from the effects of the chemicals. Some of those same field managers would hand out ibuprofen or acetaminophen for aches and pains on the job, making it possible for workers to meet their daily *tareas*.

A little while into our meeting, Don Tomás introduced us to his son, Pedro, an active worker who had fallen sick with symptoms of kidney disease several times over the previous two years. In 2015, a company doctor had sent Pedro to a private clinic for a kidney ultrasound, after his creatinine level rose above 5.8. As I explained in chapter 3, since the late 1990s, when kidney disease rates appeared to spike in the sugarcane zone, company medical clinics have closely monitored workers' kidney function biomarkers, including the levels of the waste protein creatinine, in their blood. Just before we met that day in 2017, Pedro's symptoms returned, and he was given two days off from work to recover. Now those two days had passed. As Don Tomás recounted his son's work history for my digital recorder, Pedro was getting bathed and dressed to go to the mill and report back to the human resources office. He had to attest that he was still feeling sick and request new kidney tests, he told us, lest he be fired for abandoning his job. Pedro had to work to be sick, and be sick to keep working. He stood a better chance of having his condition classified by the INSS as work-related, or laboral, if he could stay employed. Workers were more likely to be able to access biomedical knowledge and state disability benefits if they presented themselves as loyal employees, and if they presented their bodies as available for exposure to heat, chemicals, and dust.

Over time, workers developed a remarkable understanding of the relationship between exertion, chemicals, the consumption of water and analgesics, and kidney function. As Don Camilo, another longtime cane cutter and a member of AMBED's board of directors, explained, "When I worked in the [field], I carried two big bottles of water, and when I went to urinate, it came out clear, clear. So I said, 'I'm OK.' Then it started to come out almost black, so I went to the [company] laboratory, and asked, 'What's this?'" When Don Camilo's urine started sending him disturbing signals, his first act, as Pedro's had been, was to visit the company's medical laboratory. His next was to visit the INSS. When Don Camilo was initially diagnosed with CKDnt, however,

the INSS classified his disease as nonoccupational, or común. He refused to accept this decision, and his family gathered enough money to hire a lawyer to help dig into company records to prove that he was working during the time that his disease likely first took hold. As the lawyer made his petitions, Don Camilo's wife, who also worked for the Montelimar Corporation, made regular visits to the company human resources office to plead for help in dealing with the INSS. The family spent more than three years working its way between company and INSS offices before Don Camilo's CKDnt classification was finally changed to laboral.

As the stories of Yadier, Pedro, Don Tomás, and Don Camilo attest, disease classification in the sugarcane zone entailed a multiway exchange between workers, neighbors, families, corporations, and state. Classifications were far from given. Rather, they emerged out of a blending of plantation labor with aspects of the "commoning" work that characterized Yadier's chicken cooperative.

Disposability and Care

At first glance, the relationship between CKDnt and work seems easy to explain. In western Nicaragua, where sugarcane plantations are among the only reliable employers, there is a labor surplus, which means that companies can use early detection of kidney dysfunction to cut ties with workers as soon as their bodies succumb to dangerous conditions. As Julie Guthman explains, this kind of corporate monitoring reflects a broader global condition of industrial agriculture, in which laborers remain "valuable . . . because they have been constructed as disposable and thus readily left behind when they become sick or less productive."⁴ Worker disposability is often understood as an essential, if hidden, element of monocrop production, one that is enabled by public policy. In the United States, for example, undocumented Latin American migrant workers are legally excluded from many basic social protections, including social security.⁵

It is noteworthy, then, that for decades, the Nicaraguan state has sought ways to *ensure* the future of the rural poor and of the national economy: to use the bureaucratic mechanism of public welfare to turn working bodies and working environments into subjects of regulation and care. Indeed, social security is arguably a Latin American product. Manuel Israel Ruiz Arias, a former director of the INSS, credits the South American revolutionary Simón Bolívar with introducing the concept of "social security" to the lexicon of government in 1819, some sixty years before Otto von Bismarck implemented a social safety

net in Germany.⁶ The premise of such safety nets is that the state must protect its most vulnerable citizens across the life course. The INSS, like most modern social security systems, ties entitlements to labor. The French anthropologist Marcel Mauss portrayed social insurance of this type as an elaborate form of reciprocity, one that acknowledges that “the wage does not cover society’s obligation to the worker.”⁷ The bureaucratic design of social safety nets, however, tends to favor frugality in the allocation of benefits. Deservingness is determined by officials who are incentivized by rigid regulations to limit the distribution of entitlements. The result is that state care can maintain rather than assuage structural violence.⁸

The establishment of modern social security schemes has not erased older ways of making labor-based claims to food, land, and health care in Latin America, those “moral economic” entitlements based on reciprocal relations between landowning patrons and the peasant and smallholder “clients” who work for them. An insistence on such obligations, as seen in the work that Don Camilo and his family undertook to change his *común* classification to a laboral classification, continues to be a way for the poor to hold employers and landowners to account.⁹ Moral economic obligations were also central to the operations of nonplantation enterprises like Yadier’s chicken business. To social security and moral economic considerations, a global economy in which the behavior of large companies has come under increased public scrutiny has given rise to practices of “corporate security.” In an age in which human rights and environmental concerns are unavoidable, companies must express limited degrees of care for the communities in which they operate, but they do so frugally. After all, they have a responsibility to their shareholders to limit their liability.¹⁰

The corporate impulse toward frugality had immediate and devastating effects in the early days of the CKDnt epidemic. Until the CAO intervened on behalf of workers’ groups at NSEL and later at Montelimar, detection of the disease in company clinics nearly always led to swift and unceremonious dismissal. In the years after sugar companies first started monitoring kidney function, scores of workers were fired, or, in their words, “tossed into the wind,” “left out on the street,” “abandoned,” with little recourse to occupational health or injury insurance.

Worker disposability is not an inevitable feature of the rise of monoculture or the emergence of a post-Fordist global economy. It is “a historically constituted social fact, which can manifest itself in a variety of ways.”¹¹ As CKDnt became more widely acknowledged, and as it became more clearly connected to sugarcane production, disposability ceased to seem like an inevitable part of

working life in the sugarcane zone. Thanks to broad recognition of a possible connection between work and CKDnt, disposability had shifted from an inevitability to a possibility. Workers still feared the prospect of abandonment, but they also creatively leveraged systems of corporate and state care, along with kin and community ties, to hedge against that abandonment.

Cabra. Campesino. Combatiente. Número.

Don Alvaro Torres was diagnosed with CKDnt in 2010. Back in the 1970s, when he was just a teenager, he started working in the sugarcane fields near his home outside Villa El Carmen as a *cabra*, or informal helper, accompanying his older brothers as they cut cane during the annual harvest. When Don Alvaro was young, the plantation now known as Montelimar was a loose federation of farms owned and operated by landowners loyal to Nicaragua's dictator, Anastasio Somoza Debayle. Somoza Debayle himself owned a sizable portion of the land under cane in the region, and his palatial beachside estate, which also went by the name Montelimar, was as much a local landmark as the ingenio. Families like Don Alvaro's considered themselves campesinos, working their own land while supplementing their incomes with cash wages from sugarcane labor.

Somoza Debayle inherited the plantation-mill complex at Montelimar from his father, Anastasio Somoza Garcia. As we saw earlier in this book, Somoza Garcia was a self-described economic liberal and modernizer who reimagined the agricultural belt of Nicaragua's Pacific coast as the crucible for the nation's economic future.¹² In this future, a nation of campesinos would progressively become a nation of workers (*obreros*).¹³ During his rise to power in the 1930s and 1940s, Somoza Garcia separated himself from political strongmen of previous eras by styling himself not as an oligarchic patrón—a leader who cultivated loyalty by doling out the favors and benefits associated with agrarian moral economies—but as the country's "laborer in chief," or *jefe obrero*. Somoza Garcia cultivated loyalty by tapping into an emerging class consciousness, particularly among the rural poor.¹⁴ Over two decades, he consolidated power by deftly dividing and subdividing the interests of the country's nascent rural workers' movement and its conservative landed elites, staving off left-wing socialist unionization with one hand while building social protections for workers into the law with the other. Most prominently, Somoza Garcia promised to include agricultural laborers in a new national pension and disability scheme. The scheme was written into the Nicaraguan constitution in 1955, and a few years later, the INSS was born.

During the Somoza era, Nicaragua's sugarcane workers did begin to access INSS benefits, but coverage was wildly uneven. Even when they reached massive scales, the major agro-export industries in Nicaragua (cotton, sugarcane, tobacco, sesame, peanuts, and coffee) continued to rely mostly on seasonal laborers, and on long-standing systems of kin-based patronage, to recruit and retain them.¹⁵ Even today, workers who show up each year for the sugarcane harvest support themselves, as Yadier did, through small farming: growing a variety of food crops, tending cattle, and maintaining flocks of chickens, ducks, and geese.

Many workers at Montelimar started out as *cabras*. One explanation I received for the use of this term is that goats (*cabras*) consume the weeds and grasses that grow beneath crops like cane and suck valuable nutrients from them. A human *cabra*, then, might do some weeding, fetch water, and in other ways absorb the tremendous physical stress of the job of harvesting sugar, allowing the adult, formally employed worker to whom he was attached to meet his daily cutting quota. Cutting cane has been compared by occupational health experts to running a half-marathon in ninety-plus-degree weather, six days per week, for weeks on end. It saps energy, and it demands a discipline that a field manager, or *capataz*, cannot instill on his own. But to call the *cabra* a "child laborer" would be misleading. The *cabra* is as subject to the orders of the *capataz* as he is to those of his adult relatives.¹⁶

The figure of the *cabra* bridges the reciprocal, noncapitalist obligations that attend family and kinship with the extractive imperatives of modern industrial production. The *cabra* embodies other, murkier dimensions, including both extralegal exploitation (as an "informal" laborer, a *cabra* could make no claim against a sugarcane company for injury or wage theft; as a child, he was subject to potential abuse, or special treatment, at home) and the kinds of patron-client-inflected moral economics often associated with Latin American plantations (if he worked hard, the same *cabra* could reasonably expect an overseer or field manager to formally hire him when he came of age). When they were hired and became officially listed on the books of the company and the INSS, *cabras* turned into *números* (numbers). A formally hired person would henceforth refer to him- or herself as a *número*. Overnight, their futures became factored into company and state actuarial figurations about investment and risk.

Within the life histories of individual cane workers like Don Alvaro, then, two facts about sugarcane labor coexist. Seen as originating in the figure of the *cabra*, one's status as a worker derives from a kind of entangled existence, in which social security came from a combination of plantation production and subsistence from small family plots. Seen as originating in the figure of the *número*,

one's status as a worker derives from an "autonomous" existence, in which labor power is compensated through state-regulated wages and benefits.¹⁷

Don Alvaro himself expected to become a *número*, but in 1979, the Sandinista revolution deposed the Somoza dynasty. Anastasio Somoza García, who seeded the idea for the INSS, had been assassinated in 1956. In the years between his death and the 1979 revolution, his sons Luis and Anastasio Somoza Debayle oversaw the transformation of the country's Pacific landscape from a loose patchwork of small and medium-sized farms to an increasingly consolidated series of monocultures—cotton, sugarcane, wheat, sesame, and peanuts.¹⁸ This transformation, as we saw in chapter 2, was part of an initiative by entities like the US government, the Rockefeller Foundation, and the World Bank to grow Latin American economies through monocrop agriculture—one that continues to this day. Over the course of the 1950s, 1960s, and 1970s, Nicaraguan smallholders found themselves with less and less land, making field labor increasingly necessary, if never sufficient, for survival.¹⁹ The social security system that Somoza and his sons created did not keep up with this growth. In fact, in its first twenty-five years, the INSS "was characterized by zero growth."²⁰ Expanding plantation companies used the seasonality of labor, a diminishingly small rural literacy rate, and nonmonetary benefits such as food and medicine to keep many of their operations off the books.

Partly in response to this socioecological crisis, peasants, students, and urban and agrarian workers' movements united under the banner of the FSLN to overthrow the Somoza dynasty in 1979. The FSLN's political platform in the 1980s was beset by its own internal divisions. Leadership was split between a group of pro-peasant *campesinistas*, who advocated for the establishment of agricultural cooperatives and the protection of small and medium-sized farms from industrialization, and a group of modernizing *decampesinistas*, who (somewhat in line with the Somozas' vision) saw the conversion of rural peasants into wage earners as an inevitable and economically desirable outcome.²¹ The *decampesinistas* pushed for the nationalization of roughly half of the country's sugarcane sector, including the Somozas' Montelimar plantation, which was renamed the Ingenio Julio Buitrago, after a founding FSLN member who is remembered, interestingly enough, as the "father of the *urban* resistance."

Formal, paying jobs on the Julio Buitrago plantation were given to combat veterans of the revolution and the subsequent US-orchestrated contra war, including Don Alvaro Torres. The INSS, renamed the Institute for Social Security and Welfare, was expanded massively during this same period. Some seventy-five thousand rural people, including all those at the state farms, were

enrolled.²² But as Santiago Ripoll explains, decampesinista assumptions about the appetite of rural workers for embracing the state farm model were overly optimistic, and many workers, particularly former revolutionary fighters, demanded access not just to work but to land.²³ Eventually, workers like Don Alvaro were given assurances that they would be more than just *números*. They were given an ownership stake in the Julio Buitrago plantation itself, in addition to plots where they could grow their own crops. Social security now included not only the family ties that helped bring new generations of *cabras* into the workforce but also the moral economic obligations between *combatientes* and the state that were born out of the revolutionary moment. Just like the *cabra* system, this sense of manifold obligations never fully went away. Throughout the negotiations mediated by the CAO, in fact, Don Alvaro continued to think of the sugarcane complex at Montelimar as something that he could claim, thanks to his work both as a *cabra* and as a *combatiente* in the revolution, as a kind of patrimony.

For Don Alvaro and other Montelimar residents of his generation, the land concession to *combatientes* and the conversion of *campesinos* into partners in the state farm joined the *cabra* and the *número* in a stew of facts about working conditions. Nicaragua's revolutionary government invested in sugarcane, in part, because the idea of modernization through industrial monoculture had become cemented into the national development telos, and in part because plantations had long been viewed by *campesinos* as sources of stopgap security, places where a benevolent *patrón* might be sought when medical, economic, or other needs arose. By making workers vested coproprietors of state plantations, the revolution deepened a long-standing sense that a sugarcane firm's duty of care to its workers extended into the family plot itself.

This recognition was short-lived, and when the revolution ended in 1990, the government hired consultants from Price Waterhouse to orchestrate the sale of nationalized plantations like Julio Buitrago to private buyers. The post-revolutionary government did try to avoid the reentrenchment of the Somo-cista oligarchy in the countryside by formalizing the land rights of both the ex-combatants and the thousands of farmers and villagers who lived in the environs of cane, cotton, sesame, and peanut plantations along the Pacific coast.²⁴ Even a few of the Sandinista-era cooperatives managed to survive into the twenty-first century. At the time of its sale, workers at Julio Buitrago were granted a 25 percent stake in the plantation, but that concession was quickly forgotten.²⁵ It was not until 2012, some twenty years after the sale, that some of the men and women who worked the Ingenio Julio Buitrago were paid a small sum in recognition of the sale, but Don Alvaro and his neighbors still talk of

the sale and the disappearance of what they call *el 25 por ciento* as a theft of a revolutionary gain by rich bankers and unscrupulous political leaders.²⁶

The plantation now known as Montelimar changed hands twice between 1990 and 2000, when it was purchased by its current owner, a murky conglomerate called the Nicaraguan Shipping Consortium (Consortio Naviero Nicaragüense, or NAVINIC). These changes of ownership made establishing chains of responsibility for worker welfare much more difficult. NAVINIC continued to hire field laborers from the surrounding communities, but it frequently relied on subcontractors, who failed to report weeks of work to the INSS and failed to act as caring bosses. And just to confuse matters further, when the CKDnt epidemic emerged, NAVINIC changed its legal name to the Montelimar Corporation. During the 1990s, enrollment in the INSS among rural people plummeted from its revolutionary period high of seventy-five thousand to around three thousand.²⁷ This meant that by the time the CKDnt epidemic began, many of the workers seasonally employed by sugarcane firms were not paying into the national social security system at all, even if the pay stubs they collected from a revolving cast of subcontractors said otherwise. They would not become aware of this until they became too sick to work.

This situation is not unusual. Indeed, evidence suggests that the entrenchment of state protections for agricultural laborers in Latin America has actually deepened social and economic precarity, precisely because subcontracting permits companies to game the system.²⁸ Seasonal work is by definition not constant work, which means that if a worker's relationship is increasingly with a series of contractors and not a single sugarcane company, any inconsistency in treatment or in accounting becomes harder to correct. A retired worker I interviewed explained it like this. Back in Somoza's time, he said, if you had a problem (an illness, a missing paycheck, a missing INSS record), you went straight to the administration and you dealt with the administration. But by the 1990s, subcontractors were making access to administration more difficult. "No hay patrón," he said. "No hay patrón. Because the contractor doesn't know you are . . ." You were just a número. The condensation of an array of bifurcated identities (campesino-cabra, cabra-número, número-combatiente, combatiente-owner) into a single number elided a fundamental sense among workers that persons and things that seem unitary and individual exist in the world as relational and immanently divisible.²⁹ Social security systems depend on such condensation. Workers like Don Alvaro maintained a capacious sense of what social security meant. Social security emanated from bureaucratic registries, the obligations of the state to armed combatientes, the debts owed to clients from patrons, and the kin relationships that structured the cabra system.

Campesino, cabra, combatiente, número. The story of the CKDnt epidemic in Nicaragua illustrates that economic and ecological simplification are not the only sources of plantation violence.³⁰ These are joined by the bureaucratic simplifications of social welfare schemes like the INSS.³¹ Simplifications are built into the architecture not just of the companies that produce and process monocrops but into the architecture of the nation-states that regulate those companies. Such simplifications are supposed to be helpful, for if it were impossible to tell whether an illness was work-related, or if there were not a legal way to categorize an injury as the result of industrial negligence, workers would be further disempowered. The problem is that while workplace injuries are frequently thought of as discrete events, acute disruptions to the everyday cycles of industrial labor, injury is perhaps better seen as a process rather than an event.³² This is not to say that categorical bifurcations or bureaucratic regulations are inherently bad. Indeed, as Andrea Ballesterio's examination of water regulation in Costa Rica shows, they are indispensable to the ethical work of human rights and environmental protection.³³ In the case of CKDnt, however, the process of determining what counted as a work-related condition turned out to be an arbitrary and violent one.³⁴

Routine Tests and Arbitrary Conclusions

Doña Cynthia and Don William lived in a settlement tucked on a hillside above the small town of San Cayetano, halfway between the Pan-American Highway and the Pacific coast. I met them on a rainy day in mid-July. Don William was in his late forties, which meant that he first showed signs of CKDnt rather late in life by comparison to others with the condition. He had worked at the company long enough to be able to retire with full benefits. While legal retirement age varies in Nicaragua, sugarcane workers who had put in enough time could begin collecting benefits through the INSS at age fifty. If he lived to age sixty-two, Don William would be able to draw an additional old-age pension through the INSS, and if, as was more probable, he did not reach that age, Doña Cynthia would be entitled to a small widow's pension.³⁵

Nicaragua has a two-tiered health care system. The national Ministry of Health runs public clinics and referral hospitals to which every citizen, regardless of employment status, has full access. Those who are formally employed pay portions of their salaries, called *cotizaciones*, into INSS accounts, and employers also contribute to the INSS on workers' behalf. *Cotizaciones* are akin to the payroll taxes that workers pay in other countries. For those who have experienced

occupational injuries, who are retired, or who have reached old age, payment into the INSS confers entitlement to care at a network of semiprivate hospitals and clinics, all of which are considered superior to the public ones run by the health ministry.

The INSS is a fragile institution for several reasons, the most obvious of which is demographic. The size of Nicaragua's intermittent, cash-based, "informal" workforce continues to dwarf that of the documented INSS-contributing "formal" workforce. In 2017, a report by the International Monetary Fund (IMF) estimated that some 80 percent of Nicaragua's workers did not pay into the INSS, and though efforts have been made by successive governments to grow the client base by encouraging people outside the formal workforce to contribute, the massive disparity remains.³⁶ This means that the "social" part of "social security" has always been severely limited. The solvency of the INSS has not been helped by the fact that successive governments have raided its reserves for short-term giveaways to loyalists.³⁷ In April 2018, partly because of this chronic instability, the government of Daniel Ortega, encouraged by the IMF, proposed a hike in INSS employee contributions and a reduction in retirement benefits. In the wake of these proposals, a simmering opposition to Ortega's government boiled over, and Nicaragua fell into a national political crisis marked by weeks of public protests and severe reprisals by the National Police. Hundreds of people were killed in the unrest, and hundreds more were jailed. The country has not been the same since.³⁸

Don William and Doña Cynthia were not on the front lines of the 2018 protests, but they were well aware of the vicissitudes of Nicaraguan social security. Workers like Don William kept close tabs on the number of weeks they had been employed, and stacks of pay stubs documenting cotizaciones were as ubiquitous in their homes as sachets of instant coffee. In the legal language of the Nicaraguan labor code, a workplace injury is a *riesgo laboral*, a clear, calculable risk, an event that might (probably) happen to a certain percentage of workers in the future.³⁹ Yadier, the poultry entrepreneur whose story opened this chapter, gave the example of his uncle Arlen, who lost a finger in a harvesting accident. Arlen's was a working finger, and the machinery that took it was part of a working environment. There was little ambiguity there.

But CKDnt was not, or at least not always, an occupational injury. As Ruiz Arias, the former INSS director, explained in the Nicaraguan public affairs journal *Envío* in 2010,

Work-related risk insurance . . . seeks to protect workers from the moment they set off to work until they come home at night. . . . If the

worker ends up disabled he/she also receives a pension and on reaching old age has the right to two pensions: for disability and for old age. The work accident . . . must be reported in order for the worker to claim benefits. If it is a “white” accident, an unreported one with no apparent symptoms, INSS won’t consider it a work-related illness or accident even though health problems appear later on. The same is true if it is a non-serious and unreported “red” accident (because there is blood).⁴⁰

CKDnt subverts this neat bifurcation. It is neither “white” nor “red.” There are symptoms, but no discrete accident, and unlike the loss of a digit or a limb, there is no blood spilled.

While tests at the company clinic were starting to show worrying signs of kidney injury, Don William held out hope that if he could stay employed for just a few more months, he could count on the retirement benefit from the INSS. Continued employment would also make it more likely that the INSS would choose to classify his condition as laboral. If a worker’s kidney disease was to be considered laboral, they had to meet a few criteria. They would have to have worked in sugarcane for at least two years. They would have to have done these two years of work under the current ownership of the plantation, and to receive any kind of INSS benefit, they would have had to have worked for at least 26 consecutive weeks during that time. To receive a full pension, they would have to show a total of 150 weeks of documented work. And, of course, the INSS would have to feel confident stating in an official medical record that plantation working conditions had something to do with the condition of the patient’s kidneys. All this meant that if Don William was laid off and then reported his CKDnt case to the INSS, it would be much more likely that it would be classified as común.

The terms *laboral* and *común* are both statements about the spatial and temporal limits of modern plantation labor. They are ways of setting working conditions on what João Biehl calls the “frugal” terms that link the work of public medical care, oriented to preserving life, and corporate behavior, oriented toward accumulating wealth.⁴¹ Companies like Montelimar needed to get workers with suspected CKDnt off their books, in order to make it less likely that INSS doctors would classify their condition as laboral. It was one thing for nearly everyone in the sugarcane zone to assume that CKDnt was caused by industrial sugarcane production; it was quite another to underwrite that opinion in the official records of the social security system. As long as mortality and morbidity records on CKDnt remained ambiguous on the causal question, sugar companies could limit their liability. The causal ambiguity also benefited the

fragile social security system. The financially strapped INSS could not possibly cover every case of CKDnt if it classified them all as laboral. The bureaucratic bifurcation between laboral and común was built atop the political bifurcation between campesino and obrero, the workplace bifurcation between cabra and número, the conceptual bifurcation between formal and informal labor, and the structural bifurcation between semiprivate INSS and public Ministry of Health services.

At the Montelimar company clinic, Don William's kidney function was assessed through a variety of laboratory procedures, as it had been many seasons before. His blood was tested for the presence of creatinine, which helped doctors determine his estimated glomerular filtration rate (eGFR), and his urine was examined for evidence of unusually high levels of electrolyte sediments such as magnesium and phosphorus. His eGFR turned out to be consistently low, while his sediments were high. These could be signs of an acute kidney injury, something more chronic, or both. Don William continued to take the tests for several weeks, sometimes receiving a few days of sick leave, and sometimes feeling (and testing) well enough to work.

When we met, Doña Cynthia did most of the talking. "The last exams that [the company doctor] sent [Don William] to get," she remembered, "had to be done in Managua, at a particular laboratory. So the company took them in a microbus. . . . They must have had some kind of arrangement, because they sent a group of them, not just [William]." At that laboratory, Don William and a group of his coworkers underwent more blood and urine testing, and then they piled back into the microbus to go to another laboratory for ultrasounds. "And with these exams, they were able to certify that [William] really had the disease," Doña Cynthia continued. "They had diagnosed it here [at the plantation], but there they confirmed it."

Ten days after that trip to Managua, Don William and several others who were on that bus were laid off. What Doña Cynthia still couldn't get over was the excruciating slowness of the experience. For two months, Don William had been reporting back to the company clinic, hoping that his kidney values would stabilize. The tests in the private laboratories in Managua, however, showed no improvement. Don William received the news of his firing just two months shy of retirement. Even if the INSS did not choose to classify his CKDnt as laboral, full retirement benefits would have included a decent pension. Doña Cynthia reasoned that the company wanted to give the INSS good reason to classify his disease as común.

In the interview recording, I am clearly confused. Surely, the company would have wanted Don William to be able to retire comfortably, I suggested.

“Of course they know,” Doña Cynthia replied, a bit impatient. “They know how old the workers are, and they know how many cotizaciones they have. The company knows perfectly well who is close to retirement and who isn’t.”

What felt violent about this situation was not just the firing but the arbitrariness of the company’s decision. “In fact, I *went and I told them*, ‘Look, why don’t you just let him work these two months, just until his retirement?’” Doña Cynthia continued. She and Don William had heard that a handful of CKDnt patients who worked under field managers or sector engineers that were known to be particularly good bosses had been able to petition for low-stress work over those final few weeks or months, allowing them to qualify for retirement. Even though that sort of arrangement was anything but guaranteed, the figure of the beneficent upper manager (for all intents and purposes, a *patrón*) allying with workers against the austerity of the state remained a powerful one.

The Gift of Disease Classification

When I spoke with CKDnt-affected workers around Montelimar, several of them concluded their accounts of their journeys through the INSS by saying something to the effect of “and they gave me an *enfermedad laboral*” or “they gave me an *enfermedad común*.” It was as if the disease classifications, which one might expect to be forensic or technical descriptors, were instead the end results of some kind of long-term exchange.

And why shouldn’t they? After all, social security systems like the INSS rely on mutual contributions by workers and employers, who expect the state to provide care in return. Questions about what counts as a workplace injury, and what counts as a working environment, turn out to be questions of exchange, and by extension questions about the recognition of persons.⁴² What was confusing about the bifurcation of CKDnt cases into the categories of *laboral* and *común* was that it seemed to rely on a conceptualization of work that diverged from the way that men and women who had actually spent their lives in the cane experienced life in the sugarcane zone in the decades leading up to the onset of the CKDnt epidemic.

The rise of attention to occupational disease over the twentieth century, which came thanks in large part to organized labor, has come at a cost, namely, that medical scrutiny of workers’ bodies often furthers the dehumanization of those bodies, all while masking the broader set of economic and political forces that cause harm.⁴³ Bodily conditions can be bifurcated into occupational and nonoccupational categories, but the process of embodiment cannot. The kidneys are physically affected by sugarcane production long before they become

visible to corporations or state social security institutions.⁴⁴ Unlike limbs or even brains, kidneys are only indirectly enrolled in work. There is “intellectual labor,” and there is “manual labor,” but to my knowledge no category called “renal labor” exists. The kidney’s services as an interface between a body and its environment are something of a biophysical donation by the worker to capital. No one is hired for the quality of their kidney function, but they can be fired for it. It is thus no wonder that workers talk of the fate of their bodies not through the technical idiom of exposure but through the social idiom of exchange.

Those like Don William, whose CKDnt was classified as común and stayed that way, could still receive a disability payment through the INSS, since INSS doctors agreed that they *were* physically unable to work, but they would have to seek medical treatment through the public health care system, run by the Ministry of Health. The IMF’s 2017 report on the INSS notes that ministry’s service is inferior to that of the INSS, not least because the public health system has no capacity to provide dialysis care, something that all CKDnt patients eventually need.⁴⁵ This meant that those whose CKDnt was deemed común would have to spend their own disability pension money to pay for treatment.

Blended with the bureaucratic arbitrariness of the INSS, the arbitrary patriarchal benevolence of the plantation created a nasty brew. David Graeber has argued that “bureaucratic procedures . . . are invariably ways of managing social situations that are . . . founded on structural violence.”⁴⁶ This insight is useful for understanding the bureaucratic itineraries of sugarcane workers and of the life-altering difference between the words *laboral* and *común*. Those itineraries alert us to “[structural] violence’s capacity to allow arbitrary decisions, and thus to avoid the kind of debate, clarification, and renegotiation typical of more egalitarian social relations.”⁴⁷ As the stories told by Don Camilo and Doña Cynthia suggest, such renegotiation still happened in CKDnt cases. Some people *could* convince an INSS doctor to change a classification from común to laboral, and some people *could* convince a field manager to let them eke out the last few weeks of work before retirement. The problem was that the chance of entering into such “egalitarian” relationships with either the state or management was random.

The arbitrariness of care on the plantation is not just a feature of a hierarchical structure that puts management and INSS officials above workers. It is a feature of the very “red” and bloody germ of plantation capitalism itself: the control of labor through the threat of direct physical violence.⁴⁸ I am not saying that workers at Montelimar were physically abused on the job. What I am saying is that to understand what makes CKDnt into a social crisis, it is essential to un-

derstand structural violence as the historical outcome of enslavement and indenture, labor processes that have always included both the threat of arbitrary violence and arbitrary gestures toward caring “egalitarian social relations.”

Occupational Disease and the Problem of Simplification

Occupational disease is typically framed, both in the Nicaraguan laws I summarized here and in most modern tort systems, as a discrete event. In US law, “a claim of injury relies on a prior, uninjured body.” This legal bifurcation between the injured and the uninjured, as Lochlann Jain notes, makes regulating harm done at work by toxic substances, or accretive exposure to heat and dust, exceedingly difficult.⁴⁹ These exposures present a temporal problem: How to pinpoint the “prior” in a body like Don William’s?

If the starting point of CKDnt is debatable, the disease itself is not. Doctors know it when they see it, and even in places like Nicaragua, where biopsies and other complex procedures are hard to perform, they rarely dispute the diagnosis. But there is a void where a definitive causal mechanism should be.⁵⁰ The emergence of this void can be traced to the very design of the occupational environment, one saturated with toxic chemicals, where temperature control and hydration are erratic, and—most important of all—where the experiences and knowledge of the people getting sick are systematically devalued.⁵¹

Are such conditions occupational or not? This seems to be the question. A clear answer seems like it would have meant a great deal to a couple like Doña Cynthia and Don William. Ever since company doctors at NSEL first attempted to study the disease in sugarcane laborers in the 1990s, the science of CKDnt has been consumed by the task of determining the extent to which the disease is related to work. Even though a causal mechanism for CKDnt remains elusive, the ostensible correlation between the disease and sugarcane production is undeniable. CKDnt is a sign of an eco-bio-social dysbiosis, one with dire consequences for the future of the sugar industry, in Nicaragua and elsewhere. If more and more workers are coming down with a devastating disease, companies and governments might want to stay ahead of the problem. Since plantation companies have been systematically disavowing their responsibility for the violence done in the name of commodity crop production for centuries, it is not surprising that they, and the states that support them, are looking for ways to cut their losses.

Even with full knowledge of the risk of CKDnt, throughout the course of my research, people in the sugarcane zone continued to take jobs in the harvests. They continued to take those jobs even when they knew there was a strong

likelihood that the work would shorten their lives. Like Don William and Pedro, many continued to return to work because the plantation was their primary source of medical attention. To presume that they were simply exploiting themselves because they had no choice would be a mistake. Anthropological research in plantation contexts illustrates that complex, more-than-capitalist relations—including the kinds of “egalitarian” ones that Graeber alludes to in his work on bureaucratic violence—are essential to the persistence of monocrops.⁵²

My analysis of the stories of CKDnt patients’ journeys through the INSS leads me to conclude that the question of whether CKDnt is “occupational” or not, while epidemiologically interesting, is overly narrow. After all, we already know based on decades of research that industrial farm work is dangerous. Answering the occupational disease question for CKDnt tells us nothing about how, even as they continue to strain against the ecological limits of soils and water tables and against the biophysical limits of human bodies, monocrop systems persist. Indeed, efforts to determine whether diseases like CKDnt are occupational or not actually help perpetuate the violence of monoculture—and not just because these questions are hard to answer. To treat work in sugarcane as an “occupation,” as a job and nothing more, is to reinforce one of the very things that makes plantation life violent: its tendency to perpetuate itself through social and ecological simplification.⁵³

We must ask what the bifurcation between occupational and nonoccupational disease does, and for whom. What sort of politics of work does it imply? What if the continued recurrence of questions about whether and when agricultural labor is dangerous is itself a political technology, a way of extending the unnatural life of the plantation by treating it as if it were interchangeable with any other form of production?⁵⁴ What if that recurrence is part of a long-standing modernist push to bifurcate work from life? And what if such a push occludes the more-than-capitalist activities and moral economic obligations on which both plantation agriculture and rural life still depend? In Nicaragua, as we will see in chapter 6, CKDnt seemed to matter as a problem not so much of work but of the *end* of work: its temporal ending, prompted by the onset of disease or retirement, as well as its moral implications, including how a worker’s loyal service to a company, or a company’s faithful provision of care, should be valued.

As much as monocrop agriculture can be caricatured as an animated force that aspires to occupy more and more land and to consume more and more bodies, monocrop agriculture depends on the idea that it, too, has limits: that there is a space that lies beyond it—a space where illnesses just happen. Think of the ways that the agro-industrial complex in the United States has historically

leveraged the politics of legality and citizenship to limit its obligations to migrant workers from Latin America. Call it accumulation by disentanglement.⁵⁵

Uncertainty about the status of bodies as working, and environments as occupational, has been a major obstacle to the development of modern welfare states in Latin America, where agriculture still takes up a dominant slice of GDP. The past century of Nicaraguan history is marked by efforts to tame that uncertainty: to do the work of convincing all concerned that commodities like sugar, spaces like sugarcane fields, units of human labor power, and the conditions of kidneys are all discrete and more or less interchangeable things. To be discrete and interchangeable, they must have physical limits. A field can only carry so many stalks of cane; a worker can only harvest so many kilos in a day; and a corporation can only manage fields and workers at a certain scale.

At the onset of the CKDnt epidemic, international lenders from the World Bank and national agricultural regulators had come to think of sugarcane plantations as discrete, regulated spaces, the kinds of spaces where workers' time was neatly kept, where they paid into the social security scheme, and from which the INSS would help them cleanly eject after injury or retirement. The case of CKDnt illuminates some of the limitations of both the modern corporate-state welfare complexes that aim to deal with the problem of workplace injury, and of the conventional critiques of those complexes. The twinned fragility of social security systems and industrial production systems is a hallmark of the epoch Kim Fortun calls "late industrialism," a time when the autonomous, atomistic existence of things, facts, and bodies is coming into question—at least in those pockets of the Euro-Atlantic world where people may have once found stories about that autonomy convincing.⁵⁶ When the fiction of autonomy breaks down, strange new pathologies arise—long COVID, cancer clusters, endemic asthma, multiple chemical sensitivities. Economic, industrial, and state fragility is refracted back onto bodies in the form of more precarious conditions, more injuries, and fewer options for preventing them, or so the thesis goes.

But for most working-class people in Latin America, factual, objective, or personal autonomy was never a given.⁵⁷ For many, existence was and remains irrevocably bound up with messy colonial formations—like plantations—and with noncapitalist forms of debt and obligation like those of Yadier's chicken cooperative. What is violent here is not the breakdown of a stable, autonomous existence but the effort to will the imaginary of autonomous existence into a matter of fact. As Nicaragua's social security system struggles for solvency due to chronic underfunding and decades of political corruption, workers make appeals for justice and for health care based less on liberal notions of bodily

autonomy than on an insistence on the entanglement of flesh and environment—on the persistent blurriness of the divide between the occupational and the nonoccupational environment. The simplification of CKDnt as an occupational problem is thus part of the broader set of simplifications on which late industrial agriculture relies. Violence stems not from the division of work from nonwork, but from the fragility of that division, and the lengths to which the state and capital interests will go to preserve it.

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