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NAFTA's Cartel Economy

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This article combines elements of a personal essay with travel writing, in which geographers have expressed renewed interest. Constructed not through contemplations of the mind but from lived corporeal experience, it reflects both fieldwork discomforts and moments of somatic exhilaration when the mind reacts, producing the epiphany of a new idea or insight. The article follows two researchers who travel through insecure parts of Mexico in an effort to understand how the North American Free Trade Agreement (NAFTA) has affected the Mexican cattle sector and implications for its forest biomes. Land cover change data show a decline in Mexico's deforestation rate, and the authors hypothesize that agricultural intensification enabled by the neoliberal reforms of NAFTA are responsible. The article starts with a road trip from Culiacán—home of the Sinaloa cartel—and ends in Chiapas, where the Zapatistas rebelled against NAFTA in 1994. At the Guatemalan border they confirm the unchecked flow of about 1.4 million contraband calves from Central America, on their way to Mexican feedlots. The authors estimate that the herd producing this number of animals would require as much as 100,000 km² of pasture, presumably formed on mostly forested lands. Thus, deforestation in Mexico might be on the decline but only because its post-NAFTA beef supply chain has displaced it elsewhere. The authors reject their hypothesis about agricultural intensification. The article concludes with a speculation about the melding of Mexico's corporate and criminal organizations into a cartel economy. *Key Words:* cartels, deforestation, Mexico, NAFTA, neoliberalism.

And what rough beast, its hour come round at last
Slouches towards Bethlehem to be born?

—*The Second Coming*, William Butler Yeats (1920, 10)

Arturo and I leave Culiacán at 2:00 p.m. heading south on Highway 15D. We're on our way to the pine forests east of Mazatlán, a city on the Gulf of California a ferry ride away from Cabo de San Lucas. At 4:00 p.m. we turn at the gas station marking access to Highway 40, the road for Durango passing over the Sierra Madre Occidental. Our plan is simple: Drive until we get to the forest and stop for photographs. By the time we turn for Durango, the humid coastal plain has given way to a drier climate, and the endless corn fields of Sinaloa, to dusty chaparral. The highway rises quickly and soon the Gulf of California appears with Mazatlán to the west. Before us to the east, the two-lane road snakes in ascending switchbacks along vertical granite edges, where stunted pine trees cling to rocky crags.

In half an hour we open our windows to whole mountainsides carpeted by pine with fir trees feathering the high ridges. We park along the roadside and climb out, inhaling the piney fragrance. Trees rise eighty to ninety feet, and golden sunlight pours to the forest floor, carpeted with wire grasses and clover-sized plants showing tiny purple flowers. It has the familiar

feel of places in my home country like the Rocky Mountains just below the tree line. I shoot fifty photos on my digital camera before we head back at 6:00 p.m. An hour later we've made the descent and reached the gas station by Highway 15D.

"How's the gas situation?" I ask, unconcerned.

"Fine," Arturo tells me.

Night has fallen, though it's still early. Arturo reaches for the radio and finds a song.

*To this important meeting comes a wild Cheyenne
It's so dark, you can barely see her
But she opens the door not a care in the world
This woman so distinguished.*

"What's it about?" I ask.

"Melissa Ojeda. 'La China.'"

"'La China?'"

"Uh-huh. A notorious *sicario*."

"Why would someone write a song about her?"

"It's a *narco corrido*. The cartels all have bands on the payroll."

Arturo turns the radio off as "La China" crackles into static.

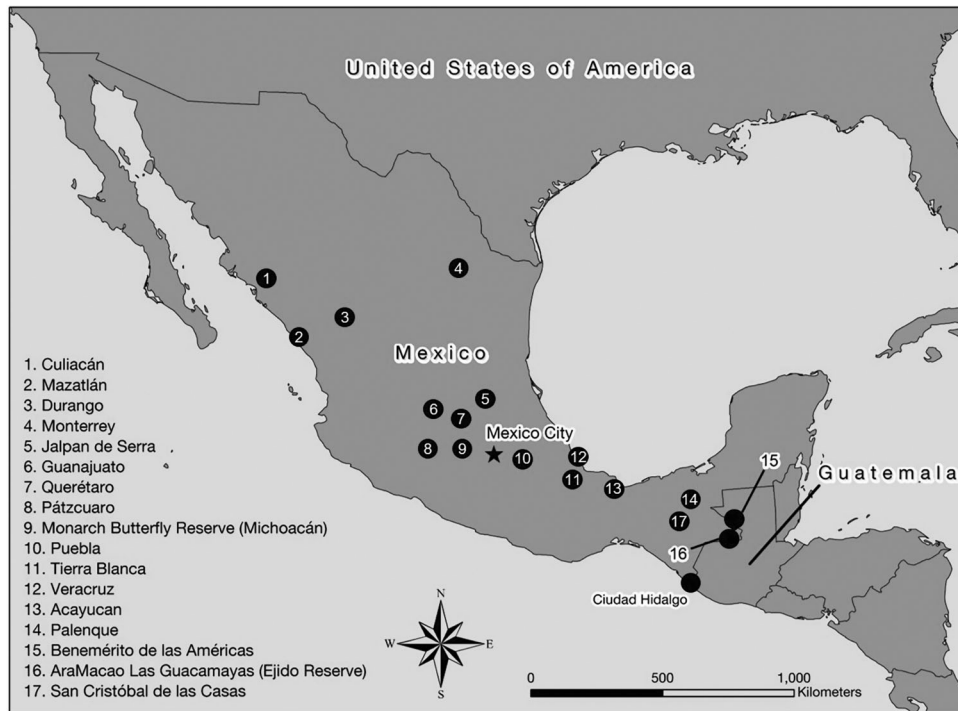


Figure 1. Research site visits, 2016 through 2018.

How Not to Conduct Research in Cartel Territory

Most of my career as an environmental scientist has transpired in the Amazon Basin, where I've spent years studying its land use systems. I never imagined I'd undertake research in Mexico until an exceptional Mexican-American student, Arturo, chose to pursue a PhD under my direction, which he finished with distinction. Now with funding from the National Science Foundation (NSF), and with in-country collaborators from Michoacán State and Mexico City, we're traveling the Mexican outback trying to understand how the North American Free Trade Agreement (NAFTA) has affected Mexico's cattle economy and forest biomes (see Figure 1). This is of potential significance to Mexico's commitment to the Paris Climate Treaty, because land use change, particularly deforestation, is a key factor in greenhouse gas emissions. Mexico has made a bold promise to drop its rate of deforestation to 0 percent by 2030.

In his dissertation research, Arturo discovered that the Mexican deforestation rate began falling in the wake of NAFTA, with the temperate forests even recovering lost ground in a process known as *forest transition*. Over the same period, Mexico's

cattle herd grew and its beef exports exploded. These twin facts would seem to be in contradiction, because pastures cleared for cattle cause most tropical deforestation worldwide. What could explain such a felicitous turn of events? Probably not environmental laws, which are routinely violated in Mexico just as in the Amazon Basin. One potential explanation resides in the argument that agricultural intensification has "spared" land from encroachments by fields and pastures. Thus, one of our objectives is to learn whether productivity gains in Mexican agriculture can explain the falling rate of deforestation, an outcome famously hypothesized by Norman Borlaug, architect of the green revolution.

It is well known that grain farming has intensified worldwide over the past several decades. Mexico provides a good example of this, with maize productivity rising from 1.7 to 3.7 metric tons per hectare between 1990 and 2016. Less well known is how Mexican beef production has been affected by the shift from the grass-fed system of the hacienda to a complex supply chain based on feedlots. In fact, Mexico's cattle economy might now be "sparing" land by reducing what's needed to support the national herd. If so, NAFTA-driven modernization has provided an environmental benefit by mitigating the destruction of Mexico's forests. Studies

addressing Borlaug's hypothesis in other parts of the world have yielded mixed results for a variety of reasons. We hope to sort the story out for Mexico, a nice test case as the birthplace of the green revolution.

Unfortunately, most of the cattle economy is located in rural areas, the preferred geography of the cartels.¹ Although U.S. cable networks provide romanticized depictions of narco-life with offerings such as *Queen of the South*, most Americans have no idea about the amount of blood being spilled south of the border. Since former Mexican President Calderon declared war on the drug trade in 2006, between 100,000 and 200,000 people have died, possibly more. The U.S. State Department publishes travel advisories, from Level 1 for countries that are safe to Level 4 for those that are not: Somalia, North Korea, Afghanistan, and so on. Mexico receives a Level 2 advisory, which is to say it is not so bad overall: safer than Honduras (Level 3) but less so than other places in Latin America such as Ecuador and Peru, which receive a Level 1.

Numbers for an entire country conceal regional differences, however, and five of Mexico's thirty-one states (Colima, Guerrero, Michoacán, Sinaloa, and Tamaulipas) manifest Level 4 advisories. The State Department does not allow embassy personnel to visit these places except in emergencies. It tells private individuals who do so to do the following²:

Draft a will and designate appropriate insurance beneficiaries and power of attorney.

Discuss a plan with loved ones regarding care and custody of children, pets, property, belongings, nonliquid assets (collections, artwork, etc.), funeral wishes, and so on.

Establish a proof of life protocol with your loved ones, so that if you are taken hostage, your loved ones can know specific questions (and answers) to ask the hostage takers to be sure that you are alive (and to rule out a hoax).

Leave DNA samples with your doctor in case it is necessary for your family to access them.

I haven't done any of this because I've grown complacent doing my research in the Amazon. Nothing bad happens to you there, or at least it never has to me. Also, Arturo's the one with his feet on the ground in Mexico, not me. In certain respects, I'm just along for the ride. That's why seeing Arturo's nervousness behind the wheel makes me nervous. Arturo's not a jittery guy. I look about, noting that

the traffic has thinned considerably. All is dark but for the occasional beam of a passing headlight. We haven't seen a single town. This seems strange.

"I think we'll run out of gas," Arturo announces without preamble.

"What?"

"We're almost out of gas."

"How far to Culiacán?"

"Forty miles."

"What does the tank show?"

"Empty."

"Where's the next gas station?"

"Culiacán."

There are many things I want to say to Arturo but don't. In truth, I have no reason to be angry, because I put Arturo in a riskier situation than this one when I asked him to test a survey questionnaire on the run-up to our project. Because Arturo had little experience conducting field interviews as required by the research plan, it was my responsibility to instruct him about how one approaches a potential respondent and elicits meaningful information. In the Amazonian outback people are hospitable. They always invite you in for coffee, even a meal. Thus, I misled Arturo by telling him the best way to get an interview is to walk up to a business, knock on the door, and state your intentions with a smile.

Arturo had misgivings about this but ultimately deferred to my long experience (and arrogance) and made the mistake of listening to me. This he did by traveling to the State of Veracruz, which boasts a very large cattle herd and a concentration of feedlots. Arturo approached the gated entrance to one of them in the southern part of the state. It was guarded by two men in uniform sitting side by side in a cramped booth. He identified himself and waited while they studied his papers and made a phone call. At last, they opened the gate and escorted him to a rough-looking individual, the manager, who then led Arturo into a warehouse with a desk and several chairs in the corner. The man was suspicious but after ten minutes loosened up, and they had a pleasant, informative conversation. As Arturo took his leave, the manager told him he must never again do what he'd just done: show up

unannounced at a feedlot (or hacienda) anywhere in the rural areas. People didn't trust strangers, the man said. There had been too many killings. The manager pointed to a walkway inside the warehouse at the level of a second story. There, several men milled about, glancing down at them. The manager told Arturo that they would have shot him had he given the signal.

So I'm not angry at Arturo for failing to act on my question about gas. I'm anxious, though, and as the minutes tick by my imagination careens through every possible contingency, through every conceivable way to get to Culiacán and back to retrieve the car, soon to be marooned without fuel. I find myself wishing I were somewhere else. Anywhere.

Arturo would no doubt prefer to be somewhere else, too. It's also the case that had he followed his heart's desire to become a sculptor, he wouldn't be sweating it out now, an academic on what might be his first and final research trip to Sinaloa.

An academic he became, however, convincing me after completing his PhD that we should expand his dissertation into a full-blown project. Our award notification came just before Donald Trump was elected president and began his attacks on NAFTA for having destroyed U.S. manufacturing by enticing corporations south of the border. President Trump's new trade deal, the United States–Mexico–Canada Agreement, has not affected anything despite the hullabaloo. I doubt we'd have been funded had we delayed our proposal submission.

But we were indeed funded and chose to inaugurate the project with a trip to Sinaloa to interview a corn broker known to our Mexican collaborators. The drop in corn prices following structural reforms in Mexico in the 1980s, then NAFTA, triggered the transformation of the Mexican cattle economy into a feedlot supply chain requiring mountains of cheap grain. Sinaloa corn producers mechanized quickly, and their output, supplemented by imports from the United States, provided the supply-side impetus to the restructuring of Mexican beef production.

Sinaloa also happens to be Mexico's most notorious Level 4 state. Its capital, Culiacán, serves as headquarters of the Sinaloa cartel and was the favored haunt of Joaquín Guzmán, better known as El Chapo, until his arrest in 2016 and extradition to the United States the following year. In fact, the corn broker we interviewed told us of how narcos had forced him off his own farm. They offered him a

low-ball price and told him it was nonnegotiable. They made him understand that if he didn't accept it there would be serious consequences. You'd never know any of this by the city's appearance. Except for the downtown, which has a traditional Mexican plaza and Catholic church, Culiacán feels quite "American" with its upscale condominiums, strip malls, and retailers like Sam's Club and Walmart. There are oddities, of course, like the cartel mausoleums on the south side of town in the Jardines del Humaya cemetery, a gated community of two- to three-story monuments built for fallen loved ones. Another Culiacán eccentricity is the shrine to Jesús Malverde, the "angel of the poor," a Sinaloa bandit regarded as a local Robin Hood in the late 1800s. Here you can purchase votive candles and saintly wax likenesses of the man.

Culiacán was founded in 1531 on an old indigenous site whose name in translation means "palace of snakes," which is appropriate as I've come to understand.

I wish I'd known all this before driving to the old-growth forests east of Mazatlán to obtain a baseline for observing forest transition. I wish I'd known about the two surfers who'd been kidnapped and killed in the early hours of 20 November 2015. On their way to Guadalajara, Dean Lucas and Adam Coleman certainly had no idea that the locals called the road they drove, Highway 15 D, the "Highway of Death." There's a lot I should have known, and could have with a quick Google search, but didn't. What I did know is that it's never a good idea to run out of gas on a dark lonely highway, wherever you might be.

"That's it," Arturo says.

"What?" I'm certain he means our fuel is gone.

"That light ahead. It's a gas station."

With a full tank of gas, we make it to the hotel.

If I were reading this account, I'd be wondering why these two individuals—namely, myself and Arturo—are exposing themselves to danger for no clear purpose. As I write it, I find myself wondering, too. I suppose it sounds rather mundane to say we're undertaking a survey of feedlots and talking to key informants about all aspects of the beef supply chain. The idea is that information so captured will tell us how Mexico's cattle economy functions, thereby

revealing the nature of its impact on the country's forest biomes.

Something perplexing we noted in examining early survey results was the vagueness with which feedlot managers responded to questions about cow-calf operations, the small ranches that supply them with the animals they fatten, the feeder cattle, mostly calves. This information is essential to determining whether land is being spared, because the suppliers in question account for most of the land used by the supply chain. Our collaborators in Michoacán have spoken to more than a hundred smallholders with mixed farming systems that include cattle, some of them feeders. It's clear from the data that NAFTA has been key to agricultural change here, in particular with a demonstrable shift away from subsistence maize production. It's also clear that this buildup in the domestic stock hasn't accounted for a significant upsurge in the demand for land, given the small size of the holdings.

There's anecdotal evidence that as the NAFTA economy took off, feedlots began sourcing their feeders from cow-calf operations in Central America, bringing them across the border as contraband. This makes sense for two reasons. First, we've been told that calves cost 10 to 20 percent less there than in Mexico. Second, information collected by Arturo from the agricultural census shows that domestic supplies fall 1.4 million feeders short of what feedlots need each year to meet demand. They have to come from somewhere.

After our trip to Culiacán, Arturo began searching for where this "somewhere" might be. Mexican colleagues pointed him to data collected by Federal Sanitary Inspection stations, where government workers stop *jaulas*—trucks carrying cattle—to count animals, record their origins and health status, and document them as domestic livestock. By studying this information, Arturo discovered that shipments of feeder cattle to feedlots from southeastern Mexico moved in tandem with the growth of Mexican beef exports, which exploded after the final phases of NAFTA implementation in 2008, when tariff rate quotas were removed for the import of U.S. corn.

From practically nothing at the turn of the millennium, feeders sourced from this remote corner of the country soared to 1.8 million by 2014. Further, most of them originated in counties near the Guatemalan border, with the small town Benemérito

de las Américas accounting for almost all. This seemed mysterious to us. Benemérito de las Américas lies 100 miles southeast of Palenque down a road called the Carretera Fronteriza in a lightly settled part of Mexico known for the Mayan ruins of Bonampak and Yaxchilán. There was only one way to find out what was going on, by traveling there to see firsthand whether *jaulas* were hauling calves from the borderland to the heartland.

On the Road Again

After classes let out for summer break in the second year of the project, we fly to Mexico City, destination the states of Tabasco and Chiapas. We arrive late morning and set off in a rental Toyota truck with a broken air conditioner, the only one available because vacations have started and people are coming home, mostly from the United States. Our objective is simple: to find evidence of contraband animals and, if possible, estimate their numbers.

What do you do if your research takes you to a place with hidden dangers and come to suspect that the dangers brush up against the topic of your research? What if you come to suspect, over time, that the topic and the dangers intersect, forming two sides of the same coin, one of which you do not wish to see?

Almost all of the smallholders our collaborators have talked to in Michoacán complain about cattle thefts perpetrated by *narcos* (their word), which would appear to suggest a cartel connection on the home front. There's also abundant evidence of narco involvement in land grabs and ranching on the far side of the Mexican–Guatemalan border. It might therefore seem foolish that Arturo and I are driving to Tabasco State to rendezvous with a cattle smuggler in a town controlled by a cartel I will not name. You can only enter this town with their permission, which the smuggler has obtained for us. I now know enough about rural Mexico to recognize this as a dicey proposition. In truth, I don't want to go through with it, but my rationale is Arturo's rationale: The only way you can understand the illicit cattle trade is from the inside.

I don't really believe this, but Arturo knows more than I can ever hope to know about doing field research in Mexico. He assures me that the smuggler, vetted by our Mexican collaborators, is a *persona de confianza*, someone we can trust. When I

tried to talk him out of it, Arturo told me that like many gringos I exaggerate the danger. Mexico isn't just a criminal wasteland of bloodthirsty cartels, he said. I suspect this is Arturo's way of getting back at me for having put him in danger at the feedlot in Veracruz. He wants to see me sweat. I'm somewhat reassured by the fact that our collaborators in this case are from the veterinary sciences, so we're likely to be identified as such. Cattle smugglers, whoever they might be, still have to worry about the sanitary condition of their contraband.

With Arturo behind the wheel, we climb the southern rim of Mexico's central basin in snaking loops up the route that Cortes took to invade Tenochtitlán, the insular Aztec capital on Lake Texcoco, long since drained and demolished by Mexico City. The megalopolis disappears from the rearview mirror as the *altiplano* opens before us, a dusty flatland of battered buildings, century plants, and Spanish bayonet shrubs cocooned in papery waste. Even though we ostensibly drive a toll road, access lanes allow pedestrians, bicycles, and vendors to weave through the slow-moving traffic at will. Highway grit and diesel fumes blow through the windows of our vehicle as we inch our way ahead with the paralyzed stampede leaving Mexico City. In an hour, the dilapidated roadside clutter surrenders to a Daliesque landscape of withered pastures and mangy livestock, an occasional goatherd appearing lifeless as a scarecrow, children in neat school uniforms materializing from nowhere, and the volcanoes rising up in shrouds of pure white snow.

It's a cliché to describe them as majestic: Popocatepetl, "the Smoking Mountain," and Iztaccíhuatl, "The Sleeping Woman," with its four peaks showing the profile of her head, breasts, knees, and feet. But they are majestic, made all the more so by contrast to the half-urban, half-agricultural sprawl beneath them. In little time we traverse the pass and descend the Sierra Madre Oriental, the backbone of the State of Veracruz. Tucked between roaring semis, we ride the brakes from switchback to switchback, the asphalt surface slick from orographic downpours on the gulf-facing slopes of the mountains. In the smoky mists rise old-growth oak trees with gnarly trunks covered by lichens. Some twist at odd angles as if bent by strong wind, and orange bromeliads pile up on crooked branches festooned with Spanish moss. Streams pour over smooth boulders through thickets of rhododendron, cascading to

downslope pools. But the sky clears and the road levels out. On the coastal plain of Veracruz, humidity smothers the cool mountain air.

In the 1960s the entire southern coast of the Gulf of Mexico—stretching from Veracruz State through Tabasco to Campeche—was closed-canopy tropical forest annually drenched by more than 150 inches of rain. Then, the federal government built highways and electrical power plants to stimulate mechanized agriculture, hoping that people would leave Mexico's populous cities. They didn't come as expected, and the land was largely enclosed by ranchers who replaced tropical hardwoods with pasture grasses, just as was done in Amazonia and most other tropical forest frontiers, always to the surprise of the government planners. Arturo and I see little variation in this on the drive to Acayucan, where we'll stay the night, a small town between Veracruz City and Villahermosa, capital of Tabasco State.

This is the region where Arturo had his anxious encounter two years ago, southern Veracruz. By now the Zeta cartel has mostly gained control of the important "plazas," or drug routes, and the local population is in the terminal phase of a cartel conflict involving the search for disappeared loved ones in *narcofosas*, dumpsites often containing hundreds of bodies. We get to Acayucan late afternoon, look for a hotel near the town center, and eat before dark. We head for the Tabasco–Guatemalan border tomorrow to meet our contact and hope to accompany him on a quick trip into Guatemala and back. Then we head for the Carretera Fronteriza to visit Benemérito de las Américas, after which we plan to spend the night at the Ara Macao Las Guacamayas Ejido Reserve in the Lacandon Forest, the only extensive tract of tropical wilderness remaining in Mexico.

Its streets stinking of diesel and gasoline, Acayucan is an assemblage of squat buildings webbed by drooping telephone lines shaggy with limp confetti. We find a hotel across from the town plaza, eat a quick dinner, and turn in early. We check out at sunrise and go for a quick breakfast in the cantina next door. I pick up a newspaper to scan while drinking coffee. The front page tells of a man who stabbed his wife last night in the plaza across the street. Something more disturbing lies buried past the society section with wedding notices of the town's important families, a story not much longer than Hemmingway's one-sentence novel. Yesterday afternoon, six policemen were discovered on the outskirts

of town, executed. No names are given, no conjectures as to how or why it happened, no *when* exactly, no *where*. All we have is the awful fact that it happened. I show the story to Arturo and we leave town lost in our own thoughts. It's my turn to drive and I have trouble keeping my foot off the accelerator.

The story is disturbing, more so by its brevity of exposition than by content. The cartels have killed hundreds of journalists to keep their bloody acts anonymous. No wonder the story tells nothing. Fear has transformed the reality of accessible facts into a world of bare bones. The stories that haven't been told are more troublesome, the stories the assassinated journalists might have written if they'd had the chance. After we've put some miles behind us I ask, "The Zetas?" "Probably. Who knows," Arturo replies.

The Kaibiles

Once the enforcement wing of the Gulf cartel, the Zetas, decided they'd do better on their own and broke away, liquidating their former employers and spreading across Mexico, particularly into Veracruz and Tabasco. Along the way, they perfected the art of decapitation with new techniques of sadistic atrocity. What makes them effective is that they were once soldiers in the Mexican Army, members of the special forces. What makes them capable of unspeakable acts is that they crossed from Tabasco State into Guatemala to train with the Kaibiles.

Two men with bloodied faces kneel before the camcorder and answer pointed questions. They admit their crimes and appear utterly resigned to what's coming. When they've finished their confessions, a man dressed in camo wearing a balaclava approaches from behind holding a chainsaw. He yanks the cord and the motor roars. He decapitates both of them without hesitation then kicks each head aside. (*El Blog del Narco*; video de ejecuciones)³

The Kaibiles are a black ops unit of the Guatemalan military with more practical experience than their Mexican counterparts. During the civil war in that nation (1960–1996), they decimated the insurgent leadership. Many rumors swirl about these legendary killers. Evidently, new recruits have to adopt a puppy during their first week of training and then kill and eat it two months later when training ends. The name *Kaibil* derives from *Kayb'l*, a Mayan warrior who

mounted a fierce resistance against the Spanish conquistadors in the western highlands of Guatemala. The United States played a decisive role in the emergence of the Kaibiles and their monstrous counterinsurgency tactics. Its School of the Americas trained them, as it did so many of Latin America's vicious killers.

As we leave the outskirts of Acayucan to the highway heading east toward Yucatan, Arturo thinks to lighten the mood with some cartel humor and tells a story.

A campesino family is stranded at roadside with a broken-down car at dusk. They're moving to a new town and don't want to be driving at night. Summoned from their nightmares, an SUV comes up from behind and pulls over. Four men jump out with handguns. They steal everything down to their belts and shoes, then leave.

"What should we do?" the mother says.

"I have no idea," the father says.

"I'm hungry," the daughter says.

"Me too, me too," cry all the other kids.

At that instant, a black pickup comes up from behind. It pulls over and out jump six men holding short-barreled assault rifles.

"What's wrong?" they ask.

The family tells their tale of woe.

As one of the men proceeds to fix the car, the others hop back into the pickup to chase after the SUV. Ten minutes later they return and unload the family's possessions. They summon the father for a look in the bed of the truck, where four heads lie bunched on a scrap of burlap—the bandits who robbed them.

"I don't think there's enough burlap for all of us," the father says, unsure as to where this is leading.

The six men have a good laugh, then one of them explains, "We're from a good cartel. We only deal drugs. We're not like the scum who rob people, kidnap them."

I don't realize Arturo's finished his story until I hear our tire treads snapping at the cracks in the road.

"That's it?" I say.

"That's it."

"So the cartels take pride in their work?"

"I guess."

"Ha, ha, ha."

Into Chiapas

For the next few hours, we drive through pastures, many of them “dirty” with overgrowth. They support what appears to be few animals, although more might be hiding in the shade somewhere. Elaborate wooden gates give access to old-style haciendas not visible from the highway. They’re painted in garish colors, with hacienda names lettered on the arches above the dirt roads disappearing into the vegetation. Occasionally, the dull green terrain reveals an abandoned palm oil plantation in shades of yellow-gray. All that remains are rotting trees, their fronds drooping like broken wings.

It’s early afternoon when the undulating landscape of Tabasco’s coastal plain tilts up to the Chiapas Highlands, hidden by a wide sweep of clouds. We turn off the road bound for Cancun to head for Palenque, where we’ll detour east to the Usumacinta River and the Guatemalan border. We begin to count *jaulas* on leaving the *autopista* for a poorly maintained, two-lane highway, semis whipping past in the opposite direction just inches away.

In a few miles, we start seeing dark-haired women with round faces, wearing multicolored shawls. They balance baskets on their heads or breastfeed babies tucked into cotton pouches carried over folded arms. Oblivious to the traffic, the women inch along hunched over as if trudging up a steep incline. A settlement appears and we slow to zigzag through the obstacle course of rocks placed to impede the flow of passing vehicles—logging trucks stacked to capacity, *jaulas* loaded with calves, ancient pickups, and road-warrior assemblies of salvaged car parts that pass muster as motorized transport.

Two teenage boys lift a rope to stop us, letting the village kids run out to sell their chicklets and mangos, knock-off watches and cigarettes, and bouquets of fresh cut flowers. The youthful swarm emerges from plank dwellings covered by sheets of ribbed tin and standing on flimsy stilts to avoid insects and mud. Some of the exteriors were once painted with a palette of Caribbean pastels, now faded. Most have the drab look of rotting wood. The tiny businesses seem empty in the dull heat, the pharmacies, the hair salons, the hole-in-the-wall *tiendas* with shelves of canned goods and banana bunches hanging from the rafters. Mango trees throw shade in places, where grizzled men in tattered clothes and outsized rubber boots stare at us as we pass by.

Thirsty, we pull over beside a cantina with a rusty metal cooler that looks like it’s been hauled out of deep ocean water. We buy soft drinks and sit for a moment. The cool bubbly liquid is a tonic to my overheated body and parched throat.

“Look.” Arturo nods at the settlement’s only concrete building across the street, an empty schoolhouse. Revolutionary graffiti streaks an exterior wall with a call to arms and raised fists. It’s faded from years of rainfall and neglect but still legible. In fact, the road we travel and the Carretera Fronteriza ahead were built in 1989 to provide military access to the region, then simmering with indigenous unrest. This culminated on 1 January 1994, when the Zapatista Army of National Liberation staged an uprising, the same day that the implementation of NAFTA began.

The timing was deliberate. The Zapatistas believed that free trade would open Chiapas to exploitation by corporate interests and further impoverish an already poor people. What most aggravated them was NAFTA’s allowance for the privatization of communal land, the *ejidos*, a cornerstone of Mexico’s constitutional land reform of the early twentieth century. Former Mexican President Salinas threw 30,000 to 40,000 troops against 3,000 indigenous insurgents and executed a bloody campaign of intimidation until domestic and international outcry demanded that he stop. What we see of the settlement suggests that the revolutionaries were right about NAFTA, at least in this part of Mexico. There appears to be nothing in the way of benefits from market integration; quite the opposite. The Zapatistas are still around after twenty years, hidden in their mountain redoubts. They exercise control over a number of municipal governments but with no formal recognition from the government.

Refreshed by our respite in the cantina, we return to the truck and continue on. Shortly, the hills begin, with slash fields climbing 60-degree slopes, many of them newly burned, with ashes littering the wounded soils. Here, whole parts of the road have been undercut by mudslides, collapsing into steep ravines and leaving the traffic, such as it is, to inch along asphalt contours hugging the hillsides. At what seems the narrowest track of highway I’ve driven, a dark shape roars past, then another and another. Three Hilux pickups speed south prepped for off-road travel on high suspensions, with .50 caliber machine guns in the back manned by soldiers wearing camo and ceramic vests, their faces hidden in balaclavas.

Five miles from Palenque the air saturates and the clouds turn purple-gray. A moist wind blows as the first pelts of rain slap the pickup. Then, lightning strikes with a volcanic blast and I nearly swerve off the road, as the storm dumps water from ragged clouds that turn the day to eerie dusk and the lightning begins in earnest. Flash after flash, each as bright as a thousand-watt bulb and accompanied by a stupendous boom. *The lightning will stop*, I think, because the laws of physics say so: There's only so much differential charge between sky and earth. Yet the lightning strikes continue, burning the air to ozone.

We get to a gas station at the peak of the storm. The attendants mill about in a nervous state, giggling with each strike, transfixed by the imminence of an electrical death. We need gas, so Arturo grabs one by the arm and makes him fill our tank. After fifteen minutes, the storm ebbs and Arturo pulls out his cell phone to call our contact, with whom we're supposed to meet this afternoon. He tried last night to no avail, but this time someone answers. There's a brief conversation, one that ends on a downbeat. "He can't do it 'til next week."

Since our return flight to the United States is in four days, the rendezvous is off. "We tried," I say, relieved but trying not to show it. Arturo shakes his head in disgust as we climb back into the truck, destination Benemérito de las Americas, Arturo at the wheel. In a minute, we're on the outskirts of Palenque heading south. Ahead of us the hills rise through peach-colored bands of sky, while high above buzzards pinwheel in a lofty spiral exploiting the last few gasps of storm wind. We turn onto the Carretera Fronteriza, leaving behind the Mayan ruins of Palenque and the aquamarine waters of Agua Azul.

It is late afternoon as we approach Benemérito de las Americas. Jaulas line the roadside near cantinas where music blares from scratchy speakers. The small town has the bustle of a much larger place: noisy traffic, a gridded street plan, and a preponderance of soldiers. Some of them cluster at street corners, while others cruise about town in troop transports. We drive to the banks of the Usumacinta, turning off the town's main street onto an attractive, tree-lined avenue that slopes to the river's edge. Two hundred yards on the other side lies Guatemala, where an unpaved road crawls out of the water and continues into the Petén region, Central America's

most recent deforestation frontier. Back and forth ply launches full of people, on their way to Mexico or Guatemala. A barge with large retractable ramps, fore and aft, floats nearby. The border's completely open. Men, women, and children mill about, but no one in uniform.

"I don't see customs," I say.

"The Army's too busy monitoring traffic flow," Arturo says.

"So this is where the jaulas come over?"

"This is the place."

In the three-hour drive from Palenque, we've counted twenty-one jaulas. One hundred and twenty calves per vehicle translates into more than 1 million animals per year, by this route alone ($120 \text{ calves/jaula} \times \text{seven jaulas/hour} \times 10 \text{ hours/workday} \times 22 \text{ work days per month} \times 7\text{-month dry season/year} = \sim 1.3 \text{ million calves/year}$). The field count is consistent with the numbers Arturo collected from the sanitary inspection data, providing another piece of evidence that the Mexican cattle economy now depends on Central American calves.

We've finished our assessment of contraband cattle and the border at Benemérito de las Americas. It's time to leave. Our (relatively) expensive vehicle, broken air conditioner notwithstanding, gives us away as outsiders. There's no need to determine at what point we'll call attention to ourselves, so we get back in the truck and drive off. It's late afternoon and we still have another hour on the road. We don't want to drive at night.

The Cartel Economy

The apparent disregard of the Army for the porous nature of the border here stands in sharp contrast to the main route into Guatemala at Ciudad Hidalgo, which is tightly controlled. I can't help but suspect that this to be an instance of government collaboration with a criminal enterprise. Although we didn't actually get to see money change hands because our rendezvous with the smuggler fell through, it doesn't take much to imagine that the cash-rich cartels are purchasing Central American calves and smuggling them home under the benign gaze of the Mexican armed forces, to be documented at sanitary inspection stops en route to the feedlots

they supply. In fact, if the cartels aren't doing this, they're neglecting an obvious opportunity to launder money while investing in a business generating huge returns. How could it be otherwise given that narcos have already accumulated so much land on the other side of the border in Central America?

The cartels did all right in the early years trundling bales of marijuana across the northern border. They did even better with cocaine, heroin, and so on, ratcheting up their profile in the world of illegal fortunes. Then out of the blue came a chance to accumulate even more wealth and a shot at respectability with a NAFTA benefit of their own making. Having addicted 20 million Americans to drugs, with help from counterparts and investors in the United States, the cartels are now positioned to nourish their sallow junkie bodies with free-trade proteins in the form of Hungry Man meals, beef jerky, and fast-food hamburgers.

No doubt other sectors of the Mexican economy have formed mutually beneficial relationships with the drug trade, swapping stock options for the liquidity of cash. It's telling that some of the bloodiest turf wars are fought for control of the large coastal ports. This is not because the bosses like container ships but because said ships can carry—in addition to illicit drugs—the vast panoply of Mexico's export goods. The neoliberal configuration of Mexico's new economy is a win-win for everyone excepting the collateral damage of those who've perished along the way. NAFTA has hurried along this institutional transformation by enabling the erosion of *ejidal* lands and by facilitating the flow of drugs into the United States and the flow of U.S. firearms into Mexico.

We drive through Benemérito de las Americas heading south, en route to our final destination, the Las Guacamayas Ejido reserve. I've never seen the Lacandon Forest and am looking forward to it. But on the outskirts of town we approach a roadblock where soldiers wave at us to pull over. I count ten of them. They're dressed in camo and wear red berets. Several hold what appear to be Sig Sauer assault rifles. These are expensive weapons. Curiously, Sig Sauer just won the bid to equip the U.S. Army with sidearms.

Two soldiers approach and tell us to step out of the vehicle and wait. They offer no explanation and seem unhappy with life. A few minutes later an officer strolls out to us with two adjutants. He wears a pressed olive uniform and his shoes are shiny. The

double brass bars of a captain's rank glint on his shoulders.

On approaching, he smiles to put us at ease and then looks into our truck, only to immediately step back. He shakes his head *no* then walks off. We don't feel threatened but this is troubling and we wonder what will happen next. Time passes. Then more. At last, one of the adjutants comes to tell us we can leave, explaining that the captain needs a lift to visit one of his mistresses. We seemed like a good prospect until he inspected our truck and realized it would make a mess of his uniform.

Respite in the Lacandon Forest

We continue on until turning off the Carretera Fronteriza down the gravel road leading to our destination through pastures spliced with tangles of wild vegetation, backed by hills crested with tropical forest. At last, the road dips to the floodplain of the Lacantún River and we arrive. The Ara Macao Las Guacamayas Ejido Reserve consists of ten bungalows raised up on stilts to avoid rainy season overflows, all connected by a maze of elevated walkways cutting through dense hedges of heliconia brimming with spiky orange flowers. After checking into our rooms, we head for the bar beside the river and order beers. We stand on the polished mahogany planking of the bar floor, against a wood railing with a good view of the river just a stone's throw away.

We leave tomorrow via San Cristobal de Las Casas, but we'll return in a month to Michoacán for a look at the pine and fir forests of the Monarch Butterfly Reserve on the border between Michoacán and the State of Mexico. As mentioned, the temperate biome is recovering lost terrain, although our collaborators tell us that the reserve is under threat. Evidently, the cartels are leveling its montane forests to plant avocado. Following NAFTA reforms that allowed for the privatization of the ejidos, an influx of capital stimulated avocado agriculture, and Michoacán with its perfect conditions now supplies about 40 percent of the world market. The state has suffered for this, as rival gangs fight for land and legitimate producers are pushed off their holdings.

Michoacán's premier criminal organization, the Knights Templar, once provided paramilitary services for the Gulf cartel and trained with the Zetas. As often happens, they split from their former associates and surpassed them with novel cruelties like the

tossing of grenades into crowded plazas. Their deadly offshoot, the Viagras, has perfected the technique of cutting hearts out, Aztec style, and is using it to savage effect in battling the Jalisco Cartel New Generation for control of avocado in the western part of the state. Our sanitary inspection data show that a county in Michoacán receives more of the contraband cattle coming from Central America than anywhere else in the country. Aside from its location in the general vicinity of the cattle thieving I've already noted, the county is home to one of the largest feedlots in Mexico, whose parent company has its corporate headquarters in Culiacán and happens to own the operation in Veracruz where Arturo had his unwanted lesson about doing survey research in Mexico.

It takes four men to hold him down, one on each limb. *I didn't do it, I never killed anyone*, he screams. *I'm innocent, innocent*. He squirms as they rip his shirt off and almost sits up until they flatten him completely. A knife appears and whoever's holding it starts at the stomach, cutting up. The screaming intensifies as the chest cavity opens. A hand yanks out the beating heart. (*El Blog del Narco*; video de ejecuciones)

I take a long sip of beer, watching a pair of red macaws jump about on the limbs of a huge ceiba tree propped up on the river bank by buttress roots unfurling from the trunk like wooden sails. Across the tranquil Lacantún rises a dark forest wall where the silhouettes of emergent crowns loom above the canopy against a lavender sky. Somewhere in its brooding recesses a saraguato monkey shouts with the full-throated roar of a jaguar. This is old-growth biomass in all its biodiverse majesty, nothing like the secondary vegetation we observed along the edges of pastures or up near the hilltops. It's good to finally see the consequences of Mexico's slowing rate of deforestation in the form of a tangible boundary between where humans stop and nature begins.

If only it wasn't an illusion.

After all, we've just validated Arturo's initial estimate of 1.4 million contraband animals with our count of jaulas. If cow-calf operations in Central America are anything like the ones in Mexico, then up to 100,000 km² of tropical deforestation has leaked across the border to accommodate what is being smuggled to Mexican feedlots, an area equivalent to 65 percent of Guatemala's national territory. Mexico might meet its Paris Climate Treaty commitment but only by exporting deforestation to other

countries. Forest destruction under NAFTA hasn't diminished. It has intensified.

Leviathan

How can you write about Mexico without falling into some clichéd version in black and white, good and evil? Where is the middle ground between the tourist brochure of sunny beaches and the report from Amnesty International? Just because narcos prowl about doesn't mean there aren't perfectly normal places where people walk their dogs in peace and choke on atmospheric pollution. Whatever the reality might be, there's no denying the fact that Mexico is one of the unluckiest nations on earth. How could it be otherwise with the greedy colossus to the north that has stolen so much of what ought to be Mexico's territorial extent?

You've also got the cartels.

Post-NAFTA Mexico boasts a trillion-dollar economy. Although millions remain in abject poverty, per capita incomes have nearly doubled since 1990 in real terms, and many Mexicans enjoy a standard of living unimaginable a few decades ago. There's the daily body count, of course, and the hiding away of environmental harms in other countries. Perhaps this is the new normal, the cost of doing business in a neoliberal economy disciplined by violence instead of law, while its host government presents a happy face to the world community as a team player in the fight against global warming. I've passed from fatalism about what might happen to me working in Mexico to amazement at how much the country has prospered under the blood autocracy of the cartels. We might do well to study the Mexican case as an example of economic success based on a social contract with our inner demons. This could be the future.

Bibliographic Considerations

This article conforms to a stylistic convention known as creative nonfiction, a departure from communicative norms practiced in the sciences and other forms of scholarship. It combines elements of a personal essay with travel writing, in which geographers have expressed renewed interest (Duncan and Gregory 2002). The travel writing in question does not inhabit a detached outpost for the Western colonial gaze (Said 1979) but rather the immediacy of a task-oriented field immersion involving

two individuals in a balanced partnership (e.g., Matthiessen 1961, 1978; O'Hanlon 1997). The article uses the road trip convention to open opportunities for place description and personal reflection (Kerouac 1957) and to address the impact of trade liberalization on Mexico's forest biomes and derivative complications for the global governance of climate change. Constructed from lived corporeal experience, the text reflects fieldwork discomforts and moments of somatic exhilaration when the mind reacts, producing the epiphany of a new idea or insight (Merleau-Ponty 2013). Writing is deployed as a probative methodology suspended between hypothesis statements and hypothesis tests. A vast intellectual terrain exists here, one that academic norms mostly erase despite its critical importance to the research quest. "NAFTA's Cartel Economy" occupies this terrain.

The story follows two researchers who travel through Mexico to study the beef supply chain. As such, it rests on two scholarly literatures, one addressing global production networks and the other, neoliberal nature (Hopkins and Wallerstein 1977; Gereffi and Korzeniewicz 1994; McCarthy and Prudham 2004; Castree 2008a, 2008b). The article provides an exposition of their intersecting themes (Friis et al. 2016; Lenschow, Newig, and Challies 2016; Parra Paitan and Verburg 2019). Specifically, it describes how market globalization spurred by free trade creates opportunities for the concealment of environmental harms through spatial displacements across national borders. Environmental scientists have addressed such displacements in the form of indirect land use change, leakage, and telecoupling (Walker, Browder, et al. 2009; Walker, Defries, et al. 2009; Lapola et al. 2010; Arima et al. 2011; Grugel and Riggiozzi 2012; Golub et al. 2013; Liu et al. 2013; Hertel, Ramankutty, and Baldos 2014; Richards, Walker, and Arima 2014; Walker 2014). As for Mexico, its dynamic cattle economy has outsourced cow-calf operations to Central America, thereby accounting for a large share of the region's deforestation. Environmental degradation—often following in the wake of deforestation—comprises an important category of impacts on nature attributable to capital accumulation (McCarthy 2004; McCarthy and Prudham 2004; Büscher et al. 2012).

The article tracks two field excursions through regions of Mexico shadowed by cartel violence. This dramatizes the story as it unfolds and, in so doing, functions as a literary device. But the travel tensions

and sensations of danger are informed by both journalistic accounts and scholarly considerations of the Mexican cartels (McKinley 2006; Ahmed 2017; Grayson 2017; Stack 2018). It is perhaps ironic that Mexico's emergent cartel economy—to the extent that we can intuit its presence in the murky shadows of a frightening illegality—has all the appearances of a showcase for the neoliberal dictums of deregulation and free trade. This economy has diversified into legitimate sectors—including agriculture—and expanded its global reach (McSweeney et al. 2017; Devine et al. 2018; Nugent 2018). The cartel thematic thus attaches to the research objectives of the field excursions aimed at understanding the impact of free trade and globalized production structures on forest cover in Mexico.

Here, the forces of neoliberalism have produced a Leviathan of decentralized cartel autocracies defined by the melding of corporate and criminal organizations into a narco bourgeoisie, a term coined by McSweeney (McSweeney and Pearson 2013; Wainwright and Mann 2015; McSweeney et al. 2017; Devine et al. 2018). Cartel governmentality has dispensed with the internal controls of biopower and resurrected the spectacle of terror as its premier disciplinary instrument. Bodies are managed by dispersing videos of corporeal destruction through social media, by hanging terminated bodies from bridges and highway overpasses, and by brandishing the threat of bodily absence in the form of disappeared loved ones and acquaintances. The cumulative effect of these technologies of fear is the regimentation of labor, the liberation of capital. Beyond the rule of law, the narco bourgeoisie acts without restraint, an existential happenstance destructive of people and nature, constitutive of power (Foucault 1990, 2012; Campbell 2014; Cisney and Morar 2015).

In contemporary Mexico, cartels control many local governments and as much as 71 percent of the national territory, where a hyperliberal economy has dissipated ethical norms (Hobsbawm 2010; Campbell 2014; Nugent 2018). Its moral compass is the market extremism of Coase (1960). Violence in the interest of economy is not a crime but a service rendered, and a victim's failure to avoid death is not murder but the lack of market power to purchase life. Unfortunately, the Leviathan is avaricious and coming our way (Grayson 2011; Chokshi 2014; U.S. Drug Enforcement Administration 2015).

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Notes

1. The article uses the terms *cartel* and *narco* to represent all manner of drug trafficking organizations and involved personnel. It does so for the reason set out in Campbell (2014), namely, their widespread usage. Many Mexicans probably now use the terms as catch-all phrases referring to a wide variety of criminal activities and associated individuals.
2. The U.S. Department of State advisories can be found on the Travel to High-Risk Areas page of the Department's travel Web site (Travel, n.d.).
3. The author urges readers to avoid accessing the El Blog del Narco Web site.

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