

***Zopilotes, Alacranes, y Hormigas* (Vultures, Scorpions, and Ants): Animal Metaphors as Organizational Politics in a Nicaraguan Garbage Crisis**

Alex M. Nading 

Watson Institute for International and Public Affairs, Brown University, Providence, RI, USA;
alex_nading@brown.edu

Josh Fisher 

Department of Anthropology, Western Washington University, Bellingham, WA, USA;
joshua.fisher@wwu.edu

Abstract: While scholars frequently frame conflicts over urban waste in terms of a politics of infrastructure, this article frames such conflicts in terms of a politics of organization. In 2008, self-employed recyclers in and around Managua, Nicaragua blockaded local dumps in an effort to secure rights to scavenge for resellable material. Over the course of this “garbage crisis”, a material and semiotic entanglement of human labor organization with animal ecology became politically salient. At different points, recyclers were compared to ants (*hormigas*), vultures (*zopilotes*), and scorpions (*alacranes*). State officials, NGOs, and recyclers themselves used these animal metaphors to describe the organization of waste collection. Drawing on theories of value from political ecology and economic anthropology, as well as analysis of the deployment of these “organic” metaphors, we outline an “organizational politics” of urban waste.

Resumen: Los geógrafos y antropólogos frecuentemente describen conflictos sobre los residuos urbanos en términos de una política de infraestructura. Este artículo describe tales conflictos en términos de una política de organización. En 2008, los recicladores autónomos en Managua, Nicaragua y sus alrededores bloquearon vertederos locales en un esfuerzo por asegurar los derechos de recolectar materiales revendibles. A lo largo de esta “crisis de la basura”, un enredo material y semiótico entre la organización del trabajo humano y la ecología animal se hizo políticamente significativo. En diferentes puntos, los recicladores fueron comparados con hormigas, zopilotes, y alacranes. Los funcionarios del Estado, las ONG y los recicladores utilizaron estas metáforas animales para describir la organización de la recolección de residuos. Basándonos en las teorías del valor trazada desde la ecología política y la antropología económica, así como el análisis del despliegue de estas metáforas “orgánicas”, esbozamos una “política organizativa” de los residuos urbanos.

Keywords: value, urban political ecology, human–animal relations, infrastructure

Introduction

The history of urban Nicaragua’s waste economy is marked by a series of crises. These crises are ecological and economic in nature, but above all, they are organizational. In this article, we describe how ideas about animal behavior figured in

the most recent of these crises, a strike mounted in 2008 by self-employed recyclers who shut down the municipal dumps in the city of Managua and nearby Ciudad Sandino, in order to secure rights to scavenge for resellable material. Our findings come from interviews with recyclers, municipal garbage collectors, and city government officials, as well as a close reading of media and academic coverage of the crisis. This research was conducted both during the strikes and intermittently over the next nine years. We draw on this research to map what we call an “organizational politics” of urban waste.

In political ecology, conflicts over urban waste are frequently analyzed in terms of a politics of infrastructure. This perspective reframes “waste management” as a form of “metabolism”, in which states tend to cede control over public space to capital at the expense of the poor (see Gandy 2004; Graham 2010; Heynen et al. 2006; McFarlane 2008). The emphasis here is on how materiality and political economy are co-constitutive (Bennett 2009; Carse 2017; Demario and Schindler 2016; Gandy 2005; Meehan 2014). As waste, water, cars, and people flow through material space, pipes, roads, walls, and the like become tools for governance (Anand 2017; Bjorkmann 2015; Myers 2005; Rodgers 2012).

Here, we are interested less in questions of governance than of organization. We see the case of Nicaragua’s recent waste crisis as an opportunity to contest characterizations of informal economies as lacking form or as mere derivatives of a core capitalist logic (Castells and Portes 1989; De Soto 1989; Hart 1973; Wilson 2005). Such economies are highly structured, though not always in ways that are legible to the state or capital. Focusing on the organization of waste economies thus provides an opportunity to attend to another side of urban metabolism: the vernacular terms through which participants imagine the metabolic process, including the role of their own labor within it (Heynen 2014; Marx 1976). In urban Nicaragua, such vernacular understandings frequently take the form of animal metaphors, that is, descriptions of human labor organization as animal-like. Following arguments in anthropology, cybernetics, and feminist science and technology studies, we understand these metaphors as key conceptual frames for political ecological processes (Bateson 1979; Barad 2007; Bowker and Star 1999; Demeritt 1994; Haraway 2008; Latour 2004). In Nicaragua’s waste economy, animal metaphors frame an organizational politics that concerns the value and form of labor.

If “the practice of politics”, as Tania Li (2007:12) puts it, is “the expression, in word or deed, of a critical challenge”, then these animal metaphors are an apt place to begin understanding the politics of waste. We are interested here in exploring Li’s notion of politics as “expression”, especially as it plays out between state and capital interests and so-called “peri-capitalist” actors (Gibson-Graham 1996; Kirsch and Mitchell 2004; Tsing 2015). In Nicaragua’s ongoing waste crisis, discourses about the behavior of ants, scorpions, and vultures double as efforts to perform economic exclusion and integration. In unpacking the significance of those metaphors, our own analytical anchor is the genealogical relationship between the terms *organism*, *organic*, and *organization* (Williams 1976:226–228). For us, what links these terms—besides etymology—is value. The value of mitochondria to a cell, or prey to a predator, is not fundamentally different from the value of human labor to cooperative production. Yet, whether those relations are wild or domesticated, organic or

organized, they are also never fully manageable. With this in mind, we draw on George Henderson's (2013:xii) definition of value as "how productive, social activities get divided up within societies, activities ... that yield the assemblages of humans and non-humans that are necessary to sustain life as well as to spark new life". What we are calling "organizational politics"—performed in part through animal metaphors—centers on the "critical challenge" of determining how those life-sustaining human and non-human activities should be divided (Li 2007).

Our aim in this article is twofold. First, and more specifically, we want to understand how peri-capitalist actors like recyclers, who are often blamed for urban crisis, also make political use of the discourse of crisis. In Nicaragua, animal metaphors linked the waste crisis to the organization of work: the distribution of tasks, as well as the distribution of the benefits that accrue from the completion of those tasks. Second, and more broadly, we want to draw on anthropological understandings of value to add to a conversation within political ecology about the place of nonhumans in urban politics.

Waste and Crisis: Historical and Geographical Context

The majority of the research for this article was done in the municipality of Ciudad Sandino. Until 2000, Ciudad Sandino was a sub-district of Nicaragua's capital, Managua. Today both waste and the people who collect that waste flow back and forth between the two cities. If waste is the first thing that connects Managua and Ciudad Sandino, then crisis is the second.

In 1972, an earthquake destroyed some 90% of central Managua, killed thousands of people, and displaced thousands more. Ciudad Sandino was actually originally populated by people who were displaced by that earthquake. Disasters like earthquakes obviously produce lots of waste, and much of the rubble left behind by the earthquake was carted to an area called Acahualinca, on the shore of Lake Managua. This site eventually became the city's municipal dump, known as La Chureca, after a Nahuatl word meaning "old rag" (Fisher 2016:236). Over the next 40 years, La Chureca became notorious. In 2007, a Spanish newspaper declared La Chureca to be "one of the 20 horrors of the modern world"—no. 4, to be exact, just ahead of the burning of the Amazon rainforest (Cabrera 2007). One of the reasons for this declaration was the presence of thousands of recyclers, known locally as *churequeros*. (For simplicity, we use the terms "recycler" and *churequero* somewhat interchangeably in this article.) Images of La Chureca and its recyclers have long provided "aesthetic evidence of Nicaragua's crisis" (Fisher 2016:239). Ciudad Sandino has its own municipal dump, also known, somewhat confusingly, as La Chureca. In both cities, photographs of recyclers in Ciudad Sandino's dump circulate through aid networks as evidence of a humanitarian crisis.

In Managua and Ciudad Sandino during the 1990s and 2000s, a complex waste collection economy emerged (Hartmann 2012). Each local government operated formal household and commercial waste collection services: trucks collecting sacks of refuse, financed by a combination of foreign aid and taxes. In addition, a fluctuating number of self-employed recyclers collected material such as aluminum,

paper, plastic, and scrap metal from the roughly 20% of the municipal waste that did not make it into the trucks (i.e. in streets, gutters, and sewers). As in other cities around the world, Nicaragua's recyclers also worked in the dumps themselves. Whether they collected it in the streets or the dumps, recyclers then sold what they found to a network of buyers dispersed throughout greater Managua.

In March, 2008, this metabolic system broke down. *Churequeros* blockaded the dumps in both Managua and Ciudad Sandino. When municipal garbage trucks attempted to enter, *churequeros* pelted them with rocks; they set fire to tires to keep out police; and they effectively halted trash collection for several days. In both cities, the aesthetic and humanitarian burdens of garbage were already routinely referred to in terms of crisis, but this event gave the crisis a name, *El Churecazo*, or the "fiasco in La Chureca" (Fisher 2016; Hartmann 2012).

At the time, recycling in Nicaragua was something of a boom industry, generating some US\$45–50 million annually. *Churequeros* shut down the dumps, in part, because they had grown tired of seeing municipal garbage collectors—the ones being paid salaries by the cities of Managua and Ciudad Sandino—skimming valuable recyclables out of the waste stream on their routes (Nading 2014). The *churecazo* signaled a crisis in a double sense. It marked an unbearable tipping point of social and economic vulnerability among the recyclers, of course, but for municipal and eventually national leaders, it also indexed a failure of urban planning and management.

The aftermath of the *churecazo* and the attempts of the national and local governments to resolve it have been previously documented (Fisher 2016; Hartmann 2012; Nading 2014; Zapata Campos and Zapata 2013a, 2013b). To put an end to the *churecazo*, local authorities promised to crack down on the skimming of recyclables by city-employed collectors, and they made some nominal gestures in the direction of improving health, education, housing, and employment opportunities for recyclers. With the help of Spanish NGOs and corporations, Managua's open-air dump, the original La Chureca, was eventually closed and replaced by a modern landfill. More broadly, the national government instituted a sweeping new set of social policies, under the banner *Vivir Limpio, Vivir Sano, Vivir Bonito, Vivir Bien* ("Live Clean, Live Healthy, Live Beautiful, Live Well"), which attempted a wholesale reorientation of public policy toward the improvement of the urban environment.

Animal Metaphors and Organizational Politics

The focus of this paper, as we noted above, is not the new modes of governing the urban environment that emerged in the wake of the *churecazo*, but rather the politics of organization that drove it. In our notes and interviews on the *churecazo* and its aftermath, we found that metaphorical discussions of animals were routinely deployed in claims about the value of labor. For example, in 2012, Josh was doing fieldwork in the run-up to the closure of Managua's dump. The *churecazo* had succeeded in drawing global attention to the garbage crisis, and as one recycler explained, international humanitarian aid and development organizations seemed drawn to Managua "like flies to dung" (*como moscas a mierda*). Taken in isolation, this would seem to be just a felicitous turn of phrase, and a commonplace one at

that. But the more we looked, the more it seemed that the nonhuman ecologies of greater Managua's waste economy were folded into its human politics. Animals had value in the waste economy in three senses that could not be easily disentangled.

First, animals had value because they work. As thinkers from both Marxist and post-structuralist political ecology have noted, nonhuman work, even if it goes unremunerated, is central to capitalist value (Gibson-Graham and Roelvink 2010; Kirsch and Mitchell 2004). Theoretical concepts from "metabolism" to "thing-power" portray the behaviors of beings like flies, vultures (the *zopilotes* in our title), rodents, mosquitoes, scorpions (the *alacranes* in our title), microbes, and ants (the *hormigas* in our title) as forms of work (e.g. Barua 2017; Bennett 2009; Moore 2016; Perkins 2007). But it is not just political ecologists who think of work like this. Beekeepers, industrial pig farmers, tea plantation workers, and microbiologists figure work in much the same way (Besky 2014; Blanchette 2015; Kosek 2010).

While value is certainly created through physical activity, anthropologists tend to emphasize that value also stems from a second source, namely, immaterial, reproductive, or affective activities (Munn 1986; Yanagisako 2012). Congealed in multiple forms, value stems from judgments about need, use, desire, and wellbeing (Appadurai 2012; Fischer and Benson 2006; Gudeman 2001). In Nicaragua's waste economy, animal metaphors convey sensibilities about the moral qualities of work, particularly the extent to which its organization reflects values of cooperation or care on one hand, and exploitation or appropriation on the other.

But a theory of value based only on labor or only on quality is still insufficient for understanding organizational politics. For this, a third approach is necessary. Linguistic anthropologist Paul Kockelman (2010) sees value as a cognitive schema that orients subjects and helps them weigh possible paths of action. Similar to David Graeber's (2001) definition of value as "the importance of action", Kockelman's (2010) self-conscious use of metaphors of "maps", "terrains", and "travelers" portrays value as "life under an interpretation": an orienting principle for navigating a space of social relations and representations. This schematic approach, however, still fails to fully account for nonhuman action. For this, Henderson's (2013:xii) reading of value as an assemblage of human activities and nonhuman processes oriented toward sustaining and producing life is helpful. The approach to organizational politics we outline here explores how animal metaphors, as value claims about different forms of labor, help people to navigate those complex assemblages. This returns us to Li's (2007:12) point about politics as the expression of a critical challenge. "Crisis" is a shorthand for "critical challenge". Framing a crisis in word—in metaphor—gives it meaning, but perhaps more importantly, it indexes the possibilities and limits of collective action in a more-than-human landscape.

Hormigas and the "Churecazo"

To make this case, we begin with the *churecazo* itself. Many people in greater Managua were taken by surprise when a few hundred recyclers managed to shut down two large dumps serving more than three million people. During fieldwork conducted in the months leading up to the *churecazo*, Alex had been working closely with city garbage collectors and recyclers. Recyclers expressed frustration

that the city collectors were skimming the most valuable recyclable waste—the metal, paper, plastic and other things known collectively as *chatarra*—out of the stream. Many objected to a seeming informality infecting the formal waste collection service, but when Alex asked what they might do in response, he found ambivalence about the potential of an organized movement against the city collectors. As one recycler explained: “Mayors don’t listen. They don’t want to waste their time talking, because the mayor doesn’t pay attention ... to the people there. So many [people], because of this, they don’t want to organize themselves”.

Despite this outward tone of resignation, recyclers did organize against what they saw as an unjust distribution of materials. In order to explain the deeper organizational politics that, we argue, undergirded the tactical strike, we turn to the first of three animal metaphors. Recyclers in Nicaragua are often called *hormigas*, or ants (Nading 2014:76, 84). There are two reasons for this. The first reason is ostensible. Recyclers collect paper, cans, and bottles in giant plastic grain or cotton sacks. These sacks tower over their hunched backs as they walk the streets, making them look from a distance like ants bearing outsized loads of food.

The second reason is more organizational. At a glance, ant behavior can seem purely reactive. As scavengers, ants survive not only by their individual capacity to lift great amounts of weight but also by their tendency to opportunistically swarm upon an available meal. As the owner of one of Managua’s largest recycling firms told Alex in an interview: “We call them *hormigas*, the local so-called *churrequeros*. In our neighborhood, we separate the valuable things from the garbage, so he won’t make a mess”. From above, then, the term *hormiga* seems to connote dis-organization.

From below, however, the phrase “trabajo de hormiga” (*ant-work*), used across Latin America, carries a different meaning. It translates, roughly, to “painstaking task”. In Nicaragua, the phrase “trabajo de hormiga” is often deployed to describe low-status, door-to-door, or manual “groundwork” (*trabajo de base*). For “ground-level” Nicaraguan recyclers, metaphorical references to *hormigas* are a gesture to work that is not just methodical or tedious but also, potentially, organized. When trucks arrive at a dump site, recyclers make death-defying leaps onto the vehicles and begin tearing open sacks even before the handbrake is set and the hydraulic lift starts to rise. *Churrequeros* beset the waste that makes it onto the ground as a kind of swarm, raking through it with homemade metal picks, quickly sorting material into piles. While they assist one another in unloading, there is also a great deal of infighting, sabotage, and trickery. We have observed *churrequeros* pushing one another to the ground to get access to fresh piles of garbage, banging their picks on the doors and hoods of moving trucks and screaming directions at city collectors, and lighting brush on fire and digging ditches to steer drivers into preferred areas.

The ant-work in the dump operated on a particular organizational logic. As one recycler explained to Josh, there are unwritten rules for *recicladores de base*, or “ground-level recyclers”. Those rules are different in the dump and in the street:

If a *hormiga* finds a bit of copper wire while walking down the street, nobody can tell him that it’s not his because we’re the ones do the ant-work [*trabajo de hormiga*] that nobody else wants to do ... But if they find it in the dump, that’s different because they have to obey the rules of the *hormiguero* [ant-hill].

For recyclers, the *hormiguero*, or ant-hill, thus becomes a kind of managed commons. The swarms *churrequeros* create are neither simply a manifestation of pure desperation nor the result of several dozen rational, self-maximizing beings spontaneously emerging as a complex system. To find out why “hormiga” makes sense as a metaphor for “recycler”, then, we must attend not just to the representational logic of words but also to the organizational logic of action, namely the swarm (Graeber 2001; Henderson 2013; Kockelman 2010; Kosek 2010). In keeping with the proposition that metaphors are not simply comments about reality but rather constitutive processes of that reality—i.e. ways of discerning, negotiating, or managing the entangled moral, economic, and ecological relations of everyday life—we want to suggest that the *hormiga* metaphor is a form of organizational politics (Bateson 1979; Bowker and Star 1999).

Space and time are central to this politics. It was the *churrequeros*' ability to appear *as if* out of nowhere, both on a daily basis in the dump and in the March 2008 protest, that gave them an outsize micro- and eventually macro-political power. These metaphorical *hormigas* were not reacting to the conditions that surrounded them, but actively remaking them. Each time a city truck entered the municipal dump, the *churrequeros* conjured an affective climate of high tension. Their swarm, then, was a poetic construction of space. It was not simply the fulfillment of a basic need; it was a creative claim to the dump as a kind of commons: an open laboring site.

Seen in this way, the *churrecazo* was just one punctuated moment in an ongoing series of ant-like actions aimed at ensuring the equitable distribution of access to resources. As the anthropologist Kathleen Millar (2014, 2015) explains, recyclers in Brazil reject (and are rejected by) the time-work-discipline of wage-labor. They either cannot get waged jobs or do not want them. In this, they are not alone. As Millar (2015:31) notes, while the “ruptured time” associated with neoliberal accumulation produces in unemployed middle class subjects a sense of boredom or restlessness, for recyclers and other unwaged laborers, that restlessness emerges within the context of work itself. Recyclers in Brazil see their ability to weave their own laboring temporalities as a value in itself, in the sense that it is they—and not an employer or even the ebb and flow of the waste stream—who regulate the intensity of work. This, for Millar (2014)—and we agree—is an unacknowledged aspect of what scholars are now calling the “precarity” of late capitalism. Precarious life is not simply a life at the mercy of what comes next; it is a context in which new kinds of organizational logics emerge.

Ant-work does not just organize dumps as laboring spaces; it organizes life beyond the dump as well. Consider the story of Meyling, a *churrequera* from Ciudad Sandino. Meyling, like many other women recyclers, came to the area around the dump seeking cheap housing, a measure of economic independence, and an escape from an abusive household. Thanks to trash picking, she found all three. In 2007, for just a few thousand *córdobas*, she purchased a plot of land on the edge of the dump—large enough to allow for both a small wood and plastic house and a space to store recyclables. While *churrequeros* give the impression of fierce and sometimes even treacherous competitiveness inside the dump, the scene at Meyling's house was quite different. A few years after the *churrecazo*, she forged an agreement with a fellow *churrequera* to split her house lot. As of this writing,

the two women live together as *comadres*, non-biological female kin who share economic and affective responsibilities. As *comadres*, they pool both space and reproductive labor time, sharing childcare responsibilities, splitting water and electrical payments, and giving themselves security against robberies and assaults. Living together, they say, they actually now spend less time scavenging than they when they lived alone. Again, *trabajo de hormiga* is less an impulsive reaction to economic want than a creative re-valuation of otherwise abject space.

Nicaraguan *churrequeros*, like recyclers elsewhere in the world, reject a neoliberal work-discipline that capitalizes on crisis and the “flexible” capacity of labor to respond to it (see Harvey 1991; Weeks 2011). *Trabajo de hormiga*—unexpected, skillful, and seemingly spontaneous—amounted to a kind of political jujitsu. In the *churrecazo*, instead of reacting to crisis, the *churrequeros* generated one. A tactical rupture in space and time is precisely what the protests at the dumps were, yet the same set of organizational values that undergirded that tactic also allowed *churrequeros* like Meyling and her *comadre* a measure of control over their domestic lives.

Zopilotes and Un-Dead Labor

While authorities elsewhere in Latin America have tended to treat recyclers as potential partners in managing waste by formalizing them and making them auxiliary members of municipal collection forces, in the wake of the *churrecazo*, Nicaragua’s authorities took the opposite approach, at least initially (Medina 2007; cf. Whitson 2011). The aim of the national and municipal governments in the weeks after the *churrecazo* was to de-stabilize the emergent organization of recyclers. In this effort, political leaders relied, too, on an animal metaphor.

These leaders compared *churrequeros* to *zopilotes*, or vultures. After all, recyclers literally shared their workplace with vultures, who could be seen nearly constantly circling above both the dump in Managua and the one in Ciudad Sandino. Vultures did this with good reason. Scattered among the waste deposited at both dumps were the carcasses of butchered cows, pigs, and other animals. The Mayor of Managua at the time of the *churrecazo*, Dionisio Marengo, suggested that it was even possible that the recyclers might occasionally feed themselves and their families on the same carrion that sustained the vulture population (Equipo Envío 2008). The vulture metaphor here was at once aggressive and sympathetic. Marengo was, like most of Nicaragua’s political leadership at the time, a member of Sandinista National Liberation Front (FSLN), the governing party of President Daniel Ortega, and the party that claims the mantle of Nicaragua’s 1979–1990 popular revolution. Sandinismo, rooted in Marxism and liberation theology, is vocally on the side of the poor and marginalized.

Vultures also featured prominently in photos of Nicaragua’s dump that circulated in the humanitarian websites and newsletters that for years raised money to provide support for those living and working in the dumps, as well as in the FSLN’s attempts to raise awareness about poverty. The vulture was a metaphor not for a vital collective but for a set of desperate individuals. The vulture is a seemingly anti-social creature.

The organizational relationship between these organisms was politically significant (Williams 1976). An ant—*una hormiga*—might be a kind of worker, but a

vulture—*un zopilote*—was just an opportunist. As Managua’s Sanitation Director—a Marenco appointee—put it:

The *churequeros* are not workers; they are informal businesspeople who sell their labor to no one. They exploit themselves, a few with great success ... The only one who gives value to a product is the worker ... In this case, the product is the organization and cleaning of garbage ... The agents of the informal, opportunistic economy don’t add any value to this product.

The Director’s words here speak to the odd place of waste in urban value chains. As we explained above, recyclers in Nicaragua make money by selling recyclable material to small local brokers, who then sell it to larger regional exporters. It is plausible to argue, even in a strictly Marxian sense, that there is a value to this process, encapsulated in the socially necessary labor time required to ensure that this “raw” material moves from dumps back into the sphere of exchange (Marx 1976). But as Vinay Gidwani (2013) explains, the value of waste is actually more complex. Waste is simultaneously both un-valuable excess and value-in-waiting. As value-in-waiting, waste preexists capitalist relations. Much of it resides in the spaces being claimed by *churequeros*: the “commons”. At the same time, as un-valuable excess, waste “poses jeopardy to capital precisely because it confounds capital’s attempts to discipline and contain life within the domain of utility and accumulation” (Gidwani 2013:781; cf. Reno 2009).

Seen in this double sense, waste is not so much the “dead labor” of infrastructure—the animated hardware that sucks the living labor of the worker (to paraphrase Marx) but rather a kind of un-dead labor (Kirsch and Mitchell 2004; Marx 1976). Waste is dangerous, “un-dead” labor both because it sucks the living labor of the recycler and because, as excess, it is reanimated and rogue. As a carrion-eaters, vultures, both actual and metaphorical, are an organic sign of this un-dead value (cf. Kohn 2013; Van Dooren 2011). The waste crisis, then, concerns the organizational difficulty of commensurating value-in-waiting with value-in-excess.

The comparison of *churequeros* to vultures was, to return to Li’s (2007) formulation of politics, a way of “expressing” this critical situation. Whereas the ant metaphor signified a capacity for swarm-like organization, built around a demand for equal distribution of laboring space and labor time, the vulture metaphor signified a capacity for moral and technical transgression. To contain this transgression—and to end the *churecazo*—the state launched a plan to shut down Managua’s dump, the original *La Chureca*. With the support of the Spanish international development agency, this plan was completed in 2012. Some former *churequeros*—but by no means all of them—were given hourly wage work sorting and managing the waste in the new landfill. A similar plan has been proposed for Ciudad Sandino. The closure of Managua’s dump and the proposed closure of Ciudad Sandino’s were methods for, in Gidwani’s (2013) terms, “disciplining and containing” waste. The conversion from open-air dump to sanitary landfill was a strategy for the eradication of vultures, both literal and metaphorical.

Churequeros we interviewed were not entirely happy with these plans. “Covering up *la chureca* is cutting us out, little by little”, speculated one individual, “there will be no work for any of us soon”. That was because the number of pickers who would

find wage-work in the new landfills would be a fraction of the total number in the area. Moreover—to return to Millar’s (2015) ideas about temporality—the institution of hourly wage work in a city-owned landfill seemed to be an attempt not only to contain and discipline waste but also to contain and discipline an unruly population. In the modernization scheme, recyclers-turned-sanitation-workers would have to compete as individuals. This would make them *more* like vultures, only this time they would compete not for the actual carrion in garbage but for a fraction of the residual value it contained (see Zapata Campos and Zapata 2013a).

Alacranes: Un-Dead Labor and its Alternatives

While *churrequeros* we interviewed strongly rejected the comparison to vultures, they understood its power in organizational politics. Since many of them had little land to call their own, they could not accumulate great quantities of metal, paper, or plastic. They had to quickly sell the things they collected to local buyers, who would weigh their collections and pay them the going daily rate, which fluctuated with the global prices for aluminum, PET plastic, and other items. *Churrequeros* were very much at the mercy of these wealthier and better connected buyers. What was most problematic to them about the comparison to vultures was that it erased this complex set of relations. Once it became clear that the replacement of open-air dumps with sanitary landfills would mean a lower level of employment, the post-*churrecazo* plan seemed like an intensification of a hierarchical economy that exploited the economic vulnerability of recyclers.

But the establishment of sanitary landfills staffed by newly formalized and waged labor is only part of the ongoing solution to the waste crisis. Starting around 2010, former recyclers started getting NGO support to create recycling cooperatives (Zapata Campos and Zapata 2013b). In Ciudad Sandino, such a cooperative was organized around 2012 with the joint support of the municipal government and a group called REDNICA (*Red de Emprendedores Nicaragüenses de Reciclaje*, or “Network of Nicaraguan Recycling Entrepreneurs”). REDNICA is part of the Global Alliance of Waste Pickers, which is itself supported by the NGO Women in Informal Employment: Globalizing and Organizing (WIEGO). REDNICA’s purpose was explicitly to “give voice” to recyclers in Nicaragua, “the majority of whom are not heard or considered or remain invisible” (Globalrec 2014).

In Ciudad Sandino, REDNICA’s entrance onto the scene was initially welcomed by many recyclers. REDNICA helped them not only to organize a cooperative but also to construct their own warehouse, located on land that was provided rent-free by the city government. REDNICA also helped finance the purchase of uniforms and tricycles fitted with large boxes so that cooperative members could, theoretically, ply the streets alongside city garbage trucks and collect recyclable material on daily routes. The uniforms and the tricycles, complete with the labels of the cooperative, gave the pickers a veneer of officialdom. Under this “hybrid” waste management system, in which the non-governmental cooperative worked alongside the government’s waste management service, recyclers would still earn money by selling recyclables directly to brokers (Zapata Campos and Zapata 2013b). Importantly, they would not earn wages.

To this day, city leaders we have interviewed remain doubtful that the recyclers have the will or the capability to organize themselves into a functioning cooperative. In fact, many officials consider the *churrequeros* to be non-citizens, either because they are recent migrants to the city from the countryside, or because, like Meyling and her *comadre*, they live in unregistered housing and pay little to nothing in taxes. Cooperative members remain, likewise, suspicious of the government's will to support them. REDNICA's presence has helped somewhat to assuage this mistrust, but REDNICA's own description of pickers, as "invisible" and silent, is also troubling. After all, less than four years before the founding of the cooperative, a few hundred of them had shut down garbage service for an area of some three million residents.

The complications go even deeper than that.

When REDNICA began organizing the cooperative in Ciudad Sandino, it sought out leadership from a variety of sources. Among those who ended up joining the cooperative's board of directors were not just *recyclers* but small time trash *buyers*, the people who purchased the metal, plastic, and paper from recyclers and later sold it on to larger exporters. In other words, the middlemen who had long taken advantage of the *churrequeros'* economic vulnerability were positioning themselves as representatives of the trash-picking community.

These middlemen, known as *chatarreros*, were by no means wealthy or elite, but they were better connected politically than most *churrequeros*. More than the *churrequeros*, it was the *chatarreros* who fit the vision of the *emprendedor de reciclaje*, or "recycling entrepreneur", in REDNICA's name. We have interviewed dozens of *chatarreros* since 2008. Many of them—including the ones who joined REDNICA's cooperative board in Ciudad Sandino—were themselves former *churrequeros* who had begun scavenging waste and later turned to buying it. They did this mostly by seeking patronage relations with larger, better-capitalized middlemen. In a typical scenario, large brokers from the center of Managua would loan a *churrequero* the hardware she or he needed to begin purchasing scrap (trucks, fuel, scales, bags). The large buyers would then set up exclusive buying relations with these new, lower-level buyers. This arrangement amounts to a recycling pyramid scheme. The success of such arrangements was determined by the low-level buyer's ability to cultivate a steady clientele of sellers among the recyclers.

Churrequeros we interviewed interpreted this scenario through a third animal metaphor. Colloquially, *churrequeros* referred to low-level *chatarreros* as *alacranes*, or scorpions. As one *churrequero* explained, the scorpion is a dangerous and potentially even deadly predator, but its strength comes from a curious source. Baby scorpions are known to occasionally eat their mothers for survival. Describing a trader he dealt with, he said:

He's a scoundrel [*una sinvergüenza*; literally someone without shame]. You have a deal but the moment you turn your back he stings you [*te pica*] ... I think he'd even set upon his own mother if she was worth anything in scrap.

Even though science has nuanced this long-popular belief about scorpion behavior (baby scorpions don't always cannibalize their mothers, and in fact it can be the other way around), scorpions remain closely associated with matricide in Nicaragua.

The comparison of recyclers-turned-trash-buyers to matricidal scorpions became particularly salient when the local *chatarreros* finagled their way to the top of the REDNICA cooperative in Ciudad Sandino. In claiming to be not only members of the cooperative but also its natural leaders, the *chatarreros* seemed to be engaging in a kind of economic endocannibalism. In a reversal of the trickle-down logic of entrepreneurialism, in which the garbage broker (the clever, ambitious figure whose investments permit those lower on the commodity chain to survive) is the source of value, the scorpion metaphor figured the recycler as the source of value, and the middleman as the parasite. Though we are quite sure that the scavengers in Ciudad Sandino had not read much Marx, the metaphor does afford a queer re-imagining of the extraction of surplus value from labor. After all, for the *churrequeros*, the attraction of forming a cooperative in the first place was the potential to increase the power of sellers in this stratified economy. In a phrase, the purpose of the cooperative was to cut out the middleman.

The scorpion metaphor was a critique of a certain kind of clientelist exploitation, but it is not too much of a stretch to see it also as a critique of a conventional development discourse that assumes a teleological progress towards more efficient (and more capitalist) forms of production (Hart 2001). The centrality of the “entrepreneur” in the waste cooperative schemes that have taken hold in Nicaragua over the past decade can be linked to a more general presumption in development discourse that the waste economy must trend toward rational organization—away from opportunistic self-employment and toward wage labor. If small recycling brokers were slowly becoming the franchises of larger firms, then the next step seemed to be the employment of independent recyclers as hourly wage earners. After all, this is precisely what was happening in Managua’s new landfills. The conversion of scavengers into wage-laborers disciplines those who are lucky enough to secure jobs, but it also leaves those who are not so lucky relegated to a population of relative surplus labor (Li 2010; Marx 1976). In this way, the scorpion metaphor was a form of organizational politics: it was a way of “expressing” a critical situation, the slow-building crisis of a shrinking labor market (Li 2007).

When we returned to Ciudad Sandino in mid-2016 to look in on the progress of the REDNICA cooperative, things were shaky. The *chatarrero* who had been named as its leader still claimed that he was in fact in that position. Furthermore, he was critical of the other members. He lamented their “disorganization” and naiveté when it came to business and politics. As far as he was concerned, a network of recycling entrepreneurs needed a successful entrepreneur at its head.

When we visited the headquarters in town where members kept their tricycles and sorted their waste, however, the other members disavowed the *chatarrero*, claiming that he was no longer a member. Partly as a result of this disagreement, the cooperative’s standing with the public was tenuous. Householders and city managers remained unconvinced that the women and men riding through town on the tricycles were anything different than your average *churrequero*. To some, the cooperative did not seem committed to the kind of organization that REDNICA and the city managers had expected. The economic seed money had dwindled, and the total number of official members remained low (somewhere between 15 and 30) compared with the number of recyclers who still worked independently in the city dump and plying

the streets (closer to 100–150). Cooperative members complained of being harassed by homeowners whose garbage they tried to sort and of being denied access to collection routes by distrustful city garbage collectors.

What frustrated the city managers was that although the official number of cooperative members was quite low, on any given day, there might be many more than 15 or 20 working at the headquarters sorting garbage or riding the streets on the tricycles. As one member of the cooperative's board explained to us in August 2016, many local recyclers wanted to participate in the cooperative's operations, but they also wanted to be able to go back to independent trash-picking. If a person was a cooperative member, he or she was committed to collectively pooling recyclable material and any profits that came from their sale.

Hormiga Redux

Somewhat surprisingly, the cooperative's leaders were fairly comfortable with the idea of allowing non-members to work with them on a part-time, ad hoc basis. They saw the cooperative, in Henderson's (2013) words, as one manifestation of a larger value "assemblage". If a member wanted to lend a tricycle to a non-member in exchange for a small fee, or if the cooperative deemed it suitable to pay additional individuals to sort through collected recyclables and prepare them for sale, this was acceptable. These kinds of ad hoc arrangements emerged in addition to the kind of distributive arrangements manifest in the story we recounted above of Meyling (herself a cooperative member). Members helped one another switch on and off between trash-picking work and childcare or other non-market tasks. Here, again, the figure of the ant colony is analytically salient. Cooperation and care co-existed with opportunism and even occasional conflicts of interest (Gibson-Graham 1996). To the recyclers in the cooperative, this arrangement was also political, insofar as it was a way to address the ongoing crisis of a lack of supply in the waste stream, a lack of time to balance scavenging with cooking, childcare, and education, and, crucially, a lack of membership.

The cooperative's organizational politics thus mirrored the politics that fueled the *churecazo*. Everybody was potentially able to make demands on waste, on one another, and by extension, on the state. As in the *churecazo*, in this slower-moving organizational politics, the critical question was about *distribution* rather than accumulation. It is echoed in the metaphor of the *hormiga*, who acts ambivalently, as both an individual opportunist and an indistinguishable member of a swarm.

This emphasis on distribution, marked by fluid membership and a dizzying series of work- and resource-sharing arrangements, was what made the cooperative somewhat illegible to the state and to the citizenry. In a community workshop we organized in late 2016, residents of Ciudad Sandino expressed uncertainty about whether the people they saw on the streets in uniforms and on tricycles were "genuine" cooperative workers or opportunistic proxies. One reason for this suspicious attitude might be that cooperative labor organization has a deep political history in Nicaragua. The Sandinista revolutionary government of 1979–1990 promoted cooperative organization in a variety of sectors, from coffee to traditional ceramic crafts (Field 1999; Wilson 2010). Much post-Sandinista development, including

REDNICA's trash-picking scheme, drew implicitly on this national history. As Josh has described previously, in one North American NGO's attempt to help women in Ciudad Sandino to form a "fair-trade" apparel cooperative in Ciudad Sandino, this revolutionary nostalgia has more recently been combined with market-based ideas about "human capital" and "sweat equity" (Fisher 2013). Women apparel cooperative workers clashed with their NGO supporters over the question of whether work-sharing and subcontracting faithfully reflected the principles of cooperative organization. Like the residents and city managers in Ciudad Sandino, the apparel cooperative's NGO supporters took it as given that the distribution of cooperative resources and benefits should be limited to formal members.

It was by this logic that the garbage broker who still claimed to be the leader of the REDNICA cooperative could critique the members for being "disorganized". In emphasizing radical distribution over accumulation and efficiency, members were being not just bad cooperative organizers; more importantly, they were being bad entrepreneurs. As mere *hormigas*, they needed lessons in the logics of business.

Conclusion

The idea that animals "work", and that their work might inform the organization of human labor, is not new, even if it has been recently reanimated in critical geography (see Barua 2017; Kallis and Swyngedouw 2017; Moore 2016). Yet how animals work is still an open question. The three animal metaphors we discussed above—the *hormiga*, the *alacrán*, and the *zopilote*—index three alternative views of organization. Even if these three metaphors each point to different animals, they all seem to be ways of practicing politics, as Li (2007) puts it, by expressing a critical challenge. In Nicaragua's waste economy, animal metaphors put the expression of crisis into the language of organization and dis-organization. They are value claims in the sense that, with animal metaphors, assemblages of human and non-human life-producing activities come "under an interpretation" (Henderson 2013; Kockelman 2010).

In the *hormiga*, the first metaphorical animal referent, value emerges through a paradoxical combination of opportunism and distribution. Ant-work is always more than the sum of its parts, whether at the scale of the individual lifting many times its weight, or the swarm picking apart a discarded pile of food and spreading it across the colony. While literal ants, like Marx's bees, may not think ahead about the relationship between opportunism and distribution, human recyclers in Nicaragua doing *trabajo de hormiga* are self-consciously interested in this relationship. Getting it right is the critical challenge (Li 2007).

In the world of the *zopilote*, the animal-referent of those who would do away with self-employed recycling altogether, there is nothing *but* opportunism. As one government-affiliated union leader told a group of researchers in the aftermath of the *churecazo*, "the only losers here are the vultures, because they have no union to save them" (Zapata Campos and Zapata 2013b:15). He was talking about birds, not people. Like many government officials, he saw the rationalization and wageification of trash picking not just as containment of an organizational crisis, but as a kind of salvation for recyclers themselves. As an expression of organizational

politics, the vulture metaphor denies the possibility of autonomous organization. It replaces talk of distribution with talk of moral and economic transgression. The vulture can share with one of its own only insofar as it steals from another.

In the low-level trash broker, the metaphorical scorpion or *alacrán*, the recyclers saw not a progressive rise from squalid scavenging to entrepreneurial success, but a cannibalistic form of exploitation. The matricidal scorpion doesn't just steal from others, it betrays its own kind. For the recyclers, there was something profoundly amoral about the way the clientelist trash brokerage system was organized, yet the *alacrán* metaphor also contains a warning. Within each recycler, it seems, there lies a potential scorpion, a potential mother-killer. If the metaphor of the ant figured the organizational politics of the waste crisis as one of distribution, the metaphor of the scorpion figures it as one of betrayal.

Recyclers, of course, are not only a phenomenon of cities in the global South. Still, it has to be said, there are not nearly as many recyclers as a percentage of the population in the global North as in the South. One reason for this is that cities in the North have, through a combination of state-run infrastructure and capitalist enterprise, created a system for the metabolism of waste that—like other forms of accumulation—requires fewer workers than ever. Development economists have long argued that the political and social rights of recyclers should be recognized because they produce value for their economies (e.g. Medina 2007). Many of those in Nicaragua with whom we work, when pressed, will mostly say the same. They will also concede that scorpions, ants, and vultures have a valuable role to play in urban ecologies. Yet those same people will also happily admit that they would like to see fewer vultures, fewer ants, and fewer scorpions in their midst.

Many would also like to see fewer recyclers.

The idea that recyclers deserve rights and dignity but should also be made as scarce as possible is one of those paradoxical positions of modern capitalist developmentalism—the kind of developmentalism that tends to figure the entrepreneur as its avatar. While those who do not make their living as recyclers can hold these two opposing views with little trouble, recyclers themselves understand that it can ultimately lead to exclusion, violence, and exploitation. We want to close, then, with a story from our joint fieldwork in December 2016, when we held a community workshop that brought a group of trash-picking cooperative members together with others in Ciudad Sandino to discuss and debate what many framed as the city's ongoing crisis of environmental quality.

At the end of the workshop's second day, a member of the trash picking cooperative approached us (Alex, Josh, and a Nicaraguan project coordinator). She asked if we might be able to provide funds to help the cooperative repair their tricycles. The original tricycles had been donated by REDNICA, but the NGO was no longer funding the cooperative, and they were beginning to fall apart. As we explained above, the cooperative was still struggling to be taken seriously by residents. Without these vehicles, the woman explained, they might be accused—once again—of being disorganized and indistinguishable from other scavengers.

We were torn about what to do. We understood that REDNICA's model depended on the cooperative's willingness to grow its membership, but only insofar as profits could also be re-invested in tools, tricycles, bags, and other hardware. The

cooperative had chosen instead to spread its meager earnings out in a looser distributive network.

To us, initially, the breakdown of the tricycles and the lack of funds for repair seemed like a sign of project failure, but we want to suggest in closing that it was not so much a failure as it was a mismatch of organizational politics: of modes of naming and acting on a “critical situation” (Li 2007). Insofar as it had managed to distribute funds and tools across a large network of kin and neighbors, the cooperative had been highly successful, but the members were far from a harmonious, self-supporting, or “organic” collective (Williams 1976). After all, they only received their uniforms, tricycles, and land thanks to a particular kind of donation, what Nicaraguans refer to as *cooperación*. This term has a slightly different valence than “donation”, or *donación*. *Cooperación* indexes co-working, accompanying: distributing labor and mutual aid, rather than things. *Cooperación* can be further distinguished from the kind of clientelist gift given by a large recycling firm that could turn a recycler into scorpion-like, matricidal middleman. For *churequeros*, trash picking work was not, morally speaking, a means to more accumulation, but a means to more equitable distribution. In Managua and elsewhere, opportunities for trash picking work are likely to continue to diminish as technologies of incineration, energy conversion, collection, and sorting develop. Thus, one lesson from the ongoing crisis is, perhaps, that we need to understand events like *churecazo* and its aftermath as a moral demand not for more work, or even for more efficient work, but as a sign that urban economies might need to be organized with an eye to survival in a world of less work.

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