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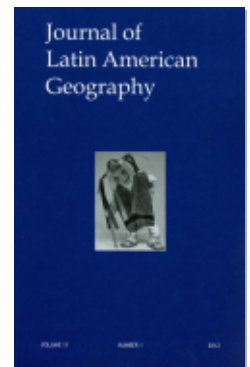
## Uneven Urban Spaces: Accessing Trash in Managua, Nicaragua

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# Uneven Urban Spaces: Accessing Trash in Managua, Nicaragua

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## Abstract

Informal waste recovery is a vital occupation for urban dwellers without formal economic opportunities. Despite the prevalence of informal waste pickers in urban areas, little is known about tension and conflict associated with pickers' ability to access trash at municipal waste sites. In this article, ethnographic field data are analyzed to explore themes of tension and conflict as experienced by informal waste pickers at the Managua, Nicaragua, municipal waste site. Special attention is paid to two recent events in the waste site: the announcement of a large-scale development project that will radically change municipal solid waste management practices at the site and a month-long strike carried out by waste pickers. Importantly, findings suggest that municipal waste sites should be situated in terms of historical and present-day processes, that waste must be conceptualized as a finite resource to be fought for, and that waste pickers experience tension and conflict on account of internal and external spatially-defined factors.

Keywords: *informal waste recovery, conflict, municipal waste site, Managua, Nicaragua*

## Resumen

La recolección de basura informal es un tipo de empleo esencial para los residentes urbanos sin oportunidades de empleo formal. A pesar de la gran cantidad de recicladores informales en zonas urbanas, se sabe poco sobre la tensión y el conflicto asociado con problemas de acceso a la basura en un basurero municipal. En este artículo, analizo información de métodos etnográficos para examinar los temas de tensión y conflicto de los recicladores informales a un basurero municipal de Managua, Nicaragua. Enfoco en dos eventos recientes al basurero municipal: el anuncio de un proyecto de desarrollo que cambiara el proceso del manejo de basura en el basurero y una huelga de basura que duró un mes. De importancia son los resultados que sugieren que el basurero municipal debe ser considerado como producto de los procesos históricos y de hoy en día, que la basura debe ser conceptualizada como recurso finito y por la cual se debe luchar, y que los recicladores informales sufren tensión y conflicto a causa de los factores espaciales internos y externos.

Palabras clave: *recolección de basura informal, conflicto, basurero, Managua, Nicaragua*

## Introduction

Though often considered to be platforms for upward socioeconomic mobility, urban centers are also chronically spaces of economic destitution and material scarcity. Images of the urban poor picking over garbage epitomize the economic and material

inequalities that routinely plague urban areas. An increased reliance on throwaway and pre-packaged goods, coupled with growing industrial and agricultural demand for raw materials, make waste recovery an economically viable trade. In total, as many as 64 million people in the Global South make their livelihoods by picking over solid waste and categorizing recyclable material, including metals, glass, plastic, paper, and other items of value (Medina 2007).

In Managua, Nicaragua, 1,200 to 2,000 persons pick over garbage daily at the city's only municipal waste site. Recently, tensions have risen in La Chureca, the name given to the capital city's open-air municipal waste site, due to real and perceived threats of decreased access to trash. This article focuses on two recent developments related to the capital city's management of solid waste. First, in late 2007, the Spanish Agency for International Development and Cooperation (AECID, as it is known by its Spanish acronym) announced a multi-million dollar, five-year plan to radically overhaul the waste site to address the social, economic, and environmental concerns associated with it (Sanz Ezquerro 2007). Among other actions, the plan calls for the construction of a (closed-air) landfill, recycling plant, and methanol recuperation plant, as well as the relocation of more than two hundred families who live immediately adjacent to and, in some cases, in the waste site. Second, in March 2008, informal workers in La Chureca blocked the entrance to the waste site for one month. The blockade called attention to the lack of recyclables of value arriving at the dump. Although this act of defiance temporarily prevented the *churequeros*, the name given to those who work in La Chureca, from accessing solid waste (and subsequently recyclables), the waste pickers envisioned the strike as a means to increase access to the city's trash. Considering these two recent developments, the central questions of this article are as follows: From the perspective of waste pickers, what microspatial processes determine who has access to solid waste and who does not? How might conflict over solid waste produce and reproduce inequality among informal waste pickers?

In this article, I contribute to the informal waste recovery literature by focusing attention on the ways in which solid waste produces conflict and tension among waste pickers at a municipal waste site. Although informal waste recovery occurs in a number of places across the urban landscape (e.g., at the residential or industrial sources where it is produced, en route to its place of deposition, etc.), I focus on a *municipal* waste site, a space in which I argue interactions between waste pickers are most dense and social isolation is most extreme. Attention is paid to the local, uneven, and spatially influenced processes that shape the flow of, and access to, solid waste. Furthermore, this study shows that waste pickers have various identities that are at times in conflict with one another.

The paper is structured as follows: First, I briefly overview research on informal waste recovery in Latin America. I then situate the case study within Managua's larger socio-spatial disorder and describe the city's current solid waste problems. Third, I argue that, due in part to larger historical processes, the municipal waste site has increased in social and economic importance for waste pickers since it has evolved into a 'zone of exclusion'. Lastly, I describe how the two recent developments involving the *churequeros* have threatened to further marginalize some waste pickers over others, thereby creating multiple layers of social and economic tension among waste pickers and between waste pickers and outside actors. Together, these themes characterize the current metabolization of solid waste and determine which actors stand to benefit and which do not in terms of gaining access to solid waste, and ultimately, their livelihoods.

To explore themes of conflict and inequality in informal waste recovery, this study draws from urban political ecology (UPE) literature. Although this is not an

exhaustive review of the literature (see e.g., Heynen, Kaika, and Swyngedouw 2006), the major themes of UPE are discussed. Urban political ecologists argue that urban spaces increase, rather than limit, interactions between humans and the (natural and built) environment. Keil (2003: 729), for example, writes, “urbanization is not merely a linear distancing of human life from nature, but rather a process by which new and more complex relationships of society and nature are created.” To sort out such complex relationships, Swyngedouw and Heynen (2003: 914) posit that UPE, a variant of political ecology, as a framework, must work to “untangle the interconnected economic, political, social and ecological processes that together go to form highly uneven urban landscapes.”

The concept of metabolism is of central importance to UPE literature (Keil and Boudreau 2006; Swyngedouw 2006). Fitzsimmons (1989: 115) conceives of metabolism as a relationship between nature and society whereby metabolism is “the material production of the worker by the work, as well as the work by the worker.” By way of production, the social becomes enmeshed in the material, and vice versa. Considering the metabolism of solid waste is important for two distinct reasons. First, everyday metabolic processes of the social and the material produce hybrid relationships that alter and define urban societies and natures. As such, solid waste is a product of political and economic forces (Njeru 2006) that cannot be adequately analyzed without considering informal waste recovery. Second, metabolism emphasizes the economic organization practices surrounding production of the material, which is in this case, recyclable materials. However, the economic organization of society, which is predicated on power differentials, often produces inequality and conflict across multiple scales (Swyngedouw and Heynen 2003). Municipal waste sites are significant nodes in the transformation of materials produced by urban landscapes, but the potentially uneven microprocesses that characterize waste sites have remained under-appreciated and under-researched in geography, especially in UPE work.

## Research Methods

Multiple research methodologies informed the findings of this study. Because little is known about the spatialities of informal waste recovery in municipal waste sites, qualitative research methods were especially important to this study. To critically analyze the structural and social processes associated with waste picking (Winchester 1999), semi-structured interviews were carried out with residents of La Chureca (n=17) and from sectors in Barrio Acahualinca adjacent to the waste site (n=17) in 2009. Additionally, key informants, including representatives of local and international non-governmental agencies (NGOs) and the city of Managua, were interviewed. Four community guides—two of whom live in La Chureca and two of whom live in Barrio Acahualinca—assisted me in making contact with potential research participants, clarifying key points and colloquialisms, and orienting me to the area’s local, social, and physical geography. I also recorded ten follow up, in-depth oral histories to improve my understanding of the historical processes and lived experiences of the neighborhood. Purposive sampling of oral history interviewees ensured a maximum variety of perspectives. This approach also affirmed the value of the waste pickers’ personal experiences related to waste picking (Beverly 2005).<sup>1</sup>

Second, historical data were retrieved from *El Instituto de Historia de Nicaragua y Centroamérica de la Universidad Centroamericana* in Managua. Information gleaned from archival material, including historical maps and municipal solid waste management (MSWM) reports, helped contextualize, verify, and strengthen the qualitative data from participants and understand the history of SWM in Managua. In addition, the online

archives of Nicaragua's two major newspapers—*El Nuevo Diario* and *La Prensa*—and NGO and government documents were extremely helpful in gathering recent material related to this project.

Third, field observations in La Chureca and Barrio Acahualinca, as well as the greater Managua metropolitan region, complemented other research methods and helped affirm or contest what research subjects told me during interviews.<sup>2</sup>

### Informal Waste Recovery

Much research has focused on the economic and organizational aspects of informal waste recovery. Informal waste recovery offers a relatively stable income, and in some cities, waste pickers earn three to five times the local minimum wage (Gutberlet 2008; Medina 2007). Solid waste, then, is a valuable resource, especially to marginalized urban dwellers without other economic opportunities. Waste pickers' earned income levels are often influenced by local, regional, and national policies. In general, public policy towards waste picking takes one of four forms: (1) waste picking is declared illegal, and therefore, is repressed; (2) waste pickers are ignored and neglected; (3) waste pickers are exploited or used as political clients by persons of political power; and (4) waste pickers are actively supported and even stimulated by policies to continue, and in some cases, expand informal recycling methods (Medina 2007). Waste pickers' earned income levels (and working and living conditions) are typically greater when public policy is more supportive of waste pickers. Earned income levels are also influenced by the degree of organization that exists among waste pickers. Waste pickers who band together to form cooperatives are frequently able to increase the price received for various recyclables, thus mitigating unequal and conflict-ridden relationships with intermediaries in the recycling market (Medina 2000). In one example, government-sponsored micro-credit lending to waste cooperatives in São Paulo, Brazil, facilitated the commercialization of recycling cooperatives. As a result, cooperatives were less dependent on intermediaries, and individual wages increased (Gutberlet 2009). Additionally, integrating waste pickers into MSWM often reduces conflict between themselves and public officials (Gutberlet 2008; Medina 2007).

Participation in informal waste recovery is also a social process. As waste is generally unwanted and viewed as 'matter out of place', those associated with solid waste are highly stigmatized (see e.g., Moore 2008, 2009). This is particularly true for waste pickers (Medina 2007; Whitson 2011), who are often excluded from mainstream society due to their subsistence on solid waste. However, recent evidence suggests that waste pickers' place in society may be fluid. Whitson (2011:24-5) argues that decriminalization of informal waste recovery is partly responsible for reshaping social relations between ambulatory waste pickers and broader society in Buenos Aires, Argentina, arguing that "members of the upper- and middle-classes came face-to-face with both poverty and the consequences of their consumption and disposal behavior in ways that they had not previously". To date, much less has been written regarding the social relations *among* waste pickers, especially those who primarily work in municipal waste sites. In Mexico City, research has brought to light the uneven power relations that existed between *caciques* (bosses) and the waste pickers they controlled (see e.g., Medina 2007: 131-135). There, *caciques* frequently bribed politicians to control the sale of recyclable materials so as to increase personal profits and suppress the wages of the waste pickers. In this feudal-like system (Medina 2007: 135), waste pickers' economic, political, and social activities were closely monitored by powerful *caciques*. In another study, Birckbeck (1978: 1182) writes that "conflict is surprisingly rare" among unorganized waste pickers in a Colombian

municipal waste site, despite the existence of 'ripe' conditions (e.g., payment per piece of recyclable material, generally low wages, etc.) for conflict. He goes on to say that "the only *indigenous* collective action has been generated by the need to defend the right to work," referencing the time in which a group of workers, in conjunction with buyers of the recyclables, bribed officials to maintain access to solid waste. Nevertheless, Birckbeck argues that the buyers put forth much of the effort to organize due to the waste pickers' social and economic marginalization. This finding suggests, then, that waste pickers in municipal waste sites are a homogenous group that lacks the agency to 'defend their right to work'. However, investigation of the everyday socio-spatial relations among waste pickers may present an alternative understanding of the social organization of informal waste recovery in a municipal waste site. The recent events involving Managua's churequeros, therefore, are an important opportunity to revisit how waste pickers react to threats of decreased access to solid waste.

### **Spatial Inequality and Urban Abandonment**

Managua is often characterized as a chaotic, sprawling city that displays little evidence of formal urban planning. The city's evolution from socialite hub in the 1960s to its current state of despair can be attributed to a series of environmental, social, and political calamities (Rodgers 2008). In 1972, a catastrophic earthquake leveled 90 percent of commercial buildings and 75 percent of homes in Managua (Rodgers 2008). On the appearance of the city's core, Doreen Massey reflected:

The form of the city was changed beyond recognition. The centre was left empty, the roads criss-crossing the open space in an eerie reminder of the past, and weeds and wild flowers gradually took over what once had been the central blocks of the capital. (1986: 10)

After the 1972 earthquake, the Somoza regime condemned much of the city's central business district and pushed a suburban model of development (Higgins 1990). While Managua's affluent isolated themselves on the periphery of the metropolis, the city's destitute and newly arrived immigrants formed squatter settlements throughout Managua, including areas near the destroyed city center. Much of the city's central business district, along with American chain restaurants and exclusive retail centers, followed the capital flight to where they remain today, situated along the highway to Masaya, approximately four to six kilometers south from the city center (Figure 1). Reflecting on this transformation, Rodgers (2004) notes that Managua's elite have continued to actively 'disembed' themselves from the city and its destitute. As evidence he points to the public beautification projects where elites frequent, an increase in privatized security and the proliferation of a 'fortified network' where elites live, work, and play, and targeted transportation developments that reduce travel times and the potential for crime. Rodgers (2004) argues that these developments, supported by Arnaldo Aleman, first as Mayor of Managua and then as President of Nicaragua, transformed certain zones of Managua into 21st century neighborhoods (Rodgers 2004). The poor majority, however, has not benefited equally, and most are too impoverished to afford the bus fare to reach such formal economic opportunities. Entire neighborhoods have been consequently excluded from day-to-day social, political, and economic relations, and are effectively "zones of exclusion" (Rodgers 2005: 2).

### A 'City Drowning in Trash'

City dwellers in developing countries are increasingly choosing to consume pre-packaged goods over locally grown and manufactured foods (Moore 2008, Watts 2010). According to city records, Managuans generated approximately 0.9kg of trash per capita each day in 2008—an increase from 0.5kg trash per person per day in 1973 (de Jong 1994, Equipo Nitalápan-Envío 2008). In total, Managua's only municipal waste site, La Chureca, receives an average of 1,200 tons of trash daily (Pérez Rivera 2008), nearly double the 670 tons of trash dumped daily in 1990 (de Jong 1994). By district, the amount of solid waste collected by City of Managua employees to be transported to La Chureca varies from 0.74kg/capita to less than 0.45kg/capita (Haydée Brenes 2009). The discrepancy between total amount of trash generated per capita (0.9kg) and the average amount of trash collected per capita per district (0.74kg - <0.45kg) signifies a serious gap in the amount of solid waste generated versus solid waste collected. This highlights the fact that not all trash produced by Managuans find its way to the municipal waste site. In 1989, the City of Managua collected 50 percent of generated solid waste and there were 150 spontaneous dumps, or places in which public dumping of waste occurs (also called clandestine dumps), located throughout the city (Envío Team 1989). Twenty years later, Managua's *Dirección de Limpieza Pública* (Public Sanitation Department) reported they collected 80 percent of solid waste generated by the city's 670 barrios (Pérez Rivera 2009b). Consequently, approximately 300 tons of garbage goes uncollected every day, much of which is dumped in 700 spontaneous dumps located throughout the city (Pérez Rivera 2009a). Such spontaneous dumps are a matter of convenience for individuals who live in suburban barrios or neighborhoods that do not regularly have solid waste pickup (Larios 2004, Imhof 2007). The latter point is compounded by the fact that the Public Sanitation Department's waste truck fleet is insufficient to regularly collect the city's trash (Imhof 2007).

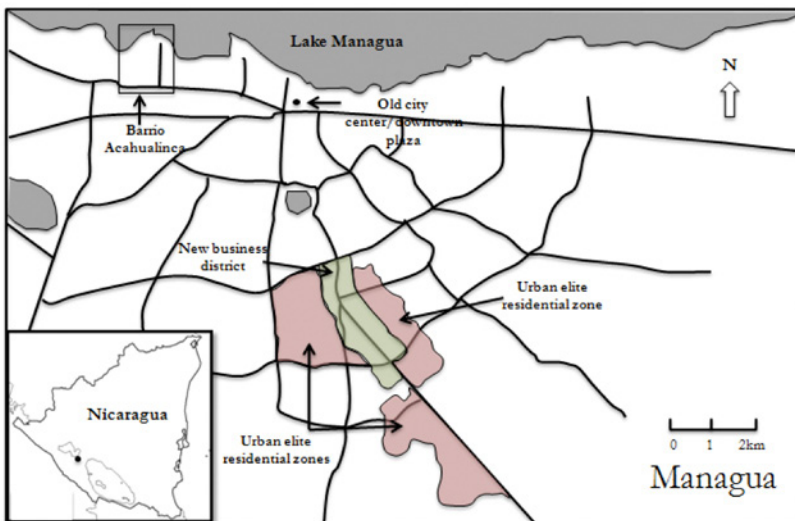


Figure 1. Social and economic exclusion post-1972 earthquake. Approximate location of urban elite residential zones, current central business district, and Barrio Acahualinca. (Source: map by author, zones drawn based on personal observations).



Additionally, some trash is taken to residential scrap yards, or lots where recyclable materials are stored before being sold as raw material. In 2008, the Mayor's office reported that there were 60 legal, or regulated, scrap yards in Managua and approximately 300 illegal scrap yards in residential areas throughout the city (Pérez Solís 2008). Unregulated scrap yards pose a serious threat to public and environmental health if not properly maintained. Three-quarters of all scrap yards in Managua fail to meet public health guidelines (Pérez Solís 2008), and environmentalists and health officials have linked the number of cases of diarrhea—which can cause infant mortality—to the number of spontaneous dumps (Envío Team 1989). Moreover, Managua's public health department notes that spontaneous dumps attract flies, mice, and mosquitoes that transmit diseases such as leptospirosis, dengue, skin diseases, and diarrhea and lead to increased respiratory problems (Imhof 2007). Regarding environmental issues, solid waste of no economic value is often thrown in Managua's open-air storm drains. During the rainy season, the trash blocks the flow of water and causes widespread flooding in barrios adjacent to large canals (Pérez Rivera 2010).

According to local newspaper reports, attempts to clean up Managua are slowed by politicking, lack of resources, and lack of education regarding environmental issues. First, a representative of the Environmental Commission of Managua noted: "The problem is that each (new) administration changes the officials who already have experience managing solid waste problems" (Pérez Rivera 2009a). For example, in 2003, it was widely reported that Herty Lewites, then mayor of Managua, suggested dumping the city's trash in a nearby volcano crater, which he boasted "would act like an enormous garbage incinerator" (Pantoja 2003).<sup>3</sup> Second, Managua's solid waste division is plagued by a lack of resources, including sanitation trucks and personnel, to cover the more than one thousand barrios located throughout the metropolis. One city councilperson noted that the quantity of city sanitation equipment has been decreasing while the amount of trash to be collected has been increasing (Pérez Rivera 2010). Third, some suggest Managua's trash issue is not due to economic restraints, but rather lack of education that must be addressed by political, educational, and religious leaders (Sarias 2010). Despite small advancements in reducing the burden of the city's solid waste issue—including the implementation of *multas* (fines) and beginning environmental brigades (Imhof 2007, Poder Ciudadano Environmental Agenda 2009)—"trash 'drowns' Managuans" (La Prensa 2009) and is so prevalent that it is considered the capital city's "decoration" (Ampie 2011). Indeed, MSWM has increasingly become a point of socio-environmental concern in Managua (Ampie 2011, Equipo Nítlāpan-Envío 2008, La Prensa 2009, Pérez Rivera 2009a), and little attention has been paid to Managua's municipal waste site.

### Case Study: Barrio Acahualinca and La Chureca

Barrio Acahualinca is one of the oldest and poorest neighborhoods in Managua. Archival data suggests that it was settled in the 1930s or 1940s, at which time Managua's population numbered between 50,000 and 60,000 (Ortega 1976). Located west of Managua's old city center, Acahualinca shares its northern border with Lake Managua (Lago Xolotlán), the second largest freshwater lake in Nicaragua (Figure 2). Currently, an estimated 16,000 to 18,000 persons live in the Acahualinca neighborhood (INIDE 2008). Approximately one-quarter of the barrio's 1,900 residences were classified as "high risk" (i.e., in a dilapidated state or susceptible to flooding) in 2009 (INIDE 2008). Furthermore, one-half of Acahualinca's homes are without indoor plumbing, one-half have no potable water, and a majority of homes do not have a property title (INIDE 2008). The poorest of Barrio Acahualinca's nine sectors, which serves as the municipal



waste site, is known by the epithet “La Chureca”. The total area of La Chureca sector measures approximately 47 hectares, or 118 acres (Sanz Ezquerro 2007). Here, all of the homes are without indoor plumbing, most lack potable water, and none has a property title.



Figure 2. Barrio Acahualinca, Managua, Nicaragua. Aerial photo showing location of sector La Chureca and approximate boundaries of Barrio Acahualinca, April 2009. (source: map by Google Earth, boundaries drawn by author and based on personal observations).

Prior to the 1972 earthquake, the land that was to become La Chureca was vacant, marshy land susceptible to frequent flooding and deemed unfit for agricultural use or residential zoning. According to interviewees, Acahualinca residents used the land for leisure (bathing in the lake) and as a source of secondary income (hunting, fishing, collecting firewood, cultivating food). Almost overnight, however, this changed. In late 1972 or early 1973, the vacant land was transformed into the municipal waste site. Rubble that had been strewn across the old city center by the earthquake was moved to the vacant land, just beyond what was then the western boundary of the Acahualinca neighborhood. Trash, transported by city-owned and operated trucks, began arriving daily at the site (Figure 3).<sup>4</sup>

Over time, the municipal waste site has become associated with numerous public and environmental health concerns. Lake Managua's waters are contaminated by leachate from the dump, and seasonal flooding often washes solid waste into the lake (Envío Team 1989). In addition to being located on seismically active land, environmental engineers discovered after the dump's founding that the soil is made up of "sandy material with a high capacity for filtration" (de Jong 1994: 9). Toxins and waste residue, therefore, seep unimpeded through the ground and are carried to the lake via water runoff from a nearby watershed (Envío Team 1989, de Jong 1994). This is problematic because: 1) the contaminated lake threatens Managua's potable water supply; 2) Lake Managua serves as a place of recreation and source of livelihood (fishing); and 3) during the rainy season, Lake Managua's water naturally drains into Lake Nicaragua, Central America's largest freshwater lake, located south of Managua (Envío Team 1989, de Jong 1994).

By 1979, the year the Sandinistas claimed victory over the Somoza dictatorship, approximately one-quarter of Managua's 500,000 residents, displaced by the earthquake and revolution, had sought refuge in slums along the polluted southern shores of Lake Managua (Chavez 1987). Attracted by the economic possibilities of waste picking at

the waste site and the lack of economic opportunity elsewhere, migrants from the countryside and other neighborhoods in Managua began driving up the population of Barrio Acahualinca and La Chureca. Thousands of Acahualinca residents—as well as persons who live outside of Acahualinca—now depend directly or indirectly on La Chureca to make their livelihood. Though census records for Barrio Acahualinca could not be found, interviews suggest that Acahualinca's population swelled in the years immediately after the revolution. According to interviewees, the barrio benefited from Sandinista policies, suggesting that certain sectors of the barrio were included in the *urbanizaciones progresivas* program. One interviewee noted the size of her family's lot was enlarged, as another recalled:

This street here was the old drainage canal. It was full of trash, [and was known as] the western canal. All of the little houses here were disordered and not like they are now. Everything was put in its place after the triumph of Daniel [Ortega] at the end of the war when he came into power...He [President Ortega] gave each person his lot...All of this was a mess because there weren't toilets or water. Before, there were two water spigots. We had to wait until one o'clock in the morning to fill and pay [for water]. Now, everybody [here] has water and electricity.<sup>5</sup>



Figure 3. Churequeros working amidst trash. Photo taken on top of plateau of garbage near center of waste site while gazing due west. (source: photograph courtesy of L.P., waste site resident).

Due to its low population density, access to limited pre-existing infrastructure, and proximity to vacant land, it can be said that Barrio Acahualinca was considered by the government as a “prime” area to target new growth, so long as public health and environmental risks of the municipal waste site were ignored.

*The Making of a Zone of Exclusion*

Despite the Sandinistas' efforts to provide housing for Nicaragua's displaced and destitute, there still existed a national shortage of 220,000 housing units in 1990 (Mathey 1990). By this time, approximately 40 to 50 homes had been built in sector La Chureca of Barrio Acahualinca.<sup>6</sup> La Chureca, however, was most likely never considered for state assistance since settlements deemed to be located in flood-prone or earthquake-damaged areas were barred from receiving official land titles and materials to improve infrastructure (Massey 1986). Waste site inhabitants consequently suffered, but refused to relocate. In the mid-1990s, the community took it upon themselves to improve community infrastructure:

Before, there was neither electricity nor water. Little by little we began to bring in electricity and water and the community became a barrio... We have put a lot of effort into making this our community.<sup>7</sup>

Accessing water and electricity was a significant achievement for the La Chureca community. Such small steps highlighted their determination to improve their standard of living, construct a different identity for themselves, and establish the area as a formal barrio. Moreover, ability to access water and electricity helped the community overcome feelings of marginalization, irrelevance, and exclusion.

Acahualinca residents, and waste site workers especially, indicated that they confront social, economic, and political exclusion. First, social exclusion most often manifests itself through popular media, in which the waste site has been compared to a "war-zone", "a mini-world of pestilence", and "Hell" itself (Grigsby Vergara 2008), and a former mayor publicly proclaimed that churequeros eat dead buzzards (Nítlápan-Envío team 2008), a point that community members were quick to dispel. Additionally, many interviewees noted that they felt marginalized by international visitors (e.g., NGOs, mission groups) who frequent the barrio. Residents of La Chureca charged that some of these "poverty tourists" are more interested in making money for themselves than in helping the community achieve a greater socioeconomic status. Second, the overwhelming majority of waste site workers recognize that waste picking—or work associated with waste picking (i. e., buying recyclables or owning a *pulpería* (convenience store) in Acahualinca)—is one of few stable economic opportunities available to them, even if it earns them far less than the living wage (Figure 4).<sup>8</sup> Moreover, waste site workers and community members were quick to note that unemployment would greatly increase if the dump was relocated or closed to the public. The waste site is so economically important that residents who were relocated to formal housing far from the dump eventually returned due to lack of other employment opportunities and the unmanageably long commute between their new home and only source of employment. Lastly, residents of Acahualinca accused local and national politicians of ignoring them. One interviewee noted:

The Sandinista government gave us (my family and me) the minimum, the most basic. We had land, but nothing else. We came looking for employment, and we're still fighting for it.<sup>9</sup>

Others added that they are treated like political pawns whose votes could be won with empty promises for better living conditions, like housing and potable water.

*Striking for Garbage*

In 2008, it was reported that recycling the city's waste generates between US\$20 and US\$40 million annually (Equipo Nítlápan-Envío 2008, García 2008). Interviews with waste pickers in La Chureca indicated that before 2008 their average daily wage was US\$3.00-US\$4.00. Due to the global economic crisis that began in 2008, however, industrial demand for recyclables greatly decreased, and consequently the value of recyclable material decreased. Interviews with waste pickers and buyers exclaimed that the value of recyclable materials decreased one-half to one-quarter of the market price in 2008. Consequently, waste pickers indicated that their average daily wage had decreased to US\$1.50 to US\$2.00. Price of materials alone has not reduced their average daily wage. Churequeros noted that the continual decline in quantity of valuable recyclables arriving at the waste site further depressed wages. Blame was primarily attributed to city sanitation workers who were removing valuable recyclables from the trash en route to La Chureca, and secondarily to a local gang who, at the only access point to the waste site, often forced sanitation truck drivers to dump their trash there so they could pick over it.



Figure 4. Group of extended family members cleaning and sorting recyclables. Taken in the courtyard of a residence in La Chureca, photo shows churequeros cleaning intravenous IV tubing and shoe soles to be categorized and sold to a recycling factory. (Source: photograph courtesy of J.P., waste site resident).

By 2008, many churequeros were exasperated by the lack of trash arriving at the dump, and in March of that year, they began a month-long strike to draw attention to their plight. According to the churequeros, the strike was the culmination of their social, political, and economic marginalization by actors at the local and national scales. Similar to other waste-related strikes (Moore 2008: 426-27, 2009), trash became a tool with which the churequeros could exert political pressure on local lawmakers. Whereas Moore (2008, 2009) depicted local residents fighting against the dumping of trash in their

community, the garbage strike in Managua was fueled by unequal *access to* solid waste. The churequeros contest that informal waste recovery is the *only* means of subsistence available to them given their exclusion from the local (and national) economic market. Therefore, waste site workers took it upon themselves to demand their rights to the city's trash. Noting his overall discontent with the idea of striking, one leader in Acahualinca commented, "It was the only thing we could do...In my opinion, according to the law, it was completely illegal...but one has the right to live".<sup>10</sup>

Termed the *churecazo* (fiasco in La Chureca), churequeros prevented waste from being dumped in La Chureca by blocking the entrance to the dump and throwing rocks at collection vehicles that attempted to enter. Trash quickly piled up in the streets, and City officials were forced to haul trash to much smaller open-air landfills in nearby cities (Torres Mayorga 2008). The strike ended when representatives from La Chureca and Public Sanitation Department agreed that city-employed sanitation engineers would receive a salary increase so long as they refrain from taking recyclables from the city's solid waste. The agreement increased the sanitation engineers' salary by 40 percent (Ntlápan-Envío team 2008), but it has had little effect on the income of churequeros thus far. As of 2010, almost all churequeros agreed that the situation had not changed, and some believe that recyclables have become even scarcer since the strike ended. The churequeros still blame the city workers, and to a lesser degree, the gang that roams the entrance of the dump. Though it cannot be definitively said that City of Managua employees are solely responsible for the continued shortage of recyclables, sanitation workers continue to stuff recyclables into bags tied to the side of their trucks while passing through residential areas.<sup>11</sup>

### *Inequality through Unionization*

The 2008 garbage strike led to the founding of a workers' union within La Chureca. According to some churequeros, they were compelled to form a union in order to lay claim to an identity that recognized them as workers and not vagrants. The General Secretary of the *Trabajadores por Cuenta Propia* (Self-Employed Workers') union noted, "We the workers of La Chureca weren't recognized as workers by society because we were only seen as churequeros. But today we are legally represented before the FNT (National Workers' Front) and Ministry of Labor".<sup>12</sup> Above all else, the union leader went on to mention that the churequeros want to preserve their place (i.e., jobs) in the dump. The initial inscription fee to join the union was US\$3, but this amount was reduced to US\$1.25 with the help of an FNT subsidy. The inscription fee pays for an official union card, and members are expected to contribute approximately US\$0.50 each month to remain in good standing. However, the General Secretary noted that there has been difficulty collecting the monthly fee on account of the waste pickers' decreased earnings.

Interviews with leaders of the union and La Chureca suggest that people who live *inside* of La Chureca are disproportionately affiliated with the union. Of the 800 union members, approximately 700 to 750 reside in La Chureca.<sup>13</sup> The General Secretary noted that the rest live in Acahualinca and other barrios near the dump. Moreover, only those persons who worked in La Chureca prior to the 2008 strike are allowed to be in the union. Some Acahualinca residents, however, argued that they have not been given the opportunity to join the union, despite having worked in the dump since long before 2008. One woman in particular labeled the residents of La Chureca as "egotistical" and noted, "those *abajo* have their union cards, but not us here (*arriba*)".<sup>14</sup>

There also exists a noticeable geographical bias with regard to who represents the union. Each one of the twelve elected union leaders hails from inside the waste site,



and there is no representation for—and scarce affiliation of—workers who live outside of the waste site, although they make up one-half to three-quarters of all waste site workers. According to interviewees, the union leaders were elected at a general meeting by affiliated members, the overwhelming majority of whom live in La Chureca. If the La Chureca union was formed to be a voice for all marginalized waste site workers, it seems it may exacerbate inequality between workers if those who live outside of La Chureca are not represented.

### *Aid as a Source of Conflict*

Churequeros earn their primary income by picking over garbage for recyclables in Managua's municipal dump, but it is their poverty-stricken identity that attracts supplementary material assistance (food, school supplies, clothes) from international tourists. Over time, La Chureca's reputation for being a place of "desperate poverty" has grown (Nítlápan-Envío team 2008). Concurrently, the number of aid groups and small development projects has also increased, the most substantial of which is the AECID project announced in 2007. However, development aid has introduced a considerable amount of conflict to Barrio Acahualinca and La Chureca. For example, waste site workers frequently feel they are exhibits of poverty tours.<sup>15</sup> Churequeros suggested that their miserable work and/or living conditions are no more than photo opportunities for poverty tourists. In some instances, interviewees noted that poverty tourists use the churequeros for personal economic gain.

At times they only carry out projects to make money, or for the fame of being here. For example, if you have a project sponsored by foreigners, they come and take pictures and other things. They show these items to people back home and the (NGO) receives money, but they don't finish the project...And the poor person always remains behind...I've always heard that help is coming, that it is coming from this country or that country, and so we just say, save yourself if you can.<sup>16</sup>

For reasons like this, many waste site inhabitants have distanced themselves from NGOs and foreigners.

Additionally, tension has increased between waste pickers who live in La Chureca, whom I will term "insiders," and churequeros who live in sectors Barrio Acahualinca other than La Chureca, or "outsiders," based on reported unequal distribution of aid. "Outsiders" charge that aid organizations fail to pay attention to them and their needs. One interviewee emphatically proclaimed: "We also have needs, but because we don't live there (in La Chureca), they don't help us".<sup>17</sup> Another "outsider", echoing these sentiments, added:

Those abajo are more blessed in that the gringos send them clothes and food. If their roof is rotten, the gringos come and ask them, 'Would you like us to fix this house?'...They say those of us arriba (who live outside of La Chureca) don't have needs, but everyone has needs. The children arriba have needs. There they receive all kinds of help: toys, food, clothes, school supplies. I wish they (the gringos) would treat us equally.<sup>18</sup>

The same interviewee, who heads a household of 15 people, suggested that the 'churequero' identity is based on *labor* and not *place of residence*. Having worked in La Chureca for 22 years, she sternly noted, "to *churequear* means to work in recycling."

According to a definition grounded in labor, this interviewee—as well as hundreds of others who live adjacent to the waste site—would be equally entitled to aid enjoyed by “insider” churequeros. Against accusations of unequal distribution of aid, an “insider” argued: “The others (those who do not live in La Chureca) are visitors...It seems to me that the aid is for [us] because we have lived here much longer. We have more right because others only come here to visit and work”.<sup>19</sup> For some, they experience a sense of entitlement to aid when reflecting on their marginal position, and here the definition of churequero is very much dependent on *place of residence*. Along this interpretation of marginality, NGOs have built and continue to maintain a primary school (1997), a clinic (2002), and a recreation program (mid-2000s) (FUNJOFUDESS 2010).

Conflict over aid is not limited to that which exists between “insiders” and “outsiders.” There also exists a substantial amount of conflict *within* La Chureca, specifically among unofficial *coordinadoras* (community leaders) who have territorialized the neighborhood. As of 2010, there were two coordinators, each with their distinct agenda and constituents. One resident of La Chureca noted:

There is a lot of arguing between the coordinators, perhaps for the preference of projects and programs that come here. One supports it and the other doesn't. One says that maybe the other section doesn't deserve the help and the other says the same. The coordinators are divided because one is part of the *Movimiento Comunal* and other is *Poder Ciudadano*. If the donation comes for the people on the side by the school, usually only those people receive it. And if gifts come, for example, to the church, then only the people on this side (of La Chureca) receive the donation. When something comes, the groups want it. Sharing is difficult or it is very small. Therefore, there is a lot of conflict here among the people.<sup>20</sup>

As outlined by this interviewee, the *coordinadoras* seem to use the neighborhood's marginal identity to promote and preserve their well-being over others.

### *Towards the Future: a Radically Changed La Chureca*

From time to time, rumors of large-scale development projects circulate through La Chureca and Barrio Acahualinca. In 2005, for example, Spanish, Italian, and American corporations expressed interest in investing in the construction of an energy plant in La Chureca (Pérez R. 2005). All of these plans, however, were dropped soon after they were first announced, reportedly due to lack of cooperation on the part of the City of Managua. More recently, a US\$40 million comprehensive development plan was developed by Spain and endorsed by Nicaraguan officials at the local and national scale. According to an AECID official, the *Proyecto de Desarrollo Integral del Barrio de Acahualinca* will improve the socioeconomic conditions of 16,000 persons living in Barrio Acahualinca and adjacent neighborhoods, as well as ameliorate the environmental problems the open-air dump currently poses.<sup>21</sup> In Acahualinca, funds will be used to improve infrastructure (roads, portable water, sewers) in all sectors and relocate more than 250 homes located in areas prone to flooding or landslides (PDIBA 2009). Moreover, materials for home improvement will be given to residents located in areas not prone to flooding. In La Chureca, more than 200 families will be relocated to pasture areas near the waste site. There, AECID will build a new community for the “insiders,” complete with a school, cultural center, and recreational fields.

In response to environmental concerns associated with current MSWM practices (leachate, methane production, air quality), AECID is embarking on a “very



ambitious...model project” to improve MSWM in Managua.<sup>22</sup> Among other actions, the plan calls for the construction of a closed-air landfill, recycling plant, methanol recuperation plant, and compost facility. According to an AECID official, the new waste management facility will employ current churequeros but will strictly force Nicaragua’s anti-child labor laws. In sum, the development project calls for an integrated MSWM model, an approach that Medina (2007: 97) notes generally “consists of a hierarchical and coordinated set of actions that reduces pollution, seeks to maximize recovery of reusable and recyclable materials, and protects human health and the environment.” Though the project is spearheaded and largely financed by AECID, the City of Managua and government of Nicaragua are expected to manage the new La Chureca MSWM facility upon completion of its construction.

Since the AECID development project was announced in 2007, both “insider” and “outsider” churequeros have wondered how their livelihoods might change. Most of the thirty-four persons interviewed were overwhelmingly in favor of the development project, so long as they were guaranteed employment at the new recycling facility. Though the AECID official interviewed neither confirmed nor denied rumors that the new plant will employ only 400 workers—far fewer than the 1,200 to 2,000 persons estimated to work in the waste site currently—the union of La Chureca was ready to “fight for its legal rights...with articles from the Constitution of Nicaragua” so as to ensure employment for all union members:

So the union, the unionized organization is preparing to take on serious fights for our employment. But today, it is true, we find ourselves in a very confusing situation in that we have before us the official planning for what is the project...Here we see a negative aspect (of the project), the part that has us worried as a union, as a community movement, and that is the reduction in jobs that this project will cause because they are telling us that there are going to be 400 jobs. So, this gives us a lot to think about...<sup>23</sup>

Alternatively, “outsiders” were mostly supportive of the project, but some worried they would not be given jobs in the new facility.

We’re hoping for a just and responsible collaboration...We want a new way of life, (and) to build a (recycling) facility for a lot of workers and that housing is improved.<sup>24</sup>

and,

Those who live in La Chureca are going to be the chosen ones to work in the factory and have their ID cards. They are going to have rights and we will not have rights.<sup>25</sup>

Finally, the graveness of the situation was summed up by another:

If that waste site changes, many people will die because meat and chicken from restaurants, grocery stores, and markets is dumped there and it is collected so children and everyone can survive. If it is taken away, what will all the people do? If there aren’t jobs, then, I don’t want them to take it away.<sup>26</sup>

## Conclusions

In urban areas marked by widespread socioeconomic marginalization, informal waste recovery is an important economic strategy with social, political, and environmental implications. This study demonstrates that in Managua, Nicaragua, significant tension and conflict are associated with accessing solid waste at the city's municipal waste site, known as La Chureca. Findings suggest that the churequeros are a heterogeneous group who experience tension and conflict based on their association with solid waste, position along the solid waste stream, their geographic place of residence ("insiders" vs. "outsiders"), and their social linkages and political representation before persons of power. This is evident in two recent and ongoing events. First, the AECID development project threatens to further the perceived and real divisions that exist among "insider" and "outsider" waste pickers. Second, the 2008 garbage strike was a collective effort among churequeros to confront the City of Managua to demand access to trash. In both of these examples, the desire for access to solid waste, recyclables, and even the waste picker identity increases tension and conflict between and among various stakeholders of informal waste recovery.

This research highlights three important considerations of the micropolitics of everyday informal waste recovery in a municipal waste site. First, La Chureca is a contested place that is characterized by spatially defined external historical and present-day social, political, economic, and environmental processes. Indeed, the waste site's founding up to and including the current struggles over access to recyclable materials has been deeply influenced by myriad local and national inadequacies in municipal solid waste management and, more broadly, urban economic and social planning. Second, this case study suggests that although solid waste is generally considered by Managua's general population to be an infinite nuisance, solid waste is a finite resource that must be fought for from the perspective of the waste pickers. Third, interview data suggest that the formation of a waste picker union incites inequality that may lead to the unequal distribution of benefits associated with the waste picker identity. The fracturing of waste pickers has potentially serious social and economic consequences.

Although previous research has focused on inequality between waste pickers and other stakeholders, this case study shows there is a need to understand more fully the spatially defined inequality that exists among waste pickers. In particular, research on the spatial processes of informal waste recovery at the various nodes (Medina 2007: 66-9) at which recyclable materials are recovered from solid waste is warranted. Such research would provide a more complete understanding of the metabolic processes of MSWM so that inequality associated with waste picking is reduced. Considering the un-democratic relationships inherent in the metabolic processes of MSWM as evidenced by this study, only when all marginalized stakeholders stand alongside of, and are heard by, those who typically retain power will more equitable socio-material relationships be achieved.

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## Notes

<sup>1</sup> Extended excerpts of oral histories from this project are available at: <http://hartmann.wordpress.com/>.

<sup>2</sup> All interviews, including the in-depth interviews, were carried out in Spanish by the author. Verbal and written data were translated by the author. The study was approved by The Ohio State University's Internal Review Board (IRB Protocol Number 2009B0187).

<sup>3</sup> Environmentalists, of course, were quick to note, "if the volcano's crater was filled with trash, it could throw solid waste and toxic materials into the air along with burning lava" (Pantoja 2003). Fortunately, the plan was never implemented.

<sup>4</sup> It is easy to surmise that relocating the dump to Acahualinca was in line with Somoza's previous environmental policies; the dump was nothing more than a "cheap" fix—due to its geographical proximity to downtown Managua and the large amount of undeveloped (and unusable) land available—for the city's growing population.

<sup>5</sup> Individual interview, June 23, 2009.

<sup>6</sup> Interview with NGO representative, June 19, 2009.

<sup>7</sup> Individual interview, June 18, 2009.

<sup>8</sup> In July of 2009, the government-reported average monthly expenditures for a family of five was approximately USD\$400 (MITRAB 2011). At the same time, most informal waste workers in La Chureca reported earning between USD\$1.50 and USD\$3.00 per day.

<sup>9</sup> Interview, June 25, 2009.

<sup>10</sup> Interview, June 25, 2009.

<sup>11</sup> Personal observations, June-July 2009 and January 2010.

<sup>12</sup> Interview, July 14, 2009. The union leader, who lives in the waste site, also buys some recyclables from waste pickers. Of the leaders interviewed for this study, he is the only waste picker who is also a buyer.

<sup>13</sup> *Ibid.*

<sup>14</sup> Interview, June 25, 2009.

<sup>15</sup> During the summer 2009, I noted that at least one to two international groups per week visited the waste site. Additionally, several long-term volunteers worked in La Chureca at a school and clinic.

<sup>16</sup> Interview, June 18, 2009.

<sup>17</sup> Interview, June 23, 2009.

<sup>18</sup> Interview, June 25, 2009.

<sup>19</sup> Interview, June 22, 2009.

<sup>20</sup> Interview, June 17, 2009.

<sup>21</sup> Interview, June 24, 2009.

<sup>22</sup> *Ibid.*

<sup>23</sup> Oral history, July 25, 2009.

<sup>24</sup> Interview, June 25, 2009.

<sup>25</sup> Interview, June 23, 2009.

<sup>26</sup> Interview, June 25, 2009.

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