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An Analysis of Policies in Support of Waste Collecting in Rio de Janeiro – Three Case Studies

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1. Introduction

The waste collector has become a locus of public policy activity due to a number of factors: the type of waste produced subsequent to the industrial revolution, the advent of a consumption society, the scarcity of natural resources, the problem of containment, and the development of recycling technologies. The repetitive nature and connectedness of these problems justify the conceptualization of recycling as a discursive practice (FOUCAULT, 1972, 1984; MACHADO, 1981). This repetitive nature encompasses not only the production of new discourses (discursive and non-discursive practices) on waste and the waste collector, but also the emergence of entrepreneurial segments of an economy based on recycling, and a change of habits among consumers, among others.

In this sense, post-consumer waste that was once associated with danger—a threat to health and to the environment—and that once provoked repulsion and aversion (DO CARMO, 2010; EIGENHEER, 2003; RODRIGUES, 1995), is currently viewed as reusable material. It is associated with elements of raw material used by industries and with the income of waste collectors. This association has become possible thanks to an emerging paradigm: practices such as the development of industries devoted to the reuse of waste, the expansion of a market for recyclables (RODRIGUES, 2005), the growing awareness of society and, lastly, the policies that support the work of waste collectors. In this way, what was once repugnant becomes valuable (DO CARMO & PUPPIM DE OLIVEIRA, 2010). To be credited in large part for this change are the growing cadre of authorities, such as engineers and ecologists, who have become involved in environmental education initiatives and different types of recycling projects. It is often the desire to avoid environmental and social harms that is both waste's cause and effect.

This article shows how, just as public sector postures have changed in relation to waste, so too have they changed with regard to waste collectors. In this study, it is defined 'waste collector' as one who subsists exclusively on the sale of reusable material obtained at the source of the generator (DO CARMO, 2009b). Martin Medina (2000, 2007) was the first to discuss the public sector's posture toward his group, and proposed four types of policies used to address waste collectors.

The first approach is a policy of repression. The policy is predicated on the notion that waste collectors belong to an amorphous collection of social marginals –undesirables– and foraging constitutes an inhuman, illegal activity as well as a source of embarrassment and shame. Waste collectors are often kidnapped or expelled, such as in the case of Egypt and Colombia (MEDINA, 2000; RODRIGUEZ, 2003). According to Dias (2002), in Belo Horizonte, Brazil, the municipal government took waste collectors off the streets during the 1980s; a policy that largely reflected the lack of a health-based distinction between refuse and undesirable people, such as beggars, prostitutes, and waste collectors (PORTILHO, 1997). In other countries these policies amounted to coercion, forcing people into other forms of employment. Whether because of low levels of educational attainment, aptitude, or age, these strategies commonly failed to result in enduring work for waste collectors within the formal sector (KASEVA & GUPTA, 1996; MORENO-SANCHEZ & MALDONADO, 2006).

The second approach is a policy of omission or neglect which occurs when public authorities refuse to acknowledge waste collectors and their function. In this way, they are pursued, but also they do not receive support; they are simply ignored. African cities such as Dakar, Senegal, Bamako, Mali, Cotonou, and Benin provide examples of this policy at work (MEDINA, 2000).

The third approach is a policy of conspiracy (collusion) which is characterized by fraud, in which government officials develop exploitative relationships with waste collectors. These relationships often reflect mutual gain and assistance, a sort of political clientilism. Mexico City provides a traditional example of this dynamic, where public authorities and waste collector-leaders, referred to as 'chiefs' or caciques, develop a complex relationship. According to Castillo Berthier (2003) and Medina (2001) these relationship are often illegal, and include not only waste collectors but depot owners, street cleaners, middlemen, businesses, and public authorities. Some of these illegal relationships involve bribing officials to disregard the behaviour of caciques.

Supportive policies¹ (the fourth approach) refers to the most recent and progressive change, whereby governments make way for initiatives to legalize the activities of waste collectors and support their activities through cooperatives. This support typically arises because of the realization that waste collectors are ideally suited to adverse situations. They are particularly important as partners in finding solutions to environmental and economic problems, and they are especially welcome in slums, where local conditions impede the use of American or European technology to manage waste. Some Asiatic countries, such as Indonesia, the Philippines, South Korea, India, and Thailand, encourage foraging through import tariffs on packaging materials and by providing financing for governments to create cooperatives (COINTREAU, 1986; FUREDY, 1984; KASEVA et al., 2002; MEDINA 2000, 2007).

Many of these initiatives have been supported by the World Bank. At the beginning of the 1980s, the Bank produced a master plan for managing waste and promoting local waste-relevant technologies, many of which have been employed in Africa. The Bank's master plan

¹Medina (2000, 2007) uses the term, "stimulation policies," whereas I use the term, "policies of support" or "stimulus policy".

questioned the wisdom of the mechanized waste disposal systems promoted by developed countries, particularly given the necessities of local environments and waste collectors (COINTREAU, 1985, 1986). In Latin America, the establishment of public-private partnerships and concessions for waste collectors to collect mixed waste provide one example of a supportive policy.

Ojeda-Benitez et al. (1988) insist that it was the public authority's recognition that waste is a source of income that brought about municipal support for policies, increasing employment for low-wage areas. In the city of Rio de Janeiro, strategies to stimulate this sector became a priority at the end of the 1980s and at the beginning of the 1990s. This article suggests that the economic concerns surrounding the issue of waste are the principal reason why support began to emerge, imbuing waste collectors with greater visibility and value.

In this way, the objective of this article is to present the result of policies to support the work of waste collectors in the city of Rio de Janeiro. It does so by analyzing three case studies consisting of an equal number of cooperatives and their strategies. Finally, it seeks to identify the subjective ways in which waste collectors view the processes that guide each one of the three organizations and their respective discourses.

2. Methodology

The purpose of this article is to portray and examine the views of waste collectors interviewed during exploratory case studies. These studies were performed on three government-supported cooperatives in Rio de Janeiro between 1994 and 2003. Three municipal public officials and 66 waste collectors responded to questions during interviews, 17 of which were open-ended and 49, semi-structured. The first case study took place between the months of June and August 2002, the second during April and October 2004, and the third between July and December 2004. Participation in state and national waste collector meetings in 2006 and 2007 provided additional interviews with people linked to the three cooperatives in question. Secondary materials, such as books and journalistic production were also used to carry out research.

This article subscribes to the notion that desires to better the economic and social conditions of waste collectors imply understanding the changing processes of these workers and their work, and how they continue to be constituted. In order to improve conditions, it is first essential to understand the process of constitution: the place of workers with respect to society, the public sector, and buyers (recycling entrepreneurs), among others. In this sense, the article discusses the discursive and non-discursive practices to which collectors were subjected as waste became an object of profit as well as an environmental and social good.

In this way, waste becomes a discursive production (FOUCAULT, 1972, 1980, 1984, 1991ab, 1995) to shed light on the principles, concepts, strategies, and theories that have shaped the issues and industries pertinent to recycling and the environment. It also casts light on what is said—the discursive and non-discursive practices—with regards to the waste collector. The methodology is based on Foucault's discursive framework, which is conducive to understanding history and social construction (HARDING, 2003). It also helps us

understand the results of subjective terms and their broader implications. Taking waste to be an object of revelation, the paper proposes to examine the rules and authorities that govern its existence, its historical emergence (its archaeology), and its characterizations (its genealogy). In short, it seeks to understand the transformation in discourse surrounding waste over time.

3. Evolution

Many waste collectors interviewed during the case studies showed that there is an effect of the negative meaning of waste in the process of constructing their professional identity (DO CARMO, 2009ab, 2010). There was a stigma attached to those who work in contact with waste (DO CARMO, 2009ab, 2010; DO CARMO & PUPPIM DE OLIVEIRA, 2010; EIGENHEER, 2003; PORTILHO, 1997; RODRIGUES, 1995). It can be pointed as one of the probable justifications for their manifest lack of economic organization: *"People think we're beggars"* (waste collector, first case). This quote demonstrates the stigma attached to jobs involving the handling of waste—or *"dirty work"* (AGUNWAMBA, 2003; ASHFORTH. & KREINER, 1999; HUGHES, 1962). At the same time, the other two cases exemplify how the stigma interferes in the process of negotiation (buyers) (second case) or access (the producers) (third case) to the waste: *"They [buyers and producers] prefer to negotiate with the leaders [from the cooperatives] than with us"*. Scrap dealers and intermediaries, people involved in this business in Brazil who merely buy and sell the recycling, are often migrants (Portuguese, Italians, Spaniards, etc.) and seem to not be included in this aspect because today they are only buyers and rarely collect, as in the past (19th century) (ADAMETES, 1998; PORTILHO, 1997).

The cultural aspects within which waste is immersed justify its negative semantic—because the signifier 'waste' (or 'garbage') is pregnant with pejorative connotations. It can refer to concepts such as degeneration, decomposition, leftovers. As an object with no use or value, it may be associated with things of poor quality or things which are out of place, chaos and mess. But it is its unpleasant and troubling characteristics (smell, appearance and formlessness) which lead to its association with things such as death, limit, ending, making it taboo (EIGENHEER, 2003; FREUD, 1976; RODRIGUES, 1992, 1995). These are the aspects which mark what it was termed in previous studies 'the negative semantics of garbage' (DO CARMO, 2009ab, 2010; DO CARMO & ARRUDA, 2010). Consideration as a valuable object (commodification) changes its social representation and interests, as if some waste starts to have a positive semantic when associated with recycling (DO CARMO, 2010).

The following sections address discourses surrounding waste, as well as the elements and rules that compose this discursive unity (this association with recycling). Through this analysis, the article identifies the strategies and policies of public support that have affected the conditions of waste collectors.

3.1 Discourses on waste

As a locus of public policy, waste can be associated with three distinct issues: the question of health, the environment, and economics (DO CARMO, 2010, 2008). The issue of health is linked to risks associated with the disposal and storage of waste. During a time when the

sun took care of excrement and organic waste in the streets, at some risk to human health, waste was not viewed to be a problem necessitating the attention of city administrators. This picture changed with overpopulation. According to Rodrigues (1995), for example, only at the end of the nineteenth century did the French consider waste something that demanded attention and outlays of public money. Much has changed; each region now has to address this issue to the best of its ability.

As waste became a problem for cities, especially the lack of sewage disposal, diverse efforts were made to address waste. Between 1940 and 1960, the U.S. and Europe chose landfills as a preferred solution. The problem of space, however, encouraged public managers to reconsider the technologies used in public disposal. Incineration emerged as an important strategy, although it proved costly and was restricted chiefly to the more advanced countries.

Unlike developed nations, city governments in many developing nations frequently viewed waste to be an irresolvable problem (GONÇALVES, 2003; PORTILHO, 1997). Many demanded scarce resources for the purchase of expensive technologies (BARTONE, 1990). It was only at the beginning of the 1970s that the management of waste and public health were taken seriously in these countries. Many of the programs launched in the 1970s and 80s were the result of the World Bank, which carried out a mandate to look for solutions to problems of end-disposal (COINTREAU, 1986, 1985; BATOOL, CHAUDHRY, MAJEED, 2008).

Waste as an environmental question garnered attention beginning in the 1950s. This attention responded to the need for new technologies in order to reuse materials and mitigate the harmful effect of overflow (CASTILLO BERTHIER, 2003). It was clear that incineration provided an inadequate solution to these issues and, motivated by environmental and social movements, developed countries became the precursors of efforts to develop new strategies and technologies. In this sense, the relationship between waste and environmental problems was established by environmentalists.

According to Portilho (1997), however, the populational density in Brazil caused by demographic explosions influenced the establishment of the above relationship, because the question of urban space became a central issue for the environmental movement. It was only in the 1960s that the environmental question would become the focus of NGOs and social movements, especially in association with issues of inequality. In the 1970s the movement attracted the attention of politicians, and the business and industrial sectors joined the fray in the 1980s and 90s. It was in the 1990s that concepts such as the '3Rs' began to gain prominence, the concept of product cycles, the waste collector as a recycler or environmental actor and, consequently, strategies reflecting these concepts, including legislation and recycling campaigns. Medina (2007) illustrates this transformation by showing how the denominations used to describe waste collectors began to change:

It so happens that, when transformed into something useful—primary material—waste becomes associated with economic questions, as opposed to merely environmental issues. Economic interest emerges once there is a concomitant connection between the type of waste generated and its suitability for re-use, on the one hand, and on the other hand, the availability of people to collect waste and deliver it for negotiation and rendering. Until this

happens, foraging is looked at as degrading, and waste collectors are to be distanced from urban centers by repression or have their activities ignored, thus being omitted from society.

Country or Regions	Traditional terms	New Terms
In Latin America:		
Argentina	<i>Cirujas, cartoneros</i>	<i>Recuperadores Urbanos</i>
Bolivia	<i>Buzos</i>	
Brazil	<i>Catadores de lixo, Badameiros</i>	<i>Catadores</i>
Colombia	<i>Basuriegos, Gallinazos</i>	<i>Recicladores</i>
Costa Rica	<i>Buzos</i>	
Cuba	<i>Buzos</i>	
Chile	<i>Cachureros</i>	
Dominican Republic	<i>Buzos</i>	
Ecuador	<i>Minadores, Chamberos</i>	
Guatemala	<i>Guajeros</i>	
Mexico	<i>Pepenadores</i>	
Peru	<i>Cutrereros, Moscas, Buceadores</i>	<i>Recuperadores</i>
Uruguay	<i>Hurgadores</i>	<i>Classificadores</i>
Venezuela	<i>Garimpeiros</i>	
In English-Speaking Areas:		
	<i>Scavengers, Ragpickers, Totters, Rag-and bone men</i>	<i>Waste pickers</i>
In French-Speaking Areas:		
	<i>Chiffonniers</i>	<i>Récupérateurs</i>
In German-Speaking Areas:		
	<i>Lumpensammler</i>	
In Japan:		
	<i>Gomi-Hiroi</i> (transliteration from Japanese)	
In China:		
	<i>Jian Polan 1</i> (transliteration from Mandarin)	

Table 1. Worlds commonly used for individuals engaged in informal recycling activities (source: MEDINA, 2007)

The general social value placed on waste will continue to grow, as long as new discursive practices keep emerging, particularly among those who previously did not view waste as anything of economic interest. It is worth stressing that new discursive practices surrounding the concept of waste as an economic question, and the search for disposal solutions, emerge concomitantly with the scarcity of disposal options, namely storage space.

Despite the search for solutions, until recently only industrial and commercial waste was recycled; domestic waste was off bounds for the waste collector. But it was the waste collector who was eventually responsible for returning domestic waste to the production cycle. In Colombia, for example, while specialized companies collected industrial trash, waste collectors were the principal gatherers of post-consumer domestic materials (BIRKBECK, 1979a). The waste collector's exclusive interest in domestic, post-consumer waste was due to its mixed organic and inorganic nature. This mixture of waste requires relatively sophisticated technology and a large amount of capital to separate. As such, the waste collector's participation in the recycled material business is only made possible by the difficulty of obtaining the material by other means.

The selective foraging of citizens of Rio de Janeiro, in the mid 1990s, marked a new moment in the way post-consumer domestic waste (now recyclables) was purified, accessed and handled. A social perception of domestic waste's economic value meant that waste collectors began to lose the exclusive access to recyclable materials they previously enjoyed. Many workers in other sectors began to use recycling as a complement to their salaries, collecting waste in their spare time or at work, as did waiters, housecleaners, building managers, and so forth.

Although (when queried) the motivations of people who adhere to a discourse of recycling are ostensibly environmental, they are also economic: environmental awareness campaigns are developed concomitant with strategies to support waste collectors—the traditional salvagers of refuse in Rio de Janeiro—to establish fixed locations for buying and selling recyclable waste. These fixed locations, which aim to facilitate waste collector access, also attract those people who are attentive to the economic value of recyclables.

3.2 The conditions and prospects of waste collectors

According to Castillo Berthier (2003), the first systematic study of waste as a social problem was carried out in Mexico during 1983. This study was undertaken in an era when official statistics and information on the subject was inexistent. In this period, issues relevant to the environment were ignored; neither viewed as a serious problem, nor as an area worthy of study in the social sciences. The difficulty of obtaining data on the work of waste collectors is equally common in Brazil. According to the literature consulted, waste collectors were initially identified in the 1930s. (DIAS, 2002). Many people agree, however, that they only started to gain visibility in the 1970s and 1980s:

If I have great production, excellent quality, supply flow, but I don't have a competitive price, then I will buy from whoever is willing to sell... As many are unable to add value, the profiteer establishes a production line of recyclables and fills eight, nine, ten big stores thus adding value from the point of view of economies of scale, supply flow, and price... Nobody sells in the

industry. Everybody goes through an enormous chain, and that makes the price of the product rise and feeds those profiteers. [municipal public official]

The waste collector has existed since the 70s, the 80s. We've heard the story of his appearance during a national congress. They really belong to the old times. It started like that – people who had lost their jobs, who had no means of survival, collected some tins, some cardboard... [waste collector]

In the course of many talks with waste collectors I have said: 'If you aren't yet, tomorrow you'll be like the coal miners in the beginning of the century. They were extraordinarily valued. During the heavy industry development, the coal miners, although exploited, began to be valued. So, you will be the future coal miners. Today you are worthless, but tomorrow you'll be worth a lot because you'll have recovered raw materials from garbage.' They rested pensive. [municipal public official]

At the beginning was the Portuguese immigrants (like his father), before the cooperative, yes? Right there, with unemployment starting to be the people from the Brazilian Northeast, after that it starts to be a social problem and everybody unemployed, much homelessness and ... they take advantage to earn the daily bread. [municipal public official]

Many academic texts affirm that once waste collectors became legitimized and incorporated into the services of waste management, their work began to gain social status. Sicular (1991) cites the example of the City of Mexico, Cairo, and regions of Indonesia, where the status of workers ameliorated as they became integrated into the public service of waste collection. Partnerships of mutual succor emerged in these places. In Brazil, Nogueira (1996) relates the experience of waste collectors in the City of Victoria who, finding work separating recyclable materials in factories, undergo a sort of identity-transformation. Addressing the idea of identity in a different vein, Dias (2002) affirms that the waste collectors of Belo Horizonte gained recognition as lawful citizens from the moment they organized an association.

Defending the notion that waste collectors gain recognition as workers and professionals once they have constructed an identity as such, Bastos (2007) suggests that an identity only emerges once it has been demonstrated that waste collectors are incorporated into the recycling production cycle. The importance of waste collector organizations is corroborated by diverse authors within Brazil and across Latin America (GONÇALVES, 2003; MEDINA, 2000, 2001; RODRIGUEZ, 2003, among others). These observers believe that organizations make the work of waste collectors much more economically viable. Betting on the validity of affirmations such as these, the City of Rio de Janeiro advanced public policies to support the work of waste collectors, principally through the creation of cooperatives.

By the end of 1993, a contract was agreed upon by the municipality and Comlurb [Municipal Cleaning Company], under Law No. 8,666, to lease spaces for the cooperatives... A cooperative is a mutual action in order to valorize the waste collectors' production. I believe in a promising future, especially to a whole host of people without a chance to study – marginalized, unemployed people with no means of survival. As much as I want to absorb them, I will not succeed. Only garbage can offer these means, under proper safety and hygiene conditions, and with the assurance of their civil rights. The proposition was to freely lease spaces with basic

infrastructure – electricity, toilets, an office, and storage space – and to assist in the management [of the cooperative]. [municipal public official]

A cooperative is an assembly with common ends and goals in order to valorize the product from a four principle point of view: first, to attain an economy of scale in order to acquire advantages in a certain market; second, to improve the production, to qualify it, to obtain a seal of approval to its product; third, to offer the consumer a cycle of frequency in the material supply; and lastly, to compete from the point of view of a competitive market. The production and selling in a small scale are at disadvantage in terms of competitive market when it comes to an economy of scale. [municipal public official]

In this sense, the City promoted a social change in how waste collectors and their work were portrayed. Interviews confirm that waste collectors sensed this change. In the 1990s they went from being beggars and homeless to being considered recycling ‘partners.’

Before B [the municipal public official and coordinator of the program beginning in the 1990s] we were treated like beggars by the municipal government. There was only the program where the City would round up our belongings off the street (Cata tralha). They would take everything and leave it far from the Center. [waste collector]

The foundation of cooperatives aims to reduce garbage volume at the source (the more you collect, the less it goes to the landfill); appreciate the value of the waste collectors’ work so that they can be acknowledged in a kind of organization the community can accept, thus ending predatory collectors; and rationalize management practices and costs because the predatory collector litters the streets while he works... [municipal public official]

This statement helps us think about the transition from policies of repression to policies of support; the transition has not necessarily been linear (FOUCAULT, 1972). This is especially true of the discourse surrounding waste; as indicated by issues previously discussed, in which environmental and economic questions figure prominently. Put differently, the issue’s importance to environmental concerns also lends itself to its importance *vis à vis* economic concerns, and vice-versa. In this sense, although environmental and economic issues may be distinct, they are composed of elements that transcend the boundaries of each other’s discourses (concomitance).

When new discourses about waste emerge, they inevitably involve new discourses about the environment or the economy. Public authorities provide a good example. They associate recycling as a good for the environment as well as for income-generation. Nevertheless, the norms governing a discourse on waste do not belong exclusively to specialists such as ecologists and engineers, or public managers; other actors must be considered, including psychologists, social workers, and public health workers.

There are the plant waste collectors, and the landfill waste collectors, who select the mixed recyclables from domestic refuse... the predatory street waste collectors, who anticipate Comlurb’s fleet of trucks, grab what they want and leave a mess behind. There is the street waste collector, who is disciplined and works in an organized way, and who is more socially accepted. He has references and wears an identity card, he goes to condos, to colleges, and to financial centers in order to get the purest material – what the others can’t do. The plant waste collector and the landfill waste collector belong to the final destination, and the predatory waste collector

has no access because his presence is culturally aggressive, he lives on the streets, is dirty and has no identity papers. This already has to do with the cooperative... A forth category is the man with a kind of big wheelbarrow who delivers building materials, collects building debris at private properties, moves things (sofas, mattresses, fridges, stoves, beds) and also collects recyclable materials. The street waste collector without a job is one thing, and the person who goes there to sell something but isn't a waste collector, is a seroant of a building that has selected something and goes there to sell it during his break—he is something else. He's no waste collector, he does odd jobs. So it's difficult to incorporate everybody in a kind of organization. [municipal public official]

One thing is for sure, waste collectors are not included among these specialists: they appear as a compositional element in this discourse—as the target of diverse strategies—or as subjects of the discourse (exploited, marginalized). But despite the knowledge they acquire through experience, waste collectors never establish normative discourses themselves. As discussed, Bastos (2007) believes that the construction of a respectable waste collector identity—as a worker and professional—only emerges once s/he is recognized as part of the cycle of production.

Despite this author's affirmation, the objective of supporting policies have been to help the waste collector overcome dependence on the middleman—as long as they provided an economy of scale, added value to the gathered product, helped make workers more applied, and promoted norms of organization through cooperation. Independently of meeting these objectives, in subjective terms it is possible to affirm that, the context permitted those with knowledge to determine a form of work—cooperativism—that was not necessarily suited to waste collectors.

The Comlurb set up cooperatives and simply placed the waste collectors within them, but they did not draw up a contract. The cooperatives provided the space and structure, but they wanted to maintain control over the situation and they didn't cede space for the waste collector to negotiate. [waste collector]

Comlurb builds the cooperatives and placed the waste collectors inside, but didn't sign a contract...If there is one, it must be between Comlurb and the space administrator. It (the contract) leased the space and structured it, but wanted to be in charge of the situation and has left no room for the waste collector to negotiate. [waste collector]

On the other side of the equation, once waste collectors adapted to the system, they did not necessarily meet with economic success—better incomes—as the following section will illustrate.

3.3 The case studies

Breaking with exploitation, ameliorating working conditions and income, and diminishing the build-up of waste in dump sites were the justifications for public policies put into place in the 1990s and 2000s. As well as minimizing health risks by ensuring adequate treatment of waste, these policies also aimed to overcome the stigmas of marginality and informality (BRITO, 2001). The program consisted of installations and spaces—basic infrastructure—as a means of furnishing waste collectors with the ability to accumulate larger quantities of material, providing scale, and adding value through processes such as cleaning (of the

recyclables). The Fig 1 below exemplify the recycling chain – the term used to describe the process that starts with the collection of used materials and encompasses all the stages until their final destination, the recycling plants – in Rio de Janeiro city, which is similar to other cases in developing countries.

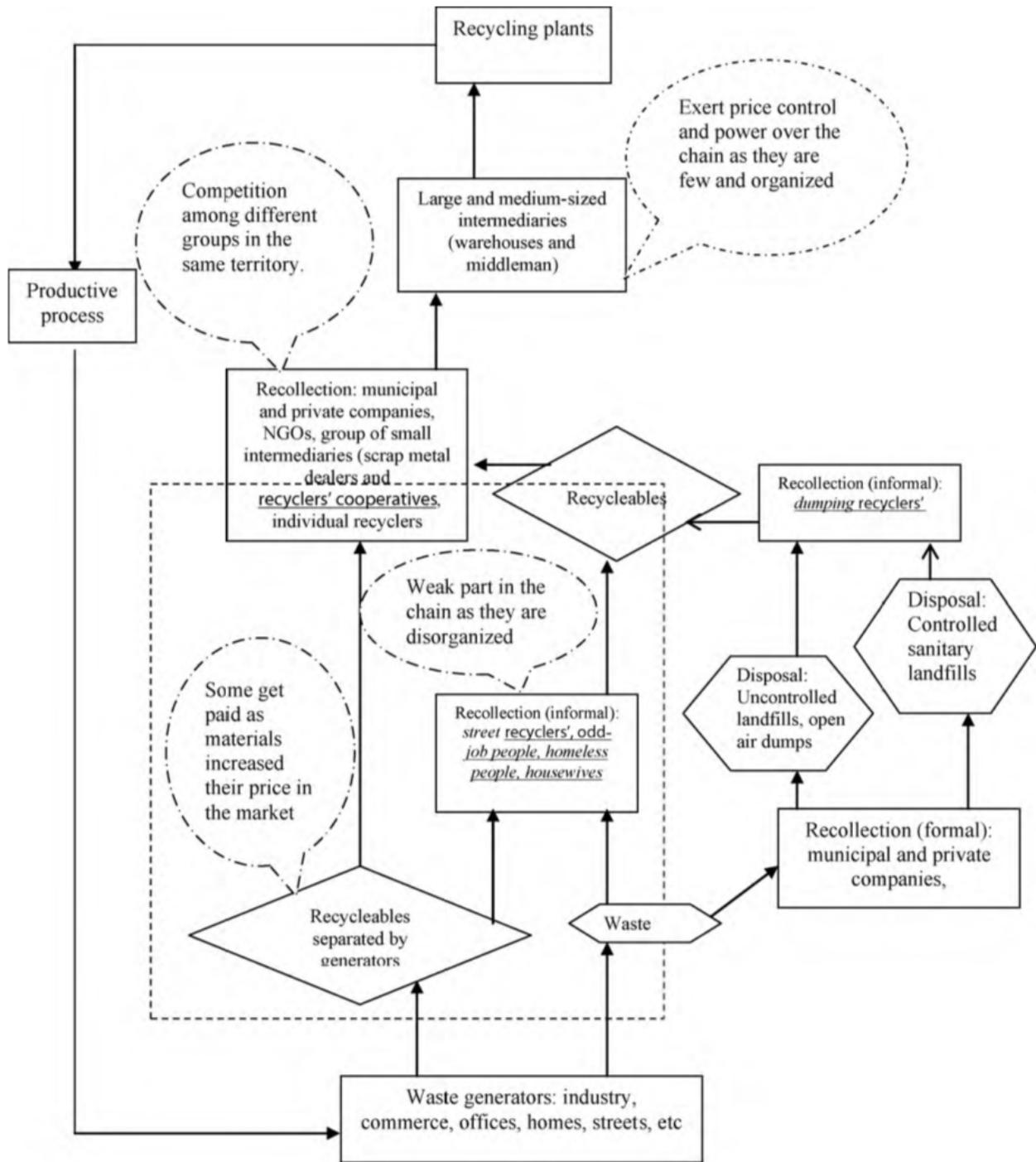


Fig. 1. Waste circulation – the object of this chapter is (first, second and third cases) is surrounded by the dashed rectangle (source: DO CARMO & PUPPIM DE OLIVEIRA, 2010).

The ultimate objective of the public policies, of course, was to help waste collectors negotiate better prices. As well as providing space for materials the Comlurb also offered logistical

support to help waste collectors overcome dependence on small middlemen. The earnings that once went to these intermediaries would be shared among members of the group. Among the cooperatives created during the period (18 in 1993/94 and 4 in 2003), three case studies were examined.

The hardest part was organizing the cooperative, because the waste collectors used to work alone or in small groups of two or three people, and each dominated a physical space... As they have a low cultural level, it was difficult to establish class consciousness... Our role was to join those groups together encouraging a culture of more solidarity... At first, four cooperative nuclei and a central nucleus were created. Sometimes we tried to help, orienting and assisting them with knowledge so that they could collect more and attain higher prices... The most difficult thing is managing the cooperative... In the process of organizing the waste collectors, it's basic to show them alternatives that will improve their material life... You must always begin with small meetings, talk about the importance of cooperative work, and create commissions. [municipal public official]

In the beginning it was said to be a management course, a technician would be in charge of the administration. Then, this technician would leave and the waste collectors would elect a cooperative member to be the administrator or president. But this never happened, there was only one president (in down town) those cooperatives and he monopolized everything, stole from everyone with the support of Comlurb itself. [waste collector]

The first case study was undertaken in a cooperative of waste collectors in the Zona Sul or southern part of Rio de Janeiro. The cooperative was administered by a Portuguese immigrant, an ex-waste collector, who bought material obtained at the source (both waste collector and non-waste collector derived) and redistributed it to medium-size middlemen. Unlike what had been proposed by the Comlurb, and despite its scaled operation, this cooperative did not help to ameliorate the earnings of waste collectors. Negotiations were carried out as before, and the proprietor did business with medium-sized middlemen. According to the administrator, the short-term concerns of waste collectors prevented them from building up scale and being able to negotiate better prices: "There is always a segment that doesn't accept organization, which prefers anonymity. They are indeed street people, and it takes time to gain consciousness about the work". In sum, waste collectors did not live or participate within the organization's routines. They restricted their activities to negotiating with it, much the same as people who did not work exclusively as waste collectors and instead used the cooperative as a convenient place to bring recyclables and complement their incomes: "Not so much for me, because I have a job, but for people who don't, this is good. I live nearby. The waiters gather the tins and I bring them. I don't go collecting little tins on the streets, no, not me".

There is a lack of jobs, of opportunities; most waste collectors have not got elementary education and have lived on the streets for a long time. Before being collectors they were homeless, or their mothers, their grandmothers, were waste collectors and used to bring them while they worked. [waste collector]

This comes through generations. Today...the waste collector profile is broadening; there are many unemployed people who start to collect waste and don't know how; someone brings a pal who has nothing to do and he works during that weekend but doesn't come back the next, or comes back once in a while. But the waste collector profile is that of someone from Baixada

Fluminense, who hasn't got much job opportunities and discovered scavenging as a means of income. [waste collector]

The second case study was conducted in a factory for separating select urban waste and recyclables. The factory was established by cooperatives and used competitive public procurement to select cooperatives that would administrate it. It suffered from absenteeism and rotational disputes, and had problems with training, divvying-up chores, auditing goal-attainment, and negotiating the purchase of materials. For its part, the Comlurb provided a storage area for recyclables, took care of the maintenance of the installation, and recruited cooperators among which tasks were divided. The interdependence of the factory—each step depended on achieving another—meant that cooperators had to keep each other accountable. Accountability was particularly important because salaries were distributed equally among cooperators. Widespread dissatisfaction resulted from salary advances (which could constitute up to 70 percent of monthly income), as well as squabbles over the distribution of income and the payment of taxes. As a result, rivalries were common among the cooperators. They blamed each other, the public authorities, and the management, generating dissatisfaction. Supportive policies clearly achieved market success—scale and quality—however, the rules were not to the liking of the waste collectors.

If a contract exists, it must be between Comlurb and the space administrator. It loaned the space and structured it, but sought to take charge of the situation and has left no room for the waste collector to negotiate. [waste collector]

Well, if you are leaving a space which offers you rights and a very good profit at the end of the month, it must be because the model isn't good, it doesn't offer you what you want and there is foul play. It's not the cooperative, it's not the waste collector that makes the cooperative bad, it's the people Comlurb places there to assist in the administration... The cooperative generates a lot of money, not for the people who sell, but for the people who buy from us and then re-sell it... I see that Comlurb's intention in organizing the cooperatives is serious, is good... It regarded us as "partners in the cleaning up." But the people placed there to organize it aren't clean; they put a stain on Comlurb's reputation. The first cooperative to end because of that was the Francisco Bicalho (an important avenue at the downtown), it was degraded, its members broke everything. Then the others cooperatives (also ended)." [waste collector]

The third case study involved an association of waste collectors who worked out of a warehouse provided by the government in the state of Rio de Janeiro. The association first began to receive government support and register waste collectors in 1993, and since 2003 has been administered by an ex-waste collector. This administrator was hired by the NGO responsible for looking after the association, and previously worked with a Portuguese buyer. Incidentally, this buyer owns a recycling depot and buys paper and cardboard from the city in an oligopolistic fashion. The administrator of the warehouse was responsible for maintenance, but did not interfere in the negotiations that took place. Each waste collector operated his or her own work area within the warehouse, and their respective materials: "Collecting is good, because I do it when I want. What is more, I don't have a boss. Nobody tells me what to do".

Today, 80% of the street waste collectors have already been through a cooperative and don't want to return... they experienced being fooled, because before joining the cooperative they

earned, let's say, 150 reais^{2a} week, and afterwards they began to earn 60 reais. So there was no advantage. The cooperative itself should be created to subsidize the waste collectors, to help them to sell the material for a higher price, help them to obtain more material. If there was a true partnership with Comlurb, then it would be possible to double the amount of material because Comlurb has control over all city waste after it leaves your home. So the waste collector would have the opportunity of raising profits and lessening the outflow. But the waste collector's profits diminished and he only paid and paid. [waste collector]

Comlurb created the cooperatives and the waste collector would have to sign up, bring two photos, make an identity card, and be recognized as a member. An internal and an external statute would be created, there would be rules to be followed, discounts on the payment... But everything was done upside-down: first they installed the waste collector in the space, then they created a statute, and afterwards they registered him again. The waste collector had already got used to staying inside the facility to sell his material, not to suffer any discounts on his salary, and to go on with his life. [waste collector]

The biggest problem today is not sending the recyclables directly to the big factories. We have a National Waste Collectors' Commission that meets every two months in Brasilia and we have held a national congress. The questions most posed were about the high tax and the lack of quality (purity) and quantity (scale) to sell to the big factories. They do not come to collect less than twenty tons...This circles and circles around... It is very difficult to get to the top. [waste collector]

I would say that 70% of recycled waste comes from people attached to condos, clubs, offices, who make a pre-selection and sell it. But all of them have an activity, they are somehow employed, (...) unlike the waste collectors. They aren't waste collectors, they do it as a supplement. [municipal public official]

The after-use garbage [post-consumer waste] is very expensive. So, only those who are in charge survive. This feeds a chain of profiteers at the waste collectors' expense. Recycling is a promising market. If you have investment from the government, if you are subsidized, if you strengthen the cooperatives, then it will be a self-supporting activity. [waste collector]

A waste collector doesn't have to tear the bags; he already knows where the paper is. He has a technique, he feels outside the bag and knows wet garbage from dry (useful garbage). Usually, he who tears the bags is the small waste collector who is neither articulate nor organized. But they're no true waste collectors! [waste collector]

This self-determination had positive effects. Magera (2003) writes that the degree of control exercised by the waste collector over his own material is associated with the degree of manipulation that might occur at the moment of negotiating prices. For the association of waste collectors examined herein, public authorities represented a greater threat (through policies of conspiracy and commission) than they did a source of support (policy of support). Throughout the interviews conducted, the greatest recurring fear of waste collectors was to lose their collection points, especially given the growing interest in waste and recycling among public authorities and society—who now also negotiate recyclables.

² As of date, US\$1 is approximately equal to 1,63 reais.

Discursive Practices	Non Discursive Practices
<p>Sanitary:</p> <ul style="list-style-type: none"> • Stigma, • Marginality; • Disagreeable; • Symbol of backwardness; • Product of poverty; • Social exclusion; • Unemployment; • Amorphous mass; • Poor working conditions; • Inhuman and illegal activity. <p>Environmental:</p> <ul style="list-style-type: none"> • Implications for the management of waste and recovery of resources; • From waste collectors (garbage pickers) to Recyclers/environmental agents (see table 1); • Implications in the management of waste and the recovery of resources. <p>Economic:</p> <ul style="list-style-type: none"> • Informality; • Exploitation; • Aptitude for collection in slums; • People who find the means of subsistence in garbage; • Illiterate; • Individualist; • Immediatist; • No class consciousness; • Unorganized/organized (by adhering to the rules of cooperativism). 	<p>Sanitary:</p> <ul style="list-style-type: none"> • Policies of repression and neglect (kidnapping, expulsion, removal, incentives to change activity; treated as street people/beggars). <p>Environmental:</p> <p>World Bank initiatives and the questions of the social conditions of the waste collectors (health, work, market).</p> <p>Economic:</p> <ul style="list-style-type: none"> • Policies of collusion and support (organization of the recyclers into cooperatives, legalization of their activities, labor support laws, concessions for collection contracts, formation of public-private partnerships); • Academic works that approach the topic; • Eco-points; • Selective collection; • Creation of Recyclable Separation Depots[CSRs or Central de Separação de Recicláveis in the city of Rio de Janeiro].

Table 2. The Discourses on Garbage and Elements Attributed to Waste Collectors (source: the author).

4. Discussion

Instead of focusing on the role of the waste collector, the public sector's policies of support and press reports and campaigns have mainly emphasized recycling as an activity of economic value. The establishment of cooperatives has helped contribute to the entry of new actors in the recycling business: waiters, homeless people, domestic employees, and housecleaners, among others. The notion of bettering the work-conditions of waste collectors, as recommended by the public sector, caused workers in the second case study to feel exploited. They were not only upset at colleagues who 'faked' working, but also at managers who maintained unfair information asymmetries – no subjects interviewed knew of the end destination for the material negotiated by managers.

Given that certain skills are required in the identification and separation of material by type—an industry imperative—it is surprising that public authorities perceive waste collectors as knowing little about the industry. This is, after all, an industry and occupation that government has only recently courted.

Contributing to this perception is the evolution of the waste collector as a concept. If it were possible to trace a parallel between the policies of the public sector and the coverage of the media and academic literature, it would be possible to distinguish certain discursive and non-discursive terms, as displayed in Table 2.

From the above table it is possible to identify a few elements that constitute much of what is said (discursive practices) and done (non-discursive practices) in relation to waste collectors. But even if empirical studies were undertaken, what element would they use? Table 2 illustrates how rules conferred upon the waste collector in each case study display different effects.

Case	Rules	Discursive and non-Discursive Practices
First	<ul style="list-style-type: none"> • Entrepreneurs negotiating with middleman; • High capacity for scale (accumulation) and processing (quality); • Income by individual production (volume collected). 	<ul style="list-style-type: none"> • Neither participation in the negotiation, nor in the advantages of scale and processing; • Temporary work; no participation in collective organization decision-making; • High flexibility and turnover.
Second	<ul style="list-style-type: none"> • Negotiation with the middleman; 	<ul style="list-style-type: none"> • No participation in the negotiation and, despite sharing the advantages of scale, their income (gain) is lower than in first and third cases;

	<ul style="list-style-type: none"> • High capacity for scale (accumulation) and processing (quality); • Income by collective production, directly related to group performance (volume collected). 	<ul style="list-style-type: none"> • The structure of the organization creates conditions for the emergence of micropowers due to collective gains; • Temporary work (high turnover); • A feeling of being exploited.
Third	<ul style="list-style-type: none"> • Negotiation with a medium-sized middleman by themselves (non-intermediaries as in the first and second case); • Capacity for scale (accumulation) and processing (quality) controlled by themselves; • Income by individual production. 	<ul style="list-style-type: none"> • Participation in the negotiation (without intermediaries) with the middleman; • Participation in advantages of scale and processing (controlled individually); • Input on the support they would like to receive from the government; labor affiliation and inherited vocation (in contrast to the turnover in the first and second cases); • Participation in the collective decision-making processes of the organization.

Table 3. Waste Collector Organizations (three case studies) and their Discursive Practices (source: the author).

The above table delimits, specifies, names, and establishes the rules that determine the waste collector's degree of participation in the cooperatives, in accordance with what managers view as being the purpose of their cooperatives. Regarding the disposal of goods, all were successful. With respect to whom the cooperative served – as a source of employment and income – only one case, the third, produced verifiably positive effects due to the agglomeration of groups (cooperators). Success can be attributed to this group not because of the collectivity as a whole, but rather because each cooperator had access to rules governing that organization. By contrast, other cooperatives evinced disinterest and conflicts, and their incomes never bettered what they earned beforehand.

The three case studies were some of the organizational models supported by the municipality of Rio de Janeiro city in response to this new context of waste. The first and the

third case studies address the process of how “odd jobbers” and specialized firms respectively attribute value to waste. The second case addresses the consequence of the organization of waste collectors in a factory model of work (according to the municipality’s plan).

5. Final considerations

The objective of policies to support cooperatives was to diminish the dependence of waste collectors on buyers. Having observed three case studies, only the third can be called a success. The third case came closest to meeting stipulated public policy goals of scale and negotiating directly with buyers. To what extent did the strategies or policies of support—in the sense of helping waste collectors—attend to the needs of the recyclable market? The flow of goods has improved over the years, as has the response to recycling by society and business. But the same cannot be said about the organization of waste workers.

This idea refers us back to Escobar (1995) who, in conceptualizing poverty, suggests that policies for the development of poor countries are better suited to integrating, managing, and controlling these countries and their populations than in resolving the problems associated with poverty. Waste collectors should be considered authorities on waste, so that they might assume greater participation in the process of solving their own problems. Unfortunately, this ideal was not met in most of the cases examined. Instead, waste collectors gain salience in the media and constitute the target of public policies, but only, however, because specialists in different fields associate them with issues of waste and recycling. Finally, the results suggest that policies did much more to contribute towards improving recycling systems—within a market context— than to improving the economic conditions of waste collectors.

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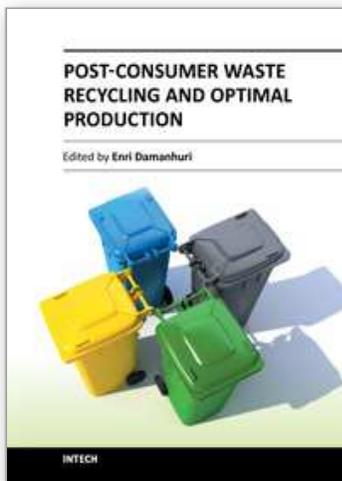
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This book deals with several aspects of waste material recycling. It is divided into three sections. The first section explains the roles of stakeholders, both informal and formal sectors, in post-consumer waste activities. It also discusses waste collection programs for recycling. The second section discusses the analysis tools for recycling system. The third section focuses on the recycling process and optimal production. I hope that this book will convey both the need and means for recycling and resource conservation activities to a wide readership, at both academician and professional level, and contribute to the creation of a sound material-cycle society.

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