

Resistant recycling and recycling (r-)existences: self-organizing collective subjectivations of waste pickers in Rio Grande do Sul, Brazil

Abstract

Recycling consists of a variety of everyday practices interacting throughout a complex urban ecology of materialities, subjectivities, knowledges, organizing practices, institutions, policies and communities. In this article, we look at self-organized collectives of *catadores* (waste pickers) in Rio Grande do Sul, Brazil. This research combines quantitative data from the 497 municipalities of Rio Grande do Sul with a set of interviews and ethnographic observations. The emergence of self-organized collectives of *catadores* shows the affirmation of creative and transformative practices that actively resist the precarious infrastructures in which they operate. This resistant attitude is displayed by their political and strategic positioning in relation to municipalities and low-level administrators, but also in relation to the social, economic and environmental inequalities that affect their lives and their communities. We propose to look at these collective practices of resistance as expansive and creative, establishing transversal alliances throughout the community. In this sense, resistance becomes an act of recycling: the transformation of urban ecologies into an ongoing and sustainable way of staying with waste. Resistant recycling transforms individual and collective existences.

Keywords: recycling, resistance, waste pickers, urban ecology, waste management, everyday politics.

Introduction

The introduction of the National Policy on Solid Waste (*Política Nacional de Resíduos Sólidos* - PNRS) in 2010 was the attempt by the Brazilian federal government to establish an environmentally sustainable reform for an integrated management of solid waste. Recycling and eco-efficiency were at the heart of the policy, whose wider objectives were the protection of human health and the reduction of environmental impact. Yet, its implementation is devolved to municipalities (*prefeituras*), which are accountable for waste reduction, separation, processing, management and recycling collection (Maiello et al., 2018). After ten years, the PNRS has produced little more than a fragmented scenario whose precarious infrastructures repropose some age-old problems regarding local waste management: the extremely low percentage of recycling, inefficient controls on the final destination of urban waste, delays in the implementation of waste plans (Carbonai et al., 2020). This is the fragmented and precarious space where self-managed associations and cooperatives of *catadores* (recyclable material waste pickers) operate.

This article looks at recycling practices from below, focusing on how *catadores* not only navigate and resist these precarious urban spaces, but they operate despite and beyond administrative policies and their implementation by local authorities. Through the self-organization of groups with strong bonds that go well beyond the working relations (“a large family” as one interviewee puts it), we look at practices of collective subjectivations that resist personal marginalization while contributing to the wider ecologies of their communities, forcing municipalities to adapt. By resisting precarity and marginalization through recycling, *catadores* recycle their own lives and the livelihood of their urban spaces: recycling (r-)existences. Recycling is the material differentiation of what has been disposed and yet has still value, from the rest of waste. As *catadores* engage in processes of recycling, they also recycle their own existences, by detecting what is still valuable in their lives, what exceeds their marginality, giving new values to their existences by creating new forms of living with “the potential to create alternative socio-political worlds” (Millar, 2008: 30). Recycling existences is a practice of resistance to the extent that opposes the sheer effects of urban inequality and exploitation, while experimenting with alternative ways of organizing work and social reproduction. Yet, this emphasis on creating alternative forms of living requires a reconceptualization of what we mean by resistance. Rather than being a mere reactive rebound to an imposed condition, resistance shows its creative and affirmative potential. From this perspective, we intend to recycle the concept of resistance, recuperating what is still valuable for analysing practices that are at once oppositional and creative. Recycling (r-)existences stands for this double conjunction of recycling existences of resistance and the recycling of (the concept of) resistance.

Over the past twenty years, Brazil has been providing a role model for integrating *catadores* into local waste policy (Pereira, et al., 2011). In 2001, recyclable waste picking was included as a profession in the *Classificação Brasileira de Ocupações* (Brazilian Occupation Classification). With this legal recognition, *catadores* gradually found a place in official statistics, enabling monitoring of the occupational group. Yet, due to the high degree of informality, it is very difficult to establish the size of the population of waste pickers in Brazil; in 2011, the data accounted for the existence of 400,000 waste pickers present in the national territory (Dagnino, 2017). In Rio Grande do Sul, the state that is the focus of this work, the population of formalized pickers surpassed 5,000 workers in 2011 (Da Silva Freitas and Ferraz Da Fonceca, 2011). This is only a very partial figure as it is estimated that in Porto Alegre alone (the capital of the state of Rio Grande do Sul) there are about 7,000 individual waste pickers on the streets who are not part of these statistics (interview 16).

In this paper, we focus on how collective organization in self-managed groups functions as a catalyst for active and expansive practices that radically change not only the lives of *catadores*, but also their

ecologies, understood here as their communities and the environmental infrastructures that sustain them (Guattari, 2005). The active role of these groups is expressed through collective practices of resistance and contestation against local authorities and the administration of waste management through national and regional policies. The resistant character of their practices is expressed by their frequent reference in the interviews to the idea of “positioning”, a strategic stance spatially mapping oppositions and alliances. With Foucault (1982), we look at these urban ecologies as a field of forces that engage in multiple relations of power, where power is understood as “action upon action”, attempting to elicit determinate behaviours and overall outcomes, while managing a variety of possible responses. Resistance is configured as a force that interrupts, opposes or escapes the power relation at stake. For *catadores*, positioning defines an active posture that determines resistant practices in relation to the power of municipalities, of the market, of intermediaries and of the wider socio-political conditions that affect their existences. Following Freire (2014), positioning becomes an element of political subjectivation, the stance of those who fight to be a subject of history rather than adapting to it.

This active posture is often overlooked in the literature on *catadores*. Their resistance is often presented as a matter of survival (Sousa et al., 2019; Accornero and Gravante 2022), where the choice of becoming a waste picker is characterized as a response against prolonged unemployment (Braga et al, 2015). Although the radical condition of vulnerability cannot be discounted, the risk of reducing resistance to a mere struggle for survival deprives *catadores* of their agency, relegating resistance to a necessary rebound, an automatic reaction to poverty. Against this condition of passivity, we follow Millar (2018) in exposing the limits of the coupling of survival and resistance as the analytical framework for interpreting the lives of *catadores*, focusing instead of the wealth of their practices that Millar define as a politics of detachment that “entails a rupture with normative forms of capitalist labor, that opens up the possibility of other ways of fashioning work and life” (Millar, 2018: 92). From this perspective, Millar rejects the concept of resistance altogether as its oppositional stance would not suffice to render the *catadores*’ potential for forging new forms of living. We propose to pick the concept of resistance from Millar’s garbage and recycle what is still valuable for our analysis. Our recycled concept of resistance makes space for an oppositional stance, while emphasising the creative and innovative character of these practices. In these regards, we follow interpretations of Foucault’s resistance that highlight its capacity to generate change and invent transformative practices of subjectivation outside existing power relations (Deleuze 2006), conferring to resistance a constructive character (Lilja, 2021) and relegating opposition to an unwanted and tedious burden that cannot alone explain the wealth of creative practices that resistance manifests in what is ultimately its primacy over power (Checchi, 2014). In the recycling (r-)existences of *catadores*, we look at their radical experimentations with forms of self-organizing that transform the ecological interconnections of collective forms of subjectivation (Papadopoulos, 2019).

We look at how municipalities are often the reactive pole in these power relations, while self-managed groups of *catadores* actively affirm their practices and create their form of living. Their strategic positioning is not always directly oppositional against municipalities or against the capitalist system that contributes to determine their marginality, but it is widely manifest through the forging of transversal alliances with their communities, NGOs and other groups at national level through practices that go beyond recycling (e.g., promotion of cultural events, knowledge exchanges and solidarity networks). The *Movimento Nacional de Catadores de Materiais Recicláveis* (MNCR – the National Movement of *Catadores* of Recyclable Materials) represents the main example of how resistance is actively exerted through a variety of everyday practices that range from direct

confrontations and demonstrations, to education and promotion of self-organizing and cooperative principles (Castro, 2017).

While studies on the topic are often limited to small groups or a single municipality (Coletto, 2009), this research combines quantitative data from the 497 municipalities of Rio Grande do Sul with a set of interviews and ethnographic observations. The text is divided into two major parts and follows a logic of mixed methodology. The first part of the text presents the results from a Multiple Correspondence Analysis (MCA) showing the presence and diffusion of groups of *catadores* in the municipalities of Rio Grande do Sul in relation to the main environmental planning tools introduced by the PNRS. The results of this first analysis – mainly exploratory – are oriented alongside a round of semi-structured interviews with coordinators and presidents of self-managed groups of *catadores*, which are presented in the second part of the text.

A mixed method approach

This study combines elements of quantitative and qualitative analysis. The quantitative analysis is based on a descriptive statistics analysis and a Multiple Correspondence Analysis (MCA) of a large dataset of the 497 municipalities of Rio Grande do Sul, the southernmost state of Brazil. The MCA uses a dataset (see also Carbonai et al. 2020) extracted from data collected by the *Tribunal de Contas do Estado do Rio Grande do Sul* (TCE-RS) in 2016 (TCE-RS, 2016). This data was compiled as a part of the TCE-RS's project to evaluate the effectiveness of the PNRS. We considered four variables present in the TCE-RS dataset: 1. the presence or absence of sewage planning at the municipal level (*Plano municipal de saneamento básico*, PMSB); 2. the presence or absence of a municipal urban waste management plan (*Plano municipal de gestão integrada dos resíduos sólidos urbanos*, PMGIRS); 3. The presence of a municipal plan for the separate collection of waste; 4. the presence or absence of a municipal advisory council about environmental issues¹ (see table 1). Also, the MCA considers another four categorical variables: 5. the presence of self-managed of *catadores* (see <http://www.snis.gov.br/>); 6. the number of inhabitants per city (recoded in two categories; see www.fee.rs.gov.br); 7. the Socio-economic development index at municipal level (*Índice de Desenvolvimento Sócio Econômico*, IDESE; see www.fee.rs.gov.br) recoded into three categories, and 8. the regional location of the municipality (four regional groupings of Rio Grande do Sul). All these variables are categorical (mostly dichotomous): the MCA allows for an analysis of the general condition of correspondence among these categories.

As for the purposes of the quantitative analysis, we tried to understand the associations between categorical variables: those regions where self-managed groups are concentrated, the possible association between environmental planning tools and the presence of *catadores*. The analysis of semi-structured interviews is important to clarify the relationship between self-managed groups and waste policy at municipal level.

As the quantitative analysis depicts a fragmented and precarious scenario where municipalities struggle to align their policies to the PNRS guidelines with extremely low levels of separate collection and recycling, we conducted semi-structure interviews (n=17) and ethnographic observations to analyse how self-managed groups of *catadores* reproduce their everyday practices despite and beyond these precarious infrastructures. The design of qualitative interviews was structured around the findings of the quantitative analysis. Most of the semi-structured interviews were conducted during a training meeting in October 2019 in Porto Alegre. Other interviews have been collected at the ASCAT cooperative, based in Porto Alegre, in 2018, and in Uruguaiana, during a long interview

with Dona Tugira (interview 17), a historic leader of the Rio Grande do Sul *catadores* movement, in December 2019. Names of the participants have not been anonymized, following the explicit indication of several interviewees that considered this research as an additional way to affirm their resistanceⁱⁱ. Ethnographic observations were collected during a long experience of *extensão social* (a collaborative project between academics and communities) in São Borja, a rural city in the northwest region of the Rio Grande do Sul. Ethnographic observations and data collected through informal conversations with *catadores* were noted in a field diary.

Qualitative data were analysed through content analysis. We individuated three interconnected themes emerging both through the interviews and the ethnographic observations. First, *catadores* emphasise the difficulties that affect not only the reproduction of their lives, but also the wider reproduction of their ecologies. The second theme focuses on the practices unfolding within these spaces of precarity: rather than passive or reactive agents, *catadores* manifest affirmative practices of resistance, positioning themselves strategically against the infrastructural difficulties they encounter. Yet, beyond this oppositional stance, their resistance is constructive, transformative and expansive. Their practices constitute alternative modes of organizing, forging new relations and alliances. This is the last theme emerging from the analysis: from the recycling of waste to a wider process of recycling that involves the lives and the subjectivations of *catadores* and their ecologies.

Descriptive statistics and multiple correspondence analysis

Descriptive statistics show that only a part of the municipalities of Rio Grande do Sul approved the planning tools provided in the PNRs: the PMSB was approved by 80% of the municipalities of Rio Grande do Sul; 63% approved a PMGIRS; 65,7% approved a municipal plan of separate waste collection. Yet only 40% of the municipalities approved all the three plans. The ineffectiveness of this fragmented implementation can be demonstrated by the level of separate collection and recycling whose average is only around 13% (www.sinis.org.br). Interestingly, there are no significant differences in terms of separate collection and recycling between those municipalities that approved the plans and those that did not. This suggests that the introduction of these plans is merely formal and responds to the need to meet legal obligations. The poor implementation of these policies reveals the general disinterest and lack of engagement with environmental objectives and values among local administrators. In this context, self-managed groups are present in 82 of the 497 municipalities (16,4%).

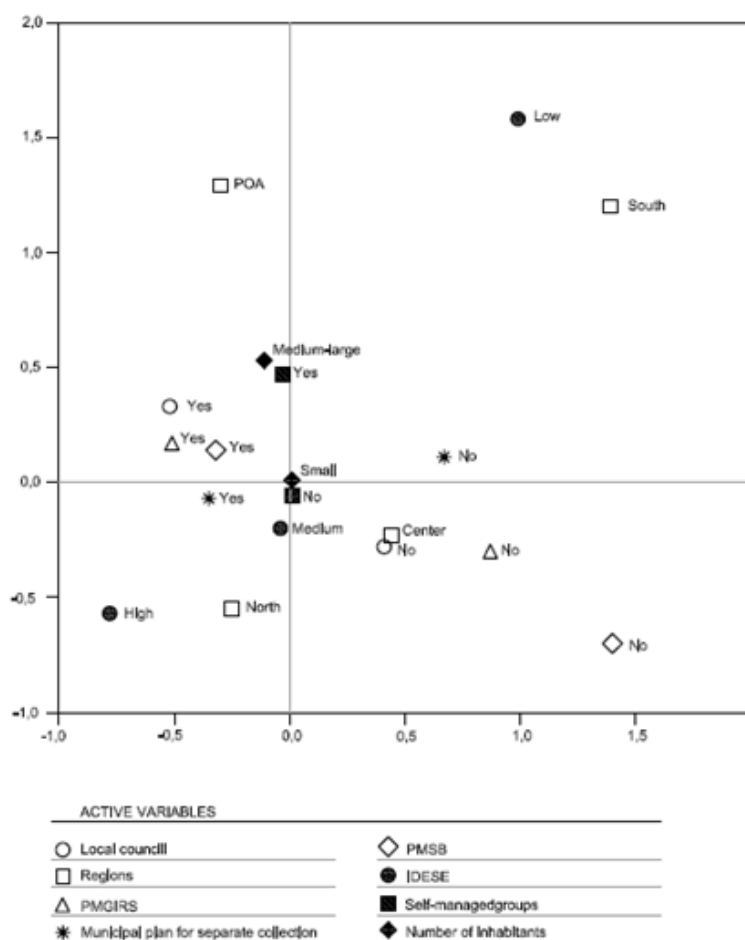
To get a better synthetic overview of the data, we submitted the eight considered variables to an MCA (Benzécri 1973; Greenacre 2007) in order to explore the possible relationships among their nominal categories. The computations have been performed through SPSS Multiple Correspondence Version 1.0 by the Data Theory Scaling System Group (Di Franco, 2006: 107). The MCA iteration process stopped because the convergence test value was reached at 21st iteration. The first two factors are considered (the others appeared too small to be taken into account). The first factor explains 34,4% of the variance, while the second explains 26,1%: 60,5% of the total variance is explained by both factors. For the first factor, management planning (variables PMGIRS, PMSB) weigh above all. Regions and IDESE are the most important for the second factor (see Table 1).

Table 1 – Weighting factor, categories, frequencies and coordinates on the factors

	Weighting Factor		Category	n	Coordinates	
	1	2			1	2
Active variables						
<i>Local council on environment policy</i>	0,21	0,09	Yes	216	-0,52	0,33
			No	272	0,41	-0,28
<i>Regions</i>	0,25	0,62	North Rio-Grandense	270	-0,25	-0,55
			Rio-Grandense Center	85	0,44	-0,23
			RMPA (Metropolitan Region of Porto Alegre)	98	-0,30	1,29
			South Rio-Grandense	44	1,39	1,20
<i>PMGIRS</i>	0,43	0,05	Yes	309	-0,51	0,16
			No	181	0,87	-0,31
<i>Municipal plan for separate collection</i>	0,23	0,00	Yes	322	-0,35	-0,07
			No	168	0,67	0,11
<i>PMSB</i>	0,43	0,1	Yes	399	-0,32	0,14
			No	90	1,40	-0,70
<i>IDESE</i>	0,25	0,47	Low	79	0,99	1,58
			Medium	339	-0,04	-0,20
			High	79	-0,78	-0,57
Illustrative variables						
<i>Self-managed groups</i>			Yes	82	-0,03	0,47
			No	415	0,01	-0,06
<i>Number of inhabitants</i>			Small	478	0,01	0,01
			Medium-Large	18	-0,11	0,53

The proximity of the categories in the scatter plot suggests an association between these categories. See for example, 1. the proximity of medium-large cities (Number of inhabitants per city) and the presence of *catadores* (Yes); or 2. on the right side of the graph, along the horizontal axis (dimension 1), the proximity of the categories South (regions), Low (Idese), No (waste planning). Also, as can be inferred from Figure 1, and relative to the first and second dimension, the presence or absence of self-managed groups of *catadores* is equally distant from PMSB (Yes or No) and PMGIRS (Yes or No). In fact, when testing this association by a chi-square test, we did not find a significant p value: the presence of the self-managed groups of *catadores* is independent of the presence of municipal plans.

Figure 1 – Joint Plot of Category Points



In general, the presence of self-managed groups is associated with four variables: 1. Region (self-managed groups are mainly present in the Metropolitan Region of Porto Alegre); 2. the presence of a local plan for separate collection; 3. the presence of a city council that deals with environmental issues; 4. cities with more inhabitants. Finally, the presence of self-managed groups is not – or is just partially – associated with those policies introduced by the PNRS.

Chi-square test of independence allows for a better understanding of the results of the MCA. Among the tested associations, the positive association of a self-managed group is encountered in relation to the presence of the following: 1. a separate waste collection management plan; 2. a municipal council that deals with environment issues; 3. the regional context; and 4. cities with more inhabitants (see table 2). On the contrary, there are no significant associations between the presence of a self-managed group and the presence of a PMGIRS or PMSB.

Table 2 – Cross tabulation for self-managed groups (considered variables with $p < 0.05$)

		Self-managed groups		Total
		Yes	No	
Municipal plan for separate collection and recycling	Yes	70	252	322
		85,4%	61,8%	65,7%

	No	12	156	168
		14,6%	38,2%	34,3%
Total		82	408	490
$X^2=16,88$		100%	100%	100%
Local council on environmental issues	Yes	47	169	216
		57,3%	41,6%	44,3%
	No	12	156	272
		42,7%	58,4%	55,7%
Total		82	406	488
$X^2=16,88$		100%	100%	100%
Regions	Norte Rio-Grandense	19	251	270
		23,2%	60,5%	54,3%
	Centro Rio-Grandense	14	71	85
		17,1%	17,1%	17,1%
	Metropolitana de Porto Alegre	31	67	98
		37,8%	16,1%	19,7%
	Sul Rio-Grandense	18	26	44
		22,0%	6,3%	8,9%
Total		82	415	497
$X^2=52,86$		100%	100%	100%
inhabitants	<50000 inhabitants	64	414	478
		78,0%	100,0%	96,4%
	>50000 inhabitants	18	0	18
		22%	0,0%	3,6%
Total		82	414	496
$X^2=52,86$		100%	100%	100%

The general scenario emerging from MCA and cross-tabulations show a largely fragmented landscape in terms of policies and local administration, which fails to explain the presence and the expansive practices of self-managed groups of *catadores*. As such, collective forms of organizing between *catadores*, far from being a consequence or a reaction to policies and local governmentalities,

represent an autonomous and affirmative subject operating despite and beyond their given institutional infrastructures.

Staying with waste: tales of the ongoing

The emergence of self-organised groups of *catadores* must be accounted for as an unexpected event. It is an eruption of liveliness in an urban space where policies seem largely ineffective in converting waste into recyclable materials and in achieving environmental sustainability. The conditions of the emergence of these collective practices of self-organization are unfavourable: an inefficient system of waste management, a volatile market with a multiplicity of actors and conflicting interests, the lack of material infrastructures to support the reproduction of life within these communities. *Catadores* are faced with an ecology of precarity that exposes them to multiple vulnerabilities. Their practices are bound to this precarity. Waste is there to stay as the level of recycling are low. Precarity is there to stay. *Catadores* affirm their way of staying with waste, the ability to develop responses (a response-ability) to waste within a complex and complicated ecology of interdependence (Haraway, 2016). It is interesting to note how one interviewee expresses this point. While reflecting on a series of challenges that she encountered in the reorganization of the cooperative and the experimentation of alternative practices to tackle excessive workloads and high turnover of *catadores*, she concludes: “It was a complicated period. But it is *always* a complicated period” (interview 5). In this section, we follow how this complicated ongoingness emerges in its interaction with the market, the municipalities and the lives of *catadores*: a complex field of forces traversed by a variety of power relations with their multiple contestations and the opening of potential trajectories of resistance. This is the strategic terrain where *catadores* constantly negotiate their positioning.

Recycling constitutes the basis for the material reproduction of the lives of *catadores* and of their organizations. As the sale of recyclable waste is the main source of income for these organizations, the market represents a key infrastructure: “the market is what really matters” (interview 17). Rather than a space of exchange between economic actors, the market represents a complicated web of interactions not only between humans, but also between the complex materiality of waste. The chemical composition of waste (PET, aluminium, paper, etc.) distinguishes what can be collected and sold for recycling from what needs to be disposed. A further set of differentiations is determined by the price of each material and how this value fluctuates on the market. *Catadores* interact with these differential materialities by adding further considerations in terms of weight, the speed of collection in relation to their size and the ease of transport. It is in this complicated more-than-human interaction that their income, their working conditions and the material reproduction of their lives emerge. The creation of networks of cooperatives of *catadores* guarantees access to the formal market, while increasing the quantity of recyclable material for sale and therefore their bargaining power in relation to buyers. Although the direct relationship between *catadores* and private companies in the sector is more profitable (interview 1), this alone does not suffice to guarantee the sale of all the recyclable waste collected, forcing *catadores* to recur to the shadow economy. Here we see the importance of informal networks and the diverse power relations that emerge within the social fabric that sustains these networks.

Municipalities function, at times, as a partial support that mitigates the precarious nature of the market. Yet, the relations between self-managed groups of *catadores* and local administrations cannot be analysed exclusively from an institutional perspective. It is interesting how none of the participants ever mentions the relevant policies (such as the PMSB or the PMGIRS) in waste management planning. The relation between groups of *catadores* and local administrations needs to be understood in terms

of strategic positioning, multiple contestations and uncertain outcomes. As resulting also from the MCA, this explains why the presence of self-managed groups of *catadores* is concentrated in urban areas, particularly in the Metropolitan Region of Porto Alegre, where we find a heightened political consciousness and strategic self-understanding of their resistant positioning (see interviews 8, 9, 10). While urban areas tend to ostensibly engage with environmental policies for either electoral purposes or formal legal requirements, the actual implementations of recycling practices often depend on the successful pressure exerted by self-organized groups of *catadores* that force municipalities to form an agreement (*convênio*) that not only regulates their work, but also provides financial and material support for the functioning of these organizations. Furthermore, these agreements indirectly contribute to the collective and individual subjectivations of *catadores* at symbolic level: recognizing the work of *catadores* reduces social stigma and encourages social integration (interview 8).

These agreements should not be seen as the acts of benevolent administrators or as responding to a specific political rationality. It is interesting to note how practices of resistance at local level are somehow in continuity with the wider action of the National Movement of *catadores* that since 1999 carries out its own politico-pedagogical project of training its members, empowering them both for self-management and for political militancy (Baumgarten, 2019). The drive towards the signing of an agreement between a cooperative or an association of *catadores* and the municipality comes from below. It is through resistance that *catadores* affirmatively reclaim their active role within waste management and more in general within the community, demanding a formal recognition that translates into material benefits and a rebalancing of power relations.. But the antagonistic character of this relation opens up to uncertain outcomes and possible defeats. Several interviewees express their frustration for the hesitations of local administrations in signing agreements. A quote from a coordinator of a social extension project highlights the imbalances and the difficulties that these processes involve:

in 2012, the candidate at the mayor's office of São Borja guaranteed this group of *catadores* that once he won the elections, with a CNPJ in hand, the *prefeitura* would guarantee an agreement, between cooperative and *prefeitura*. Unfortunately, in the years that the *prefeito* has remained in office, no agreement has been possible. During the 2012 elections, this candidate, and then elected, had met several times with the various groups of local *catadores*. The candidate invited the *catadores* to open a cooperative in order to be contracted by the municipality. Hence the social extension project to help the informal group of *catadores* to form a cooperative. I decided to help, and together with some students we decided to organize a series of meetings, to explain the principles of a cooperative, etc. During 2013, meetings continued with the mayor [...] Creating a cooperative was not easy. The whole administrative process was hard; the collection of signatures, the creation of a statute, but *catadores* were thrilled. The biggest problem was when the mayor did not sign a *convênio*, he didn't even know what a *convênio* was. A disaster. It was all a huge bluff. Sad. We spent time, hope, training courses, a cooperative, and the mayor betrays our expectations. (Interview 16)

Beyond the betrayal and the disastrous situation that this leaves behind, it is important to note the multiplicity of practices at stake in sustaining this whole process. The two sides of the relations are characterised by a sheer imbalance. Yet, this imbalance takes various forms. In terms of power, it is evident that the mayor exerts a role whose actions affect the actions of the counterpart (Foucault, 1982). At the other pole though, we do not find passivity: a whole series of practices that actively build up the conditions for transforming the situation (from informal *catadores* to a cooperative, formalisation of the agreement, collective learning processes, etc.). In particular, we note how resistance to this power relation passes through the articulation of a series of knowledges (both at organizational level with all the aspects related to how to operate as a cooperative, and at bureaucratic level with the understanding of all the necessary legal requirements). This constitutes a resistant pedagogical formation that develops through a praxis of political militancy (Castro 2017),

contributing to a wider process of collective and individual subjectivation. This series of active practices partly rebalance the power relation to the extent that the mayor is somehow forced to unveil the rationality of their action: “a huge bluff”. Underneath the manifest commitment to social and environmental politics, *catadores* find mere political gain, petty personal advantage and a fundamental lack of knowledge on the matter.

Inevitably this uncertainty and unbalanced power relations affect the individual lives of *catadores*. The precarity of the political infrastructure in terms of waste management and environmental policy is just one example of the wider inability of local administration to reproduce socially and economically sustainable ecologies. These systemic issues become even more evident and urgent at the peripheries of these urban spaces where vulnerability is the hallmark of individual existences. This emerges clearly from most of the interviews where social marginality, the abuse of drugs and alcohol and extreme poverty represent recurring elements. Rosy’s case (interview 5) attracts our attention:

I worked in Joinville [in the State of Santa Catarina]. I moved there after my wedding. I worked there for a while, then I decided to go back to my city [Turuçu]. There was nothing else I could do. My town is very small. There are no job opportunities. By chance I started to work in a *catadores* association, to earn some money, and then go to the sea.

Becoming a *catadores* is often a chance encounter in the midst of hopeless deprivation, an art of living on a damaged planet (Tsing, 2015). That sense of deprivation is there to stay. It does not represent a solution to all pre-existing problems which persist especially where work is not collectively organized (as in the case of individual informal *catadores*) or has yet to define its own self-managed organizational structure:

Because the problems are... the light that was cut off, hunger, all unnecessary quarrels. “Do you want to work in a service like this?” It is tired, dirty [...] you get home and you have nothing [...] you know that they have cut the light off for you too, and your son doesn’t have shoes (interview 5)

Although it does not promise a radical transformation, it gradually allows individuals to meet basic needs. And yet, Rosy beautifully reminds us that this trajectory is dense of a desire that exceeds mere survival and establishes reconnections with a wider ecology: “to earn some money, and then go to the sea”. Beyond being a mere way of making a living, this highlights the *catadores*’ affirmative aspiration for “a self-authored life” (Prentice, 2020: 121): rather than a resistance to prolonged unemployment or a struggle for survival, the resistant creation of an autonomous form of living. This also expresses the idea of a process: navigating throughout precarious infrastructures and disturbances, driven by the resistant obstinacy of hope and solidarity. It is a trajectory of ongoingness that goes through stages, not necessarily incremental and with some fallbacks. The high turnover of workers is an example of these fallbacks:

In the first month that I worked in the association, I worked for free. In the second month, I earned 70 reais. For a very heavy job. I had to change something. And you have reasons to believe it will change. Others say it won’t change and that if we change it will get worse. Someone left the cooperative. They didn’t understand the process. Then, we started from the beginning, all over again [...] As president, I began to think that we had to have a strategy. We had to find ways to make people stay. The work was re-organized. Before, people worked all week to earn fifty reais. Then we began to earn fifty reais in two days. We worked less and earned the same. We began to understand that management made sense. (interview 5)

The invention of new collective practices and new ways of organizing reveals a fundamentally processual nature, a dynamic experimentation (Papadopoulos, 2018) that gradually transforms not only the organization, but also the material existence of the individuals involved. At the same it is a process of collective subjectivation that goes through moments of refusal and resistance. This

resonates with Foucault's idea of subjectivation: "Maybe the target nowadays is not to discover what we are but to refuse what we are" (Foucault, 1982). Rather than engaging with a pre-established idea of what a *catadores* should be, a true identity to be discovered, the process at stake here is characterised by resistance (Foucault, 2019): refusing what *catadores* are in order to experiment with what they can become. And we cannot fail to observe the parallel with the idea of recycling: from disposed waste, *catadores* reactivate a process of recuperation that gives a new form of existence to this material and, by extension, to their own lives.

And we improved. We began to have a direction. A route. And the person begins to have a different perspective. He could see. The person begins to think that it is "here that I can hang on", that "at least, I will have food", "the wages are low, but I will have something to eat". We then began to encourage production. We cut working hours, and rotativity ceased. Those unnecessary quarrels. We programmed our routines. [...] Today the average salary of people who work is R\$ 1200-1500 reais per month. Every time someone comes here to try [to work] he receives a refund for the bus ticket. [...] At the end of each year we receive around 2000 reais from a fund if we have had a profit. We must be careful. We use what we have and we save. These saving funds help us. (interview 5)

These processes of collective subjectivation through self-management and through the renovation or recycling of organizational practices represent a significant transformation that changes the material conditions of the organizations, their members and the wider urban space in which they operate. These transformations occur despite and beyond the precarious infrastructures with which these existences are confronted. Everyday practices require continuous experimentation and attempts to individuate alternative routes and trajectories that make these ecologies more sustainable. Interestingly, there is no intention to measure these trajectories against the standard of a dichotomic success or failure matrix. These trajectories are anti-teleological in the sense that they do not prefix a target to be achieved. It is a radical everyday engagement with a condition of vulnerability experienced not as a condition to be escaped, but as constitutive of our collective material existence (Butler, Gambetti and Sabsay, 2016). A troubled story, a complicated period that is there to stay, that is ongoing. And yet, we see the eruption of unexpected liveliness and collaborative survival despite and beyond these ruins. The stories of *catadores* "are not the tales of heroes; they are the tales of the ongoing" (Haraway, 2016: 76): active processes of subjectivation that recycle existences through resistance, while forming resistant existences through recycling.

Recycling (r-)existences

While vulnerability is the hallmark of existences confronted with precarious infrastructures, this does not result into a despairing passivity. Gutberlet (2016) analyses the response of *catadores* in terms of resilience, the ability to absorb disturbances and to adapt to stress and change. Yet, the notion of resilience risks to undermine the active and transformative aspect of their agency and the relationality of the interaction between the different actors within the ecology (Bracke, 2016). We argue that *catadores* exert an active resistance that transforms their material conditions through an everyday politics of contestation. Alene (2018) observes how the counter-conducts of waste collectors in Addis Ababa contest and reshape the disciplining and the management of waste collection organised by the city administration. In particular, these counter-conducts are inserted within a wider governmentality consisting of everyday practices and relations involving waste collectors and low-ranking official representing the municipality. In our case study, we observe how these practices exceed the idea of counter-conducts especially to the extent that these resistant existences are coded in collective practices of refusal and affirmative demands (Checchi 2021; Lilja, 2021).

There was a problem: food. We worked to eat. I went to the *prefeito* [mayor] who gave 2 kg of flour and 2 kg of sugar to me. I looked at that basket and began to think: “it is a hard work, so heavy, important, but they always devalue us”. I got angry. Then *catadores* started having lunch there. But it was horrible. Various people had a half-empty lunchbox. Someone hid their meat [...] from the other *catadores*. I went back to the mayor. I said to him: ‘You have breakfast, lunch, dinner. We want to eat at least something’ [a decent “*cesta básica*”]. (interview 5).

This shows how *catadores* actively resist the power relations that affect their material existence. The awareness of these dissymmetrical relations at material level (three meals per day versus “a half-empty lunchbox”) occasions indignation, rather than despair: any antagonistic relation opens the field to its reversibility, alternative everyday problematizations (food) and affirmative demands. And this is at once the cause and the effect of the collective nature of these organizations of *catadores*. Self-managed groups are not individual actors but part of a political arena, a system of friend-enemy relations that implies a strategic positioning both in terms of multiple antagonisms and in terms of transversal alliances.

The colonization of Santa Cruz is German. And it is rigid. There is a whole process of ‘cleaning’, of ‘*branqueamento*’ there, in Santa Cruz. The cooperative is created from this struggle, from these *catadores*, all residents in the south [of the city], the poorest neighbourhood. They united for survival. My colleagues tell me they were earning 30 reais a week. [...] In those years. Until I knew the movement of *catadores*. Hence the movement for the creation of a cooperative. (interview 8)

Here we see the importance of the National Movement of *Catadores* as a politico-pedagogical force of resistance. As a grassroot labour movement, it recuperates cooperative principles and practices of self-management that inspire individual *catadores* to come together and reinvent their own labour relations, their processes of valuation and their relationship with waste.

This re-imagining of waste management practices and recycling through principles of cooperation and solidarity implicitly affirms a radical “right to the city which involves the collective reappropriation of waste as an anti-capitalist commons” (Manzi et al., 2022: 698). In several interviews, respondents discuss their professional choices through a perspective that reflectively asserts their social and political ideas and values. What emerges is an attitude to reflect on their own condition, not only as workers, but also as a community and as community members. The term “positioning” is often present in the transcriptions: it indicates an attitude to think in political terms, reflecting on one’s own life trajectory how these existential trajectories become collectively enmeshed in order to strategically confront the social and political infrastructures of their ecologies, rather than adapting to them (Freire, 2014). The idea of positioning also expresses the importance of collective decision-making and the experimentation of alternative ways of organizing. This often takes place during working hours, as in group meetings. This happens in all groups, but more specifically at the Ascat cooperative located in Porto Alegre:

We meet on Thursdays. Every two weeks. We need to explain how much we earn, how much we sell, etc. We meet when members demand for a meeting. We have two *fiscais* [accountants] and everything that is produced is divided equally for everyone; nobody earns more, nobody earns less. (interview 6)

The whole process of creating and maintaining a self-managed group of *catadores* takes place around a system of latent values, which allows for intra-group and intergroup interactions with the neighbourhood community and the local political community. Organizing differently is central for these groups of *catadores*. This can be said to be a process of recycling where knowledges and information are continuously tested and reinvented.

One day the president tells me that I had to leave. I thought: “there are no problems, I can take my backpack and leave”. So, I took my backpack and went. Thirty days later, the workers [*o pessoal*] ask me to return and take on the position of president of the association. But I didn’t have the skills. I didn’t know how. I began to learn, to decide what was important to me. I decided my priorities. I practiced what I had learned in the company where I worked, and everything I didn’t like. (interview 5)

Here there is an interesting reference to how this process of creating alternative knowledge in practice shows a resistant character that is key for a subjectivation that is distinct and differentiates itself from the ordinary experience of a wage labourer. While some practices are imported from previous job experiences, the experimentation with new forms of knowledge on how to organise the association and how to manage its operations stems from a position of refusal. This shows how *catadores* deliberately and actively embrace their life choice, rather than passively adapting to the job out of sheer necessity. Becoming a *catador* is “also a choice taken by those who no longer wish to endure certain working conditions in the formal labor sector” (Millar, 200: 27). The constitution of this experimental and alternative knowledge has an expansive character corresponding to the expansive alliances that support each self-managed group.

Now, the main point is that at least we have a network. I work in this association and I am the president of a network of associations, because my interest is to improve the income of other people, both through a better contract and a better recycling. Because there are self-managed groups that often don’t know how to better recycle (interview 5)

This expansive coupling of knowledges and transversal alliances allows the creation of connections between *catadores* and their wider ecologies. Through their own knowledge of recyclable materials and recycling practices, *catadores* affirm their presence in a multiplicity of spaces, from their immediate communities to the town hall. Lidiane (interview 2) reports that public awareness is the key to successful management:

we teach how to do the correct separation of waste; [...] it takes place right in the town hall, showing how the waste is separated to the council members [...] People ask us how they can separate properly (interview 2).

It is important to note that this knowledge is not the result of formal education. While *catadores* are often perceived as unskilled, their work requires an extensive amount of practical knowledge in terms of safety (how to avoid contamination from hospital waste for instance) and in terms of distinctions between types of plastic or paper (Millar, 2018). This knowledge is learnt directly while working, also through informal exchanges between more experienced *catadores* and newcomers. The recent actions of social movements on environmental topics have created a wider framework for a relation between new knowledge and socio-environmental struggles. This new political and cultural sensibility has progressively contributed to change the perception of *catadores* as “providers of important environmental services” (Candido et al., 2019: 372). This allows *catadores* to enter spaces otherwise inaccessible due to class divides. Stefani and Paula (interview 3) attend the meetings of a luxury condominium in the southern region of Porto Alegre. They live close to the condominium, from which they receive pre-separated paper and aluminium. A spatial proximity traditionally characterised by diffidence and securitization through multiple barriers is recycled into an unexpected transversal alliance between classes. While this reproduces the imbalance in terms of wealth and economic value as the waste of one class becomes the income of another, the participation of *catadores* to these meetings affirm the importance of their knowledge and practices of recycling. This highlights the wider politics of waste and how the distinction between valuable and disposable materialities is socially contingent and always open to strategic renegotiations (Martinez and Beilmann 2020; Gille 2007).

This allows other forms of connections and alliances. Andreia (interview 9) tells us about the cultural events organized at their association in the city of Cachoerinha. Stefani and Paula (interview 3) tell us about cultural and social activities in their cooperative, especially with the women of the neighbourhood. Among many other activities, Rosiane and Ricardo (interview 10) participate in a community choir in Novo Hamburgo. Cultural and social activities are important: the local community shows its appreciation for the work done by the *catadores*, and for their social role.

This integration process takes place at all levels through a complex series of transversal alliances that Candido et al. (2019) call “solidarity recycling”. In terms of strategic and political alliances, we find primarily the National Movement of Catadores (Miles, 2014) that serves also as the pedagogical base for the political formation of a resistant stance by providing training on self-management and cooperative principles. At the operational level, we find a wide network of *apoiaadores* [supporters]: foundations and NGOs (Avesol, Lutheran Foundation, among others), universities with their social extension projects, municipalities, training courses, participation in events, and sales networks (interview 17).

[The movement] helped, a lot; the movement, the meetings, the *apoiaadores*, help to face this process. We need ‘political’, and ‘bureaucratic’ support. Relations between cooperatives, the cooperative network. We feel it. We make a phone call, they answer us. We need an ‘help’. We also think about quitting, but supporters explain to us what needs to be done. They give us a light. They tell us where to go. AVESOL is a seed; they give us an idea. XXXX helps us with a patronage. [...] they help us, we help each other, and visibility comes. (interview 9)

[In Encruzilhada do Sul] we started working in the cooperative after a state project, when Olívio Dutra was governor. The cooperative COOMCREAL was born [...] We also have a small market where we divide the revenues among us. We have a tractor that came to us from the deputy Adão Preto. We also have a van. Bradesco bank helped us with some machines [...]. And so, we can work: twenty-two *catadores*, mainly women. (interview 4)

These wider alliances are the result of an expansive and transformative practice of recycling, where resistant existences contest their marginality by recycling their own existences and the existence of their ecologies: recycling r-existences. In this context, self-management is more than just an organizational practice; the interviews show elements of political consciousness with an explicit refusal of the way work is ordinarily organised in the capitalist wage system. While Millar (2008) emphasises how the experience of autonomy and the relations of care developed in the dump are motivating factors for informal *catadores*, we notice how this deliberate preference over more ordinary jobs becomes even more explicit in these self-managed groups where the organization represents an additional element that is directly embedded in the individual and collective subjectivation of their resistant existences..

This association became part of me, of my life. I decided that I would never go back to a private company. In the association we have other possibilities, other paths to follow; we can do something different [in our life]. [...] We have gone through a process together. An evolution. Six of us worked. Then we grew up. Today, thanks to God, we have a decent salary. A job we like. A job that you envy if you work in a private company. I [in the factory where I worked] couldn’t do it. I ran a whole month to buy my son’s supplies. A medicine. A schoolbag. But when there was the recital, at the theatre, on Mother’s Day, in kindergarten... which was something made for me ... in that factory there was no way to go there, to the theatre: ‘we have to cut your salary’, they said. Here, in the association, things are different. The priority is who and what you are creating. And I’m raising a baby; my kids asked: ‘where is my father? Where is my mom?’. And in an association, where you trust others, a true association, where everyone works for the association, ... people understand you. (interview 5)

Rosy continues to tell us about the story of her association, the thefts that hinder the regular exercise of the cooperative, the times of crisis, and how the group managed to overcome difficulties. It is the

so-called “process of change” that takes place in the management model, simultaneously with a personal and profound transformation. This encourages the birth of a “*grande familia*”, a large family.

It’s a family! Consider the ACRE [association], a large family; we regret some things, we have our moments. But when the municipality taxes us or has something to say... we unite. (interview 9)

This idea of the family proposes a radically alternative model of organizing that resists and refuses what happens in traditional workplaces where *catadores* would otherwise be relegated to sheer exploitation. During the conversations with our participants, we noticed that the interviewees rarely refer to other cooperative members with words like “worker”, “colleague”; on the contrary, the terms “person” or “we” are preferred. This suggests the need to form new ways of making sense of relations that, despite occurring at the level of work, exceed that dimension and redefine the wider reproduction of life. Self-management produces a canvas of meanings: a strategy of everyday practices of resistance that go beyond the organizational level to arrive at the individual and collective forms of subjectivation (the *catador* identity, the association) and the social level (relations with the local community, and the political system). Hence the idea of a *grande familia*, a resistant community of intent that affirmatively engages with personal and social exclusion, the segregation in a peripheral region of the city (usually the separate sheds are located near landfills) and yet it creatively produces a reinvention of social and political practices, recycling human lives, urban spaces, social relations and waste materials into a valuable r-existence.

Conclusions

Waste is there to stay. Governmental environmental policies and their local implementation do little to achieve environmental sustainability in the management of solid waste. The extremely low percentage of recycling is the evidence of this failure. *Catadores* are there to stay too. Collective forms of self-organization do not have an immediate effect on the level of recycling. But what they achieve is a wider form of recycling that recuperates a whole ecology of life and transforms it by resisting multiple disturbances. We look at these practices as type of response-ability (Haraway, 2016), the elaboration of skills, alliances and interactions that affirm a certain way of becoming-with the urban space. These practices are necessary to stay with the multiplicity of actors that animate this complex space: waste and its material differentiation (recyclable and non-recyclable, profitable and non-profitable), the market, buyers, sellers, intermediaries, policies, institutions and local administrators, knowledges, individual lives of *catadores*, their desires, their material needs, their communities, their supporters. This urban space is ecological in the sense that shows the complex interdependence of a multiplicity of elements. The complexity is also the source of multiple disturbances though, a state of precarity that institutional governmentality seems to reproduce rather than to solve. Our quantitative data show no significant differences in recycling between those municipalities that adopt planning tools from the PNRS and those that did not. The introduction of these plans is merely formal and ultimately ineffective. *Catadores* with their self-organizing practices represents “eruptions of unexpected liveliness and the contaminated and nondeterministic, unfinished, ongoing practices of living in the ruins” (Haraway, 2016: 37).

The stories of these self-organized collectives of *catadores* show a particular way of staying with waste. Their individual subjectivations are not only the expression of counter-conducts (Alene, 2018), but the affirmative construction of a collective form of resistance. Their positioning within a complex space of interaction shows both an oppositional stance against multiple forces (the market, ecological and social degradation, municipalities, etc.), but also the urge to creatively affirm an alternative way of becoming. Experimenting with alternative practices creates new forms of living (Papadopoulos,

2018) that materially reconfigure existence through their resistance against dominant systems of valuation based on exploitation and marginalisation. The creation of new social and political possibilities is at the level of matter. Millar (2008) reports how *catadores* often repeat that “o lixo é o que não presta,” (“garbage is that which is not worth anything”) to affirm that they do not work with garbage, but with materials that are still valuable. Through their resistant practices of subjectivation, *catadores* show how their existences are still valuable, “reconceptualizing and revaluing the objects and peoples that the present world economic system discards as waste” (Millar, 2008: 32).

By looking at the recycling of waste as a form of recycling of these existences, we put forth a conceptualisation of resistance that exceeds its oppositional character and highlights its power of creating alternative forms of living. The experience of *catadores* offers the occasion to recycle the concept of resistance, recuperating its creative stance that is otherwise discarded in traditional accounts of resistance, exclusively focused on its oppositional character. We propose instead an understanding of resistance that is constructive (Lilja, 2021) and it does not remain passive in the face of power. *Catadores’* positioning represents their refusal to adapt (Freire, 2014) to a system of exploitation and marginalisation, reclaiming their right to actively choose how to live and how to interact within their ecologies. Their resistance comes first, it is primary over power (Checchi, 2021): it forces power to change, while transforming practices, lives, infrastructures and spaces. Resistance here appears as a force of expansion that transversally establishes new alliances and re-connections. It is not halted by the disturbances of power, but it recycles that state of despair into the creation of new hopeful ways to stay with waste. A whole ecology of existence is recycled through these collective resistant practices: from resistant recycling to the recycling of (r-)existences.

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ⁱ These advisory councils are formalized pressure groups that are present in some municipalities. They have no decisional power and municipalities can decide whether to implement or ignore their recommendations. All citizens can participate to the assemblies of the advisory council.