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Society X Trash: A Problematic of Metropolitan Region of Rio de Janeiro

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Abstract

In this study, we sought to check how is the environmental education for the society of the municipality of São Gonçalo, Rio de Janeiro State, and if there is a pattern of solid waste management for the municipality, or isolated neighborhoods. The study was carried out in two stages by descriptive and then exploratory qualitative research. At first there was a survey of information by the City Department of planning and Environment on the selective collection of garbage in the urban cleaning process, and in the second step a questionnaire was applied in four districts of the city used as a sample, in order to raise information about the existence of the society participation in selective collection programs. From the study, it was found the importance of promoting environmental education in the municipality, because the effectiveness of selective programs necessarily require the involvement of citizens. The appropriateness of the structure today held by the region's public service must support a program of selective collection and the existence of continuous actions of dissemination; mobilization and information are facilitators and fundamental factors. The lack of dissemination of results, the accommodation, the lack of interest of the population, the disrepute concerning actions from the Government, and the lack of space, in the residences to store recyclable waste, among others, are factors that hinder the participation in collection selective and appropriate treatment to these wastes.

1. Introduction

Currently themes involving the issue of trash this directly related to public health and have been subject in recent decades in various international conferences, because it involves the most important economies in the world, always with the aim to outline solutions to minimize the generation of solid waste and your final destination.

According to RIBEIRO [1], the growing need for selective waste collection programs (PCS) in Brazil as a municipal public policy must be allied to the discourse of integrated management and globalization of theme, whereas today most of the initiatives and actions of separate collection are informal in character. The accumulation of waste poses great challenges for public agencies and society in general, especially on how to correct and improve the packaging / storage of this waste, so as not to harm the population so little to the environment. In the municipality of Rio de Janeiro the issue of re-education for environmental protection presents itself with little applicability in some municipal,

State and private schools in which I have inserted into your lesson plan relevant issues on the topic, and starting from individual initiatives, not referring the appropriate proportions.

Currently, the environmental issue is a topic of relevance in Brazilian society, especially the character of urbanization and the emergence of urban problems, whereas the traditional concept of social participation has been expanded [2]. Contemporary social movements does not reduce to the collective defense of interests, since the collective actions of civil society have introduced changes in its content, in its practice and in the forms of organization of their bases [3, 4]. In this context was considered as social participation, the involvement of the population in government actions, more specifically on the actions of local environmental management; refers to the willingness and support of individuals in the community to requests of public managers to manage the public thing. Such an approach refers to the exercise of citizenship, which according to Scherer-Warren [5] implies a presence in the public sphere, from participatory processes and assumes the observation of social regulations, corporate coexistence and, ultimately, the recognition of the other as a citizen. Contemporary class-action suits would be focused on environmental initiatives, which do not fit in the available scientific categories [4] or conditions of motivation for actions of co-responsibility and community participation [2].

Given this scenario, the present investigation sought to investigate the reflection of lack of environmental education in the process of urban cleaning, in the municipality of São Gonçalo, and check how the population has contributed to the process of urban cleaning and participating in the selective waste collection program.

Re-education about garbage and recycling

Environmental education should be the initial focus of any environmental protection project, be it, facing degradation, preservation or for the observation of natural resources that make up the environment. The practice shows that there can be no conservation or environmental preservation without education because is she that founds in the individual and in society the need for collective changing behavior and attitudes that aim to prioritize the environment. Therefore, environmental education should begin in schools, children who are in the process of learning and education must learn to preserve and understand the importance of preserving our natural resources for our life.

For the selective collection, environmental education should constituted of education programs focused on communities, aiming to sensitize citizens to change their customs and habits regarding the correct disposal of waste, highlighting the possibilities for reuse of discarded materials. In addition, important to consider that for society to participate in some type of program, the city must do their part in the urban cleaning process efficiently and effectively.

Disclosure is effective task in the process of re-education, because "it is known that the majority of a population

cooperates with environmental issues due to its disinformation [6]. The project must involve the community and at the same time motivate participation contemplating the advantages of separate collection.

2. Material and Methods

2.1. Study Area

The Municipality was originally inhabited by Indians Tamoios, which were surprised by the first conquistadors, French and Portuguese. São Gonçalo was founded in April 6, 1579 by colonizer Gonçalo Gonçalves. Its dismemberment, started in the late 16th century, was effected by the Jesuits, who installed a farm in the area known as Colubandê in the early 17th century, the shores of present-day Highway RJ-104.

In 1929 the city of São Gonçalo, start your career in the direction of progress and success. In 1943, a territorial division in the State of Rio de Janeiro and São Gonçalo loses the Itaipu district to the city of Niterói, leaving him just five districts: São Gonçalo (seat), Colubandê, Moinho, Neve and Sete Pontes that remains today. In the decades of 40 and 50, begins the large-scale installation of large factories and industries in São Gonçalo, your industrial park was the most important in the State, earning him the nickname of Manchester Fluminense, a reference to the city of Manchester, England, characterized for your great industrial development [7].

2.2. Development

In the early 20th century, the spread of coffee production was responsible for the settlement of the plateau. Some seedlings of coffee came to Brazil, coming from French Guiana. The first place to be planted coffee was São Gonçalo, however unsuccessful planting due to soil type coffee cultivation expanded by the Serra do Mar, heading towards mining and lands in the State of São Paulo. We had in our land a weak coffee expansion, but the experience brought us benefits, as the broad construction of railroads, which facilitated the flow and delivery of products. The stretch of railroad Porto das Caixas (Itaboraí-nearby town) by the District of Neves in São Gonçalo was responsible for the formation of human settlements and towns, which used Guaxindiba stations, São Gonçalo and port of Madama. In 1890, the District of São Gonçalo, corresponding to primitive parishes, decoupled from Niterói. In 1895, inaugurated a railway that was the path of São Gonçalo (Neves) the nearby town of Marica. Were two railroads that we had this time: Leopoldina and Marica [6].

Unfortunately, São Gonçalo has not yet managed to determine a direction to be taken, on the contrary, since the historical process of economic deflation, started in the Decade of 60 and intensified on of 80, has been haunted by the stigma of dormitory town. Is observed a targeting its economic system to the service sector, markedly plugged into

the trade. According to the data of the survey Cities and Companies, IBGE [8], of the 10,308 surveyed companies, 90.11 were service sector, industrial sector and 9.85 only negligible 0.04 linked to agriculture. Still according to the same survey, 83 of these companies were founded from 85, Industrial mark GDP retraction in São Gonçalo.

The comparison between the municipality and the national, regional and State data, one can observe the prominent position in São Gonçalo, which absorbs in 2002, more than 50% of the occupied population, in contrast to other surveyed held that a trade factor of 30%. That is because more than 150 companies are "small", reporting on your team of 0 to 9 persons employed. Among the exceptions that some large network market as the Sam Club and Carrefour, and two great shopping in the city, which are references in the municipality, not only by trade (a bit more sophisticated), but also for leisure and entertainment [8].

Currently the municipality and seen as a big prone to industrial and commercial possibilities, but also shows a lack of structure with regard to environmental care and a clear policy for the fate of the garbage generated in the city that every day has become greater. Without the necessary care and the real importance to such a subject.

2.3. Methodological Design and Sample

The method used for this research is the collected data was divided into: qualitative exploratory research, through the survey of information about the practice adopted in the municipality. It was also held at this stage, a bibliographic survey in books, theses and laws in search of theoretical basis also increased knowledge on the topic treated in the region. Having found a very restricted literature.

For the second step was performed a quantitative descriptive research. A questionnaire was developed as a tool for data collection, having been applied in about 50 houses in four different districts of the city: Gradim, Boa Vista, Santa Catarina and in the Downtown. In each of the four districts winners, 50 were conducted interviews, totaling 200 respondents, according to intentional sample: 155 residents aged between 16 and 30 years; 35 residents between 30 and 59 years; 10 residents with 60 years or more; 2 community leader or representative local politician; and 28 or industrial trader. In the case of the residents, was interviewed a representative male and another female, for all age groups.

The profile of the sample delimited by the following criteria:

1. People old enough to vote and be voted in election of political representatives and, therefore, which may thus interfere in decisions about public policies;
2. Representative group of interviewees who assume the administration of the residence, such as housewives, usually responsible for solid waste management in the nuclear family;
3. Representative group of Heads of family, responsible for the upkeep of the House;
4. Group of local opinion-formers; and
5. Group of retirees, potential partners of such programs

for their greater availability of free time.

All determinations were followed directed by the Research Ethics Committee, requested and directed municipal authorities at the time of the survey.

The data were collected in individual interviews for the completion of questionnaires followed by semi-structured script previously trained interviewers.

Source software was used for statistical analysis.

3. Data Obtained

The perception of respondents on the issues: knowledge about selective collection; participation of the programmers; discontinuance of programs; and the statements of the interviewees were synthesized in Tables 1 and 2, respectively.

Table 1. Interviewed by Downtown, as solid waste collection.

Neighborhoods	SL	SA	NS
<i>Respondents</i>			
Gradim	5	3	42
Boa Vista	10	5	35
Santa Catarina	3	3	44
Center	5	3	42
Total	23	14	163

NOTE: (SL) respondents who do the separation of waste; (SA) respondents who sometimes make the separation; (NS) respondents who never make the separation of garbage.

Table 2. Respondents by Downtown, the participation of a selective trash collection program.

Neighborhoods	GP	NP
Gradim	46	4
Boa Vista	49	1
Santa Catarina	45	5
Downtown	47	3
Total	187	13

NOTE: (GP) respondents who would like to form part of a selective trash collection program; (NP) respondents who would not form part of a selective trash collection program.

4. Results

From the analysis of the data was possible to reveal information about the conception of society as the habit of separating the garbage and about the knowledge of the final disposal of garbage collected. All the data obtained shows association between selective waste collection, recycling, solid waste separation, and separate collection regarded as a good measure for the city.

About participation in selective collection, through the provision of local questionnaire data, whether or not programs are available, whether or not they would like to participate, and what are the reasons for their decision. The results presented in Table 1.

The contribution of the local population for the selective collection of garbage can be evaluated by descriptive research, ratifies the knowledge of PCS, created by NGOs, as the guardians of the sea, located in the Boa Vista. However, do not make the selective collection in residence only on

large producers of waste, which must be registered on your site.

A large portion of the population is unaware of any type of selective collection in the region. Getting almost all restricted to garbage collection held by the city in some streets of the selected districts, without any reference to the selectivity of the garbage collected. Table 2 shows the results in the *respondents* for the program.

As for the habit of separating the garbage, approximately 12% of respondents claim to separate the garbage at his residence, 7% admit practicing secession sometimes, to try to reuse, and 81% make no kind of separation in his residence. Traders interviewed almost 90% admit not to make separation and hurry up as household waste.

In table 2, shows the total number of respondents who would like to participate in a program of selective collection of garbage, almost 90% of the total respondents in as that only a smaller share 10%, if one would refuse to participate in a program designed level, maybe because of lack of knowledge or these are not simply willing to do the separation of their waste.

With 200 respondents, 93.5% claim that would like more information about environmental education, about the proper way of selection, recycling and you want your neighborhood has some kind of separate collection for recycling of certain materials.

5. Conclusion

The different perceptions and behaviors of respondents in relation to social participation in selective collection programs was identified as favorable as well as motivating factors for such participation. Motivation factors are important: the environment and the quality of life associated with the improvement of the urban cleaning; the reduction of the danger represented by the manipulation and improper disposal of solid urban waste, for the population; the organization and appropriateness of an operational structure is crucial in the organization of a program; and the existence of continuous actions of dissemination, mobilization and information.

The results, confirmed by other authors [9, 10], show the seriousness and the lack of public policies aiming at the quality of life of the population.

Among aspects impede or that hampered the participation of the population would be stands:

- a) lack of disclosure about selective collection;
- b) accommodation and lack of interest of the population;
- c) cultural level and education of the Brazilian people;
- d) disrepute concerning actions from the public authorities;
- e) lack of space to store recyclable waste in residences;
- f) clean the packaging to avoid problems with insects and unpleasant odors during storage; and
- g) Time spent and work expended for separation of recyclable.

The main aspects that prevent or hinder the participation of the population in selective collection are associated with lack

of motivation factors identified.

This study allowed, check a possible adaptation of the classification of the target population (municipality of São Gonçalo) the selective collection programs into three groups: supporters of participation possible and not participate, confirming the hypothesis proposed. This classification can be considered in decision making with respect to the implementation of programs or in existing programmers of re-adaptation selective collection of solid waste [11, 12].

The data analyzed, it became clear the need for the Organization of an effective program of environmental education in the municipality. The approval of the Brazilian solid waste Policy, with its guidelines, objectives and instruments can be a motivation, for decision-making and public policy organization in the area.

The use of direct channels of communication with the population, the formal record of data, its systematization, response to the community, conduct regular opinion surveys are instruments that can and must incorporated as routine in such programs.

Thus, the CPGT (Centre for research in management and technology), this mobilized the responsible bodies and NGOs, in the attempt of a joint project partnered in an attempt to achieve an environmental education course for the region also partnered with other institutions of the region for possible cooperation in institutional projects aiming at the improvement and provides the authorities concerned, since it is clear an awareness of the necessity of a selective collection program by the community and the participation of organizations in environmental care.

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