


HISTORICAL TRAJECTORY OF WASTE IN THE CITY OF RIO DE JANEIRO AND ITS REPRESENTATIONS

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ABSTRACT

This research aimed to know the historical trajectory of waste in the city of Rio de Janeiro, the evolution of practices and the structures of representation that impact the environment and public health. The methodology used in this research was micro-history, the reading of the representations proposed by Roger Chartier and Bardin's content analysis procedures with the application of categorical-thematic and lexical techniques with the support of the IRaMuTeQ software. The results generated 148 reports and 1149 segments of texts emerged for analysis. In the analyses produced, structures of important representativeness in the contextualization of cultural historical production were identified: types of waste; waste management; problems related to waste; stereotypes, prejudices and stigmas associated with waste; characters associated with waste and other related subjects. It was concluded that, despite the improvement in the waste collection services of Rio de Janeiro and the cleanliness of the city, there is a long way to go to improve the rates of adequate final disposal of waste, the initiatives of reuse, recycling and industrialization. Therefore, the role of society is to redefine garbage, changes in practices, since knowing various forms of industrialization, recycling and reuse, allows us to generate profits, reduce the impacts on public health and the environment arising from improper disposal and unnecessary treatments.

Keywords: Garbage, Health Services Waste, Waste Management, Public Health, History.

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INTRODUCTION

The global production of garbage has grown in quantity and diversity, this is due to the advent of the Industrial Revolution, population growth and increased urbanization, consequently, change in the profile of economic incentive, cultural and technological development, enabling the increase in the production of consumer goods and generating the aggravation of the problem of waste generation and disposal, which did not generate many concerns, since the focus was centered on development, and the consequences of the unbridled production of garbage were irrelevant (Schneider; Stedile, 2015).

Until the 50s, the representation of waste was built from the imagination of a society that faced tragedies caused by pandemics related to plagues, referring to waste as a source of diseases and impurities. In addition to bringing with it issues related to social stigmas, where the functions of taking care of garbage were attributed to "prostitutes", "prisoners of war", "convicts", "slaves", "executioners' assistants", "beggars" and "rag pickers", what we now know as "Garis". From the ancient period to today, people who work or live off garbage are stigmatized by society, explaining the social disqualification of waste-related work. It was only from the 1970s onwards that waste began to be considered an environmental issue, when the degradation of the planet was perceived, with the generation of substances toxic to human health and the environment (Velloso, 2008).

With regard to Health Services Waste, different challenges are encountered, such as the operationalization of processes, the lack of uninterrupted training of professionals, limited financial resources and the difficulty of implementing adequate practices. Hospital demands end up becoming priorities in the face of waste management issues, and additionally the resistance of the health team, which reinforces the need for educational programs, technical support and constant monitoring of hospital waste management (Maciel; Hanna, 2024).

Garbage carries within it a meaning of something worthless, unimportant. This explains the little appreciation of this theme, with regard to society and the political agenda, which was marked for a long period of history by the dumping of garbage on the beaches, alleys, squares and streets of the city, often making the circulation of people impassable.

Understanding the context and cultural practices involved in waste management allows us to understand the path taken for the formation of social representations, unveiling the natural plurality that permeates the relationships and how media narratives were

transmitted, although objective, are subject to the subjectivities inherent to the discourse and compete for representation, and are often produced in the heat of events.

Writing about the historical trajectory of waste made it possible to identify structures of representation through cultural practices built over the years, which had great influence even from periodical prints that interfered in the generation of a social world through the creation of a real world disseminated in people's daily lives. These media narratives, although exposed to the subjectivity inherent to the discourse, end up competing with the representations of legitimate discourses.

Roger Chartier (2021) states that the concept of representation "is a powerful tool against historical falsifications, and adds that many narratives, especially in newspapers, can be produced in the heat of events, and it is relevant to analyze the non-verbal elements that participate in the production of the publication and are placed as records of real facts" (Chartier, 2021). In view of the above, it is important to analyze the structures of representation identified in written communication and to unveil non-verbal elements of media productions about waste.

In view of this, the present investigation sought subsidies that demonstrated the interface of the relationship between these problems through a historical path of the impacts caused by garbage on public health and the representations that carry the garbage theme, adding facts and knowledge about the historicity of Rio de Janeiro. Therefore, it proposed to analyze the documents published by the media of the time, in order to translate a reflexive view of the primary source of information, elucidating the experience of the time.

METHODOLOGY

This research was conducted by the theoretical and methodological contribution of microhistory, replacing the analysis of extensive chronological clippings by a reduction of the scale of observation of the trajectories of the subjects involved with waste in different historical circumstances and social spaces, contextualizing the different moments experienced in society related to waste health and public health.

The selected historical sources were periodicals published in Rio de Janeiro, in the period from 1826 to the present day, with the aim of covering the entire historical path related to the theme. These sources were obtained through an online investigation, in the National Digital Library Brazil, in the collection of the Digital Hemeroteca, where digitized national periodicals were found, such as newspapers, magazines, yearbooks, bulletins and

serial publications. 148 news items related to "urban waste" and "hospital waste" were found in the period from 1826 to 2020.

The analysis procedures were based on the theoretical concepts of Roger Chartier, as it allowed strategies to understand cultural practices and representational struggles, since this investigation brought the representation of garbage, the cultural history of conflicts related to disease epidemics and the stigmatized view of different social groups related to waste.

All the textual content of the reports was previously analyzed with the combination of manual and automated techniques, using Bardin's method of content analysis, with the application of categorical-thematic and lexical techniques, with the support of the IRaMuTeQ software (Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires), which was chosen due to the recognition of the efficacy of its results, combined with the scientific rigor of the researchers (Souza, et al. 2018). IRaMuTeQ (Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires) is a free software, with statistical rigor, which enables several types of simple textual analysis, such as word frequency calculation, to multivariate analyses, such as descending hierarchical classification (DHC) that enables the retrieval of text segments associated with statistically significant word classes, and similitude analyses that identify the competitions between words and their connections, organizing vocabulary in an understandable and clearly visible way, through a word cloud or graphs (Camargo, 2013).

The material was organized for content analysis according to Bardin (2011), structured in three phases: 1) pre-analysis; 2) exploration of the material, categorization or coding; and 3) treatment of results, inferences and interpretation (Bardin, 2011). The IRaMuTeQ software was also used as a support tool to complement the analysis of the meanings of the textual content produced by the reports.

Each report was identified by a command line and the variables analyzed. The command line is formed by four (four) asterisks followed by the identification of the report, right after the identification of the variables analyzed, as can be seen in table no. 01:

Table nº 01: Command line for analysis of the corpus in Iramuteq.

*Report No. *Jornal_ou_revista *tema_X *ano_X

Source. Prepared by the author.

The second corpus was formed by the set of text segments fragmented by the software of the total corpus to be analyzed. These text segments contributed to the formation of the thematic categories.

Subsequently, according to the second stage proposed by Bardin, after the CHD, the thematic grouping was organized by bringing together the terms that appeared in the reports, accounted for and grouped into categories. With the results in a spreadsheet, hierarchical graphs were generated to visualize the trends and elements of the representations in the analyzed period.

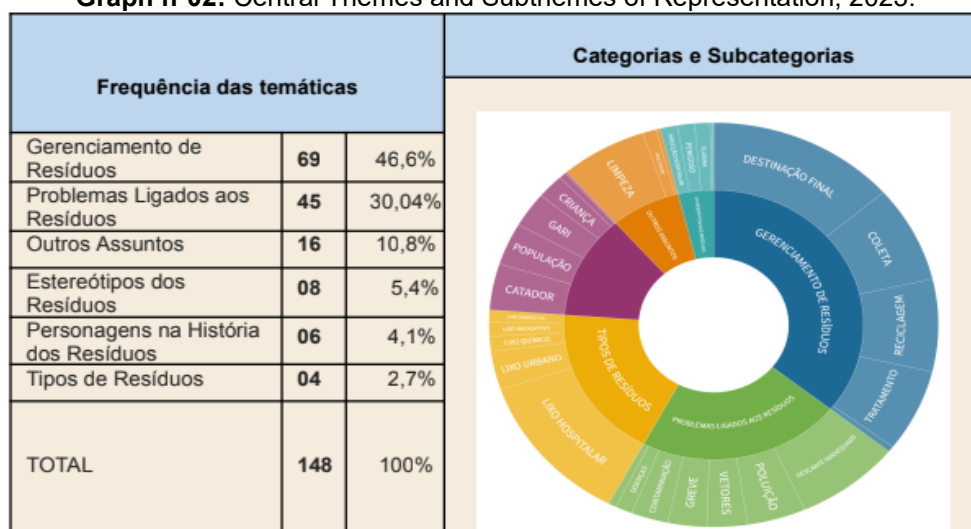
The third phase of the content analysis process, classified as treatment and interpretation of the results, was carried out seeking the meaning of reflective and critical analysis, capturing the contents contained in all the collected material, relating the theories already consolidated and the established relationships.

RESULTS AND DISCUSSION

The 148 reports were submitted to CHD and 1149 Text Segments emerged from the total of 143 STs referring to the reports, which represents a retention of 78.54% of the textual material according to the parameters required for this analysis (Camargo; Justo, 2013). The segments are cutouts that the software separates based on the root and co-occurrence of the words. During the processing, the corpus contemplated the structures of representation described here. Subsequently, these findings were presented and justified according to the adopted framework.

In the analyses produced, some structures were identified that had important representativeness in the contextualization of cultural historical production. These structures were organized into central themes formed from representative units that will be discussed. They are: Types of Waste; Waste Management; Problems related to waste; Stereotypes, prejudices and stigmas associated with waste; Characters associated with waste; Other issues also identified related to waste. The graph below represents these central themes and the pertinent subthemes found.

Graph nº02: Central Themes and Subthemes of Representation, 2023.



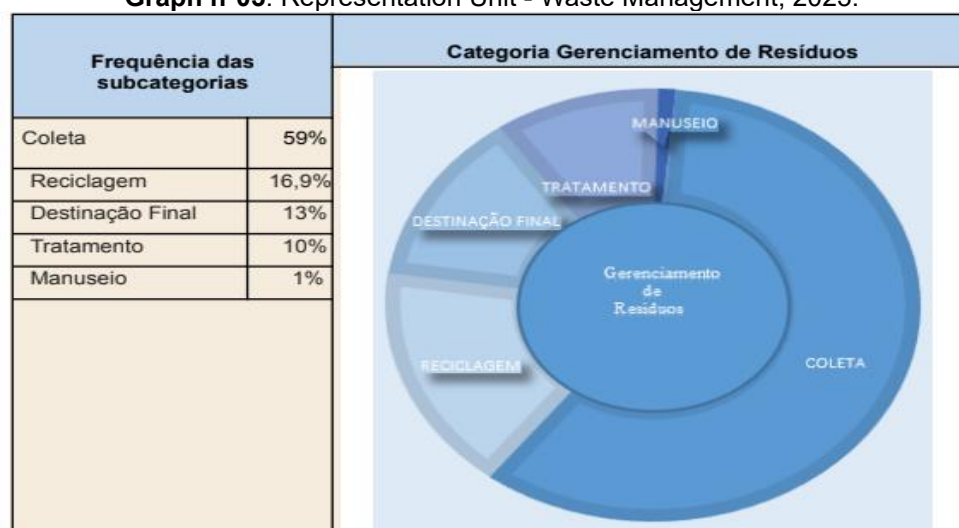
Source. Data from the Survey (2023), analyzed with the help of the Iramuteq software.

The "Waste Management" category had greater representation in the research carried out, demonstrating that managing waste is a subject that runs through history. In addition to urban and domestic waste, we started to produce chemical, radioactive and hospital waste from an industrialized and medicalized society. This change in consumption practices resulting from the industrialization process brings the representation of the political dimension, embedding a new material reality, which represented the power of developed societies, without the need for devices that demonstrate its power. This idea can be reiterated through Chartier's ideas, where he states that representation is fundamental to generate social hierarchy, and that each social condition in a legally differentiated society is seen through ways of being, acting, speaking and displaying identity, expressing power without the need to present the use of force.

With the change in the ways of producing waste, both in quantity and characterization, it was necessary to change the way of handling it from handling, collection, treatment, final disposal and recycling. Changes in practices were necessary that had consequences for the environment and society as a whole. Handling began to require the use of protective equipment. In addition to domestic and urban collection, there was the collection of the category of hospital waste and later the selective collection and separation of waste categories. The predominant treatment has always been incineration, after the use of compaction and autoclaving. The final destination, which was in the open for many years, began to be destined to the controlled landfill, sanitary landfills and later to recycling, reuse

and industrialization plants. It is important to emphasize that waste management has not happened in a linear way throughout history.

Graph nº03: Representation Unit - Waste Management, 2023.



Source. Data from the Survey (2023), analyzed with the help of the Iramuteq software.

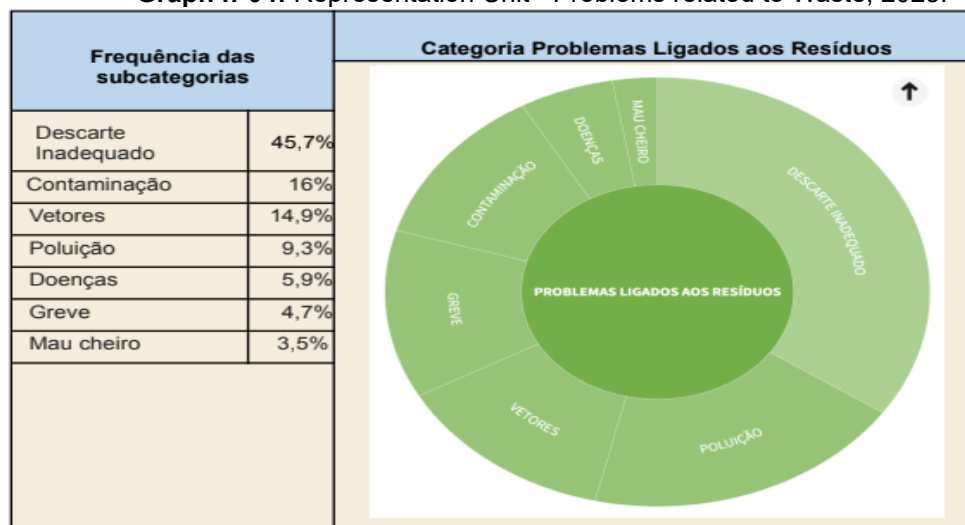
The evolution of the ways of managing waste has not kept up with the production in quantity and diversity of waste, generating several problems that have had repercussions on society and the environment. The problems related to waste run throughout history, starting with the improper disposal that permeates all discussions, because from this practice, new practices were generated. And making an analogy to Roger Chartier's thought, one force appears to disappear the other force, it is so with practices, which needs to be replaced to lose its force, lose its meaning through new behaviors practiced that will consolidate and become a new force that is believed and incorporated in the concept of representation.

Improper disposal led to problems such as bad odor, proliferation of vectors, especially rodents, mosquitoes, flies and cockroaches, contamination and exposure to the risk of infectious and contagious and respiratory diseases. In addition, the strikes carried out by street sweepers intermittently throughout history, in search of demands for better wages and unhealthy pay, further aggravated the situation experienced.

Another extremely important problem is the pollution that has been causing serious consequences in the environment, in the waters of groundwater, rivers, seas and especially Guanabara Bay, which has affected marine life, fishing, beaches, consequently public health and the economy. In addition to soil pollution that affects agriculture and air pollution, which releases harmful gases responsible for the greenhouse effect and global warming.

The creation of regulations, fines and tariffs emerged to discipline the practice, therefore, they influenced the representations of what we have today, a society disciplined by punishment and penalties in various fields, without despising the camouflaged intentions of a capitalist society. All these issues are included in the representation unit "Problems related to waste", shown in graph nº04:

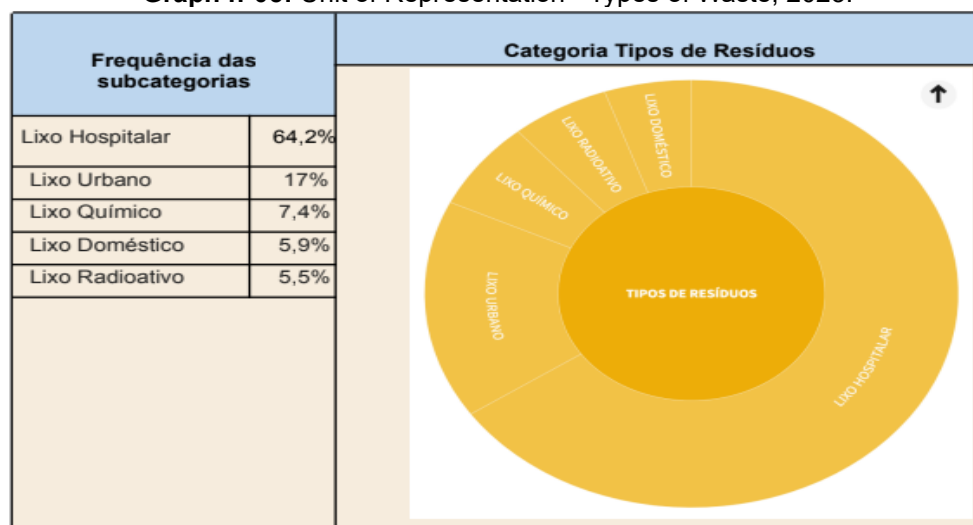
Graph nº04: Representation Unit - Problems related to Waste, 2023.



Source. Data from the Survey (2023), analyzed with the help of the Iramuteq software.

One of the highlighted units of representation was the "Types of Waste" produced, which had their transition from the moment we went from a nomadic civilization to an industrial civilization, and if previously we basically produced waste from our food that was easily biodegradable, we moved to an industrialized consumption profile, consequently increasing the production of waste by society, as well as the production of new types of non-biodegradable waste, generating accumulation in the environment and the consequences arising from the new practices. For demonstration, graph nº05 below shows the results found by the software after analyzing the reports:

Graph nº05: Unit of Representation - Types of Waste, 2023.



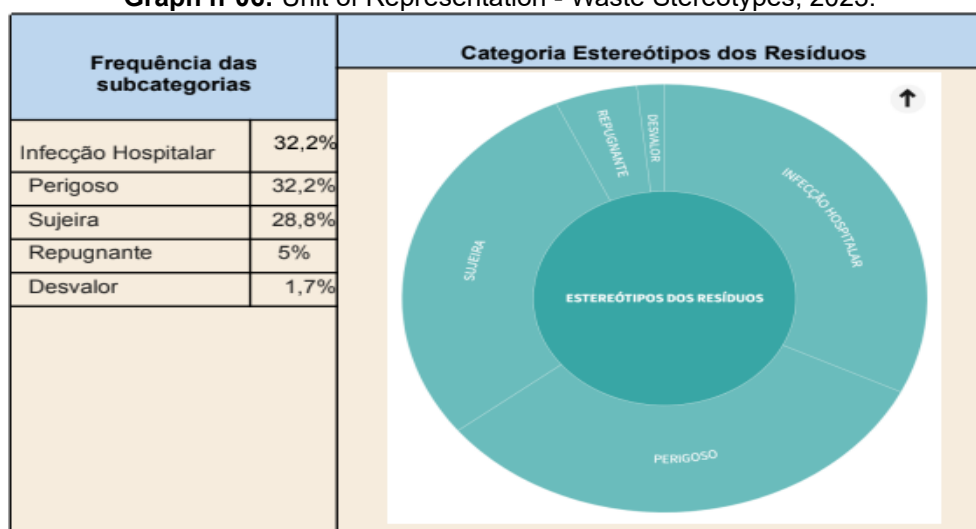
Source. Data from the Survey (2023), analyzed with the help of the Iramuteq software.

An important representative structure identified was the stereotypes, stigmas and prejudices related to waste, mainly associated with waste from health services, which is believed to be related to hospital infection, although there are no studies that effectively prove this relationship. Since antiquity, garbage has always been related to worthlessness, dirt, danger and repugnance, and the practices related to waste were a function of slaves, prostitutes, beggars, and the practice of these services continued to be entrusted to the socially inferior in society, sustaining the stereotypes related to the characters who take care of the waste.

Chartier clarifies that there is a strong relationship between stereotype and representation, since the stereotype is a fundamental modality of symbolic violence, as it imposes as natural, as trans-historical, a constructed identity alien to the will of the experienced, which reiterates the stigmatized attribution to collectors, street sweepers, collectors and extends nowadays to the professionals who take care of cleaning.

Stereotypes are preconceived, standardized images, loaded with stigmatizing elements, which mutilate the identity of the human being, being a form of violence that leads to conflicts. Chartier states that the stereotype ceases to see the individual in his plurality, imposing on him a single identity that determines a social domination over a dominated individual, with an immovable and perennial essence. This unit of representation comprised "Waste Stereotypes" is shown in graph nº 06:

Graph nº06: Unit of Representation - Waste Stereotypes, 2023.



Source. Data from the Survey (2023), analyzed with the help of the Iramuteq software.

The waste had some relevant characters, initially the "tigers" who had the function of carrying the garbage from the houses to dump in the sea or other places determined at the time, later the Garis and the collectors. The greatest relevance is given to the category of waste pickers, they play an important role in selective collection, segregating waste for recycling, including having great advancement, since today it is part of the category of occupations, classified as "Waste pickers of recyclable materials" admittedly. This fact has demonstrated how a practice can modify its representation throughout history, and despite the important functions developed by them, stigmas, prejudices and stereotypes still exist today, even with some remarkable evolutions. Roger Chartier elucidates that non-literate individuals can participate in literate culture through orality that produces written content and other different cultural practices of collective reading.

The National Movement of Waste Pickers (MNCR) through the National Association of Waste Pickers had important representation, because through forums and claims they achieved the recognition of the practice of waste pickers as a professional category, which has been modifying and replacing society's view of these actors who are so important in the process of selective waste collection.

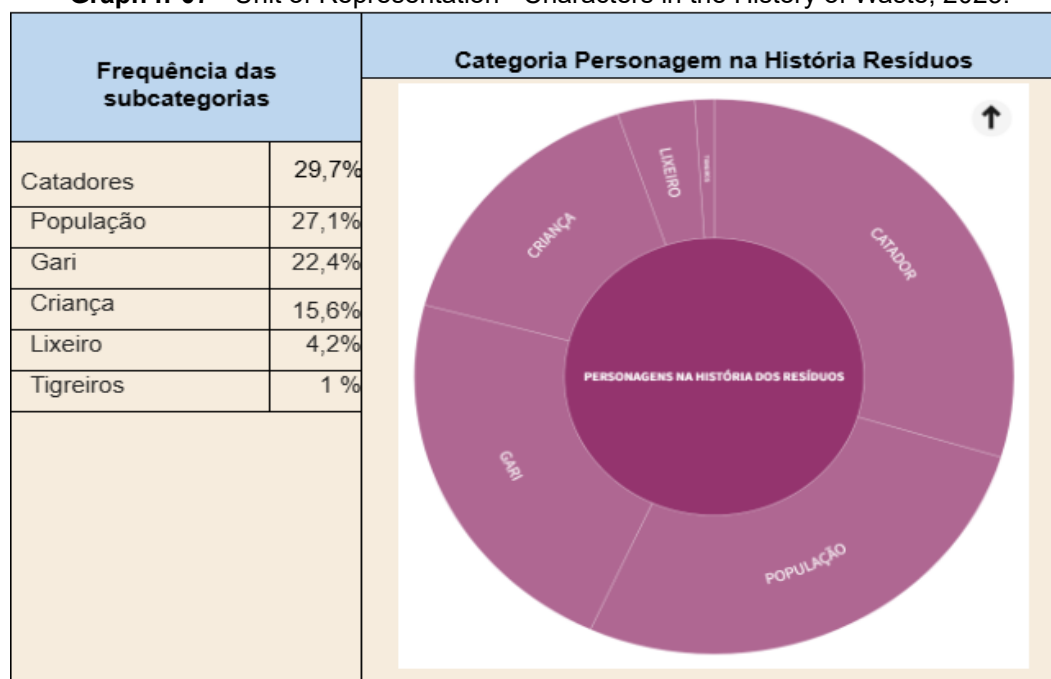
To ratify the transition of a representation, making an analogy to the collectors, Barros (2005) exemplifies the figure of the beggar who, in medieval society, had a cultural representation benefited by serving as an "instrument of salvation for the rich", through whom they could exercise charity to pay for their sins, and later came to have a cultural representation of the unemployed and a threat to society, being associated with the

outcasts and criminals, but commonly as a vagabond, and no longer as a being deserving of charity.

The figure of the child and child labor had a high representation in the study, as they accompanied their parents in the function of scavenging, contributing to the generation of family income, reflecting the stigmas and prejudices about these children who often moved away from school activities to escape this confrontation, which generated several discussions and actions in the fight against child labor.

And finally, the high representativeness of the population, which had and has a great influence on practices related to waste. Over the years, they have been modifying their consumption, their disposal, their ways of living and coexisting, which have generated changes brought about by their own practices, and the need to modify practices to try to reverse what has been caused by ourselves. These relevant characters in the history of waste practices and representation are highlighted in graph nº 07:

Graph nº07 - Unit of Representation - Characters in the History of Waste, 2023.

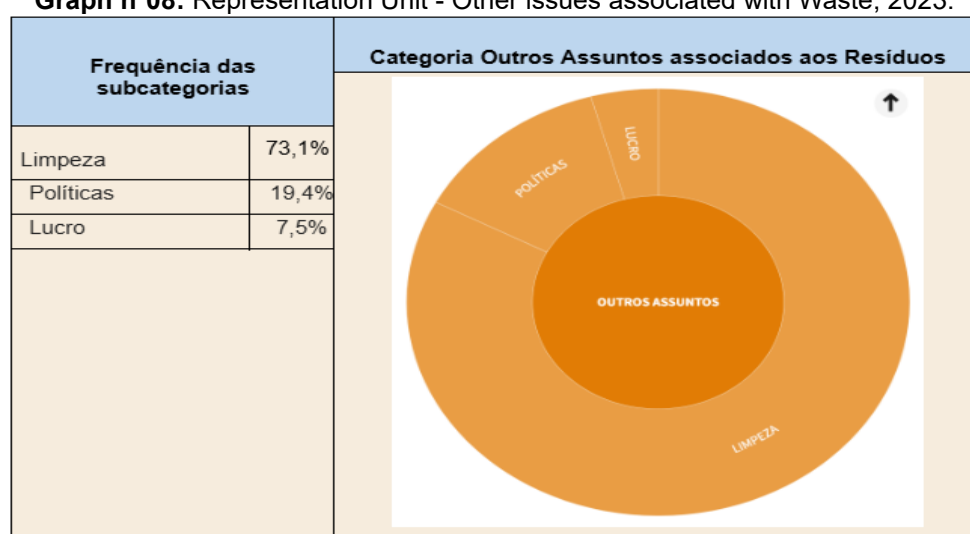


Source. Data from the Survey (2023), analyzed with the help of the Iramuteq software.

Some other structures of representations were identified, among them urban cleaning, with a focus on cleaning regulations, deaths, companies and tariffs. Public and environmental policies, which had important events and documents with important representation, generating changes in practices and even in symbolic value. The creation of the Department of Urban Cleaning (DLU) organized the processes related to cleaning and

waste management. The Federal Constitution with actions in defense of the environment. The creation of Working Groups (WG) and the master plan. The National Solid Waste Policy (PNRS) has changed the way waste is managed, generating cleaner production, with effects on nature conservation. Another point was the implementation of reverse logistics, which is important for the prevention of improper disposal in the environment. And the profits generated from waste both for the generation of employment and income and for increasing the production of industries.

Graph nº08: Representation Unit - Other issues associated with Waste, 2023.



Source. Data from the Survey (2023), analyzed with the help of the Iramuteq software.

The representations described here have been constructed throughout history, unveiling social actors who established practices during the historical course, as well as mechanisms and tools constructed socially, culturally from perceptions of reality, which allowed the establishment of the representativeness of each theme as truth.

Regardless of the media analyzed here, the non-verbal elements that participated in the production of meaning and written representations were considered, reiterating that new readers generate new texts, with new analyses of meanings and senses from the analysis of different forms of discourse production, intertextualizing and reproducing with originality new perceptions of meaning.

Understanding the context and cultural practices involved in waste management allows us to understand the path taken for the formation of social representations, unveiling the natural plurality that permeates the relationships and how media narratives were transmitted, although objective, are subject to the subjectivities inherent to the discourse and compete for representation, and are often produced in the heat of events.

FINAL CONSIDERATIONS

Garbage is, without a doubt, one of the biggest public health problems and its management directly interferes with the determinant conditions of health, since it involves different factors as seen in the study, related to the risks of contamination and diseases, structural and economic problems related to collection, treatment and final disposal, social problems that involve the exposure of human actors at degrading levels, environmental problems that caused the panorama of environmental pollution that we experience today.

With the historical evolution and the confluence of the representation of garbage and its valorization, a set of assumptions has been built and has been modifying the social representation of the actors involved with waste. The people involved with the process of segregation, recycling, reuse, industrialization transform practices and social representation. Thus, it is relevant to recognize the importance of each citizen of society, whether in the public or private space, leadership or not, at home or in the community, in a direct relationship with their practices and the development of socio-environmental relations that put public health at risk.

This study sought to know the trajectory of waste in the city of Rio de Janeiro, the evolution of practices and representations over the years and today, which impact the environment and public health. Despite the need for actions that involve large sectors of society in the reformulation of the processes of production, consumption and disposal of solid waste, it is important to change the paradigm in individual practices regarding the waste produced by individuals every day.

Despite the improvement in waste collection services in Rio de Janeiro and the cleanliness of the city, there is a long way to go to improve the rates of adequate final disposal of waste, reuse, recycling and industrialization initiatives. To improve the co-participation of society in the management of waste, which demands progress from the public authorities, but is committed to the segregation of recyclable materials, to the proper disposal of the waste produced, to the reduction of waste, and excess consumption, including by companies that must develop sustainable production techniques. Therefore, the role of society is to redefine garbage, changes in practices, since knowing various forms of industrialization, recycling and reuse, allows us to generate profits, reduce the impacts on public health and the environment arising from improper disposal and unnecessary treatments.

REFERENCES

1. Albuquerque, F. (2012, maio 9). Sustentabilidade: quase metade do lixo coletado no país vai para locais inadequados. *Jornal do Commercio* (RJ), ed. 00149, p. A-20. Hemeroteca Digital Brasileira.
2. Andrade, F., & Francalacci, R. (2007, julho 20–22). Sobrevivência que vem do lixo. *Jornal do Commercio*, ed. 00201, p. B10. Hemeroteca Digital Brasileira.
3. Associação Brasileira de Empresas de Limpeza Pública e Resíduos Especiais. (2020). Panorama dos resíduos sólidos no Brasil. <https://abrelpe.org.br/panorama-2020/>
4. Bardin, L. (2011). *Análise de conteúdo*. São Paulo: Edições 70.
5. Barros, J. D'A. (2005). A história cultural e a contribuição de Roger Chartier. *Diálogos*, 9(1), 125–141.
6. Barros, T. (1972). O lixo sem solução. *Jornal do Brasil*, ed. 00031, p. 80. Hemeroteca Digital Brasileira.
7. Bittencourt, L. (1910). Pela hygiene da cidade. *A Imprensa*, ed. 00784, p. 1. Hemeroteca Digital Brasileira.
8. Blanco, A. (1978). A peste. *O Pasquim*, ed. 00468, p. 26. Hemeroteca Digital Brasileira.
9. Borges, C. (1852, maio 11). Relatório da ILLM^a câmara. Os abandonados pela cidade - limpeza das ruas - comissão de salubridade - navios ancorados. *Diário do Rio de Janeiro* (RJ), ed. 08985, p. 2. Hemeroteca Digital Brasileira.
10. Camargo, B. V., & Justo, A. M. (2013). IRAMUTEQ: um software gratuito para análise de dados textuais. *Temas em Psicologia*, 21(2).
11. Candido, J. (1956). A industrialização do lixo urbano para fins econômicos. *Correio da Manhã*, p. 8. Hemeroteca Digital Brasileira.
12. Carneiro, N. (1976). Nelson Carneiro sugere debate amplo sobre a água: resíduos. *Tribuna da Imprensa*, ed. 08192, p. 3. Hemeroteca Digital Brasileira.
13. Chartier, R. (1990). *A história cultural: entre práticas e representações*. Rio de Janeiro: Bertrand Brasil.
14. Chartier, R. (2002). *À beira da falésia: a história entre incertezas e inquietude* (P. C. Ramos, Trad.). Porto Alegre: Ed. Universidade/UFRGS.
15. Colapso do lixo. (1960). *Jornal do Brasil*, ed. 00004. Hemeroteca Digital Brasileira.
16. Conselho Nacional do Meio Ambiente. (2005). Resolução nº 358, de 29 de abril de 2005. *Diário Oficial da União*, Brasília, DF, 04 maio. Seção 1, n. 84, p. 63–65. <https://conama.mma.gov.br/>

17. 12000m³ de lixo diariamente. (1947). Jornal A Noite, ed. 12727, p. 20. Hemeroteca Digital Brasileira.
18. A briga pelo lixo urbano. (1975). Jornal do Brasil, ed. 00143, p. 12. Hemeroteca Digital Brasileira.
19. A defesa da classe na A. B. J. P. S. D. (1919, fev. 12). Quixote, ed. 00092, p. 13. Hemeroteca Digital Brasileira.
20. A epidemia – Instruções para Inglês Ver. (1889, mar. 16). Novidades (RJ), p. 2. Hemeroteca Digital Brasileira.
21. A incineração do lixo. (1945). Correio da Manhã, ed. 15440, p. 40. Hemeroteca Digital Brasileira.
22. A querela do lixo. (1976). Diário de Notícias, p. 4. Hemeroteca Digital Brasileira.
23. Aproveitamento do lixo. (1940). Correio da Manhã, ed. 13857, p. 27. Hemeroteca Digital Brasileira.
24. Aterros: a maior solução para o lixo. (1973). Jornal do Brasil, ed. 15881. Hemeroteca Digital Brasileira.
25. Auditoria contra poluição. (1991, nov. 5). Jornal do Brasil, ed. 00211, p. 3. Hemeroteca Digital Brasileira.
26. Agência Nacional de Vigilância Sanitária. (2018). Resolução RDC nº 222, de 28 de março de 2018. Diário Oficial da União, Brasília, DF, 29 de março. <https://www.gov.br/anvisa/222-de-marco-de-2018>
27. Coleta de 6 toneladas de lixo começará hoje. (1987, fev. 24). Jornal do Brasil, ed. 00320, p. 36. Hemeroteca Digital Brasileira. Acesso em jul. 2023.
28. Comlurb faz projeto para tratar lixo. (1988, abr. 15). Jornal do Commercio, ed. 00159, p. 14. Hemeroteca Digital Brasileira. Acesso em ago. 2023.
29. Conama estuda destino de lixo hospitalar. (2000). Jornal do Brasil, ed. 00181, p. 13. Hemeroteca Digital Brasileira. Acesso em ago. 2023.
30. Cuida-se de remodelar o serviço de limpeza da cidade. (1927). A Noite, ed. 05573, p. 9. Hemeroteca Digital Brasileira. Acesso em ago. 2023.
31. Cunha, A. R. (1992, maio 5). As soluções para o problema do lixo. Jornal do Brasil, ed. 00027, p. 2. Hemeroteca Digital Brasileira. Acesso em ago. 2023.
32. Descaso com o lixo hospitalar é nova ameaça. (1989, jul. 27). Jornal do Brasil, p. 14. Hemeroteca Digital Brasileira. Acesso em ago. 2023.

33. Eigenheer, E., & Zanon, U. (1989, jan. 16). O lixo que não faz mal. *Jornal do Brasil*, ed. 00281, p. 5. Hemeroteca Digital Brasileira. Acesso em set. 2023.
34. Filho, A. J. A. (2016). A pesquisa histórica: teoria, metodologia e historiografia. *História da Enfermagem: Revista Eletrônica*, 7(2).
35. Fiuza, G. (1991, set. 2). Lixo hospitalar. *Jornal do Brasil*, ed. 00147, p. 1. Hemeroteca Digital Brasileira. Acesso em set. 2023.
36. Gary, et al. (1889, ago. 12). Limpeza da cidade. *Novidades (RJ)*, ed. 00460, p. 1. Hemeroteca Digital Brasileira. Acesso em ago. 2023.
37. Governo quer reduzir o risco de contaminação com rejeitos. (2003). *Jornal do Commercio*, ed. 0129, p. 34. Hemeroteca Digital Brasileira. Acesso em ago. 2023.
38. Graves doenças ameaçam toda população carioca. (1987). *Jornal dos Sports*, ed. 17871, p. 16. Hemeroteca Digital Brasileira. Acesso em ago. 2023.
39. Greve acaba e lixo começa a ser recolhido. (1987, fev. 25). *Jornal do Brasil*, p. 16. Hemeroteca Digital Brasileira. Acesso em ago. 2023.
40. Grupo técnico estudará coleta de lixo hospitalar. (2007, ago. 29). *Jornal do Commercio*, ed. 00229, p. A-15. Hemeroteca Digital Brasileira. Acesso em set. 2023.
41. GT para infecção hospitalar. (1988, dez. 14). *Jornal do Commercio*, ed. 00061, p. 6. Hemeroteca Digital Brasileira. Acesso em ago. 2023.
42. Humberto, C., Leitão, A. P., & Barros, T. (2012, fev. 6). O lixo no Brasil. *Jornal do Commercio*, p. A7. Hemeroteca Digital Brasileira. Acesso em ago. 2023.
43. Klintowitz, J. (1969). Pelo lixo conhece-se o século. *Tribuna da Imprensa*, p. 9. Hemeroteca Digital Brasileira. Acesso em jul. 2023.
44. KOMPAC. (1985, 28 nov). Engenharia cresce de olho no mercado de lixo. *Jornal do Brasil*, p. 24. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: ago 2023.
45. Leite, L. E. H. B. C. (1990, 28 ago). A poluição dos ricos. *Jornal do Brasil*, p. 11. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: set 2023.
46. Leite, L. (1954). Lixo uma fonte de riqueza. *Correio da Manhã*, p. 3. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: jul. 2023.
47. Limpeza pública. (1939). *Brasil Revista*, p. 159. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: set 2023.
48. Lixo também tem história. (1969, ed. 14312). *Diário de Notícias*, p. 8. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: set. 2023.

49. Lopes, T. (1987, 1 dez). A doença no lixo: Um desrespeito à lei e à saúde da cidade: Não tratam nem sabem para onde vai o lixo hospitalar. *Jornal do Brasil*, p. 4. Hemeroteca Digital. Acesso em: set. 2023.
50. Maciel, M. J. D., & Hanna, L. M. O. (2024). Gerenciamento ambiental: Desafios e soluções na segregação de resíduos de serviço de saúde em Belém. *Revista Aracê*, 6(3), 7710-7722.
51. Monteiro, M. Q. (1987). Poluição. *Jornal do Brasil*, ed. 00251, p. 13. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: ago. 2023.
52. Nicolella, P. (2010, 16 fev). A reciclagem às margens da sociedade e da saúde humana: Pesquisa revela a precariedade das condições de trabalho de catadores. *Jornal do Brasil* (RJ), ed. 00314, p. A6. Hemeroteca Digital. Acesso em: set. 2023.
53. Novaes, W. (1991, 1 jul). Lixo, um debate maior. *Jornal do Brasil*, ed. 00084, p. 5. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: set 2023.
54. Lei, A. (2018, 17 set). O drama do lixo: Brasileiro já produz 383 quilos por ano. Série especial “Os Caminhos do Lixo”. Disponível em: <https://leia.org.br/>. Acesso em: fev. 2023.
55. O lixo ia tomando conta da cidade. (1941, 19 abr). *O Imparcial*, ed. 01808, p. 5. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em ago 2023.
56. O projeto obriga o estado a se ocupar do lixo hospitalar. (2001). *Tribuna de Imprensa*, p. 11. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: ago 2023.
57. O Rio defende seu meio ambiente. (1990). *Jornal do Brasil*, ed. 00241, p. 32. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: ago. 2023.
58. Oliveira, W. E. (1975). Lixo urbano, um perigo ao homem e ao meio ambiente. *Jornal do Commercio*, ed. 00061, p. 11. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: jul. 2023.
59. Pinto, M. da S. (1976). Economia de rejeitos. *Jornal do Commercio* (RJ), p. 6. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: ago. 2023.
60. Ramalho, [Autor incompleto]. (1999). Impactos ambientais provocados por lixões: Lixão de Bangu. *Anais da Academia Brasileira de Ciências*, ed. 00001, p. 141. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: set. 2023.
61. Rejeitos urbanos: O lixo. (1976). *Jornal do Commercio* (RJ), p. 6. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: ago. 2023.

62. Revel, J. (2010). Micro-história, macro-história: O que as variações de escala ajudam a pensar em um mundo globalizado. *Revista Brasileira de Educação*, 15(45). Disponível em: <http://www.scielo.br/pdf/>. Acesso em: set. 2023.
63. Ribeyrolles. (1947, ed. 12727). A limpeza urbana no Rio de Janeiro. *Jornal A Noite*, p. 20. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: ago 2023.
64. Sales, F. (2009, 1 maio). Adequação do Rio expõe crise da saúde. *Jornal do Brasil*, ed. 00023, p. A4. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: ago 2023.
65. Salvação pelos 3 R's. (2003, 5 jun). *Jornal do Brasil (RJ)*, ed. 00058, p. 19. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: ago 2023.
66. Saneamento ainda mostra quadro de desigualdades. (2002, 28 mar). *Jornal do Commercio*, ed. 00145, p. A8. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: ago 2023.
67. Saneamento. Saúde Pública. (1889, 10 ago). *Novidades (RJ)*, ed. 00459, p. 1. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: ago 2023.
68. Santos, O. (1976, ed. 00356). Carioca revela total desleixo com lixo urbano. *O Pasquim*, p. 30. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: jul. 2023.
69. Schneider, V. E., & Stedile, N. L. R. (2015). Resíduos de serviços de saúde: Um olhar interdisciplinar sobre o fenômeno (3ª ed., ampl. e atual). Caxias do Sul, Educs.
70. Souza, M. A. R. de, et al. (2018). O uso do software IRAMUTEQ na análise de dados em pesquisas qualitativas. *Revista da Escola de Enfermagem da USP*, 52, 1-7.
71. Valle, S. (1991, 21 out). Lixo hospitalar. *Jornal do Brasil*, ed. 00196A, p. 2. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: ago 2023.
72. Velloso, M. P. (2008). Os restos na história: Percepções sobre resíduos. *Ciência & Saúde Coletiva*.
73. Vigilância sanitária anota irregularidades. (1999). *Tribuna da Imprensa*, ed. 15221, p. 11. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: set 2023.
74. West, R. F. (1960). Lixo não é lixo. *O Observador Econômico e Financeiro*, p. 47. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: jul. 2023.

75. Z. S. (1848). Publicações a pedido: Açúcar e polícia. Correio Mercantil e Instructivo, Político, Universal, ed. 00064, p. 2. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: ago. 2023.
76. Zanon, U. (1992). Lixo produzido por hospitais provoca medo. Jornal do Commercio, p. 20. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: ago. 2023.
77. Zanon, U. (1991, 20 jan). Um lixo doente. Jornal do Brasil. Hemeroteca Digital Brasileira. Disponível em: Hemeroteca Digital. Acesso em: ago. 2023.