

Weaving the network of cultural and science capitals in science museums in Rio de Janeiro (Brazil)

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ABSTRACT: Museums are places for potentially promoting emotions and creating memories from the experiences they provide. In this regard, this article investigates why people visit science museums, intending to unveil the public's diversity and facilitate the understanding of their interests and motivations for this cultural practice. Data were collected by means of a printed and self-applied questionnaire filled out by adult visitors over 30 years old during visits to five science museums located in the metropolitan region of Rio de Janeiro, Brazil. Based on the concepts of cultural capital, science, interest and motivation, the applied analytical approach was qualitative and quantitative aided by the Collective Subject Discourse method. The findings bring contributions to the field of public and cultural leisure studies. Processes of acquiring, expanding and transmitting these forms of capital to children, family, and friends emerge from the discourses during interaction with exhibitions and educational and dissemination activities offered by science museums. This understanding can help to develop museum strategies to attract and retain their spontaneous visiting public.

KEYWORDS: Science Museums. Cultural Capital. Science Capital. Cultural Leisure. Interest in Science.

RESUMO: Museus são locais com potencial de promoção de emoções e criação de lembranças a partir das experiências que eles proporcionam. Nesse sentido, este artigo busca saber por que as pessoas visitam museus de ciência. O objetivo da pesquisa é conhecer a diversidade do público e facilitar a compreensão de seus interesses e motivações para essa prática cultural. A coleta de dados se deu por meio de um questionário impresso e autoaplicado, preenchido por visitantes adultos, acima de trinta anos, no decorrer das visitas a cinco museus de ciência, situados na região metropolitana do Rio de Janeiro. Com base nos conceitos de capital cultural, de ciência, interesse e motivação, a abordagem analítica aplicada foi qualiquantitativa, com auxílio do método do discurso do sujeito coletivo. Os achados trazem contribuições para o campo de estudos de público e lazer cultural. Emergem dos discursos o processo de aquisição, ampliação e transmissão dessas formas de capital para filhos, família e amigos, durante a interação com exposições e atividades educacionais e de divulgação oferecidas pelos museus de ciência. Essa compreensão pode contribuir para a elaboração de estratégias para atrair, reter e fidelizar seu público de visitação espontânea.

PALAVRAS-CHAVE: Museus de Ciência. Capital Cultural. Capital de Ciência. Lazer Cultural. Interesse em Ciência.

INTRODUCTION

1. See Massarani *et al.* (2022) and Falk (2021).

2. See Lefèvre (2017).

The integration in social cultural life in the cities, whether small, medium or large sized, implies in practices of education and cultural character. This way, cultural leisure has a crucial role in the construction of museum visiting habit, developing the museum-leisure-tourism triad. It is, more and more, necessary to go beyond the roles of traditional museums and their social role. Museums can be considered places of promotion of emotions and creation of memories from the several available offered activities, such as: exhibits, collections, workshops, planetary sessions, speeches, among others. The museum experience is permeated by emotions, in a complex, non linear process, which is fed back from the interaction with the space. This experience and the feelings it creates guide the visitor through the museum and is responsible for recent and long term memories that might imply in new visits. The emotions are present within each person, created by the surroundings, by the people and the interactions. They permeate the actions, motivate the choices, and create sensory experiences; a lot of them, unforgettable. These experiences are absolutely personal, even the learning processes that might occur are individual, that is, two different visitors does not live the same experiences that lead to knowledge and emotions, creating different memories. The study of emotion in the museums has motivated several researches that defend the better understanding of the role they occupy in the free choice learning process.¹

The present article is a selection of the research “Lembranças, memórias, presenças que marcam. O que forma o público de um museu de ciência?”, which data collection occurred on the second semester of 2019, in five museums, located in the metropolitan area of Rio de Janeiro. In this text, we analyze the spontaneous audience who visit these institutions, by means of a questionnaire with 22 closed-ended questions and one open-ended: “why do you visit science museums?”. We will present the sociodemographic, cultural and economic profile of the visitors of science museum or science and technology (ciência e tecnologia – C&T) events, cultural practice, level of interest associated to culture and the reasons alleged to visit this kind of museum, characterizing the research as quali-quantitative, exploratory-descriptive. Other than these data, we analyze the answers to the open-ended question, from the Discourse of the Collective Subject.²

The purpose of this study is to acknowledge the diversity of public participating in the research, adults over 30 years old, willing to learn their interests and motivations for visiting science and technology museums. We would expect, with our findings, to bring in inputs that may contribute to the planning of strategies to retain the public attention and to ensure forms to attract new visitors.

3. See Cazelli *et al.* (2022) and Dahmouche *et al.* (2023).

4. See Falk (2021).

5. See Lopes (2014).

6. See Gomes (2004, p. 125).

7. See Bourdieu (2001, p. 76).

8. See Cazelli *et al.* (2022).

9. See Bourdieu (2001).

What does the public who spontaneously visit the science and technology museums search for?

A museum is a place for encounters, sociability, as well as a space for enjoyment, leisure, recreation, pleasure, entertainment and learning; all of that, permeated by the promotion of emotions and the creation of memories throughout expository report, available collection and other museum activities. The practice of visiting museums is a collective leisure activity.³

In accordance with Falk,⁴ the museums are good places for satisfying the needs of leisure and personal interests in art, history or science, that is, spaces of leisure and culture. Furthermore, leisure is a human need, inserted in people's routine, directly related with culture and playfulness. It is because of museums that visitors share a social life and take part in the space of the museum.⁵

Cultural pleasure can be seen as an opportunity to improve the challenging dialog between museum and society. The understanding of leisure as a "dimension of culture built by means of a playful living of cultural expressions in a time/space conquered by the subject or social group"⁶, it is necessary to establish relations between museums and/or cultural institutions and the actors from the fabric of society, together with the interface between productive work and free time.

Visiting a museum is understood as a qualified leisure moment that is, related to the acquisition, accumulation or improvement of cultural capital. For the French psychologist Pierre Bourdieu, the concept of cultural capital is entangled in the family mesh and its accumulation "[...]starts in the origin, without delay, without waste of time, by the family members gifted with strong cultural capital"⁷. This time of accumulation encompasses, basically, all the socialization process, which means a project for over the life, present in opportunities of cultural leisure practices.⁸

In accordance with Bourdieu,⁹ the concept of cultural capital comes from the necessity to understand the inequalities of academic process of individuals coming from different social groups. The education sociology is characterized, in the justification of social inequalities, basically, by the decrease of the economic factor weight, in view of the cultural factor weight. In his understanding, the cultural capital might exist under three forms: in embedded, in objectified and in institutionalized states.

The tastes, the greater or smaller domain of the cultured language and the information on the school world are the main constituent elements of the incorporated cultural capital. The accumulation of this form of capital demands that its incorporation is made using inculcation and assimilation works, which require time and should be performed in person by the individual, becoming an

inseparable part of the person, the *habitus*. This cultural capital constitutes, therefore, the family *background* component, acting in the most distinguishing way, in the definition of school future for the descending generations. Cultural references, knowledge considered proper and legitimate and the greater or smaller domain of cultured language brought from home (family heritage), facilitate the learning of school contents and codes, working as a bridge between the family world and the school world. These and other practices enjoyed as a group provide the acquisition of provisions that enable the composition of *habitus*, strengthening the incorporated cultural capital.¹⁰

The cultural assets, such as sculptures, paintings, books and others, constitute the cultural capital of objectified state. The acquisition of economic assets in their materiality demands only economic capital, which is evidenced in the purchase of art works, for example. However, in order to symbolic appropriate from these assets, it is necessary to have the instruments of this process and the necessary codes to crack them, that is, it is necessary to have the cultural capital, in the incorporate state.

In the institutionalized state, the cultural capital basically occurs over school degrees. The investment level in school career is related to the probable return that can be obtained with the value of the diploma, notably in the work market. This return, that is, the value of the degree acquired can be high or low; the easier the access, the higher the tendency for its devaluation.

The science capital, also known as the scientific capital, can be defaulted as an expression of the cultural capital, manifested in the three forms discussed above. Bourdieu defends that “every scientific field is a force field and a fight field to preserve or transform this force field”¹¹. Therefore, another way to conduct this distinction is to see it as a specific type of symbolic capital, based on knowledge and awareness actions, from their peers and/or competitors.

The concept of science capital based on this article was initially developed by Bourdieu and detailed by Archer *et al.*¹².

In the sociology of Bourdieu, any social field is a competition space structured around challenges and interests specific in the core of which the “agents” are distributed due to the volume and structure of capitals held by them and which constitute the action resources. The form of interest specific in the science field consists on the obligation of a particular thinking of science, thanks to the mobilization and resources to which Bourdieu has assigned the definition of “scientific capital”¹³.

Archer and collaborators, in a bus of articles, present a possibility of enlargement of Bordieu’s capital theory, specifically concerning the sciences, which

10. *Ibid.*

11. See Bourdieu (2004, p. 22-23).

12. See Archer *et al.* (2012, 2014, 2015).

13. See Catani *et al.* (2017, p. 68).

14. See Archer, Dewitt, Willis (2014, p. 5).

15. See Archer *et al.* (2015).

16. *Ibid.*

17. See Bourdieu (2015).

18. See Bennett *et al.* (2009).

was not deepened in the original thesis. It is not about a new type of science capital, but rather of “a conceptual device so as to group several types of economic, social and cultural capitals, which specifically relate to science”¹⁴.

The authors in question created an initial proposal to conceptualize and measure the science capital and, from then on, they developed the first version of a scale for the rate that measures this capital. The rate was proposed as a potential complement for qualitative research, without replacing it, broadening the capacity to evaluate standards in scale to compare with the perspective deepened by the qualitative approach studies.

Compared to the understanding of Bourdieu, the proposal of a science capital developed by Archer *et al.*¹⁵ is broader. This concept goes beyond the cultural capital concept and the science related knowledge, as well as the attitudes concerning it, also covers the social capital, behaviors and practices related to science. In the initial proposal of a theoretical science capital model, the authors combined the following: (i) scientific forms of cultural capital (scientific literacy, scientific abilities); (ii) behaviors and practices related to science (consumption of scientific media, visit to museums and science and technology centers); and (iii) forms of social capital related to science (for example, scientific knowledge from the parents and conversations over science with family, teachers, friends and others), exemplified below.

In accordance with Archer *et al.*¹⁶, a vital, and even essential, subcomponent which composes the science capital rate is the scientific literacy, something broad that includes notions of scientific knowledge, skills, understanding on how science works and the ability to use and apply these capacities in the routine, with social and personal benefits. However, this capital goes beyond scientific literacy. Another aspect is embedded in the composition of the science capital rate includes items that aim to measure provisions and scientific preferences, such as the emphasis of science in society, that is, the importance of knowing about science in the daily life. The inclusion of this dimension is justified by the quantitative measure of the cultural capital proposed by Bourdieu,¹⁷ combined with the critique made by Bennett *et al.*¹⁸, which draws a parallel between the cultural capital of arts and science.

The connection with the labor market is also present in the average composition of science capital measure, by means of a specific component that aims to check how much a scientific qualification may help obtaining several kinds of jobs. This component explores what the authors consider a particular form of symbolic scientific cultural capital. They point out that the institutionalized cultural capital, which basically occurs under the scope of school titles, performs a key role in decision making on future educational paths and possible careers.

Another component regards the consumption of science by means of several media forms, related to scientific themes, such as: TV programs, movies,

books, magazines, newspapers and online contents. Studies indicate that the consumption of science fiction is a highly effective activity so as to promote the taste and abilities related to science.

The visit to science museum institutions (museums, zoos/aquariums etc.), community spaces (such as science clubs after school) and family daily contexts (like making experiments /using science kits at home; fixing/building things at home; take walks around nature; programming computers) are also part of the science capital rate. This inclusion is justified, once, these learning contexts may provide forms of science capital, as for example, the improved scientific literacy and/or dispositions acquired that provide them.

The interaction with exhibits and their devices shown in the museum environment was the object of a study concerning the role of parents in the development of interest in children and teenagers, performed by Zimmerman *et al.*¹⁹, as in the *Pacific Science Center*, in Seattle, with ethnical and linguistic different families. The authors combined empirical data from the research with three theoretical perspectives from psychological learning literature and non-formal education: (i) development of interest, (ii) role of the parents in supporting the learning outside the school and (iii) daily experience in science. The purpose was to analyze the parents' work in supporting, stimulating and expanding the interest of children. For so, an analytical model was developed from the existing literature, which helped investigating the data obtained on video registers of parents encouraging the interest of their children in science museums.

Such recordings show the families during the visit to the museum, with the purpose of elucidating how the parents use their speech and gestures to focus on children's interests, providing a longer involvement with science and mathematical contents. Besides that, this detailed recording methodology allowed to document the role of parents in the creation of a dialog, once this familiar conversation was considered learning means, as well as the result of learning.

The authors also highlight that the parents who visit museums in family are seen as partners to reach the educational goal of museums with the children, not merely a different public. The data of this research brought evidences that the parents know the interests of their children and adopt social nature practices to support them, as well as maintaining and broadening their initial curiosity all around the museum. Although we developed this research concerning about the visitors' memories, there is no measure that allows the quantification of science capital, it is evident in the speech, confirming the museum visiting in the construction of this capital, as we will further observe by means of speeches.

The contemporary museums, from the XXI century, go beyond the display of exhibitions; they are, above all, spaces for research and knowledge sharing. These places can also be environments that facilitate the relation between people and feelings of

20. See Mazzanti (2021).

21. *Ibid.*

well being due to the exchange of ideas. The educational activities in the museums are not a simple transfer of knowledge. They are a process of construction of an individual social identity in compliance with the personal learning style of each one, analyzed with the new stimulating languages that reach emotions, increasing well-being, promoting intercultural dialog and social cohesion. This way, the museums are seen as experiences, with the recognition that the best way to learn is to “learn by doing”, and that personally experiencing something brings long-lasting learning results.²⁰

The visitor is now the center of these contemporary museums, which focus was oriented to a “multitask visitor”, simultaneously immersed in the physical and digital dimensions. This new museum tendency is related to the immersive multimedia and multisensory spaces, which create a dialog between the exhibits and the visitors. This experience museum, “museum outside the box”, requires a multidisciplinary team, with several abilities. In these immersive spaces, the emotions become curiosity, interest and motivation triggers that might create relations and affect the duration of the visit. The emotional experience is a state of freedom. Thus, the more liberating the museum is the more stimulating and engaging it will be.²¹

THE *LOCUS* OF THE RESEARCH

As follows, we present a brief description of the institutions that worked as empirical field for the present study and which integrate the Observatório de Museus e Centros de Ciência e Tecnologia – OMCC&T. Their geographic arrangement is presented in Figure 1.

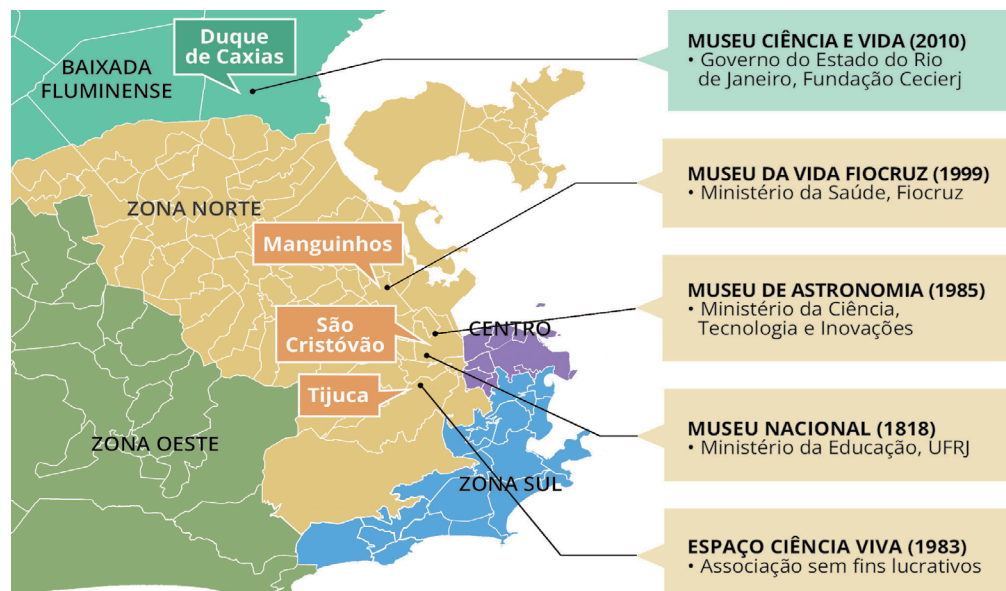


Figure 1 – Location of the participating museums, institution connection and year of creation (extracted from Google Maps).

Baixada Fluminense – Baixada Fluminense

Zona Norte – North Zone

Zona Oeste – West End

Centro – Downtown

Zona Sul – South Zone

Museu Ciência e Vida (2010) – State Government of Rio de Janeiro, Fundação Cecierj

Museu da Fiocruz (1999) – Ministry of Health, Fiocruz

Ministry of Astronomy (1985) – Ministry of Science, Technology and Innovations

Museu Nacional (1818) – Ministry of Education, UFRJ

Espaço Ciência Viva (1983) – Non-profit Foundation

Museu Nacional

Essential part of Brazilian history, it was created in 1818 by D. João VI, and is the first museum and oldest institution of scientific research of the country. In 1892, it has, as the main seat, the old residence of the imperial family, the São Cristóvão Palace. Besides that, the institution counts on two other seats, the Horto Botânico, which, just as the Palace, is located in Quinta da Boa Vista park, and the youngest one, the Campus de Pesquisa e Ensino, located in the surroundings of the park. The National Museum focuses its activities in the Imperial de São Cristóvão neighborhood, intermingling between the central and north areas of the city of Rio de Janeiro.

It is the Museu de História Natural e Ciências Antropológicas, which integrates, since 1946, the Universidade Federal do Rio de Janeiro (UFRJ). Its collection is composed, amongst other things, by items of Brazilian and foreign fauna and flora; fossils; minerals; indigenous artifacts and from other communities; archeological artifacts and photographic, audiovisual, bibliographic and documental collections. Its mission is to promote and popularize education, science and culture, with emphasis in natural and anthropological sciences, by means of teaching, research, extension, museum education, and preservation and communication actions of the museum assets.

On December 2nd, 2018, a major proportions fire hit its exhibits and most part of its labs and collections, which dramatically impacted its path. Since then, objects of the collection were rescued from the debris, the researches continue, and the Museu is alive in the routine of its labs, field activities that enhance its collections, exhibits and education projects that never ceased to perform.

The Palácio de São Cristóvão is now closed for reconstruction works, which will transform it into an area totally dedicated to exhibits and education activities. The estimate is that in 2026 the institution will partially open for public visitation, presenting new exhibits and education actions.

Museu Ciência e Vida

In activity since 2010, it is a project by Fundação Centro de Ciências e Educação Superior a Distância do Estado do Rio de Janeiro – Fundação CECIERJ, in partnership with Secretaria de Ciência e Tecnologia do Estado do Rio de Janeiro.

Placed in the central area of the municipality of Duque de Caxias, Baixada Fluminense, the museum occupies the old seat of the city Court House, with an area of about 5.000m². Its space is occupied by short term exhibits, auditorium, rooms for workshops and a planetarium with a high technology projection system.

The Museu Ciência e Vida is a space for dissemination and popularization of science and support to the teacher, with the mission of stimulating the curiosity by means of scientific knowledge in an interactive, dynamic and playful form. It offers for free a diversified cultural and education program, structured by exhibits, workshops for teachers, program aimed to the reception and nurturing of groups, robotics workshop, educational playful activities, movies and documentaries exhibits, speeches and seminars, as well as planetarium lessons. Its signature move is the use of experiments and interactive resources, the presence of human mediation, the approach of current themes and the articulation between science, technology and art.

Espaço Ciência Viva

Founded in the year of 1982, it is acknowledged as the first interactive science museum in the state of Rio de Janeiro. The institution was created by educators and researchers with the purpose of bringing together science to all citizens, contributing to the broadening of knowledge and cultural horizons for the population in general.

The Espaço Ciência Viva aims, by means of simple, interactive and playful experiments, to stimulate the taste for experimentation and pleasure for discovery. It is a non-profitable Private Association, maintained and guided with administrative independence from other private or public institutions. Its managing group is formed by voluntary teachers and researchers. Its current mission is to promote education, disclosure and communication of science, making it accessible for all citizens, as well as contributing to the improvement of quality in Science and Mathematics Teaching.

It is located in the neighborhood of Tijuca, north zone of the city of Rio de Janeiro. Since 1986, it occupies a storage building with 1.600 m² of area, in a place given by the State Government of Rio de Janeiro. This space is divided in three areas, among which we can find the Faça Ciência Você Mesmo, that maintains an interactive exhibit with about fifty modules in different areas: physics, mathematics, human perception, biology, health, sexuality, astronomy and music; the Jardim Didático Profa. Maria de Lourdes Barreto Santos, that holds specimens of different national biomes, a literacy garden and a floating system focusing on environmental education, and the Auditório Prof. Pedro Persechini, where the courses, speeches and workshops occur.

Museu da Vida Fiocruz

Opened in 1999, it is a department of Casa de Oswaldo Cruz (COC/Fiocruz), unit dedicated to the preservation of memory of the Fundação Oswaldo Cruz - Fiocruz and the activities of scientific divulgation, research, teaching and public health and biomedical sciences history documentation in Brazil.

Linked to the Ministry of Health and idealized to integrate science, culture and society, the Museu da Vida Fiocruz aims to expand the participation of people in issues related to health, science and technology, by means of exhibits, interactive education activities, multimedia, itinerant actions, plays and labs.

The museum occupies a green area of about 25 thousand m², in the campus located in the neighborhood of Manguinhos, north zone of the city of Rio de Janeiro, area of high social fragility. This space represents a central theme of life in several aspects. The emphasis lies on its structure, as an open-air park, the Castelo Mourisco, two theaters, labs, a hatchery, historical-ecological paths, exhibit rooms and a reception and nurturing center, from where the Trenzinho da Ciência sets out, crossing and integrating the whole visitation circuit.

The connection with Fiocruz grants the possibility of presentation of a rich historical heritage, both architectural and of assets, images and documents, representing over a hundred years of existence of the Fundação.

Museu de Astronomia e Ciências Afins

Opened in 1985, it had its origin in scenery marked by Brazilian redemocratization. Its conception resulted from the recruitment of scientists, intellectuals and professionals from different areas, interested in better disclosing Brazilian science production. Initially linked to Conselho Nacional de

Desenvolvimento Científico e Tecnológico (CNPq), since 2000, the museum is subject to the Ministério da Ciência, Tecnologia e Inovações (MCTI).

It is located in the Imperial de São Cristóvão neighborhood, downtown Rio de Janeiro, placed in a campus with over 40 thousand m². It is a science museum which counts on a rich collection of scientific instruments, documents and architectural collection originated from the Observatório Nacional. For over three decades, it has been, by means of different practices, strengthening its characteristics of a science and technology museum, in the broad sense of the expression: research and formation institution, concerned with history, science divulgation and activities inherent to preservation.

Created to be a dynamic, attractive and exciting museum space, it is continuously committed with the development of a large range of education and divulgation activities, as well as exhibits. It is important to emphasize the “Programa de Observação do Céu”, activity oriented to the divulgation of astronomy, by means of which it is possible to observe the Sky of Rio de Janeiro with ancient telescopes. Concerning the exhibits, MAST, since its origin, experiences interrelations between scientific instruments and science education.

METHODOLOGY

The data collection occurred on the second semester of 2019, in the scope of the research “Lembranças, vivências, presenças que marcam: o que forma o público de um museu de ciência?”, performed in the five museums located in the metropolitan area of Rio de Janeiro. The research, of free acceptance, was undertaken by means of a printed and self-administered questionnaire, filled in by adult visitors, over 30 years old, after the visitation to science museums.²²

In the present study, we have analyzed the answers to the close-ended questions for the respondent profile identification, such as age, gender, color/race, education, income, cultural practices and level of interest related to culture. By the end, we analyzed the answers to an open-ended question, on the motivations for visiting science museums.

The filling in of the questionnaires was randomly required to the visitors by the museum mediators themselves, who were trained on the approach and on clarifying the respondents on the purposes and objectives of the research. The study collected 531 questionnaires, validating a final sample of 498 participants and the lack of profile data and/or the absence of answers to the open-ended question, which implied in dispensing 33 questionnaires.

The dominant profile of the participants is presented in Figure 2 and does not meaningfully distance from the characteristics found in prior studies of OMCC&T.²³

23. See Mano *et al.* (2022); Cazelli *et al.* (2022) and Dahmouche *et al.* (2023).

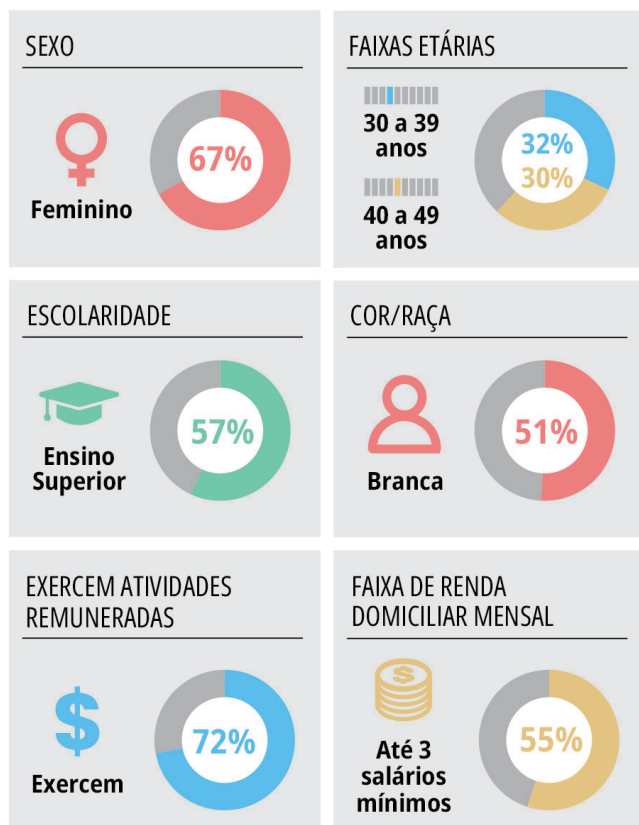


Figure 2 – Profile of the 498 visitors who took part in the study (extracted from Google Maps).

GENDER Feminine	AGE GROUPS 30 to 39 years old 40 to 49 years old
SCHOOLING Higher Education	COLOR/RACE Caucasian
ENGAGES IN A GAINFUL ACTIVITY Engage	MONTHLY HOUSEHOLD INCOME RANGE Up to 3 minimum wage

The treatment of the quantitative data was made with the Excel® software, for the data base production, conference, disambiguation of information and graphic construction. The statistic data treatment was made in the SPSS® software.

The qualitative data, after transcribed and checked, were codified with the help of MaxQDA® software. The analysis of the answers was made according to

24. See Lefèvre (2017).

25. See Costa *et al.* (2023).

the Método do Discurso do Sujeito Coletivo (DSC – Discourse of the Collective Subject), developed by Lefèvre.²⁴ The method follows distinct analysis phases: attentive reading, previous codification of text, refinement into categories. In compliance with the method, the “speeches of interest” for the research, Expressões Chaves (EC – Key Expressions), are grouped respecting the compatibility of the senses expressed, defining the categories, called Ideias Centrais (IC – Central Ideas), as detailed in Costa *et al.*²⁵.

The Expressões Chaves (EC) of each Ideias Centrais (IC) are gathered and edited in collective discourses, with minimum interferences, marked by brackets. All the EC are present in the IC by means of the discourses that reconstruct them, providing a collective speech view. Considering that most respondents are women, we opted for constructing the Discurso do Sujeito Coletivo (DSC) in the feminine. The amount of EC integrating each DSC indicates the Intensidade (I - Intensity), presenting a quantitative Idea of the discourses.

The speeches of the 498 participants allowed the identification of 552 Expressões Chaves, categorized in seven Ideias Centrais, as in Table 1. Some of them express more than one IC and, therefore, were classified in several categories, as revealed by their Intensidade.

Table 1 - Ideias Centrais (IC) of the discourses and their Intensidades de Expressões Chaves (EC) concerning the motivations for visiting the science museum.

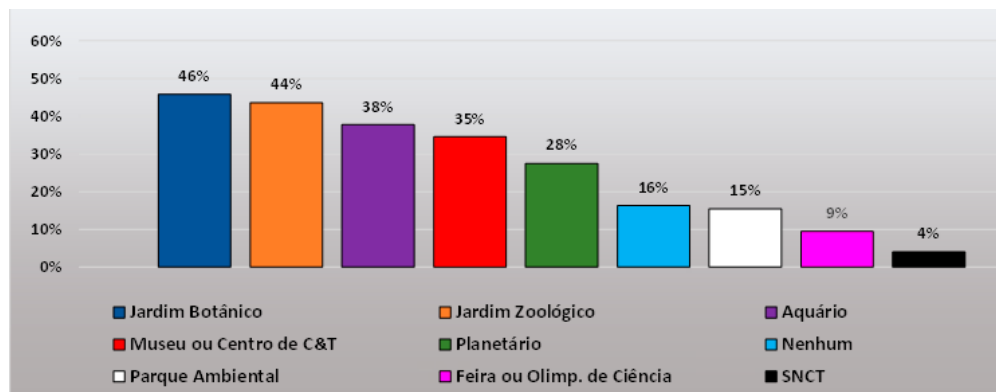
Ideia central	Intensidade (EC)
IC1 – Appreciation of museums	40 EC
IC2 – Cultural Leisure	121 EC
IC3 – Acquisition of Cultural Capital	172 EC
IC4 – Transmission of Cultural Capital to children, family, friends	115 EC
IC5 – Acquisition of Science Capital	78 EC
IC6 – Transmission of Science Capital to children, family, friends	18 EC
IC7 – Political View	8 EC
Total	552 EC

Source: Search “Lembranças, vivências, presenças que marcam: o que forma o público de um museu de ciência?” (OMCC&T, 2018).

RESULTS, ANALISYS AND DISCUSSION

Besides the sociodemographic, cultural and economic profile, in this session we present the descriptive statistics associated to visiting science museum or events related to the C&T, cultural practice, social cultural level of interest and reasons claimed to visit this kind of museum.

In Graphic 1, concerning cultural scientific spaces or events attended in the 12 months before this study, we noticed that the Botanic Garden and the Zoo are the most mentioned. This confirms their position as cultural leisure place, traditional for families, on the weekends. Aquariums, Museums and C&T Centers and Planetariums keep a close visitation percentage, between 16% and 12%. However, events like Fairs, Olympics and the Semana Nacional de C&T – SNCT (C&T National Week), as they are occasional and short term, might explain the lowest percentages observed.



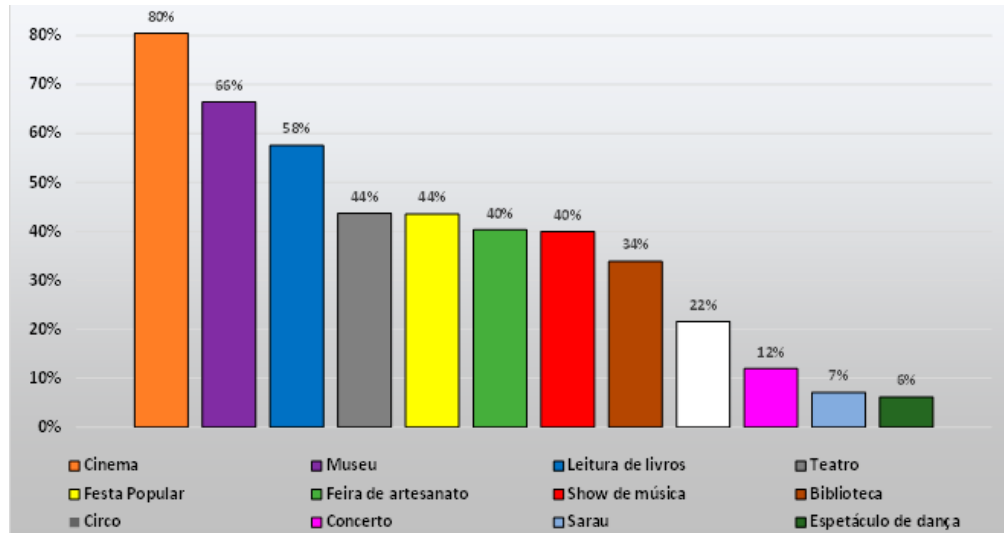
Graphic 1 – Weighted averages of the levels of interest on sociocultural themes and (N=498), considering 1 – not interested and 5 – very much interested. Source: Search “Lembranças, vivências, presenças que marcam: o que forma o público de um museu de ciência?” (OMCC&T, 2018.)

Botanical Garden	Zoo	Aquarium
Museum or C&T Center	Planetarium	None
Environmental Park	Fair or Science Olympics	SNCT

In the matter of cultural practices pointed out by the participants in the 12 months prior to the visitation, the Graphic 2 shows that going to the movies is the most mentioned activity, 80%, followed by visits to museums, 66%, and book reading, 58%. Theaters, popular parties, music concerts and crafts fairs, however, are activities mentioned by 44%, 44%, 40% and 40% of the respondents, respectively, evidencing that this public carries out these cultural practices regularly.

26. See Leiva (2018).

27. *Ibid.*



Graphic 2 – Distribution of the variable “Cultural activities you took part in the last 12 months”, including the five participating museums. Question with a possibility of multiple answers. (N = 498 respondents) Source: Search “Lembranças, vivências, presenças que marcam: o que forma o público de um museu de ciência?” (OMCC&T, 2018).

Movies	Museums	Book readings	Theater
Popular Party	Crafts Fair	Music Concerts	Library
Circus	Concert	Soirée	Dance Shows

The percentage obtained in our study for museum visiting is closer to the observed by the research made by Leiva,²⁶ in which 37% of the respondents answered having visited the museum or an exhibit in the 12 months before the study. As the data collection of the present research was made at the museum institution, while the respondent carried out the visit, that is, at the moment of the cultural activity, it is reasonable to expect a meaningful indicator for that practice; different from what was found in the aforementioned research, in which people were randomly approached on the streets.

In the research performed by Leiva,²⁷ considering the data concerning the municipality of Rio de Janeiro, 69% of the respondents said reading books, while 68% went to the movies, 49% attended concerts, 44% went to popular parties, 39% to crafts fairs, 37% visited museums, 37% libraries, 36% attended dance shows, 33% went to the theater, 18% went to the circus, 16% attended soirées and 11% attended concerts. Therefore, it is important to emphasize that concerning almost all cultural practices listed, meaningful differences were not observed between the studies, which could be associated to methodological aspects. The

exceptions are the visits to museums – more present among the ones participating in this research – and the attending to dance shows, less mentioned by them. This way, the data seem to point out that the cultural practice of those visiting science museums is characterized by a particular appreciation for this kind of activity, which is not expressed the same way for the other practices mentioned.

Besides the cultural practices, the research has also collected information concerning the interests of visitors on sociocultural and scientific themes, considering a scale that varied from 1 (not interested) up to 5 (totally interested). Such approach has contact points with the research called “Percepção Pública da C&T no Brasil 2019”²⁸, performed by the Ministério da Ciência, Tecnologia e Inovações (MCTI) and the Centro de Gestão e Estudos Estratégicos (CGEE), fact that benefit a comparative look of the findings in both studies. In order to enable the analysis, it was necessary to even both scales, once in this study, five grades were adopted and the CGEE used four: not interested, little interested, interested and very interested. For this adjustment, the grades 4 and 5 of the OMCC&T were grouped, correlating them with the last level of the scale used by CGEE.

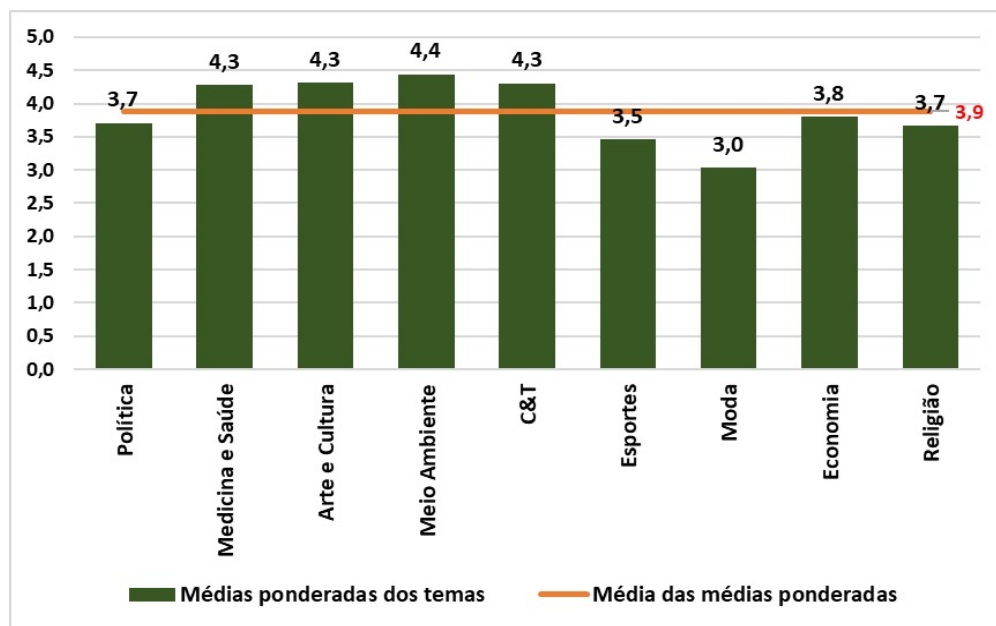
The comparison exercise reveals, in a first approach, degrees of interest in all of the themes by the science museum visitors concerning the ones verified with the Brazilian population. While most of the answers given by the science museum visitors is concentrated in the “very interested” allot, the population study identified greater percentages in the response “interested”, considering exceptions the Politics theme, which shows higher grades for “little interested”, and Sports, with percentages equivalent in the answers “interested” and “little interested”. Considering the results obtained in the answers “very interested” and “interested”, Brazilian population shows a greater interest in themes such as Medicine and Health (79%) and Environment (76%). The visitors of the scientific theme museums also revealed interest in these same themes, Environment (96%), Medicine and Health (95%), however, we can add other two themes equally relevant: Art and Culture (95%) and Science and Technology (94%). These two do not count with the same prestige with the population, once the reference study showed that 52% and 61% of the Brazilian people show interest for them, respectively. Another aspect to be emphasized concerns the taste for Politics, in which 23% of the Brazilian people declared “very interested” or “interested”, while in the OMCC&T research, it was 80%.

In the population study, we observed a decline in the last years in the declared interest in themes such as sports, arts and culture, economy and, in a less severe way, religion. The priorities remained stable: the three themes that the Brazilian is more interested are still medicine and health, environment and religion. In 2019, the rates were 79%, 76% and 69%, respectively, and 62% of the respondents are interested in any subject related to “science and technology”²⁹.

28. See *Percepção...*, (2019).

29. *Ibid.*

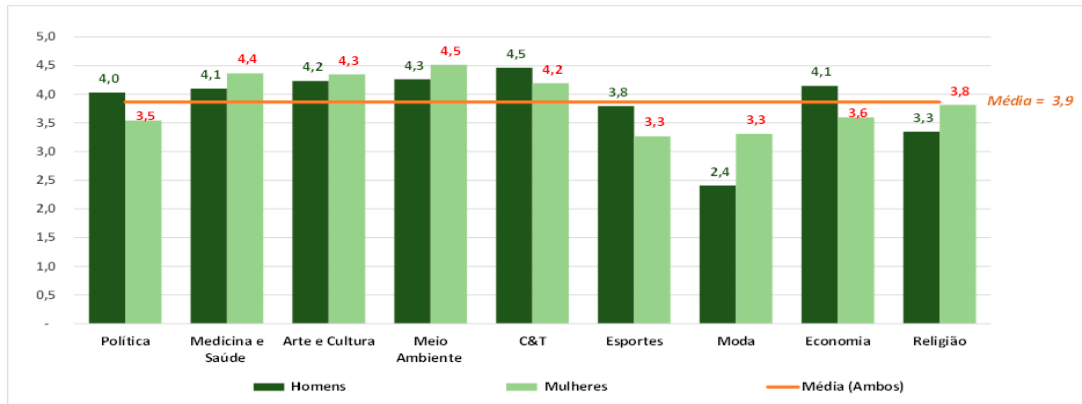
The médias ponderadas (MP – weighted average) presented in Graphic 3, considering the five degrees of interest, were the approach chosen to sustain the data analysis. The general average of the MPs positions the degree of interest in the sample of indicator 3.9 (high) and emphasizes the subjects Environment (4.4), Medicine and Health, C&T and Art and Culture (4.3) as preponderant. Fashion (3.0), Sports (3.5), Politics and Religion (3.7) are below average in relevance (3.9).



Graphic 3 – Weighted averages of the degrees of interest on sociocultural themes (N=498), being 1 – not interested and 5 – very interested. Source: Search “Lembranças, vivências, presenças que marcam: o que forma o público de um museu de ciência?” (OMCC&T, 2018).

Politics	Medicine and Health	Arts and Culture	Environment	C&T	Sports	Fashion	Economy	Religion
Weighted average of the themes				Average of the weighted averages				

The prevalence in the research sample is that women seem more interested in Medicine and Health, Art and Culture and Environment, although the difference in relation to men is small (Graphic 4). The interests manifested by some themes were marked by men with greater intensity, such as C&T, Politics, Sports and Economy. The greater difference in the degree of interest, according to the variable gender, occurred in the theme Fashion, in which the masculine assessment (MP = 2.4) had grade below the central point of the scale, as the feminine was 3.3. Let it be noted that the subject Fashion did not reach the general average of the MP of the sample, which was 3.9, it means that, even for women, it does not evidence an important preference for the visitors.

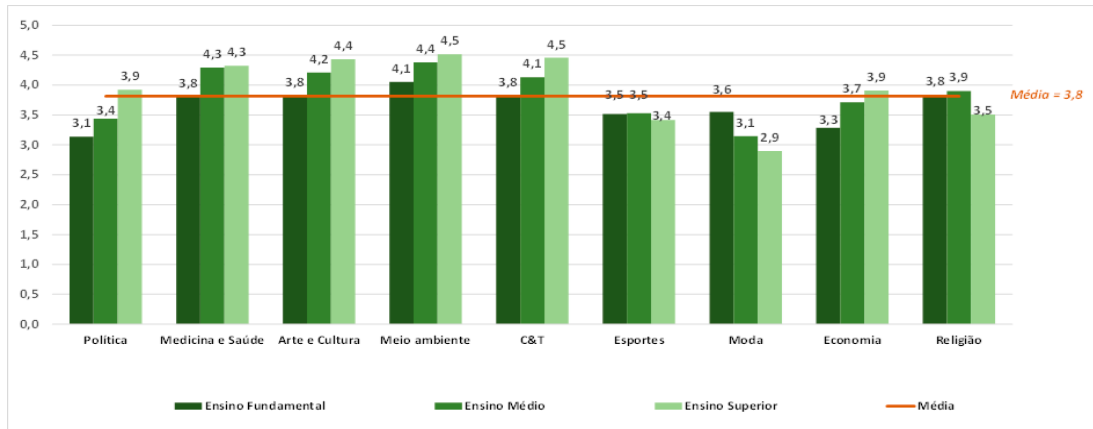


Graphic 4 – Weighted averages of the degrees of interest on sociocultural themes (N=498), being 1 – not interested and 5 – very interested, selection according to the variable Gender (N=498). Source: Search “Lembranças, vivências, presenças que marcam: o que forma o público de um museu de ciência?” (OMCC&T, 2018).

Politics	Medicine and Health	Arts and Culture	Environment	C&T	Sports	Fashion	Economy	Religion
Men			Women			Average (both)		

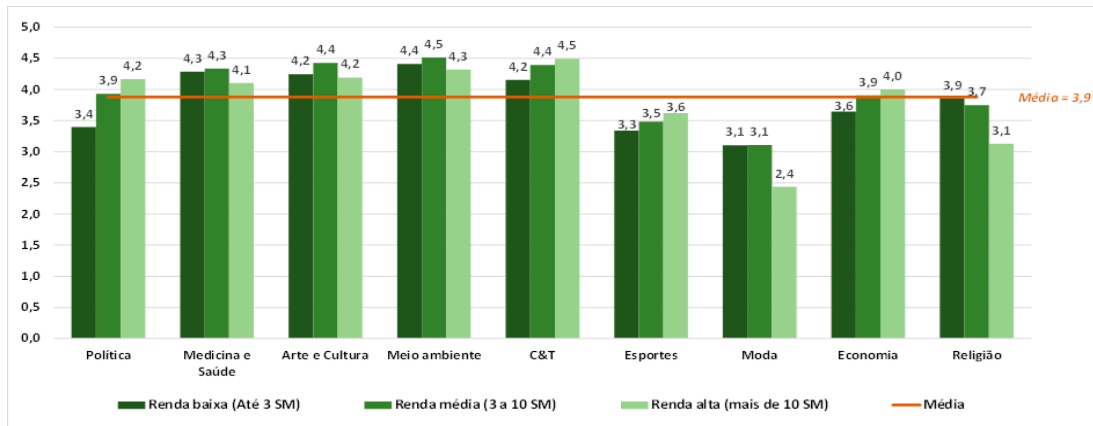
In the selection made according to the variable Schooling (which in the sample has predominance with higher education), the themes Medicine and Health are highlighted, whereas high school presents an MP of 4.3, compared to the higher education, and the themes Sports, Fashion and Religion, where the primary school and the high school levels take over the leading role (Graphic 5). Even not reaching the general average for the MP of the sample (3.9), when the subject is Sports, we observe that the interest level does not depend on the schooling level, evidencing the aggregate role for this theme. Fashion draws attention for the preference inversion, highlighting the degree of interest shown by the respondents with primary school is higher than the other schooling levels.

Graphic 6 brings the variable Income Range as a selection, which in the sample of the research had the higher frequency in the low income, for comparison of interest levels from the respondents by the themes proposed. Although showing differences between the weighted averages from the themes positioned above the general average of the MP, we observe that they are not significant, around 0.2 points. Relevant observations appear in the theme Politics, in which the lower interest is observed from the ones declaring low income, in the theme Fashion, in which the high income does not show interest, and Religion, also with the lowest income in the high income range. However, we observed the themes Medicine and Health, Art and Culture, Environment and C&T presented interest levels above the general average of the MP, regardless of the income range.



Graphic 5 – Weighted averages of the degrees of interest on sociocultural themes (N=498), being 1 – not interested and 5 – very interested, selected according to the variable Schooling (N=498). Source: Search “Lembranças, vivências, presenças que marcam: o que forma o público de um museu de ciência?” (OMCC&T, 2018).

Politics	Medicine and Health	Arts and Culture	Environment	C&T	Sports	Fashion	Economy	Religion
Primary School			High School		Higher education		Average	



Graphic 6 – Weighted averages of the degrees of interest on sociocultural themes (N=498), being 1 – not interested and 5 – very interested, selected from the variable Income Range (N=498). Source: Search “Lembranças, vivências, presenças que marcam: o que forma o público de um museu de ciência?” (OMCC&T, 2018).

Politics	Medicine and Health	Arts and Culture	Environment	C&T	Sports	Fashion	Economy	Religion
Low Income (Up to 3 MW)			Average Income (3 to 10 MW)		High Income (over 10 MW)		Average	

Concerning the themes Medicine and Health, Art and Culture, Environment and C&T, we can observe that there are no meaningful differences for the selections from the variables gender, schooling and income, that is, the degree of interest for all of these are found above the general average of the MP. Besides, in graphics 5 and 6, we have observed that the maximum variation for schooling is 0.7 points, while for income is 0.3 points, indicating that the schooling level is more meaningful than the income for the interest for themes related to the researched museums. With respect to schooling, for the primary school, Medicine and Health, Art and Culture and C&T, are on average, while for the three income ranges, the four themes are above average.

These findings are coherent with the fact that the institutions participating in the research are science museums that deal with socio-environmental, health, science and technology issues, as opposed to art-science-culture, which attract visitors to interact with their exhibits and participate with other educational activities available in these spaces, as pointed out in Dahmouche; Pires; Cazelli; Mano *et al.*³⁰.

The qualitative analysis of the 498 responses given by the questionnaires to the open-ended question “Why do you visit science museums?” allows us to deduce 552 Expressões Chave (EC – key expressions), distributed in the seven Ideias Centrais (IC – central ideas), in compliance with the DSC, below:

IC1 – Appreciation of Museums (Intensity = 40 Expressões Chaves)

“I love science museums. They are cultural historic centers that spread knowledge about mankind. They are rich places, very cozy and with a relaxing atmosphere. I understand such spaces as crucial places for the perception and broadening of a critical view of the world. Amongst several bad places, we have something good in our Rio de Janeiro.”

“I have the habit of visiting museums and cultural centers. I come frequently, to see the new exhibits. I think they are interesting and they attract me. The children like very much because there are several exhibits for different people and age groups and they learn to understand the importance of the objects exposed there and to honor our museums.”

The visitor see science museums as a place for meeting, sociability, a space of enjoyment and the creator of emotions from interaction with several activities of pleasant nature and elaborated exhibits for different age groups. This is, more and more, the goal of these institutions: to mobilize the society, aiming to reach a broader public and to create positive experiences. The visitor can both be the standard tourist and the citizen tourist. The last one is the guy on the ground, who visits the museum searching for cultural leisure experiences, who is involved in

31. See Moretonni (2018).

32. See Falk (2021).

33. See Costa *et al.*, (2023).

34. See Camarero-Izquierdo, Garrido-Samaniego, Silva-García, (2009) and Cazelli *et al.* (2022).

education, cultural and leisure activities, organized by the museums, experimenting and living the affective interactions whilst knowing their own town.³¹

IC2 – Cultural Leisure – (Intensity = 121 Expressões Chaves)

“It was the first time I came, by invitation, to know the proposal and I liked it. It was a pleasure. I intend to visit many others. It is a free tour, a public leisure opportunity with guided tour [and a] good perception [for] people’s profit.”

“I like to know new places and things. I feel fine and leave it refreshed. It is an option for leisure, fun, entertainment and information. These are experiences that can be acquired with the visits, which bring knowledge on the “mysteries” that surround us. I had the will to visit, exchange with the enthusiasts and have fun.”

“My children and grandchildren love this area. They asked me to visit it and I think it is important to stimulate. I bring them every school vacation to explore together, because it is a very good program for the children. I thought it was a very inspiring cultural activity, [because it stimulates] curiosity in knowing and living new things. I think it is a good program for my family and a fun thing for children, in addition to being close to my house and free.”

“Today I am with a tourism and science group. I like to study in the environment of the museum to be closer to everything that is going on and to “plant seeds” in students, families and friends who accompany us.”

The above speech corroborates the literature, according to which the museums are places for satisfaction of different needs of human life. In their free time, people’s demand for leisure, conjugated with the interest for artistic and scientific themes find echo in these places, that is, museums are places of cultural leisure.³² The nature of the activities performed by museum spaces and the services offered might impact the feelings of the visitors, aiming to create emotions and memories that imply in memorable and positive experiences.³³

Visiting a science museum can be an opportunity for meeting people, making new friends and sharing experiences with the family, enjoying, in a pleasant way, the company of friends and family members. This finding affirms the previous researches, that emphasize the importance of socialization as a justification to participate in new events, know different things and other leisure experiences.³⁴

IC3 – Acquisition of Cultural Capital – (Intensity = 172 Expressões Chaves)

“Apart from the common sense, it is a center where people can have access to knowledge in a different way, with different perspectives, expanding the world view. It is the best sour-

ce of knowledge for historic, cultural, memories and history for national and for the world surrounding us phenomena, [by means] of sensory activities, discovery and exploration of its spaces and environments. My visitation is linked to seeing new things [and to] the pleasure of combining leisure [and the] increasing of knowledge, accumulating experiences. I am a person who loves to study, exchange, knowing cultural environments.”

“Culture is very important! [The museum] is educational and crucial for the intellectual improving. It adds experiences and knowledge, essential for the formation of the individual, who search for improvement to understand a little more about our society. It is great to learn, to go over new things, to see the theory in practice, to better understand the subjects and new discoveries, especially when there are people passionate about what they teach and do”.

The acquisition of knowledge, the broadening of the repertoire and the cultural capital are present, in a distinguishing way, in the above discourse. The science museums offer education and cultural character activities, specifically thought for the spontaneous visiting people, especially family and friends groups, who want to share a common and meaningful experience. The visitation to such places is understood as a qualified leisure experience, where we can see the process of acquisition, accumulation and improvement of cultural capital. Bourdieu³⁵ considers determinant the opportunities that appear during the visit to museums, offered by the families to their children. The author adds that this first experience generally occurs before people turn 15 years old and are more frequent insofar the social hierarchy elevates. These invisible, disinterested and premature learning acquired in the family scope grant to their holders a greater and better performance in the acquisition of culture.

IC4 – Transmission of Cultural Capital to children, family and friends –
(Intensity = 115 Expressões Chaves)

“Since my first visit [to a science museum], I then started to get interested in education and cultural activities. I consider the theme very interesting and enriching and [the environment] pleasant and inspiring. I want to see things that bring the interest to my children and motivate them to know and to learn. I am curious and I like new things. I like to stimulate the curiosity and to stimulate the children to discover new things.”

“Me and my family search for entertainment, culture and fun on the weekends. [These are] the places I like the most to take my children to collect experiences and broaden the critical view of the world, which is the main focus of our visit.”

“I want my children, from an early age, to explore new discoveries [for us] together, to broaden our knowledge [about] what happen around the world and all of its possibilities. I visit with them to arouse interest for the activity and diversity of our culture, which is important for our growth. [Visiting science museums] favors [also] the learning of my

36. See Camarero-Izquierdo, Garrido-Samaniego, Silva-García, (2009).

37. See Dahmouche *et al.*, (2023).

38. See Bourdieu, (2001).

children in their school activities. Our Brazil is rich and we have to show this to our youth and I think it is unfair to deprive them from this knowledge.”

“It is a ride that favors and enriches the intellectual formation of my children and creates a habit and the interest in going to museums. It is culture for the whole family and a right for children. I think it is important to inform friends and acquaintances that there is a place as cultural as this one.”

As pointed out in the discourse above, the visits to museums and C&T centers occur typically in groups. Camarero-Izquierdo, Garrido-Samaniego, Silva-García³⁶ observe that the visit is culturally more pleasant and outstanding when made in group, and promotes more positive emotions when formed by family and/or friends. Dahmouche *et al.*³⁷ noticed that the visits made in the scope of the OMCC&T museums occur typically in groups of two to five people (48%) and, when led by women, tend to be larger.

With respect to family interactions, we can emphasize the ones based on symbolic exchanges (cultural capital) in the course of the visit and that might provide a type of sociocultural family support. More and more, families have become the object of privileged study, not only in the matter of economic aspects, but mainly because in this institution, efforts are established for the distribution of symbolic assets amongst their members.

Considering the family dialogs, notably the ones concerning the museum visit, we can say that they indicate the intention of parents in transmitting the cultural heritage, thickening the symbolic exchanges between the two generations. These and other practices enjoyed together provide the acquisition of predispositions that stimulate the composition of *habitus*, consolidating the incorporated cultural capital.³⁸

IC5 – Acquisition of Science Capital – (Intensity = 78 Expressões Chaves)

“Scientific knowledge is really interesting and inspiring. I love the research world, the discoveries, the experiences, and always try to keep myself updated and learn new things, [about] the empirical method and themes related to science [so that I] can experience the most real scientific practice. I think it is interesting to live this world, the different aspects of science, so as to better understand the planet I live in, especially the [themes] related to our existence and quality of life. Science always shows something new.”

“In my childhood, this was what made me want to be a scientist. Besides the personal interest, as a scientist in the science and health area, I work with communication and scientific divulgation and, as a teacher; I see these spaces as opportunities of education for me and my students.”

“Today, I visited because of the theme evolution: where do we come from and where are we going to? [I also came] for the historical contribution which makes us better understand and know more about scientific issues, [such as] the environment, astronomy, natural sciences, history of science and [about] Oswaldo Cruz, [as well as] to visualize scientific collections. I am curious about the scientific and philosophic areas. I wanted to know the necessary means for science evolution, following the technological advances that will influence new lives and what we will become in the future, in accordance with our attitudes. Where will they take us?”

39. See Archer *et al.* (2015).

40. *Ibid.*

The above discourse is in compliance with the theoretical model of science capital developed by Archer *et al.*³⁹, especially with respect to behaviors and practices related to science, for example, the consumption of scientific media, visiting museums and science and technology centers.

The experience in museums in children’s and adolescent’s lives, contributes to the valorization of science in our routine and implies in the development of science capital and in the taste for several scientific areas. The discourse also shows that science museum visitation is a way to reach the institutionalized cultural capital, once it influences the decision on the possible education and professional paths. Scientific literacy widely comprises concepts and perceptions of scientific knowledge and also develops information about the scientific practice. It is essential for the undisturbed exercise of citizenship and to the capacity to apply in personal life, as well as getting involved in public debates associated to socioscientific matters, such as climate and environmental changes, as well as life quality.

IC6 – Transmission of Science Capital to children, family and friends –
(Intensity = 18 Expressões Chaves)

“I come to bring the children for a Day of Discovery and development, exciting their curiosity, encouraging them and arousing their interest in science and culture, from an early age. It is important that they are in touch with science to develop knowledge, adding experiences, understanding the importance of research.”

“My family and I think the science museums’ exhibits are interesting and a good way for our children to learn science in a playful way. To know science outside the books help in the classroom and develops the taste for science. [We consider] important to introduce them into this world.”

The discourse presented is also consonant to the theoretical model of capital science developed by Archer *et al.*⁴⁰, particularly in the matter of social capital forms related to science. Examples are the scientific knowledge from the parents and the conversations over science with family, teachers, friends and others.

41. See Zimmerman *et al.* (2010).

42. See Mano *et al.* (2021).

43. See Percepção..., (2019).

44. See Massarani *et al.* (2021).

45. *Ibid.*

The visit to museums constitutes *locus* for learning scientific issues that supply science capital forms, once it potentializes this knowledge. In compliance with Zimmerman *et al.*⁴¹, visitation contributes to the development of interest, evidences the role of parents in the support and learning outside school and with the arising for science in the routine.

IC7 – Critical Positioning on Science – (Intensity = 8 Expressões Chaves)

“I understand [the] spaces [of science] as essential places for the consumption and broadening of critical view of the world. Science is a very relevant subject, I know the value of divulging and popularizing science [and of] giving public support in an area that, paradoxically, receives so little attention, even though so important. Science is progress. It is public service! Science is life!

[It is necessary] to support national research for the development of society, [even], because it is important to end flat-earther militia, that devastates the world.”

The visit to museums is a collective practice, it is developed in environments that allow the intense social interaction and promote affective, cultural and cognitive experiences. The OMCC&T data show that what motivates visitation is to know the museum, and the interest concerning the exhibit contents, as well as the search for broadening horizons and knowing new things, as cultural/fun leisure.⁴² The Brazilian likes science and trusts it, as confirmed by several researches for science public perception⁴³ and, more recently, in the study on the trust in science in Brazil, in a time of pandemic.⁴⁴ Most respondents state that confidence in science increased a lot with the pandemic (55.6%), while 10.1% said that it has decreased. For 51.8% science is responsible for “many benefits” for the humanity; as about one third (30.6%) thinks it brings some benefits; while the minority, 3.1%, understands that science does not bring any benefit. Comparisons with the research led by CGEE, in the pre-pandemic period, showed that the percentage of enthusiasts (who see more benefits than risks) had a slight drop, on the other hand, the amount of pessimists (who believe there are more risks than benefits) has increased. People who declared no trust in science, in general, show values opposing to gender equity or equality.

Climate changes were also investigated in the same research.⁴⁵ An expressive percentage of population is in compliance that these changes are, in fact, occurring (91%). This is an international tendency; most part of the population share this opinion. Amongst the ones that believe the climate changes are occurring, 85.8% attributes them to human action, as 12.4% consider that they are the result of natural changes of the environment.

FINAL CONSIDERATIONS

The purpose of this study was to understand what led adults, over 30 years old, to participating in the research “Lembranças, memórias, presenças que marcam. O que forma o público de um museu de ciência?” to visit science museums or centers. We focused our research in the answers to the question: “Why do you visit science museums?” and we also presented the sociodemographic, cultural and economic profile of the participants. The visitors’ discourse clearly showed what they search for in the visit to science and technology museums.

We found in the sample a meaningful level of incorporated cultural capital, coherent with the predominance of visitors with complete higher education (57%) and post-graduation, evidencing, mainly, in the interest degrees for the proposed themes. The sample, whose group age is mostly 30 to 49 (62%), engages in gainful activities (72%), with financial return of up to three minimum wages (55%). Women are dominant in the group of respondents, 67%, and their interests prevail on themes like Medicine and Health, Art and Culture and Environment show that they search for an enlargement of their cultural and science capital. Men, however, although they are interested on these subjects, present more curiosity in other themes, such as C&T, Politics, Sports and Economy.

The high levels of interest found were expected, once the research was led in the facilities of the participating museums, during a visit, which, per se, by now signals that these people value culture and science. The results show that themes related to science are above average in the level of interest of the respondents, revealing the attributed importance and the acquisition and improving of science capital. This particularity allows a critical view and a potentially privileged condition concerning the socioscientific themes.

By means of the collective discourses, it is possible to clearly observe the cultural and science capital present in the sample, with emphasis in the concern of acquisition, broadening and transmission of these capital forms to children, family, friends, and for the awareness of how important it is to provide them these experiences.

The museums are known in the discourses as culture and sociability spaces. With all of their potentialities, they are opportunities for the construction of social relations, especially for the youth. Concerning the practice of science museum visitation, the occasions precociously offered by the families to children and adolescents are determinants, once they reiterate the learning acquired in the family scope, assuring greater facility and better performance in the consumption of scientific culture.

The maximum variation in the degrees of interest researched concerning schooling, which is 0.7 points, while the income is 0.3 points, shows that the cultural resources in family context (cultural capital) is more important than

the household income (economic capital). Thus, based on literature and covered by the data from this research, specially the discourses, we can say the family environments, whose parents have higher schooling (institutionalized cultural capital), gifted with education/cultural assets (objectified cultural capital), with transferable materiality, enables them to perform an action both educational and cultural. However, for such appropriation, it is necessary a compound volume of incorporated cultural capital (the tastes, the domain of cultured language, acquired throughout life). This context, summed up to the social capital interlaced in the family relations, assure that the visit to different cultivated culture expressions are privileged moments of acquisition, transmission and refinement of cultural and science capital. This way, for the practice of science museum visiting, the cultural capital is more relevant than the economic capital.

The idea that the museums must be placed as an option for cultural leisure before its public has also found references in the study. The collective discourses indicate that there is no more room for museum spaces to be reduced to archives of themed information, neither involving its visitors emotionally nor stimulating the socialization. By deciding to leave their homes and using hours of their free time, the public finds, at their service, a handful of leisure alternatives, varying from simple outdoor rides to visits to cultural scientific spaces, movies, theaters and fairs. The sociocultural autonomy that the spontaneous visitor has is permeated with aspects, such as: closeness to home, possibility to know new people and fun, as highlighted in the discourses. The science museums need to put themselves as enriching, reliable, pleasant and fun experience options, occupying this quality cultural leisure place amongst the offers in the area.

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