

**A study on the mindfulness of tourists/visitors at the Forte do Presépio  
and Arte Sacra Museums, Belém, PA**

**Um estudo sobre atenção plena dos turistas/visitantes dos Museus do  
Forte do Presépio e Arte Sacra, Belém, PA**

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**Resumo**

A avaliação de exposições desempenha um papel muito importante para os museus, fornecendo dados cruciais sobre a interação entre visitantes e conteúdos exibidos. Compreende-se que os museus são instituições que custodiam e expõem a história e cultura de diferentes sociedades, sendo um dos principais atrativos turísticos. Portanto, este estudo teve como objetivo analisar a interação dos turistas/visitantes nos Museus do Forte do Presépio e de Arte Sacra em Belém - PA, baseado nas perspectivas teóricas de *Mindfulness* (atenção plena) de Langer (1989), dos fatores de comunicação e fatores do visitante de Moscardo (2009), e do Processamento Dual de Evans (2008). A metodologia consistiu em pesquisa bibliográfica e de pesquisa em campo, incluindo a observação direta e aplicação de formulários para registros dos dados. Os resultados apontam para a eficácia das estratégias comunicativas e interativas empregadas nos museus, que levam a estados de atenção plena de 66% dos turistas/visitantes. Conclui que ambos os museus demonstraram esforços significativos em proporcionar uma experiência que propicie a atenção plena dos turistas/visitantes, ressaltando a importância da avaliação de

exposições em promover interações de atenção plena. Este estudo também identificou necessidade de melhorias em áreas como sinalização, mediação e design do conteúdo expositivo.

**Palavras-chave:** Museus. Exposições. Turista-visitante. Atenção Plena. Comunicação.

### **Abstract**

Exhibition evaluation is critical for museums, providing crucial data on the interaction between visitors and the exhibited content. Museums are institutions that collect and exhibit the history and culture of different societies and are one of the main tourist attractions. Therefore, this study aimed to analyze the interaction of tourists/visitors at the Museum of the Forte do Presépio and the Museum of Arte Sacra in Belém - PA, based on the theoretical perspectives of mindfulness by Langer (1989), communication factors and visitor factors by Moscardo (2009), and dual processing by Evans (2008). The methodology consisted of a bibliographic and field research approach, including direct observation and the application of questionnaires to record the data. The results indicate the effectiveness of the communicative and interactive strategies employed at both museums, leading to states of mindfulness in 66% of tourists/visitors. It is concluded that both museums have significant efforts to provide an experience that promotes mindfulness in tourists/visitors, highlighting the importance of exhibition evaluation in promoting mindful interactions. This study also identified the need for improvements in areas such as signage, mediation and design of exhibition content.

**Keywords:** Museums. Exhibitions. Tourist-Visitor. Mindfulness. Communication

## **1 INTRODUÇÃO**

Museums are cultural and educational institutions that play a significant role in preserving and showcasing a society's historical, artistic, and cultural heritage. They offer enriching experiences to visitors, making the evaluation of these institutions essential for improving the quality of exhibitions and achieving educational goals. Adams (2015) and Screven (1990) emphasize the importance of evaluation in museums as a critical tool for their success.

In the context of tourism, museums attract tourists and contribute to the local economy, creating a mutually beneficial relationship between museums and tourism. This offers visitors a unique opportunity to experience the culture and history of a tourist destination. According to UNESCO (2023), the number of museums worldwide has grown, from 22,000 in 1975 to 95,000 today. Tourism plays a significant role in museums, particularly in the three most visited museums globally: the Louvre, the National Museum of China, and the Vatican. For instance, at the Louvre Museum, 75% of visitors are foreigners (Themed Entertainment Association, 2019). Therefore, effective assessment not only enhances the quality of the visitor experience but also plays a crucial role in promoting cultural tourism.

However, there is a deeper dimension to the relationship between visitors and museums: the way individuals engage with their settings and experiences. In this context, the theory of mindfulness, proposed by Langer (1989) emphasizes the importance of mindfulness and curiosity in visitors' experiences. Langer (1989) argues that adopting a mindful approach enriches the experience and fosters a deeper and more meaningful engagement with exhibitions and the museum setting. Therefore, this study aims to apply the mindfulness model to the Museums of the Forte do Presépio (MFP) and Arte Sacra

(MAS), seeking to answer the following questions: do museum tourists/visitors exhibit mindful or mindless behavior? What are the implications of these behaviors for the relationship between museums and tourists/visitors?

The objective of this study is to analyze the interaction of tourists/visitors at the Museum of the Forte do Presépio (MFP) and the Museum of Arte Sacra (MAS) in Belém - PA, based on the theoretical perspectives of mindfulness by Langer (1989), communication factors and visitor factors by Moscardo (2009), and dual processing by Evans (2008). The study examines tourists/visitors' behavior and interactions with exhibitions from a mindfulness perspective, as well as their level of motivation and interest.

## **2 IMPORTANCE OF EVALUATING THE AUDIENCE EXPERIENCE IN MUSEUMS**

Museums have undergone major transformations in recent decades, and in the mid-twentieth century criticism and questions arose regarding the continuity of conservative practices (Alexandre, 2017). Therefore, these institutions have shifted their focus to investing in interactivity with their audience.

Museums play a role as tourist attractions, and tourism has provided a vast source of potential visitors. However, the partnership between museums and tourism requires research on the existing demand and the situation of museums regarding tourism (Dalonso, 2010).

Museum institutions are spaces that provide experiences for visitors and tourists. In this way, tourist activity provides the consumption of the museum experience. However, this experience is related to the quality of services, requiring museum professionals to be prepared to serve their audiences (Godoy; Silveira; Guimarães, 2016).

It is pivotal to define in this study concepts related to experience and its components, such as motivation and perception, which have a significant impact on the evaluation of the audience's interaction with the exhibitions. They are important to understand the experience of visitors in museums, which is related to tourist activity.

First, the experience can be understood as the process of observing or perceiving, feeling, encountering, or passing through an event, and knowledge gained from the accumulation of these encounters or perceptions, in which the meanings are related. Therefore, the "tourist experience is a multifunctional experience of leisure activity, involving entertainment or learning, or both, for an individual" (Ryan, 1997, cited by Li, 2000, p. 865).

Motivation is an intrinsic component that influences the development of experience. It is defined as something different in each human being, considering that each one has different personal aspects, opinions, tastes, and desires; however, they will also have within themselves distinct intrinsic motivational forms (Lira, 2015). In this way, it is perceived that people can be conditioned and moved, but their natural intrinsic motivation is never altered by others (Bergamini, 1986). Curiosity is one of the intrinsic motivations of human beings.

A study conducted at the Museum of Astronomy and Related Sciences that investigated the motivations of adults in taking children to the museum found that the main reasons were curiosity, interest, and obtaining general or specific knowledge (Studart, 2009). Another study on the audience at the Museum of Zoology at the

University of São Paulo found that curiosity was one of the reasons for the visit (Almeida, 2009). Falk (2006) categorizes visitors motivated by curiosity as "explorers" and those motivated by knowledge as "professional/amateur".

Angelova and Zekiri (2011) stated that perception varies from person to person because each person has different opinions regarding a product or service. However, although perception is subjective, it can provide useful ideas to develop organizations. However, museums need to consider the public's perception of the content on display. It depends on museums, based on their organizational dynamics, to provide their public with the development of critical thinking (Padilha; Café; Silva, 2014).

Each museum has a unique style of conception and construction of meaning through its exhibitions. "An exhibition occurs with the placement of panels, texts, images, objects, and scenarios, among others, which define a series of paths that will be interpreted according to the interaction/negotiation procedure of each visitor" (Almeida, 2012, p.16).

In this context, museum evaluations are a dynamic and flexible process that is structured and controlled, so museums have the possibility of collecting data on the researched context. Based on this, by recording and understanding the interaction and experience of tourists/visitors in the exhibitions, a more reliable visualization of the communicative performance of the exhibitions is conceived.

Some museums report that they have transformed their actions regarding the evaluation of exhibitions as evaluators have begun to engage in more participatory approaches. Many professionals report that having some data to use in decision-making is powerful (Adams, 2015).

Understanding the audience through audience studies is crucial for museums. It helps in identifying visitor profiles, cultural preferences, museum experiences, cognitive impacts, and audience loyalty. This knowledge is essential for museums to tailor their programs effectively and provide better services to their visitors (Costa; Brigola, 2014).

In a study on audience and museum evaluation in Brazil, Koptcke (2012) examined 22 publications, including books, journals, and reports. The author identified six categories of publications: texts in event collections, research reports, journal articles, academic works, book chapters, and specialized publications. Most of these studies focused on actual audiences, such as families, youth, teenagers, and children, with no research on non-audiences.

The studies and areas of knowledge explored in the research were related to learning theories, cognition, cognitive psychology, mathematics, and physics didactics. The primary focus was on education and the teaching-learning relationship (Koptcke, 2012). The author proposed a research agenda for audience studies with three main axes: analyzing the production context, understanding the nature of the knowledge produced, and examining the social, political, cultural, and managerial uses of these studies to promote a conscious, critical, reflective, and questioning practice (Koptcke, 2012). This highlights the importance of conducting more research on audience studies and museum evaluation to enhance the interaction between the public and museums in Brazil.

Thus, museums are currently giving increased importance to the experience and perception of tourists/visitors to understand the construction of this knowledge. From the perspectives of attention, retention of content, and processing and reproduction of information, museums began to adopt methods of psychology in the evaluation of exhibitions, which seek to consider the phenomenon called mindfulness.

## 2.1 Mindfulness and Dual Processing

Mindfulness is an individual's ability to actively process the information that surrounds him/her (Langer, 1989). The author also considers mindfulness to be the process of drawing new distinctions. Therefore, the more stimuli a person receives, the more attention they will receive (Langer; Moldoveanu, 2000). A mindful individual can have multiple perspectives, be alert to new information, and be focused on the situation.

Conversely, mindlessness refers to "a state of rigidity in which one adheres to a single perspective and acts automatically. When one is mindless, one is trapped in a rigid mindset and is oblivious to context or perspective" (Carson; Langer, 2006, p. 30). In other words, the mindless individual acts inflexibly and automatically, following a single perspective.

Langer and Moldoveanu (2000) stated that mindfulness arises from intrapersonal and situational factors. Thus, some components influence mindfulness, such as the individual's personality, experience, motivation, perception, and interest in certain content. This phenomenon can also be induced when a setting is varied, interactive, and engaging; it facilitates the perception of control; it seems relevant to someone's interest; and it is perceived as something new, different, or unique (Frauman, 1999; Langer; Moldoveanu, 2000; Moscardo, 1996).

Langer's theory of mindfulness is based on a basic concept in psychology called dual processing (Evans, 2008). This concept postulates that two different cognitive systems act in parallel during the perception and interpretation of objects and events in the world: system 1, which is fast, automatic, and intuitive; and system 2, which is slower, deliberative, and analytical (Evans, 2008; Evans; Stanovich, 2013).

According to Evans's dual processing theory, system 1 is responsible for making quick and instinctive judgments, often based on stereotypes and heuristics (simplified mental rules). Although this system is efficient at processing simple information, it can lead to judgment errors in complex situations. It is activated in familiar and routine situations and is responsible for making immediate and spontaneous decisions.

However, system 2, or the analytical mode, is slow, deliberate, and based on logic and conscious reasoning. It is activated when faced with more complex and challenging situations and is responsible for making rational and planned decisions (Evans, 2008). It is responsible for making more accurate and rational judgments, using more detailed and systematic analyses of the available information.

This theory states that people use these two systems in an interactive and complementary way, depending on the situation in which they find themselves. In general, system 1 is activated when the information is simple or familiar, whereas system 2 is activated when the information is complex or unknown.

Dual processing theory (Evans, 2008) and mindfulness theory (Langer, 1989) can be related because they focus on the way attention and interpretation of information are analyzed by the individual. Both indicate the occurrence of two phenomena that can determine an individual's performance and experience.

In the context of museums, the theory of mindfulness (Langer, 1989) is related to the management of the visitor's attention and can be applied to later identify and promote more meaningful and immersive experiences. Moscardo (2009) also worked on the mindfulness theory, both in museums and in tourism, and considered two determining categories, the so-called communication factors, and the visitor factors, to understand how a visitor's experience can generate the phenomenon of mindfulness.



Communication factors compose a variety of influencing components of the museum experience, such as the use of multisensory media, novelty, conflict, surprise, questioning, interaction with the exhibition (dynamics), connections between visitors, signage, and the presence of guides and mediators (Moscardo, 2009). Regarding visitor factors, Moscardo (2009) considers the following points: individual's interest in the content, level of fatigue, motivation, distraction, and expectation.

The variable of visitor factors called museum fatigue is recurrent in many evaluation studies of exhibitions (Bitgood, 2009) and can be influenced by factors such as the duration of the visit, the density of information presented in the exhibitions, and the lack of interactivity and engagement of the visitor during the visit (Falk; Dierking, 2000; Bitgood, 1992).

Museum fatigue can negatively affect visitors' experience and their ability to engage with the museum setting (Bitgood, 1992; Falk; Dierking, 2013). Thus, when a visitor feels overwhelmed with information or bored with the exhibits, their attention will wander, and their mind will lose focus on the exhibited content, preventing the experience from being developed with mindfulness. Additionally, mental fatigue can lead to frustration, stress, and dissatisfaction, hindering the visitors' ability to fully engage with what is being presented in the museum.

In contrast, a state of mindfulness can help combat museum fatigue and improve the visitor's experience by allowing him to fully engage with the exhibits and activities that the museum offers (Langer; Moldoveanu, 2000).

## **2.2 Mindfulness Theory in Tourism**

Langer's mindfulness theory has been used to understand and improve tourist experiences. In addition, it is essential for the promotion and commercialization of destinations (Moscardo, 2009). This theory highlights the importance of being mindful of the present moment, being conscious, and having an open mind to new experiences. Moscardo (2009) applied these concepts in the context of tourism, arguing that the practice of mindfulness can improve the quality of visitors' experiences and increase their satisfaction.

Thus, if a tourist is conscious, he will have a better experience and will be able to appreciate the environment from multiple perspectives. According to Moscardo (2009), conscientious tourists remember configurations and characteristics more easily because of the liveliness and clarity of their experience. Then, there are chances that they will recommend the experience to others.

Therefore, the concept of mindfulness can be used and adapted to explain tourist behavior. Once visitors are introduced to consciously displayed information, they could theoretically benefit from an educational perspective and satisfaction more than a mindless visitor (Moscardo, 1996).

Museums are considered attractions of tourist destinations because of their importance to the history and culture of localities. Thus, it is important to apply mindfulness theory to the analysis of museums for the development of research in the fields of museology, heritage, psychology, and tourism.

Finally, relating the above theories to the tourist/visitor experience in museums, we can state that encouraging the adoption of a mindful attitude can help tourists/visitors engage more deeply with the exhibitions. By consciously focusing on the objects and information exhibited, they may be able to overcome the tendency to rely solely on

automatic and intuitive interpretation, allowing more analytical processing to come into play.

### **3 MUSEUMS OF ARTE SACRA AND FORTE DO PRESÉPIO**

The locations of this study were the MAS and the MFP, which are in the Historic Center, *Cidade Velha* neighborhood in Belém. They were created through the intervention conducted by the *Feliz Lusitania* project, which took place from 1997 to 2002. As a result, these spaces were intervened in by the project and adapted for museum use (Costa; Miranda, 2020; Costa, 2007).

The buildings of the former Episcopal Palace (Jesuit College) and Church of St. Alexander were listed by the National Institute of Historical and Artistic Heritage (IPHAN) in 1962, where they currently house the MAS. Therefore, it is the result of the first stage of the *Feliz Lusitania* Project, completed and inaugurated in 1998 (Longo, 2007).

Historically, the foundation of Belém is associated with the construction of the *Forte do Presépio*, initially erected in wood with a straw roof, after the arrival of Francisco Caldeira Castelo Branco in Belém in 1616. He departed from Maranhão and settled in the land located between the Guamá River and Guajará Bay, a strategic point chosen by the Portuguese colonizers to occupy the land and maintain control over the entire region, protecting it from possible invasions by other European peoples (Lopes, 2011; Long, 2007; Pimentel, 2017).

The restoration of *Forte do Presépio* was initiated through archaeological prospections, which contributed to the revitalization project (Longo, 2007). The excavations led to the discovery of approximately 70,000 archaeological fragments, including Indigenous artifacts, fragments of swords and pottery, porcelain pipes, foundations of previous works, stone ramps, a powder house, and other materials used by the army (Longo, 2007). Currently, the *Forte do Presépio* holds both material and symbolic values as it is considered a founding landmark of the city of Belém (Costa, 2007).

Therefore, the heritage and historical values of the buildings that now house the MAS and the MFP are of paramount importance for the region. In addition to being recognized tourist attractions, these buildings can provide the public with the memory of the region through information and objects on display and even through the buildings themselves, which still bear traces of their past, offering a high-quality immersive experience.

### **4 METHODOLOGY**

The methodology was based on exploratory research, which aims to achieve greater familiarity with the research theme or problem to make it explicit (Farias Filho & Arruda Filho, 2013). The research was divided into two stages: bibliographic and field research. Bibliographic research was conducted in books, documents, and scientific papers (Gil, 2017). The field research provided observation of the facts that occur spontaneously for data collection and recording of the variables for analysis (Marconi; Lakatos, 2017).

The field research was conducted in May and June 2023 in both museums, involving the application of 200 questionnaires (100 in each museum) with qualitative

and quantitative, open and closed questions. The questions were related to demographic data and the theoretical perspectives of Moscardo (2009), Langer (1989), and Evans (2008).

In the field research, the mindfulness theory (Langer, 1989) and the communication and visitor factors of Moscardo's theory (2009) were applied to identify and understand, through observation and dialogue with tourists/visitors, the phenomenon of mindfulness that directly influences performance and experiences in museums.

Direct observation allowed us to capture the behavior, expressions, and interactions of tourists/visitors during their visit. The analyses of the infrastructure and design of the exhibitions permitted us to identify mechanisms or means that stimulate conscious engagement or distraction, relating to Moscardo's theory.

The factors that played a crucial role in the promotion of Langer's mindfulness theory (1989) during research in both museums were identified and defined. Following Moscardo's theory (2009), questions were elaborated considering communication and visitor factors. The open-ended questions aimed to explore and confirm the tourists/visitor's experience with the identified communication factors, as well as to understand motivation, clarity of information, organization of the museums and exhibitions, and learning.

These questions encouraged tourists/visitors to express their perceptions in a detailed and contextualized way, in line with Langer's theory (1989). The closed-ended questions were related to the research objective, including records on the profile of tourists/visitors, visitor factors, and observations consistent with dual processing (Evans, 2008; Evans; Stanovich, 2013). Finally, data analysis was conducted based on Bardin's content analysis study (1994). In addition, the Excel program was used to analyze the frequency distribution of the data from the closed questions.

## **5 RESULTS AND DISCUSSION**

### **5.1 Visitor Profile**

Demographic data included gender, age, education, and nationality. Therefore, for the 200 interviewees, descriptive statistics were applied to explain the data collected and their arrangement in comparisons between both museums.

In terms of the gender of tourists/visitors, 42.5% (85) were male and 57.5% (115) were female. It was noticeable that the female gender predominated in both museums, with 31% of the female public observed at the MAS and 26.5% at the MPF.

Regarding age, there was a significant participation of young tourists/visitors aged between 21 and 30 years (26%), with 13.5% at the MFP. However, only 8% (16) of the tourists/visitors were between the ages of 51 and 60 years, the lowest percentage, while 14.5% (29) of elderly people aged 61 years or older stood out in the quantitative.

In terms of education, most tourists/visitors (59%) had higher education qualifications. Among them, 20.5% had incomplete higher education, while 38.5% had completed higher education. Additionally, 3.5% (the lowest percentage) of the tourists/visitors had only an elementary education. Although this percentage is lower, mindfulness theory (Langer, 1989; Moscardo, 2009) does not consider educational level. Therefore, tourists/visitors with an elementary school education have the same opportunity to get meaningful information and experiences from mindfulness as any other individual.



Moreover, a significant portion of the public that visits these museums every week comes from school visits. However, only a few school visits were included for observation in this study due to overcrowding and the mediation usually conducted by professionals from the schools, which interfered with attributing the museum as the main generator of mindfulness.

Regarding the origin of tourists/visitors, there was a predominance of Brazilians, with 49% at the MAS and 46% at the MFP (95%). The remaining 5% came from abroad (China, France, Italy, Poland, Australia, and Spain), with most of them visiting the MFP.

## 5.2 Visitor Factors

Based on Moscardo's (2009) definitions of the elements that influence mindfulness in the tourist experience, and specifically in exhibitions, this study considered the data related to visitor factors that can influence their experience and, thus, their inclination to mindfulness. It also considered the characteristics that influence the mindfulness phenomenon defined by Langer (1989).

Regarding the 200 tourists/visitors to both museums, 76% were visiting for the first time, with 39% of these being at the MAS and 37% at the MFP. As for those who visited more than once, they accounted for 24% of the overall total.

The factor of receiving "new visitors" is a positive aspect for both museums because, for Langer (1989), when the visitor is faced with something new, it provides greater involvement with what is around him, allowing his attention to be captured. Thus, the phenomenon of mindfulness was favorable to 76% of the tourists/visitors observed by this aspect.

Regarding the motivation of tourists/visitors to visit the museums (see chart 1), 28.5% of the overall total (200) of the public visited the museums for touring, sightseeing, and leisure reasons, which also highlights these museums as major tourist attractions.

At the MAS, the motivation "curiosity" was considered for 24.5% of tourists/visitors. This figure shows that tourists/visitors entered the museum because they passed by the street and discovered it, and consequently were curious about its collection. This curious motivation reflects Langer's approach (1989), in which the willingness to explore new opportunities can lead to moments of surprise and discovery. The willingness to enter the museum without a specific intention indicates an open and predisposed mind, aligned with the factors of mindfulness. Curiosity has been one of the reasons for visiting museums, as indicated by studies by Studart (2009) and Almeida (2009).

In addition, 8.5% of the overall total of tourists/visitors to both museums wanted to know more about art, history, and culture. Visitors are more likely to be mindful if they have an elevated level of interest in a specific subject. This group of visitors demonstrated a motivation directed toward the specific content of the museums.

School and university visits occurred frequently, but not so many people from this group were interviewed. Due to the crowding, they were usually in a hurry, corresponding to only 7% of the overall total. Langer's (1989) approach states that in situations where time is limited or rush is an issue, adopting a mindfulness approach can be challenging. However, it is still possible that some of these visitors assimilated significant information even under the most hectic circumstances, according to our observations.

As for the 4% of the total tourists/visitors in both museums, these were due to the first day of the event "A Night at the Museum", in which some tourists/visitors were interviewed due to the huge number of visitors who participated in the event at the museums in the historic center of Belém, composed of four museums.

Depending on the motivation of tourists/visitors, they were more prone to mindfulness in specific areas and moments because they got information and created meaningful experiences of their particular interest.

**Chart 1: Motivations for visiting the museum/exhibition**

Reasons for visiting museums	Museum of Arte Sacra	Museum of Forte do Presépio	Total
Tourism/Leisure	31 (15,5%)	26 (13%)	57 (28,5%)
Knowledge/Curiosity	49 (24,5%)	0 (0%)	49 (24,5%)
School/University Visit	11 (5,5%)	3 (1,5%)	14 (7%)
Event	6 (3%)	2 (1%)	8 (4%)
Art/Culture/History	5 (2,5%)	12 (6%)	17 (8,5%)
Visit with someone	15 (7,5%)	0 (0%)	15 (7,5%)
Visit the museum exhibition	0 (0%)	26 (13%)	26 (13%)
Visit the temporary exhibition	14 (7%)	X	14 (7%)
<b>Total</b>	<b>100 (50%)</b>	<b>100 (50%)</b>	<b>200 (100%)</b>

Source: Prepared by the authors, 2023.

### 5.3 Communication Factors

The communication factors outlined by Moscardo (2009) related to the induction of mindfulness were observed. For the museum experience, the following variables were considered: the use of multisensory media, novelty, conflict, surprise, production of questions, interaction of visitors with the exhibition (dynamics), connections between visitors, signage, and the presence of guides and mediators (Moscardo, 2009).

#### 5.3.1 Museum of Arte Sacra

The setting of the MAS consists of a long-term exhibition, the church of Santo Alexandre, and a temporary exhibition hall. According to our analysis, this exhibition lacks multisensory media equipment, which makes it difficult to induce a mindful cognitive state, especially for individuals with disabilities who require accessible means such as Braille and audio description, to ensure their experience. The exhibition presents dense texts gathered in only one room at the beginning of it, which impairs the visitor's mindfulness, as not everyone stops to read all the content or ends up not reading it.

Moreover, the texts are only written in Portuguese, not very dynamic in the sense of their information, and their design is not so appealing to foreign tourists, which makes it clear that this exhibition does not have dynamic sensory media to provide accessibility, surprise, and raise questions.

The lack of novelty in the long-term exhibition left it at a disadvantage because visitors preferred the temporary exhibition, thus generating unintentional competition between these two exhibitions.

The temporary exhibition "Cultural Manifestations of Brazil: The Living Celebration of the Culture of the Peoples" consisted of components that drew the tourists/visitors' attention, due to gratuity, colors, dynamic content, accessibility, and signage (an extensive banner announcing the exhibition in front of the building), in addition to several other objects.

Thus, many tourists/visitors (not included in the study) at the museum's reception preferred to visit the temporary free-of-charge exhibition. After the visit, they were tired of the extensive content, and because of fatigue, they left the museum without visiting the long-term exhibition and the church of Santo Alexandre.

Despite this observation, it is worth commenting on the presence of mediators in the long-term exhibition and the church of Santo Alexandre that were more active and receptive to tourists/visitors, which generated a good connection with visitors in the long-term exhibition.

The lighting factor was another important and planned highlight of the long-term exhibition, which emphasized its collections and created a calmer atmosphere along with air conditioning and cleanliness. It was opportune to observe that both exhibitions at the MAS compete unintentionally for the preference of tourists/visitors, as it was perceived that the long-term exhibition had a positive impact on inducing mindfulness, such as the presence of mediators and the relation between tourists/visitors. However, other aspects need attention and investment, such as multisensory media and signage.

### 5.3.2 Museum of Forte do Presépio

At the MFP, our focus was on the exhibit called "The Museum of the Meeting", which consists of a collection of various artifacts, such as lithic materials, Marajoara and Tapajônica ceramics, a collection of muiraquitãs from different archaeological sites, objects excavated from the surrounding historical site and photos of contemporary Indigenous groups.

Regarding the multisensory media, the exhibit lacks accessible content as the museum does not have multisensory equipment other than texts and identifications in Portuguese for the tourist/visitor experience.

In some areas of the museum, certain objects lack sufficient information, such as the Indigenous photographs near the entrance, and in artifacts of the Tikuna people, making it difficult to identify the objects' context, also due to inadequate lighting. These obstacles hinder interaction with the exhibit for foreign tourists, resulting in little interest and making it challenging to pay full attention.

The MFP lacks orientation signs, as tourists/visitors often go the opposite direction of the planned chronological exhibition, moving to the right side instead of proceeding straight ahead. Additionally, the museum reception sometimes fails to inform tourists/visitors about the availability of mediators. According to Langer and Moldoveanu (2000), a less attentive person may not perceive the surroundings as a source of new information, making it difficult to capture the visitor's attention to the exhibition's content.

Lastly, another crucial aspect that requires attention is the lack of trained mediators proficient in other languages. Foreign tourists visiting the MFP face challenges in understanding the museum's content, as it is only presented in Portuguese and the mediators are not fluent in other languages, limiting the experience and conscious engagement.

## 5.4 Perceptions and Mindfulness of Tourists/Visitors

Regarding the content of the exhibitions, including texts, pictures, and collections, 93.5% of the total tourists/visitors at both museums consider them understandable. Among the justifications are didactic content, explanatory texts, easy-to-understand language, signs, and subtitles, which were some perceptions considered by tourists/visitors. This denotes a positive point for museums because the public's attention can be induced to reflect more on the setting in which they are located.

In contrast, 6.5% of tourists/visitors at both museums did not consider them comprehensible, with the majority at the MAS. Their main justifications were massive texts and small fonts, a lack of other languages, a lack of information, low lighting, and the unavailability of information in audio format. Such points are considered important solutions to be invested in to improve the experience of tourists/visitors at the museum.

Regarding the organization of museums and exhibitions, 98.5% of the total consider them organized. Among their justifications at the MAS, tourists/visitors highlighted the arrangement of the objects, the delimitation of the space, the wings, the administration, and security as factors contributing to the perception of the organization. These elements are related to the conscious and detailed approach that Langer (1989) proposes, in which visitors are sensitive to the details and structure of the setting. At the MFP, the tourists/visitors emphasized the identification of the objects, the texts and information, the distribution of the exhibit, the setting, and the space as factors that contributed to the perception of the organization. This emphasis on detailed information can be interpreted as a response to Langer's mindful and curious approach.

However, 1.5% of the tourists/visitors to both museums did not consider the museums and exhibitions organized, citing a lack of lighting, foreign languages, and massive texts. Therefore, tourists/visitors who perceived a lack of lighting, information in foreign languages, or massive texts may have been affected by these barriers in their conscious engagement. The absence of adequate lighting can make it difficult to observe and identify objects, negatively impacting the tourist/visitor experience. Lack of information in foreign languages can affect access and comprehension for foreign audiences. In addition, massive texts can overwhelm tourists/visitors, thereby preventing openness to new information.

Moscardo (2009) points out that, to induce mindfulness, space must provide new and different environments, varied conditions, control, and individual choice. Thus, a disorganized museum will hardly be able to influence the mindful cognitive state because it cannot capture the tourist/visitor's attention.

As for the tourists/visitors who had previous information about the collection, 31% got information about some content of the collection, of these, 16% at the MFP, in which the one that stood out the most was the Marajoara and Tapajônica ceramics, and in second place was the history of the foundation of Belém and the Amazonian peoples. At the MAS, most tourists/visitors reported that they already knew about the Church of St. Alexander before the visit; in second place were the architecture and the collection.

These results indicate that tourists/visitors who got prior information about the collection were more prepared for an experience of mindful exploration and meaningful interaction. Those who were already familiar with certain elements of the collection may have had a greater ability to perceive subtle details, make more precise connections, and

engage in more contextualized learning on the first visit. Tourists/visitors who already had prior knowledge about St. Alexander's Church at the MAS may have viewed the collection in a more connected and conscious way because prior knowledge helps in mindfulness engagement.

Relating Langer's mindfulness theory (1989), we note that previous knowledge about the collection can influence the conscious and mindful approach of tourists/visitors. Those who already had information about certain elements of the collection were more likely to have a deeper understanding and thus evidencing a mindful cognitive state.

Additionally, Moscardo (2009) postulates that the theory of mindfulness suggests that, in any situation, the characteristics that individuals bring with them interact with the characteristics of the environment and the role of these individuals in this environment to create a state of conscious or unconscious cognitive functioning. That is, the experience becomes more enriching both due to the motivation and the expectation of the visitor when researching the attraction before visiting it.

In terms of visitor reports, 87% of the tourists/visitors to both museums reported learning something new or surprising during their visit. At the MAS, the collections that most resonated with tourists/visitors' learning were the statuettes in the corridors and the Carmelites, Jesuits, and Franciscans. At the MFP, the most mentioned collections were the history, occupation, and foundation of Belém, along with Marajoara and Tapajônica ceramics, and the relationship of the Tupinambá people with anthropophagy.

These data are important because, according to Langer (1989), once an individual can learn something new, it encourages deep processing. It is interesting to consider that the tourists/visitors who reported not having learned anything new or surprising were those who superficially visited without fully engaging with the exhibitions.

Museum fatigue can be a limiting factor for visitors' experience. However, of the 200 tourists/visitors to both museums, 95.5% reported not feeling tired, and 4.5% reported feeling exhausted. At the MFP, visitors justified their state of exhaustion because of many texts. At the MAS, reports of tourists/visitors' exhaustion were attributed to their visit to MFP (these museums are close to each other) and fatigue from climbing the staircase, rather than the exhibition content. There was only one case of fatigue due to a visitor's physical condition (pregnancy). The findings indicate that museum fatigue did not have a negative impact on visitors' experiences (Bitgood, 1992; Falk, Dierking, 2013).

Although the fatigue reported by the interviewees was low, it was noticed that many of the tourists/visitors appeared to be momentarily fatigued. In the middle of the visit to the exhibition, a moment of fatigue was perceived. However, after a change of theme or content, the tourists/visitors focused their attention on the collection. This fact was observed at the MFP, in the transition from texts about native peoples to the panel of Portuguese collections, and at the MAS, in the transition from the corridor of statuettes to the silverware or corridor of paintings.

Strategies such as the availability of rest areas, clear information about visit duration, and inducing conscious pauses for reflection can contribute to a more enjoyable and less exhausting experience. Finally, the data indicate that most tourists/visitors had a conscious and engaged experience throughout the exhibition, not leading to total exhaustion. This means that a state of mindfulness combated museum fatigue and engaged visitors with the exhibits (Langer; Moldoveanu, 2000).

The interviewees were asked if the content of the exhibitions was overwhelming or repetitive; 94.5% of the overall total of both museums answered no. This demonstrates that most tourists/visitors engage in a conscious and engaged manner with the information and objects displayed. However, 5.5% reported that some of the content was



overwhelming. At the MAS, some visitors mentioned that the figurines and texts were repetitive. In contrast, at the MFP, some interviewees reported that the texts were overwhelming, and the ceramic objects were repetitive.

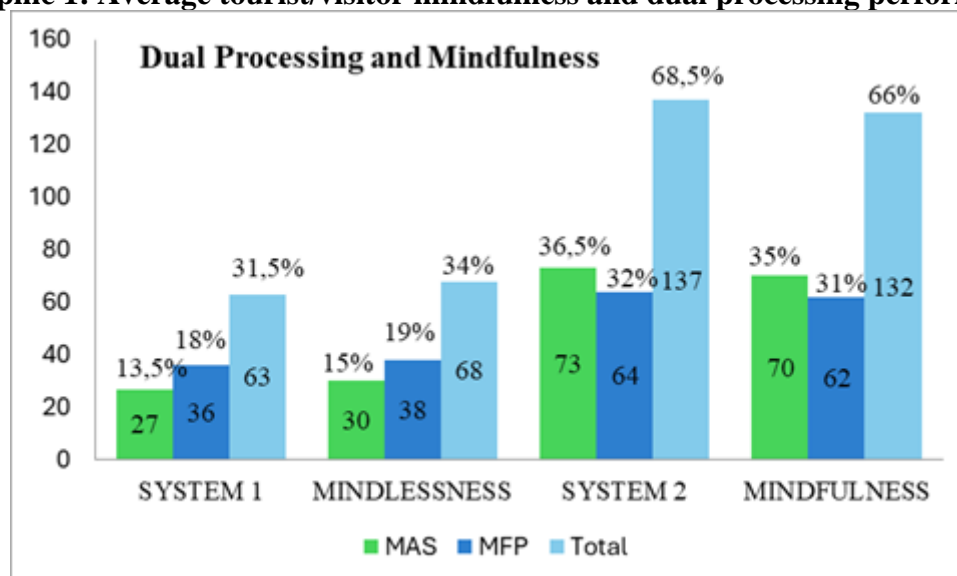
The interviewees were asked about the mediation and signage; 74% of the overall total of both museums did not miss or consider them sufficient. However, 26% reported that they needed guidance, especially from guides. However, in most cases, the tourists/visitors were unaware that they could request a guided tour. By relating to the intrapersonal and situational factors of Langer and Moldoveanu (2000), it is possible to note that the situational factors stood out positively, as only 26% of the individuals missed orientation and signaling.

Conversely, most tourists/visitors (74%) who did not miss them also considered the context comfortable and comprehensible enough to walk through the exhibitions without needing additional guidance. This demonstrates that the tourists/visitors may have actively engaged with the setting, exploring on their own and assimilating the information presented, which is consistent with Moscardo's (2009) and Langer's (1989) theories.

As for the level of how interesting the museums were, 78.5% of the overall total of interviewees at both museums reported finding the museums extremely interesting and 18% found them interesting. The data demonstrate that the perception of most tourists/visitors who participated in the interviews was positively influenced by the way they experienced and engaged with the contents. Therefore, those who reported the museums as "extremely interesting" may have engaged more deeply in their contents, considering this study as a fundamental factor for a mindful cognitive state (Moscardo, 2009).

Using the mindfulness theory (Moscardo, 2009) and the dual processing theory (Evans, 2008) in both museums, we found that 31.5% (see graph 1) of the tourists/visitors presented dialogue consistent with system 1 (automatic), and 68.5% presented dialogue consistent with system 2 (reflective). Regarding the mindfulness phenomenon of the tourists/visitors in most of their visits to the exhibitions, 66% of them presented a mindful cognitive state, and only 34% presented a mindless state.

**Graphic 1: Average tourist/visitor mindfulness and dual processing performance**



Source: Prepared by the authors, 2023.

According to the data, most tourists/visitors (68.5%) identified as belonging to Evans's (2008) dual processing system 2 participated in a more deliberate, analytical, and information-aware context during the visit to both museums. In contrast, the percentage of 31.5% indicated that tourists/visitors identified as belonging to the dual processing system 1 demonstrated more intuitive and faster (automatic) decisions during the visit with less reflective involvement.

Regarding mindfulness practice, 66% of the tourists/visitors considered to be in a cognitively mindful state during the visit were actively engaged with the exhibits, asking questions, reading the information carefully, and reflecting on what they were observing. It is inferred that a considerable portion of the tourists/visitors were genuinely engaged in a more conscious and engaged experience, developing critical opinions on the exhibitions. In addition, those who were identified as belonging to Evans's (2008) system 2 (more conscious processing) developed mindfulness, based on field observations.

In contrast, 34% of the tourists/visitors who were identified as mindless made faster and less reflective decisions during the visit, with less content-conscious involvement, which relates to the percentage of 31.5% of the tourists/visitors who presented their response based on processing system 1. Langer (1989) argued that mindfulness involves a conscious and open approach to experience that goes beyond the simple activation of system 2.

Finally, from the average proportion in which 66% of tourists/visitors showed mindful behavior, it is revealed that both museums enable the phenomenon of a mindful cognitive state in their tourists/visitors. This demonstrates a positive aspect of the ability of museums to provide more meaningful and enriching experiences that stimulate mindfulness and good learning in their tourists/visitors.

## **6 CONCLUDING REMARKS**

We consider that the study in this report achieved its objective and answered the questions that guided its conduct, providing a deeper view of the visit experience in these museums. Both museums revealed valuable information about the relationship between the mindful and mindless behavior of tourists/visitors, as well as the factors that influence this dynamic. This means that the museums managed to create a setting that provided experiences and ways of mindfulness for a considerable proportion of these individuals. Thus, the complexity of the interaction between cognitive and contextual factors in the promotion of mindfulness can be perceived.

Although the MAS and MFP showed mindful behaviors in their tourists/visitors, this study revealed challenges related to orientation, signage, and exhibit clarity. In some cases, tourists/visitors reported a need for more comprehensive guidance and information. This aspect highlights the importance of improving the structure of the exhibitions, ensuring a cohesive distribution of the objects, and comprehensible information to enrich the visitor experience. For example, if some tourists/visitors have expressed a need for guidance, this may indicate that the current elements of guidance and signage may not completely meet their needs.

Another aspect identified is the need to further stimulate interaction with guides and mediators. While this interaction is valuable in promoting mindfulness, there is scope to intensify these approaches to ensure that tourists/visitors have enriching opportunities, as evidenced at the MAS. This direct interaction can stimulate questions, discussions, and

deeper analysis of the artworks and religious artifacts exhibited at the museum. Clear directions and proper signage can also help direct visitors to areas of interest.

At the MFP, the presence of guides and mediators enriches the tourists/visitors' experience by providing contextual information and stimulating reflections on the history and significance of the *Forte*. However, there are still a few mediators.

Recommendations for improving the communication and visitor experience at the exhibitions include: enhancing clarity of information and quality of signage to guide tourists/visitors effectively; incorporating more multisensory elements in the exhibitions to make them more accessible and engaging; providing enriching interactions with guides and mediators, along with foreign language training for professionals; dynamizing the exhibition design to create a more engaging and mindful experience for visitors.

This study offered valuable data on the interaction between communication and visitor factors, highlighting the significance of considering visitors' mindfulness during museum exhibitions. By addressing the cognitive state of mindfulness, museums can enhance visitor experiences and positively impact tourism in the metropolitan region of Belém.

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