

EXPLAINING AN IMMERSIVE MUSEUM ROOM FAILURE IN INCREASING VISITORS' ENGAGEMENT (PSYCHOLOGICAL IMMERSION) WITH ART WORKS

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Abstract

The failure of an immersive museum room to increase visitors' engagement (psychological immersion) with paintings and sculptures led us to try to understand why this was the case. The following three factors were examined: 1) The room lacked some characteristics of an immersive environment; 2) Visitors did not feel physically immersed; 3) Display of the art works was problematic. Research results show that only the third factor could be held responsible for the failure.

Keywords: *Museum, immersive room, visitors, psychological immersion, failure.*

1. Introduction

Since 2000, one observes a proliferation of publications on the so-called immersive venues obtained through digital devices (Chen, Hu and Jacob, 2024; Zhang, 2020^{*2}). Regarding museums, room equipped with such devices are supposed to increase visitors' engagement (psychological immersion) with the exhibited objects (Chen, Hu and Jacobs, 2024; Robaina Calderin et al. 2023^{*3}). However, a research project that we conducted in a major Canadian fine arts museum shows no greater engagement (psychological immersion) in this type of room than in others not offering the feature (Dufresne-Tassé et al., 2022). Indeed, visitors do not deal with a greater number of works (paintings, sculptures), nor do they experience an intense engagement with them (psychological immersion) more often than in the other rooms. So, we tried to find out why this was the case and researched three main reasons: 1) The room lacked some of the characteristics of an immersive environment; 2) The visitors did not feel physically immersed; 3) The display of art works was problematic.

2. Some definitions

Physical immersion: The present definition is borrowed from Belaën (2003) and Bitgood (1990). It implies a context that plunges the visitor into another time or space (Bitgood). Thus, visitor finds herself/himself in a place isolated from her/his original environment (Belaën). This definition is yet generally accepted (Dai-in, Melissen and Haggis-Burridge, 2024; Fan, Jiang and Deng, 2022^{*}).

Psychological immersion (engagement): It is, for a visitor, to be fascinated by what she/he is observing, absorbed by what is going on in her/his mind to the point of forgetting all the rest. Her/his attention is then effortless and accompanied by an intensive cognitive-imaginary-affective functioning (Dufresne-Tassé, 2016). As the preceding definition, the present one is similar to contemporary ones (Suh and Prophet, 2018; Zhang, 2020).

3. Museum context

Research is carried out in three rooms of a major Canadian fine arts museum. These rooms display respectively 31, 30 and 29 works of European paintings and sculptures from the same period, 1850-1900.

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² References marked with an (*) are only examples as the subject has been treated in many other publications.

³ Some older references: Kirshberg and Tröndle (2012); Parker and Bond (2010); Pranskūnienė (2013); Soren (2009), Sparacino (2004).

The display, which is similar in the three rooms, is roughly of the “white cube” type, the paintings being hung on the walls, while the sculptures, placed on pedestals, are distributed in the center of the space.

The three rooms follow one another. An *Impressionist* room comes first, then follows an *Orientalist* one. A *Romantic* one completes the series. This last room, where the works are presented in exactly the same way as in the previous ones, hosts a digital projection which immerses the works and the visitor in a summer’s night. This projection, that creates what is called a virtual reality, covers the ceiling and walls with the shapes of trees whose leaves move slowly as if shoved by a gentle breeze. Every 30 seconds or so, a bird song is heard. This projection is responsible for the visitor’s physical immersion (see photographs of the three rooms at the end of this text).

4. Research schema

Sample was composed of 30 adults, men and women, aged 20 to 40 years of age. These people enjoyed a secondary education or more, and used to go to the museum two to five times a year. These people were recruited according to the “Snow Ball” technique.

Ways of gathering information from visitors:

Information was gathered from each visitor in three ways.

1. Information was collected from a visitor through the “Thinking Aloud” Technique (Ericsson and Simon, 1993). In fact, we used an adapted and validated version for the museum situation (Dufresne-Tassé et al. 2014). It consists in asking a visitor who is arriving at the museum to do her/his visit as she/he wishes, saying aloud what comes to her/his mind without bothering with remembering or justifying it. Through what they say, visitors reveal their relationship to the work they are observing, how they explore it, and how their thoughts, images and feelings come into play.
2. Once the visit is over, each visitor is asked to return to the rooms and indicate each of the works in front of which she/he had an experience of psychological immersion.
3. Once this is completed, during an interview, the visitor describes what it is for her/him to have an immersive experience, based on what happened during her/his visit. The definition thus obtained corresponds impressively to the theoretical definition offered above. Indeed, according to the 30 visitors, it is mainly: being elsewhere, taking a trip (80%), and getting closer to the works (20%). The trip is supported by (in order of importance): a) Exploring the work (possibly using information from the label); b) Deepening the meaning of the aspect considered by "attaching" memories and personal knowledge to it, or by imagining "things" that happen elsewhere than in the museum rooms. One feels emotions, pleasure, joy, empathy.

5. Results

The room did not have some of the characteristics of an immersive place?

The characteristics required of an environment for it to be considered immersive (Chen, Hu and Fisher, 2024; Dai-In, Melissen and Haggis-Burridge, 2024; Hyunkook, 2020; Valteirra Lacalle, 2018) are the following: this environment completely envelops the visitor, it is consistent, its ambient light is subdued, and it solicits more than one sensory modalities.

The analysis of the environment in which the visitor found herself/himself immersed reveals that it met all the previous characteristics. Indeed: the digital projection of a summer night covered both the ceiling and the walls of the room, so that the visitor was completely plunged in this universe; the projection also created a consistent universe that solicited both sight and hearing (birdsong). Furthermore, this solicitation would go on all the time that the visitor was staying in the room. The characteristics of the room cannot therefore be held responsible for the low psychological immersion observed among the visitors of the previous study.

The visitors did not feel physically immersed?

No, that is not the case. Indeed: Upon entering the room or shortly after, 29 of the 30 visitors say: it is beautiful, calm, the atmosphere is pleasant (only one says that it is dark and that he does not like wearing his glasses). A dozen visitors also say that they can almost feel the breeze that moves the leaves. In addition, 5 visitors regret that there is no bench that would allow them to benefit longer from the atmosphere of the room. Finally, 2 visitors suggest that the museum should create other similar rooms. This second factor can therefore, no more than the first one, explain the lack of psychological immersion of the visitors who participated in the study.

The hanging of the works was problematic?

Very likely, and for the following two reasons.

1. The "White Cube" type of hanging invited visitors to ignore the physical immersion induced by the digital projection of a summer night. More precisely, the hanging of the third room was the same as that of the two rooms that the visitor had just visited, as can be seen by browsing the first group of photographs presented below. As in the first two rooms, the hanging invited the visitor to take an interest in each painting or sculpture in turn without worrying about the characteristics of the walls and ceiling. In the third room, this meant leaving aside its immersive character. This interpretation is supported by the fact that only 2 out of 30 visitors briefly mention an aspect of the room or its atmosphere in all what they say about the 29 works exhibited.

2. The subject of the exhibited works (see the second and the third groups of photographs presented below), even when they are landscapes, has no obvious connection with a summer night and its atmosphere as the visitors in this study perceive them. It is therefore quite likely that these visitors put the digital projection aside when they process the paintings and sculptures they observe.

In short, two aspects of the hanging act in concert to make visitors neglect the effect that the immersive installation in which they find themselves has on them. More precisely, by working in the same direction, the two aspects are strong enough to create a gap between the physical immersion experienced by visitors and what they are looking at, thus preventing the physical immersion from positively influencing the treatment of the works.

6. Synthesis and discussion

We just saw: a) that the digital projection creating a virtual reality does indeed have the characteristics that make it an immersive projection; b) that visitors do indeed experience a physical immersion that constitutes a positive experience; c) but that this physical immersion does not promote engagement, or if one prefers, psychological immersion when faced with prints or sculptures exhibited in a fine arts museum; d) the most plausible hypothesis of this failure of the physical immersion seems to be the existence of a gap, more precisely an inconsistency, between what visitors physically experience and what the museography, that is to say, the characteristics of the room where they are, invites them to do.

7. Discussion

Firstly, the last of the preceding observations raises an important question for the museum world: what should be the relationship between the experience lived during physical immersion and the objects on display for immersion to facilitate the processing of these objects? For example, should it constitute an immediate context for the objects? Should it instead offer additional information closely related to the meaning of these objects?

Moreover, the failure of the physical immersion to induce psychological immersion raises a worrying question: are our results really exceptional? To adequately answer this question, one must obviously consider the results of other studies according to at least three of their characteristics. a) According to the type of museum in which these studies were conducted. Indeed, what constitutes the experience of psychological immersion, that is to say the production of meaning by a visitor while she/he is moving around a museum, varies greatly depending on whether she/he is strolling in an archaeology museum, a natural history museum or a fine arts museum (Sauvé-Delorme, 1997); b) According to the way in which objects are presented in the same type of museum, because museography, as we have just seen, greatly influences the visitor's production of meaning. It can just as easily make it impossible as it can strongly stimulate it; c) According to the means used to collect information from the visitor; the determining character of this component of a research is so obvious that it goes without comment.

If we use the three previous parameters to sift through all the research carried out in museums, there remain three studies, those of Desbans (2017), Jancert (2015) and Msica (2019) which arrive at findings similar to ours: physical immersion does not necessarily facilitate psychological immersion. So, all things considered, our observations are not as exceptional as they first appeared.

Finally, in a completely different vein, deepening the understanding of psychological immersion seems to be a pressing need for avoiding misunderstandings, but also for studying what appears to Zhang (2020) a particularly important form of the adult's psychological functioning. In fact, the "Thinking Aloud" technique, used in this study as a means of collecting information from visitors, continually gives access to the result of what their working memory processes, that is to say, their production of meaning from minute to minute, in other words, their continuous cognitive, imaginary and affective production. Thus, "Thinking Aloud" would allow to detail, if not renew, what we now know about psychological immersion and possibly also would enable studying what it entails for an adult.

Figure 1



Impressionist room



Orientalist room



Romantic room



Examples of paintings exhibited in the Romantic Room.



Examples of sculptures.

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