Social Meaning Mapping

Reflecting on exhibition experiences with digital maps

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Introduction

Maps and floor plans of exhibition spaces are being used both in visitors' navigational processes in museums and in curatorial designing processes. Moreover, spatial representation is not only important when curatorial teams are negotiating the making of an exhibition, but also when evaluating it. In evaluation processes, floor plans serve, for instance, as a tool to conduct unobtrusive observation of visitors, also known as timing and tracking (e.g. Chiozzi and Andreotti 2001, Yalowitz and Bronnenkant 2009). Floor plans are used to note visitors' circulation and orientation in the museum space, their use of objects and interpretive resources, as well as their stops and dwell time in the exhibition space. However, maps and floor plans have not only been used in timing and tracking studies. Researchers also implemented the use of these visual representations to include visitors in an active discussion about their exhibition experience and acknowledge their agency in meaning-making (Prosser and Loxley 2008, Weber 2008). In contrast to interviews which are highly linguistic, using visual methods allows us also to include participants in data collection whose linguistic skills may not have developed or who might find it difficult or challenging to articulate themselves verbally (Christidou 2020, Prosser and Loxley 2008, Weber 2008). Examples of using such visual methods include the Personal Meaning Mapping for which individuals are asked to write their associations with a target word or phrase, such as the title of the exhibition (Adams, Falk, and Dierking 2003, Falk, Moussouri, and Coulson 1998), visitor recall maps or self-reported pathway maps (Nurse Rainbolt, Benfield, and Loomis 2012), and visitors' drawings (Diamantopoulou, Insulander, and Lindstrand 2012, Insulander and Selander 2009).

Aim of the method

Following the shift in using visual methods in the evaluation of exhibitions, this chapter introduces the digital method called Social Meaning Mapping (SMM). SMM is embedded in Visitracker, a tablet-based app designed to conduct timing and tracking, and surveys (Pierroux and Steier 2016).[1] Its design has been informed by relevant methods used in visitor studies drawing upon sociocultural theories of learning, foregrounding the social and interactional nature of the exhibition experience. Specifically, SMM was designed to allow visitors' representations and reflections to come into the foreground of data collection. During SMM, visitors are prompted to use the digital floor plan from one gallery room onto which they are invited to mark not only their personal but also their collective accounts of their exhibition experience. As visitors verbally and visually highlight aspects of their visit on the surface of the tablet, they create their own maps of their experiences. Thus, when collecting data with SMM, both the final product with the drawn map and the process of marking and thinking aloud are essential resources for evaluating their exhibition experience.

Step-by-step guideline

To use SMM, one might have a tablet with the Visitracker app installed on it or alternatively use an ordinary paint software along with screen recording. The app provides a step-by-step guide for setting up a study.

1. An image of the floor plan from one gallery room needs to be prepared in advance. This image needs to be a detailed visual representation of the objects on display and its available interpretive resources. Once provided, it needs to be uploaded to the app.
2. Visitors are to be recruited before entering the gallery room under investigation. After visiting the gallery room, visitors are invited to operate the tablet during a researcher-led interview session.
3. The researcher asks for their consent to be audio recorded by letting the participants click the consent box on the tablet's screen.

1 The Visitracker app was designed to collect data on groups of no more than four visitors, as it is often very time-consuming to conduct studies with larger groups. SMM was developed as part of my postdoctoral fellowship at the Department of Education, University of Oslo. Both Visitracker and SMM were developed during a ten-year long collaboration between the Department of Education, University of Oslo; Engage Lab, University of Oslo; and the National Museum of Norway. Visitracker has been relaunched under the name SEEZ.

4. The illustrated version of the gallery room is then projected on the tablet's screen, along with a digital paint toolbox. The researcher instructs visitors on how to use the tablet and the toolbox to mark aspects of their exhibition experience digitally (Fig. 1a, 1b). Depending on the research interests and questions, different prompts can be given to visitors regarding the marking on the digital floor plan. Interviewers can explore specific aspects in detail, such as the use of the objects on display and the available interpretive resources, while allowing visitors to document their movement patterns and to share their reflections on what they encountered in this room, and what they chose to explore further or ignore altogether.
5. Additional verbal prompts can be offered by the researcher inviting visitors to clarify or elaborate further on their meaning-making, both verbally and visually. It is important to remember here that the interviewer should remain as open and flexible as possible during data collection. Potential intervening can prove detrimental to the ways visitors choose to represent and recount their exhibition experience.

The average time for data collection is fifteen minutes per group of two visitors.

Fig. 1a: An example of the SMM tool on the Visitracker app, © Screenshot: Dimitra Christidou.

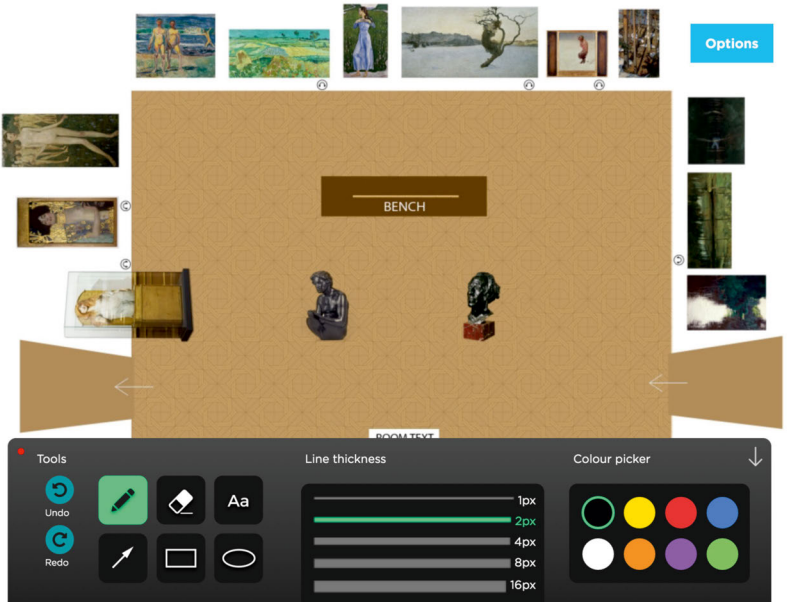
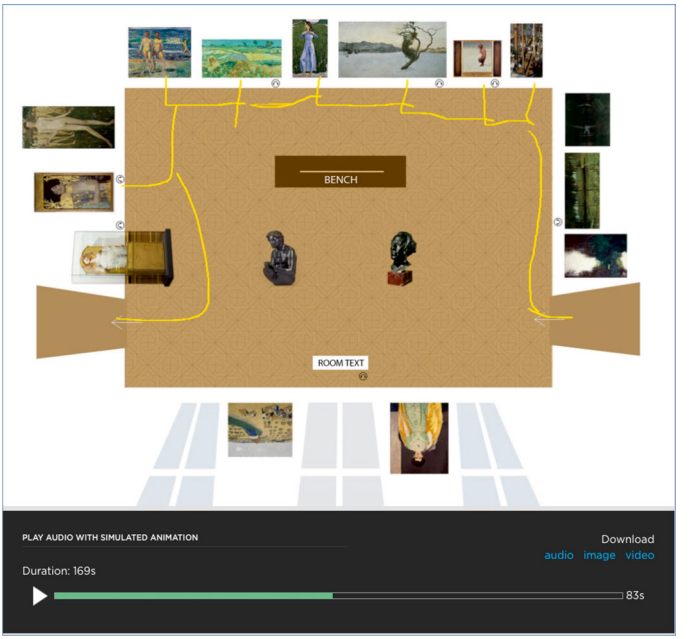


Fig. 1b: Data collection through SMM, using the Visitracker app, © Photo: Department of Art History, University of Vienna.

To access and analyze the data, one needs to log in to the dedicated Visitracker portal. During the SMM data collection, the app records both visitors' digital markings on the tablet's screen and the conversation unfolding during the interview as a video file. These videos can be accessed on the app's portal and allow for the synchronized re-creation of visitors' markings and their verbal descriptions associated with each marking (Fig. 2). As visitors are invited to collaborate on their SMM, they are communicating their experience with each other, the researcher and themselves. Depending on the quality of interactions unfolding during data collection, SMM can capture aspects of visitors' socio-cultural background, previous cultural experiences and potential areas of interest in the gallery room. Of special interest is visitors' own reasoning why they choose to further explore certain exhibition areas or objects or not. Data from SMM can then inform an analysis how visitors responded to the curatorial design of the exhibition space, object displays and interpretive resources.

Fig. 2: Synchronised replay of a Social Meaning Map, © Screenshot: Dimitra Christidou.



Case study

In the *Belvedere Visitracker* study, we explored how visitors in groups of two experienced the redisplayed collection in the Secession room at the Upper Belvedere in Vienna, Austria in Autumn 2018. The team consisted of five researchers, all equipped with a tablet on which the Visitracker app was installed. Each researcher approached visitors arriving in pairs at the first floor of the building and invited them to participate in the study. If visitors agreed and were over 18 years old, they were asked to fill in a consent form and continue their exhibition visit on this floor. The data collection occurred in three consecutive stages, with a different method used during each stage: (1) timing and tracking at the Secession room, (2) a short survey consisting of twelve questions on visitors' sociodemographic background and visiting practices, and (3) an SMM created by each pair. Timing and tracking (stage 1) started upon visitors arriving at the Secession room. Stages 2 and 3 took place immediately after visitors exited the gallery room.

During SMM, visitors operated the tablet. The researcher instructed visitors to "[p]lease mark the way you took through this room by using the toolbox available. As

you can see, there are different shapes, colours, and an eraser for you to use. While drawing, please also share your thoughts on your visit. Everything that comes to mind is of interest to us." Once visitors finished marking their trails, the researcher asked them to assign the artworks they have seen before (as an original or reproduction) with an "x" and their personal highlight with an "→", while reasoning their selections. During the whole SMM process, the researcher continued to prompt visitors with questions to elaborate on their markings and thoughts. The average duration for filling out the survey and taking part in the SMM was approximately 25 minutes. During one week of data collection, the team gathered data from 73 pairs of visitors.

When analyzing the data collected through timing and tracking, we were able to find out the time visitors stayed in the room, the most frequent movement patterns, and the focus on some specific artworks and interpretive resources. Coupling this data with the data collected through SMM, we were able to learn more about visitors' motivations, choices and behavioural patterns. By combining our own observations with the visitors' perspective, we were able to create a more holistic picture of their visit to the exhibition and link the what of their actions with the why. In a focused data analysis on the specificities of accompanied museum visits in the art museum, the 7:3 ratio of solitary versus shared interactions demonstrated that, on average, visitors in pairs acted more on their own than together in the art museum. Yet, frequencies differed widely among pairs. Pairs who showed more social intimacy in talk, also were more willing or better able to share their art experience with each other in the exhibition space (Reitstätter and Christidou 2024).

Method reflection

Based on the feedback from team members, other researchers, museum practitioners and my own personal experience, potential users might find it useful to take into consideration the following non-exhaustive list of the advantages and pitfalls of the SMM method.

The main strength of SMM is its design as a participatory and collaborative method. The maps are created by visitors in collaboration with each other and can document both aspects of visitors' personal experience (what they individually experience) and aspects of their social experience (how they engage with one another). Moreover, in their attempts to account for the social aspects of their visit, visitors can use SMM to refer to the wider ongoing situational context that unfolded during their museum visit, including other visitors who happened to be in the same room at the same time. When doing so, the maps created represent not only relationships between visitors and the museum space, the objects displayed, the interpretive resources, but also relationships between them and other visitors on site. Addition-

ally, as the digital map is being shared simultaneously with all participants, it can be further used to encourage and facilitate a collaborative reflection of the exhibition experience. The map provides the researcher also with a record that can be further interrogated while it is being made, as well as after it is completed, allowing to return to features of the exhibition and elaborate on what has been marked out. A useful piece of advice here to consider when collecting data is to have a very detailed floor plan: when the floor plan depicts the architecture of the gallery room, the objects on display and the available interpretive resources, it allows visitors to refer to these by marking them out, without requiring them to recall any concrete names or specific information.

By enabling ways of data collection that are responsive to participants' own meanings and associations and do not rely heavily on the use of language (Gauntlett 2007), SMM creates and collects visitors' own maps, which are dialectical and socially shared artefacts created by themselves (Christidou 2020, Stahl, Ludvigsen, Law, and Cress 2014). Asking visitors to use and reconfigure a spatial representation of their exhibition experience constitutes a form of place- and sense-making within a series of "embodied and imaginative practices" (Pink 2008: 176). SMM prompts visitors to reimagine themselves *being* in this specific gallery room sharing their personal and social memories in a process of immersion (Christidou and Reitstätter 2021). This is "a requirement for creating a sensation of presence" (Newbury et al. 2021: 419) that is "the subjective experience of being in one place or environment even when physically situated in another" (Witmer and Singer 1998: 225). By engaging with the marking of their experience on the digital floor plans, visitors are additionally invited to experience the museum space "as a dynamic entity or process" (Frith and Kalin 2016: 46) in which some of the available objects and resources become relevant, or not, as their visit to the exhibition unfolded. In this light, the maps made and shared by visitors can be seen as a form of 'counter-mapping' since they rewrite official versions of the curatorial space and design. Visitors' counter maps thus provide valuable information about lived exhibition experience and can inform the evaluation of curatorial settings.

A number of researchers and practitioners have criticized SMM for focusing on one exhibition or gallery room. In this respect, an important limitation of the SMM method is that it captures only a glimpse of a particular point in time of the museum visit. To address this limitation, SMM was used in a later study (Qatar, spring 2020) to collect data on an entire museum visit. However, even when limited to one gallery room, both the data collection and the analysis of the video created through SMM are particularly time-consuming processes. For example, one must recruit participants at the exhibition entrance and wait for them to finish exploring the gallery room where the data collection takes place. As with all research, reflexivity should be a central part of the process during which we should critically reflect not only on our role and assumptions during data collection, but also on the choice of methods

and their application (Davis 1998). For instance, when analyzing the data, we must remain reflective regarding the ways in which verbal instructions and prompts were offered to visitors, as these might have unintentionally foregrounded certain visual aspects of the exhibition and triggered specific verbal responses. Similarly, the representation of the gallery room as a digital floorplan should be considered, as the design might pose certain limitations to the degree of visitors' immersion and spatial understanding. Additionally, one must remain aware of the guidelines regarding the ethical conduct of research, especially those related to the collection of personal data (voices), data storage and data processing.

Nonetheless, despite the potential limitations and time-consuming processes for data analysis, the multidisciplinary combination of research traditions in SMM allows for multimodal analysis of the exhibition based on visitors' visual and oral accounts. In consequence, researchers are able to capture aspects of visitors' personal experience and spatial practices, as well as aspects of the social realms of their exhibition visit.

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