Understanding the Multi-Sensory in a City's Cultural Attractions: The Museum Experiences of Istanbul's Historical Urban Texture

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Abstract

Museums and their peripheries are hubs of intangible heritage, cultural memory and creative narratives in cities. The "sensory" is often overlooked, yet plays a vital role in museum experiences. This study focuses on the multi-sensory visiting experiences of Istanbul museums on its historical peninsula. Fieldwork was based on public participatory, "in-situ", and mobile methods, "sensewalking" to collect data. We aimed to provide a new insight into understanding the sensory reflections of Istanbul's cultural attractions. The findings on the visual, haptic, olfactory and auditory museum experiences were helpful for further elucidating adaptable, individual or customisable cultural museum design principles. We understand that the multi-sensorial nature of the museum visiting experiences is related to the historical urban texture, and the transformations in the place re-coded the multi-sensory attractions in the museums. The discussion revealed that the sensory approach needs to be embedded in examining cultural centres, especially museums. This study is the first on the multi-sensory museum experiences of Istanbul's historical peninsula. Its outcomes are helpful in identifying positive socio-cultural changes in sensory museum models in Turkey and internationally. The study's impact thus provides opportunities for opening up new perspectives in architecture, museum design, and intangible heritage studies. Sensory experiences-based policymaking and design in Istanbul's museums can evoke a new understanding.

Keywords: cultural hubs of Istanbul, Istanbul, multi-sensory experiences, museum sensory environments, sensewalking, Turkey

The sensorial interpretation of human experience in urban living began to be discussed after World War II (Benjamin, 2021; de Certeau, 1984; Lynch, 1960; Tuan, 1977). The "sensorial phenomenon" has undergone a revolution in different fields of study (Zardini, 2005), but the "sensory" is still in its infancy as an object of research and professional practice (Thibaud, 2011; Vasilikou, 2016), and there are some gaps requiring further study.

Although vision is dominant in research and practice (Mattern, 2008; Zardini, 2005), the human body is a sensory organism, and we experience our surroundings through our ears, noses, skin, taste buds, and eyes (Mags & Guy, 2007; O'Neill, 2001; Pallasmaa, 2005, 2011). Sensory experiences may refer to the perception, definition, or assessment of information through our body when we see, hear, touch, smell, or taste something. Sensory experiences happen in contact with the environment and are "multi-sensorial". They shape the feelings, emotions, evaluations, and descriptions related to the surroundings in which we live (Howes, 2005; Paterson, 2009; Zardini, 2005). sensory matters were discussed in studies on olfactory experiences (Barbara & Perliss, 2006; Henshaw, 2013; Kubartz, 2014); haptic experiences (Herssens & Heylighen, 2012; Lobo, 2021; O'Neill, 2001); auditory experiences (Bull, 2020; Henckel, 2019) and gustatory experiences (Fernando, 2005). However, museums' sensory issues are still overlooked, although some recent studies on multi-sensory experiences do discuss auditory experiences (Bubaris, 2014), haptic sensations (Vi et al., 2017), olfactory sensory qualities (Stevenson, 2014), and taste occurrences (Brown, 2018). They show that the sensory visiting experiences of museum sites would be an innovative area to study.

Sensory interactions emerge from experiencing a place, and place experiences are translated into sensory qualities that influence feelings, attitudes and behaviours (Degen, 2008; Howes, 2005; Mattern, 2008). Sensory qualities of a place occur through socio-cultural and psychological processes. They emphasise the place's attributions, atmosphere, social interactions, and knowledge (Rhys-Taylor, 2016, 2020). People's interventions in a place create the multi-sensory dimensions that negotiate their experiences (Cresswell, 1992; Jorgensen & Stedman, 2006). A place is the centre of sensory spatial attachments corresponding to sensory dimensions (Borer, 2013).

We know that sensory phenomena are vital for the urban texture (Mattern, 2008) because physical form, activity, and meaning emerging within a place contribute to multi-sensory experiences (Abusaada, 2020; Agnew, 2011;). Multi-sensory experiences link to the ability to recognise a place's sensory features. A place's multi-sensory character relates to its authentic characteristics linked to sensory properties (Low, 2015; Salah Ouf, 2001). The built environment is an ample source for sensory perspectives based on spatial connections, practices and interactions (Kent et al., 2017; Urry, 2011; Yaneva, 2018). Connections between sensory qualities and people's personally experienced perceptions create urban, textured features (Beidler & Morrison, 2016; Torabi, 2015). Multi-sensory experiences have a significant impact on portraying a deeper understanding and conception of the urban texture (Howes, 2005; Howes & Classen, 2013).

The city of Istanbul is located on a historical peninsula surrounded by the Golden Horn, the Bosphorus on the east, and the Marmara Sea on the south. The distinctive urban texture of Istanbul has been built up over many centuries. The Fener and Balat region in the historical peninsula lie within the boundaries of today's Fatih district and is one of the most important places in Istanbul, having cultural significance and possessing intangible heritage. Studies on Istanbul's museums so far have included museum and city image relationships (Altınbaşak & Yalçın, 2010; Ozorhon & Ozorhon, 2015), earthquake risk mitigation (Erdik et al., 2010), and accessibility, to mention only a few (Dincer et al., 2019). The study at hand is a fundamental one, based on the sensory experiences of Fener and Balat, Istanbul's museums, focusing on one of the cultural attraction points of the historical peninsula. Fieldwork used the qualitative, humanistic and public participatory method of "sensewalking". The main question was how multi-sensory museum qualities beyond the visual senses were experienced by museum visitors. The main aim was to investigate how the multi-sensory museum experiences might help to shape the historical urban texture of Istanbul. The central hypothesis is that a walking-based, humanistic method generates valuable insights into the multi-sensory perception of the historical peninsula's museums. Based on the outcomes of this study, we propose increasing public awareness about the multi-sensory museum qualities related to historical urban textures. Also, the study used a novel approach to collect data on multi-sensory museum experiences. This method helped us to assess the museums' non-visual sensory identifications and intangible features.

Literature Review: Cultural Attractions' Sensory Experiences in the Transforming a Place

The Spatial Story of Fener and Balat Under Global Development Waves in Istanbul

In Turkey's 1950s, the migration from villages to cities rapidly increased with industrialisation and mechanisation. Rapid changes in land purchases and sales emerged with the Second World War. Especially with the transition to a multi-party system since 1945, the big cities of Turkey, primarily Istanbul, have witnessed enormous urban projects. The wide streets of Istanbul were opened in parallel with modern urbanism movements, and various historical areas were destroyed. By the way, providing cheap labour to the rising industrial sector and allowing the workers to build their dwellings supported unplanned urban regions of the city. The first "shantytowns" (Turkish: *gecekondu mahalleleri*) outside of Istanbul's urban areas emerged with migration and were supported primarily by political power (Enlil, 2011; Enlil et al., 2015; Karaman, 2008).

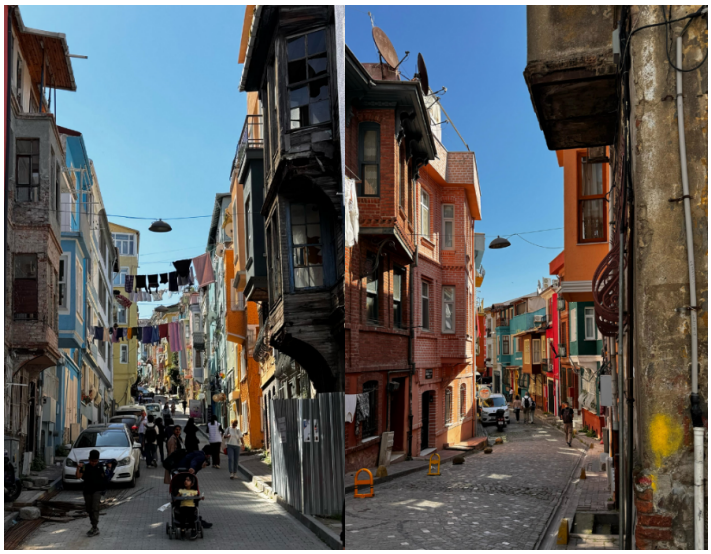
Since the 1970s, the neo-liberal order has begun to affect the free market economy, and the largest city in Turkey has started to become an open market. Liberal planning approaches were developed in this direction, granting broad rights to local governments. After the 1980s, liberalist economic systems led to the neo-capitalist urban planning approaches. In the 1980s, globalisation increased its power in architectural projects (Dökmeci & Berköz, 1994; Marquart, 2014; Uzun, 2007). The urban transformation projects in Istanbul offered solutions to allow global capital to flow into the city (Dinçer, 2011; Esen & Rieniets, 2008). Urban policies

worked to help the domestic market integrate with the world. Various strategies have become more visible in this period to avoid being left behind by globalisation. The change in historical urban areas was visible in Istanbul after the 1990s (Dinçer, 2011; İnan, 2017; Keyder, 2005; Turgut, 2010). Opening the door to the private sector on spatial planning has led to projects that bring more income and prestige (Akın et al., 2015; Uzun, 2007). Physical, economic and socio-cultural changes have occurred in historical urban textures. Istanbul's historical areas started to transform within the new social and spatial dynamics framework, especially with the economic restructuring after 1990 (Lovering & Türkmen, 2011; Marquart, 2014).

In the 2000s, we witnessed the integration of globalisation into the city's historical texture together with the challenges of urban morphology, identity and characteristics (Akın et al., 2015; Can, 2013; Islam, 2010; Keyder, 2005). The 2000s were the period when the abandoned central regions of the city, such as Fener and Balat on the historical peninsula of Istanbul, were re-articulated to provide capital for urban transformation projects. Notably, Fener and Balat have a distinctive past and different socio-cultural and architectural features. The region's narrow street pattern (see Figure 1) and colourful building facades (see Figure 2) are critical features of the urban texture**.** Red brick, stone, and wood are the most common building materials in the area (see Figure 3). The bakeries, cafes and candy shops shape the olfactory characteristics of the surroundings **(**see Figure 4**)**. The region is a cosmopolitan place, with many mosques and churches located there. The sound of *ezan* (call to Islamic prayer) and church bells beside the street vendor's voices and people talking are ordinary occurrences any time of day. The region has been the place of assemblages of activities within multi-layered confrontations; therefore, different sensory experiences simultaneously occur here. Through the years, different variables have impressed the place changes based on the multiple interrelated factors. Unlike other periods, the period that began in the 2000s was when the state tried to change cultural interaction points through urban transformation projects. Remarkably, Fener and Balat, on the historical peninsula of Istanbul, witnessed visible transformations in which tangible and intangible modifications have influenced diverse art galleries and eclectic museum places.

Figure 1

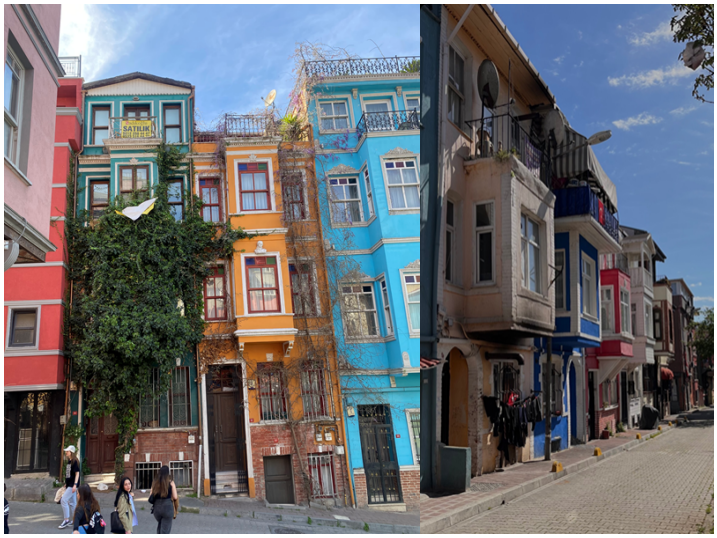
Streets in Fener and Balat



Note: The pictures show the authentic narrow streets in Fener and Balat. The photos were taken in April 2024, during the sensewalkings. The close relationship between the spatiality is directly linked to the multi-sensory atmosphere of the place.

Figure 2

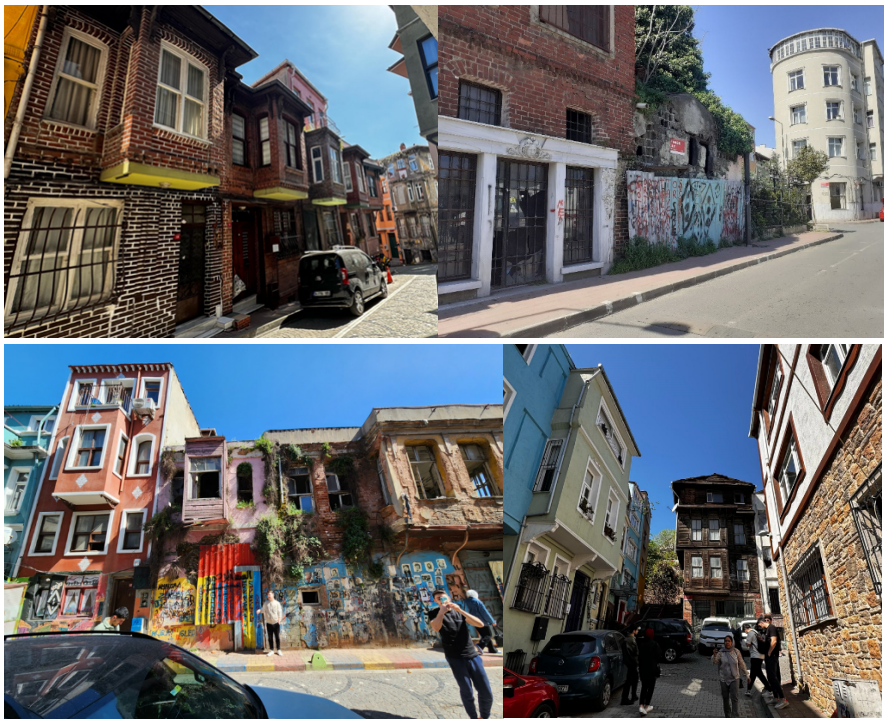
Building Facades in Fener and Balat



Note: The figures reveal colourful building facades in the Fener and Balat area. The photos were taken during the walks in April 2024. Some buildings were approached for designing new local museums, but the urban policies did not allow for this.

Figure 3

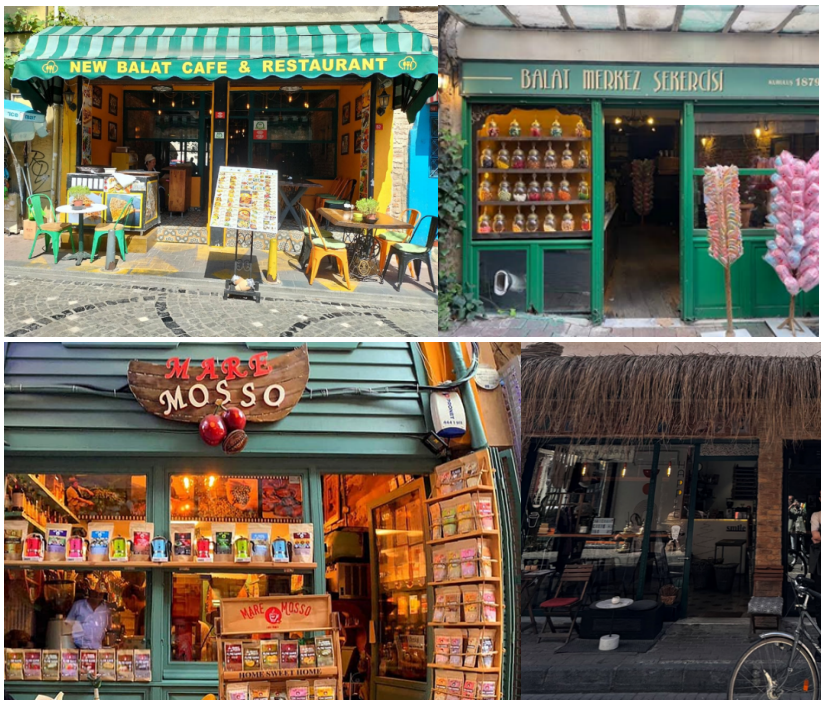
Building Materials in Fener and Balat



Note: The figures show some of the distinctive facade materials of the building; we see red brick, stone and wood on the facades of Fener and Balat's houses; the photos were taken during the time of the walks of April 2024. The graffiti and wall paintings are visible as many young people visit the area daily.

Figure 4

Front Displays of Stores in Fener and Balat



Note: Some of the area's bakeries, cafes and candy shops; the photos were taken during the walks of April 2024.

Body Senses and Cultural Attractions

We already mentioned that people experience places through their eyes, ears, noses, and skin, and they judge a place by following socio-cultural and individual expectations based on how these look, sound, smell, feel, and taste. The human body is a sensing organism that draws from sensory qualities when experiencing surroundings. The starting point of this understanding is derived from French philosopher Merleau-Ponty's ideas about place, body, experience, and sensation. Merleau-Ponty defines his spatial conceptualisation as unclosing the link between the body and place. He identifies the body as the mediator between self and place, where the self uses and transforms the surroundings through the body (Hale, 2016; Merleau-Ponty, 1964; Seamon, 2018).

The study's starting idea is that cultural attractions make it possible to understand the sensory notifications of a place. It is only through our bodies that we have direct access to place, so we cannot experience place unless our bodies. Our body opens a world where we can approach cultural attractions, so our body is our anchorage in the world. The concept of the body is part of a system of sensory activities capable of reforming—the role of the body as the origin of the experience of multi-sensory interactions in museums. The study hypothesis is based on the idea that we comprehend the sensory relations in museum environments through our bodies. Due to the bodily interactions in the place, we capture how the body directs, navigates and uses places' multi-sensory elements. A place is shaped through bodily experiences with perceptual components (Merleau-Ponty, 2002; Pallasmaa, 2011). The dynamic relationships corporeally involve us in the museum places. The body inhabits the museums' cultural codes, identities and characteristics to capture the sensory relationship in the place based on our bodily experiences.

The Fener and Balat region's cultural activities relate to its background, derived from socio-cultural identities, because it is not only a place of Turkish people but historically a place of cosmopolitism. Minorities (Greek, Jewish and Armenian), the elites, and migrants from different origins have all lived here during various historical stages. Thus, the urban texture reflects Istanbul's historical, architectural, and socio-cultural evolution. The place is a region where people can encounter layered, diverse sensory experiences. The place's sensory-spatial richness is related to its dynamic cultural encounters, such as museums, which evolved through the years. There exists something special in this area, something that exceeds the place's boundaries. The cultural attractions are the marks of the urban texture of this specific region of Istanbul. The museum environments' sensory reflections are products of cultural, individual and social processes, so they are the container of cultural, social, and individual relationships with the senses. Sensory experiences offer valuable ways to study sensory interactions in the historical urban texture. The sensory qualities determine the urban texture's social and cultural values, particularly the inhabitants' experiences, and provide continuity and sustainability of the sensory values. The intangible attributes and activities are part of the urban texture, besides the form and activities in the place.

The Museum Environments of Fener and Balat in Istanbul

Museums "are centers of learning, community centers, social hubs, even places of healing and contemplation" (Levent & Pascual-Leone, 2014, p. xiii). Fener and Balat offer vital museum services for Istanbul. The sensory museum visiting experiences are experiential agents and vital for community life and practices in the museum environment; thus, museums' habitats are the key laboratories to be examined for sensory perspectives (Velasco & Obrist, 2020). However, the debates on how visitors experience, perceive and assess museums are still in the infancy in the humanities, social sciences, and museum studies, even if the multi-sensory dimensions closely relate to museum studies.

The Fener and Balat zone is a cultural hub at the apex of the historical peninsula (Fatih district), which, as already mentioned above, used to be a sanctuary for Turkey's Armenian, Greek, Italian and Jewish communities (Bezmez, 2007; Gur, 2015). It is surrounded by late Ottoman-era buildings (mainly from the 19th and early 20th centuries) and several more recent examples of architecture. Significant historical buildings surround the cosmopolitan area, including cultural activities and museum environments. After the 2000s, the municipality decided to revitalise the museums in Fener and Balat to attract locals and tourists and bring back its old character from the late Ottoman era. Due to government-driven implementations, Fener and Balat museums have embodied these changing spatial situations. Different variables have impressed the museums' sensory qualities, and the spatial transformation of Fener and Balat museums has gained momentum since the 2000s. With new urban policies, veteran museums have begun to be changed in terms of spatial identities. Notably, the small-scale museums in the place have been facing severe challenges. New kinds of museum-visiting activities have been added to some of the restoration projects in the area. While the characteristic landmarks that made the museum experiences remarkable have changed, the transformation has affected sensory museum visiting experiences.

Fener and Balat museums were re-functioned following the vision of Istanbul becoming a world city. With globalisation, the Fener and Balat district was no longer a passive element of cultural accumulation but has become an actor in Istanbul's performance. With the acceleration of the urban transformation of Istanbul, the gentrification of museum places emerged. This situation caused municipalities to develop new district cultural attraction strategies. The local municipality has developed various approaches to increase the number of falling cultural tourism destinations in the area. With the gentrification efforts, the area's museums and art galleries were restored. This study problematised the ineffectiveness of common sense in sensory experiences' transformations of the museums, which have just witnessed the changes in the cultural attractions' changes. After completing these big renovation projects, the place began to lose its originality, and a strange homogenisation seems to have taken place through these prestigious museum projects.

How do visitors sense, experience, and connect with museums in the historical texture of Istanbul? How do the non-visual experiences of museum experiences affect intangible heritage, cultural memory, and community life? These were guiding questions for this study on a

partially neglected area in place of museum studies, sensory urbanism and architecture. To address these questions, this study followed linked thematic strands of investigation by re-exploring museums through the lens of intangible heritage elements.

Research Design and Method: The Sensewalking in the Museum Environment

What Does "Walking" Mean in the Built Environment, and What is Sensewalking?

Walking is a bodily performance to experience the lived attributions of the surroundings (Hein et al., 2008). Walking is a way of experiencing a place (Wunderlich, 2008); people immerse their bodies in a place as they walk in it (Sheller & Urry, 2006; Powell, 2020).

As a qualitative study method, sensewalking allows mixed-type data-gathering ways for people to define and interpret the sensory experiences of being in a location while they walk (Adams & Askins, 2009). While the attention was on the human-centric approaches, ecological perceptions, and phenomenological investigations of the environment in the 1960s, the method of sensewalking was used to discover people's bodily and cognitive experiences while walking in a certain area (Adams & Askins, 2009; Henshaw, 2013). The first examples of sensewalking were "soundwalks" to catch the sounds and auditory features of the surroundings. In 1969, some sound-based data was collected by way of walking to examine auditory features of the built environments (Porteous, 1985; Southworth, 2020); in 1974, artist and sound ecologist Westerkamp initiated the study to create auditory awareness of the environment (Westerkamp, 1974).

Various studies used the sensewalking method to understand sensory experiences beyond the visual senses (Henshaw, 2013; Henshaw et al., 2009). For example, smellwalks have been conducted to discover ecology-oriented artworks via aromatic discoveries (Berrigan & McBean, 2008); the urban places' environmental olfactory factors and sniff-based information were analysed with nose-trained experts through sensewalking (Porteous, 1985). McLean (2015) and Diaconu (2011) made sensory-based discoveries by smellwalks. Henshaw and Bruce (2012) investigated sound and smelling experiences and expectations. Degen and Rose (2012) undertook sensewalks by focusing on multi-sensory sensations of the transformed, built environment. Overall, sensewalking is a phenomenological approach for exploring the built environments' sensory dimensions. It is a valuable practice to understand how people experience built environments beyond the visual senses in terms of aural, olfactory, haptic, and gustatory, alongside visual experiences. The fieldwork of sensewalking is devised for the direct experience, identification, and investigation of the sensory conception of a place.

The museum environment's sensory dimensions beyond the visual senses were the central theme of this research. The sensewalking method was proposed in this context to gather responses about sensory museum experiences. The objective contributing to attaining the study's aims was using a public participatory approach to generate humanistic data (focusing on people, meaning, actions and experiences in a qualitative way) about the museum environments.

Sensewalking in the Museums of Fener and Balat

When we enter a museum, we are continuously immersed in its different but integral sensory compositions. The modes, connotations, definitions, and practices happening between our body and the museum environment create our multi-sensory experiences. Sensory museum visiting experiences are based on our surroundings' sights, sounds, smells, and textures. We used this sensory-spatial, mobile investigation method to analyse visitors' sensory experiences, including how they look, sound, smell, and haptically sense the museum environment.

In our project, the method of the sensewalking was devised in two phases. There was an initial phase before conducting the sensewalking in the museum environment. In this period, we concentrated on the concept underpinning the design of the museum environments. Speaking to some key informants helped the study grasp the principles behind the visiting strategies of the case museums. In the initial phase, a question template was designed for museum visitors, including questions to analyse the sensorial relations between the museum environment and visitors. The template included questions to ask the walkers (study participants), photograph the surroundings and write down some notes while they experienced the museums while walking.

The second stage (the main stage of sensewalking) covered the sensewalking sessions in the museums. The participants and researchers gathered at the agreed location (Balat Bus station: https://maps.app.goo.gl/8CZh8RWn5s9YRBm48) prior to the beginning of the walks where the details and purpose of the task were explained to the participants, along with their role in the research and the walking procedure. For the basis of sensewalking, the participants were required to walk in selected streets (in Fener and Balat) under the guidance of the researchers. Some points for stopping and discussions during walks were selected. They were the central nodes of the walks; they were Saint Stephen's Orthodox Church, Private Fener Greek High School, Mesnevîhâne Mosque, Coloured Houses of Balat, Ferruh Kethuda Mosque, Ebuzer al-Gıffar Tomb, Arapzade Apart, Vlaherna Meryem Ana Church, Ayvansaray Street, and Yusuf Secaattin Ambari Mosque (Route: https://maps.app.goo.gl/PQc2h6CD2FKw2XH66). The walkers concentrated on observing and experiencing the sensory dimensions of environments during walking.

Furthermore, two types of sensewalking designs were used to conduct the fieldwork. Group walking involves more than two people, while couple walking includes just two people. One "group sensewalking" and two "couple sensewalking" sessions were undertaken in April and November 2024. The sensewalks were conducted with different groups of people, so each person participated in one walk only. The participants gathered at the agreed location before the beginning of the walk, where the details and purpose of the task were explained. The meeting point for all walks was Balat Peron station. A primary route was followed in all walks (see the route https://maps.app.goo.gl/oNMaMAt3h9EuGdMKA).The participants provided informed written consent for their data to be used. As a qualitative method, sensewalking fits well with including a small number of participants. During the walks, participants took photos,

answered questions (some were open-ended, some were based on a 0 to 10 Likert scale), and took notes on the forms provided.

For the "group sensewalking" session, 19 adults (14 female and 5 male) who experienced Fener and Balat participated in the fieldwork. In the "couple sensewalking", a total of 4 adults (2 female and 2 male) walked the built environment of the place. The age range of participants in this study was between 18 and 40 years of age. Twenty-one of the participants were Turkish. All the walkers resided in Istanbul during the walks. More than half of the participants were university students.

In the context of this study, the multi-sensory walks included qualitative data acquisition of individual-centric experience within the two museum environments in Fener and Balat. The case museums were Rezan Has Museum and Feshane ArtİstanbuI. Four sensory modalities (visual, auditory, olfactory and haptic) were studied during the walks. The participants walked into the museum environment and observed and experienced the museums' sensory qualities. The participants were asked to focus on visual (colour, form), haptic (pattern, texture), auditory (sounds, voices) and olfactory qualities (smells, scents, odours) of the place. The method investigated walking-based explorations and the sensory qualities of the museum environment.

We followed the multi-sensory characteristics with a qualitative perspective considering multi-sensory elements. From a multi-sensory perspective, the Fener and Balat museums (Rezan Has Museum and Feshane ArtİstanbuI) of Istanbul disclosed the distinguishing characteristics of the district. The Rezan Has Museum offers distinctive spatial experiences in terms of urban sensations of Fener and Balat area, including an 11th-century Byzantine cistern, a 17th-century Ottoman *hamam*, and a 20th-century tobacco factory (Babazadeh Asbagh, 2018; Ozdemir & Gokmen, 2017). In its original form, ArtİstanbuI was the historical "Feshane-i Amire" building on the shore of the Golden Horn. The building was one of Istanbul's most significant industrial heritage buildings from Ottoman times, producing various textile products, primarily fezes, fabrics, rugs, and carpets. Restoration and re-functioning efforts were made to transform the historical building into ArtİstanbuI, a centre for the region's multi-sensory experiences and socio-cultural activities (Çelen, 2023; Robins, 2023).

The method sensewalking—to understand how people sensed place beyond the visual experiences— revealed the "multi-sensory" thresholds of the place. "Multi-sensory" thresholds refer to individuals' sensory perceptions as they experience the place through visuals, sounds, smells, and haptic components (Degen & Rose, 2012; Howes, 2010, 2012, 2021; Low, 2015). During the walk, all the walkers filled out the questionnaire to respond to the questions on the perceived sensory dimensions of the museum environments; ten questions were asked of the walkers. Five were open-ended, three requested simple definitions from the walkers, and two were based on a 0 to 10 Likert scale. The walkers took photographs of the surroundings and wrote down some notes while they experienced the museum environment while walking.

Findings and Discussion

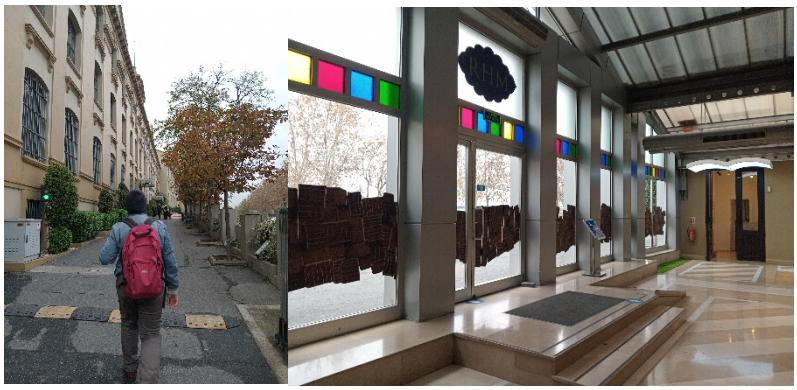
Multi-Sensory Museum Experiences and Critique of the Study

The multi-sensory experiences comprise the built environment's physical, spatial and structural dimensions (Degen, 2008; Merlino et al., 2023). The sensory experience is significantly mediated by bodily mobility, mainly by walking practices (Bassett, 2004; Degen & Rose, 2012). Walking ensures a sensorial interaction between the body and its environment (Henshaw, 2013; Middleton, 2010). As an inescapable element of daily life, walking is a bodily performance with defined lived attributions. It is a profound spatial performance which designs a sense of the place (Wunderlich, 2008).

Rezan Has Museum is a private museum in Fener and Balat, Istanbul, situated in the Kadir Has University on the shore of the Golden Horn. The collection of Rezan Has Museum consists of thousands of objects and artefacts. The walkers said the entryway and entrance of Rezan Has Museum have distinctive visual features as the building was designed with modern and traditional building materials (see Figure 5). The walkers defined the historical outlook of Kadir Has University as visually distinctive; the university building was once a tobacco warehouse and cigarette factory, then restored and transformed into the university campus.

Figure 5

Entering the Case Place, Rezan Has Museum

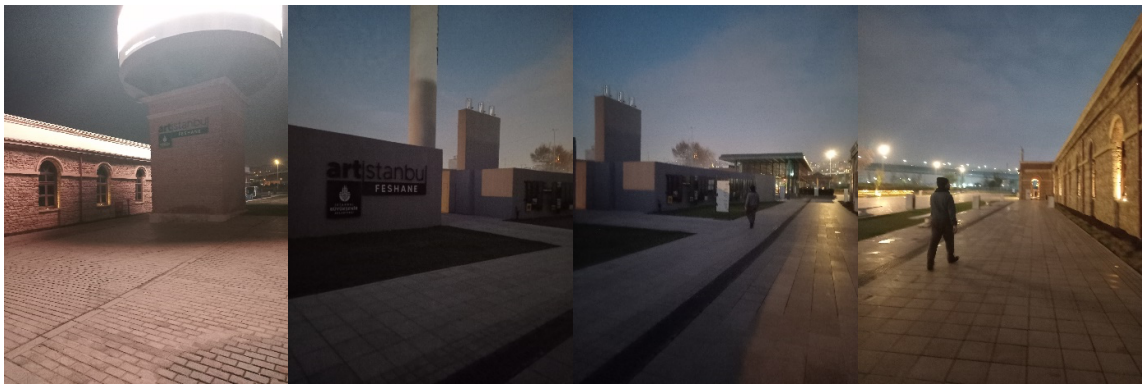


Note: From left to right, the first photo shows the way to Rezan Has Museum, and the second photo depicts the entrance of the Rezan Has Museum.

Feshane ArtİstanbuI uses a historical building built in 1833 during the Ottoman era. Feshane was established as a textile factory named "Feshane-i Amire", which was transformed into a museum after re-functioning the building. The walkers stated that the harmony between the historical texture and modern architectural elements was visible in terms of the visual experiences of the place (see Figure 6).

Figure 6

Entering to the Case Place, Feshane ArtİstanbuI



Note: The four photos display the exterior areas of Feshane ArtİstanbuI

We had brief "walk and talk" sessions (open-ended questions-based fifteen-minute interviews with the walkers) after each walking session. The walkers shared their initial assessments of the built environment's sensory experiences. Most of the walkers (study participants) stated that walking was a valuable way to experience the built environment's sensory qualities. They said Fener and Balat district has had opportunities to wander around and meet friends. The area's museums were important, as cultural activities such as going to cinemas, participating in festivals, and visiting exhibitions were related to museum visits when experiencing the area. The participants also stated that they encountered several tourists while they walked around the place. The Fener and Balat area is a key tourist destination in Istanbul's historic core, showcasing a multicultural region where non-Muslim communities coexist with Muslim residents. The place is characterised by the coast, narrow streets, alleyways, historical religious sites, and colourful houses. The area features boutique hotels, art galleries, cafes, and notable sea traffic, attracting tourists.

More than half of the participants (14 people) described the present visual environment of Fener and Balat museums as positive (by giving ten on a scale from 0 to 10). We used a 0-10 rating scale where 10 signifies "positive sensory environment" and 0 means "negative sensory environment". Thirteen people defined the distinctive wall colour as first in terms of visual sensory experiences. The recognisable entry places of the museums were defined as visually dominant by the walkers (see Figure 7). The historical texture of the facades, ceilings, and ornate windows was described as iconic in terms of the visual experiences of Fener and Balat museums. The walkers said the plan of the building was legible to experience. The metal structures and wide windows were combined with the place's historical texture, modern design and concrete outlook. The walkers defined the historic stone and brick walls of the museum's characteristics. In the "walk and talk" interviews, most walkers stated that the visual-based patterns (such as the direction and route of the place) of the museum's exhibition places were designed efficiently to see the artefacts. They said the distinct colour of exhibition panels makes the exhibition objects more visible. The light quality was favourable to the walkers as they said the interior lights are efficient for experiencing the place. Through the results related to visual features, we may say that unique visual features such as colours, forms, and patterns

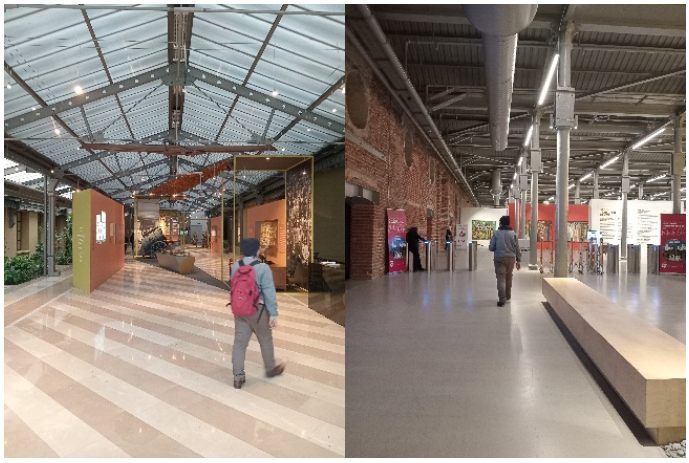
are distinguishable elements of the museum environments. Notably, newly renovated surfaces of the museum environments were defined as pleasant. The historical museum environments' visual features showed the implementation of restoration procedures. One participant stated,

> I am pleased that the restorations at the Rezan Has Museum have not harmed the authentic visual textures of the place. I notice contemporary elements that complement the historical aspects of the museum environment well.

We think visual characteristics of the museum environment must be carefully considered when designing further applications in this place. Another walker said that "visual interiors of the ArtİstanbuI museum is fabulous. The historical walls guide me through my museum journey and enhance the museum's sentimental atmosphere." We think the visual properties of the museum walls, windows, roofs and facades must be approached cautiously (by considering the materiality and sensory sides of the spatial properties) in further museum development.

Figure 7

Exhibition Areas' Entrances in the Museums



Note: The photos show the entrance of the exhibition areas; the left photo is from the Rezan Has Museum, and the second of Feshane ArtİstanbuI.

The *ezan* (Islamic call to prayer), church bells, footstep sounds, talking, coughing, giggling, and laughing were the most authentic sounds observed by the participants as they walked in and between the Fener and Balat museums. More than half of the participants (14 people) found the auditory environment of the museums favourable. The walkers stated that the division and separation inside the museum places make the auditory quality positive. The rate of "human-based sounds" such as talking, coughing, giggling, and laughing could present the crowd of visitors. The museum environment's sounds, which come from the installations on exhibition stands, walls and display panels, were defined as pleasant due to the harmony of the sounds in the place. The result says the auditory experiences in the museum environments are linked to the implementations based on the place's latest conversion, restoration, and renovation procedures, which have been stated as pleasant. We think that future decisions and practices related to urban planning and management must consider museums' auditory characteristics.

The walkers defined red brick, stone, marble, wood, and metal as the most distinctive surface materials, which were sensed as pleasant by the walkers. The red brick was defined as the most common building material element regarding haptic experiences in museum environments. The walkers said the smooth floor and colourful exhibition panels directed the walkers to connect to the haptic identity of the surroundings. The massiveness of the interior walls was the most typical material feature of Fener and Balat museums. The opaqueness of the surfaces came from the most typical material quality. In terms of museums' haptic experiences, the unique sensory characteristics of the museum environments were the imageable facades, symmetric windows, recognisable entries, height ceilings, and luminous interiors. The haptic characteristics of the museum environments were experienced with a higher rate of pleasant statements and definitions regarding the sensations of the walkers. The result may say the museums have pleasant haptic elements due to the latest implementations that may need to be improved as much as possible.

The dust smells, paint smells, paper smells, stone smells, metallic smells, perfume smells, coffee and tea smells, and cigarette smoke smells were considered important authentic smells as walkers wandered through and in between the Fener and Balat museums. The walkers said the authentic smells were experienced as episodic, not continuous, but they were strong. We can see the olfactory experiences of the place sensed pleasant during walking. The dust, paint, metallic odours, and artificial flower smells defined the most recognisable olfactory experiences of the Fener and Balat museums. The sea smell is dominant at the entry gate of the museums; tree and fresh flower smells could be experienced, as there are some green areas near the museums' locations, and the small percentage of nature-based pleasant smells was appreciated. Most of the walkers defined a distinct sweet candy smell experienced in the museum environments' galleries; it may derive from the room odours. The participants defined the smells of the museum environments as positive due to the connection with the authentic interior design and architectural atmosphere. The olfactory experiences were pleasant, and the result could be due to the effect of the museum's newly restored exhibition spaces. The positive olfactory environment of the exhibition areas was more recognisable at midday; the participants experienced the crowded cafes outside of exhibition spaces and galleries of the museums. These results underline that the olfactory features were shaped mainly by the objects, artefacts, and building materials.

We also learned how the walkers perceived and assessed the "sensory" dimensions of Fener and Balat museums. The study method supported qualitative data gathering via individual and group-centric experiences, but we also learned that it was impossible to decode the total sensory experiences of the museum environments through the walks. Sensewalking did help, however, cope with visually-oriented museum assessments and move beyond the visual museum experiences' data.

The museums provided positive sensory experiences in terms of four sensory modalities of the place, according to the participants' sensewalking results. A sensory walk does not fully picture all sensory dimensions of the museum environments, even though they can be recorded using the available technological tools. For this study, considering the relatively small sample of

participants (23 adults), the results could not draw a whole picture of all types of sensory experiences in the museum environment. We may say sensory experiences according to the daytime and seasonal weather elements would affect their sensory perception of the environment. In this study, a sensewalking session lasted nearly 3 hours. The group sensewalking session started at 11 am on a weekday in the spring session, the first couple sensewalking started at noon, and the second couple sensewalking began at 4 pm on a weekday in the autumn session. The multi-sensory approach helped the sensory elements that shaped the experiences in the museum environment. The individual interactions within the museum environments were the product of architectural, structural, and physical aspects besides sensory relations. However, the physical health (Zhang et al., 2019), mood (Coyne, 2016), demographic elements (Kent et al., 2017; Machingura et al., 2020), emotions (Abusaada, 2020), familiarity with the place (Swanwick, 2009; Degen & Rose, 2012) may also affect induvial sensory perception, considering these aspects within a qualitative method would provide extra advantages to future studies.

As mentioned already, the participants were between 18 and 40 years old. If the participants' age distribution or socio-cultural groups were extended in the examination, it would give more dimensional results as more than half of the participants said they experienced the museums for the first time. The participants were not sufficiently diverse regarding nationality, as 3 of the total participants were not Turkish. We know familiarity with the place would affect the perception of the built environments, and the assessments would change. We think the participants' moods, physiological health, and psychological situations will be important in evaluating the museum environment's sensory qualities. Maybe a small interview would be conducted after the walks (this would provide further I'nformation on the sensory characteristics of the place).

The overall sensory experience findings of Fener and Balat museums confirm that the area has been covered with pleasant (such as colours of the walls, distinctive surface materials and textures, *ezan* sound, sea smell) and unpleasant (such as dust smells, paint smells, cough and laughing sounds) sensory factors due to different implementations, planning decisions and technology-related issues. The place has its unique sensory elements, some of which are inherited from its past. When someone walks around the place, tourists, musicians, students, or locals can be encountered. The place has staged interesting sensory interactions that come from the surroundings. The sensory encounters were the place's unique sensory elements that marked the cultural attraction points' social diversity and sensory patterns. The result of the overall sensory experiences of Rezan Has Museum and Feshane ArtİstanbuI underline that the multi-sensory features were mainly shaped by the architectural elements of the place. The increasing number of exhibition places, galleries, and cafes in these places profiled cultural interactions. The place's small but veteran bookstores were also experienced positively. One walker who has lived in Istanbul since she was born said,

> I cannot imagine this place without historical stores. Every corner presents exciting opportunities to discover unique bookshops. I am addicted to wandering through the second-hand shops hidden away down small side streets.

We investigated the sensory experiences and focused on the museum environments' sensory characteristics of Fener and Balat district. The multi-sensory descriptions of the walkers gave us the sensory properties of the museum environment. They were related to multi-sensory perception and recognition of the museum environments. Fener and Balat museums have a spectrum of haptic features, visual components, and odour associations that guide experiences. For instance, the smells of rust and dust blend with the authentic textures and colours of the walls. The roofing materials harmonise with the metallic and paint-based aromas of the surroundings.

What Was the Novel Side of This Study?

While some humanities-based studies may today still disregard "sensorial phenomena" (Mattern, 2008; Pink, 2015), these nevertheless can contribute to new understandings in museum studies besides architecture and urban studies. This study contributed to such knowledge of sensory museology as we investigated how Fener and Balat museums provided sensory qualities beyond their visual senses. The findings were significant for knowing the place's qualitative value and intangible qualities.

Since its entrance in the late 1960s, sensewalking-based perspectives have been used by various disciplines in distinct approaches for search, educational or documentation aims. At their core, it was Benjamin who ignited 20th-century interest in urban walking as his "flaneur" suggested. This figure represents someone who walks through the city aimlessly, keenly observing and experiencing the built environment and natural composition. The flâneur embodies both the pleasures and the contradictions of modern city life. Benjamin emphasised the significance of a sensory approach to understand the novel experiences offered by a modern city's rapidly evolving landscape (Birkerts, 1982; Shields, 2014). Through "everyday urbanism", De Certeau explores the relationship between the sounds of the city and the act of walking. He articulates the connection between walking activities and auditory experiences. De Certeau asserts that walking ought to be regarded as an embodied means of engaging with the world, with sounds enhancing our comprehension of the sensory links within the environment as we walk (de Certeau, 1984, 2010). Situationist Artist and theoretician Guy Debord added the visual and cartographic aspects of walking (Debord, 2024). More recent sensewalking techniques emerged after the attention to ecological perception, humanistic geography, and phenomenological approach was raised to better understand the sensory human experience of the environment. In the late 1960s, Schafer's "World Soundscape Project" at Simon Fraser University organised various soundwalks to examine the acoustic environment of cities, investigating the sounds that contribute to the auditory landscape of urban areas (Schafer, 1993).

This study used the sensewalking approach, which was helpful for intangible heritage perspectives on museum scenarios, particularly for a new understanding of how people sense museum environments beyond the visual senses, which can be turned into a new urban design toolkit. The method was a flexible way to catch such multi-dimensional experiences. It triggered people to define individual bodily interactions with the place while people walked.

The method's advantage lies in discovering the recognisable sensory features available through directly experiencing the museum environment and commenting upon it.

There are several different conceptual ways to grasp or decode sensory modes of the museum environment. The study's method benefited the visitors' "in-situ", "immediate", and "bodily" responses while they experienced their surroundings. The methodology design was creative as the data collection enabled a mixed-methods-way to gather data on the visitors' museum experiences. Sensewalking is a method by which we may better understand how we experience cultural attraction points. It focuses on the multi-sensory aspects of the environment using holistic walking experiences. The method allowed participants to define and interpret their experience of the built environment through their visual, haptic, olfactory, and auditory sensations.

The discoveries were linked to the shortcomings and advantages of a public participatory approach in generating human data about museums. The approach provided viable solutions to challenge the one-sided and mostly visual-based assumptions of the museum environments' investigations. This point is essential and is hoped to prompt creative thinking for innovative museum models such as multi-sensory adaptable or customisable museums, also from the municipalities of Istanbul. The data can help create new solutions for the decision-making processes for museum environments in Istanbul. Policymakers may benefit from visiting sensory experiences in museum environments; collaborations may be envisaged with local or general museum offices. The study's reflections may also increase museum areas' design criteria used by architects and museum designers.

Conclusion

At the end of the 2000s, Istanbul took its place among the world's top global cities (Can, 2013; Islam, 2010). Its historical peninsula presents a crucial part of the unique texture of Istanbul's historicity (Elicin, 2014; Eraydın et al., 2017). When a new government was elected in 2002, the rapid strategies to put Istanbul's historical areas on the global stage first targeted the central and local governments (Dinçer, 2011; Dökmeci & Berköz, 1994). Afterwards, the cultural hubs of Fener and Balat were targeted for change due to the challenges of improving the city's many cultural spaces (Dökmeci & Berköz, 1994; Karaman, 2008). This led to the fundamental problem of socio-spatial changes and their sensory effects on the urban texture.

The study's perspective focused on walkers being active in the museum environment of Fener and Balat. The multi-sensory experiences-based methodology of the study is considered a novel approach as there was no prior investigation on the combined visual, haptic, auditory and olfactory phenomena experienced in the Fener and Balat museums. The "multi-sensory" is often overlooked, although vital in experiencing built environments. The approach considered bodily multi-sensations and answered the questions of museum environments' multi-sensory qualities.

The visual experiences-based result says the distinctive wall colours and the museums' entry places were recognisable. The historical texture of the surfaces, the height of ceilings and the specific windows seen were found to be some of the most striking visual experiences of Fener and Balat museums. Walkers also found the interior illumination of the museums positive in terms of lighting quality. The building materials, such as metal, glass, stone and bricks, were considered pleasant. The walkers said the combination of the modern design and historical texture gave off a pleasant atmospheric sense. The historic stone and brick walls of the buildings were also appreciated. Thus, the study makes clear that the visual characteristics of the museum environment must be carefully regarded in the museums' futures.

Auditory elements, such as "human-based sounds", talking, coughing, giggling, and laughing, were found to be central by the walkers. The walkers also experienced the sounds coming from *ezan* and church bells. The museum sounds, which came from the museum installation areas, were defined as delightful. The sensewalking result mentioned that the museums' auditory experiences were related to the place's conversion, restoration, and renovation procedures. We think further museum applications and practices the sound characteristics of the museums besides their physico-spatial features.

Olfactory phenomena encountered included dust, paint, paper, stone, metal, perfume, coffee and tea smells, and cigarette smoke, which the walkers recognised. Sea, sweet candy, tree, and fresh flower smells were also mentioned. The walkers found the olfactory environments of the museums generally pleasant and thought that some smells and spatial features merged. The olfactory atmosphere of newly restored exhibition areas, including the galleries, stands, and panels, was defined positively.

Haptic phenomena discovered included building materials, such as red brick, stone, marble, wood, and metal. The sensewalking sessions resulted in the appreciation of the smooth floors and exhibition panels, creating unique, haptic experiences in the museum environment. The enormity of the thick walls and opaqueness of the surfaces beside the distinctive coloured facades, symmetric windows, recognisable entries, height ceilings, and luminous interiors were defined as positive haptic features. We may say the design of the museums after its latest renovation work were found to be pleasant by the walkers, and further developments would need to engage even more the haptic sensory relations the walkers apparently sought.

Regarding the method's shortcomings, we knew that obtaining the desired level of data on the multi-sensory museum properties was challenging. The walking method produced new insights and encounters on multi-sensory place qualities, parameters and values. The sensewalking method was developed as a qualitative study tool for bringing together multi-sensory museum environment attainments while the walkers interact with the surroundings. We discussed how a sensory method could help improve study affordances. We asked how the advantages of a qualitative data-gathering gathering could reveal the sensory experiences in the built environment. The first advantage of the sensewalking method was that it made sensory experiences available while walkers were directly connected to the museum environment. The "walking" method benefited the visitors' "immediate" experiences while they experienced

their surroundings. It would have been difficult to reach "bodily" responses using other qualitative methods. The methodology design was creative in considering multi-sensory experiences. The four sensory modalities-based information may show the advantages of this public participatory method in generating humanistic data about places. The approach provided viable solutions to overcome the ordinary comprehension of the museum environments' spatial features.

Here, we must mention that finding participants with diverse profiles for our *in situ*, mobile, human-centred, and ethnographic sensory walk was challenging. Identifying suitable hours for the sensewalking proved difficult due to the heavy visitor traffic in the museums where it took place and the participants' availability. Due to the internal and external conditions in museum environments, there was overwhelming sensory stimulation at once—the abundance of sensory dimensions made focusing on individual senses or experiences challenging. Walking for extended periods may result in physical fatigue; to avoid this, we provided additional breaks to maintain the quality of mindful engagement while sensewalking. We also faced issues related to insufficient budget for the acquisition, installation, and use of technological equipment during the sensewalking.

This study began by questioning how a museum's multi-sensory features in a city's historical urban texture might be experienced. The findings specifying the relations between the sensory impressions will benefit the literature of sensory studies, sensory museology, architecture, and urban studies. This in turn will aid in thinking about new adaptable or customisable museum design scenarios for museum councils, policymakers, and urban designers. Multi-sensory experiences-based knowledge will contribute to museums' sensory concepts. Museum practitioners and policymakers in Istanbul's museums and beyond might consider creating new multi-sensory placemaking concepts to develop with the help of sensory experiences-based inquiries in mind. New solutions for museum places' sensory coding and branding for local or universal may thus become feasible. The obtained knowledge may benefit museums' sensory qualities and their understanding of design guidelines, toolkits, and models.

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