

The Sound of Museums: Music and Silence in Music Exhibitions

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Received: 11/01/2022 Accepted: 14/03/2022 ORCID iD Elisabeth Magesacher: iD 0009-0009-9436-1360 Institution (Elisabeth Magesacher): Folkwang University of the Arts, Germany Published: 31/07/2023 Last updated: 31/07/2023

How to cite: Elisabeth Magesacher, The Sound of Museums: Music and Silence in Music Exhibitions, 'Visualizing Music Histories? The 1892 International Exhibition of Music and Drama and Beyond,' special issue, Musicologica Austriaca: Journal for Austrian Music Studies (July 31, 2023)

Tags: Audiovisual; Field research; Immaterial; Museum; Music exhibition; Musical instruments; Silence; Sound; Visitor; Visual

This article is part of the special issue "Visualizing Music Histories? The 1892 International Exhibition of Music and Drama and Beyond," ed. Melanie Strumbl (July 31, 2023).



Abstract

In this article, I discuss the role of sound in music exhibitions, especially as related to the display of musical instruments. On the basis of field research conducted in the Musée de la musique in Paris, the Musical Instruments Museum (MIM) in Brussels, and the Music Collection at the Munich City Museum, I discuss different technological methods for integrating sound into music exhibitions, such as portable and stationary systems, live music, or interactive hands-on stations, the effects they have on visitors' perception of the exhibitions, and how they are linked to exhibition narrative. I discuss the role of music, noise, and silence in music exhibitions as historically visually oriented sites and thereby problematize the issue of displaying the intangible "object" of music in a visually oriented museum. Furthermore, I discuss the role and potential of silence in music exhibitions.





Introduction

The term "music exhibition" stands for a wide range of presentations of musical topics that can currently be found in various exhibition contexts. In addition to musical instrument exhibitions and museums featuring composers or musicians, it also includes music departments in technology, ethnology, or art history museums as well as exhibitions on specific musical styles or artists. As the diverse articles in the special issue "Sonic" of *Curator: The Museum Journal* (2019) show, the use of music and sound also plays a role in other, not primarily music-related exhibitions. One thing that all music exhibitions have in common is how they deal with the following challenge: the presentation of something actually immaterial in an exhibition context. The communication of musical topics takes place via three-dimensional objects, such as musical instruments, sound carriers, image sources, scores, and so on, and although sound is used in many current music exhibitions through audiovisual media and other formats, the visual often predominates over the audio, especially in the presentation of musical instruments.

In this article, I discuss the way sound is integrated into current musical instrument exhibitions and the effects of the presence or absence of sound on the reception of these exhibitions. The data on which this article is based were collected through extensive field research in various European music exhibitions^[1] (2015–18) in the context of the research project "Music on Display: Studies on the Presentation and Reception of Musical Topics in Museums" at the Folkwang University of the Arts in Essen (Germany).^[2] First, I will treat music exhibitions as places for conveying immaterial topics. Then I will expound a methodological approach to data collection. As a starting point for further discussion, I will then briefly describe three music exhibitions at museums in Paris, Brussels, and Munich that use sounding music in different ways, focusing on their sound features. On the basis of these case studies, I will show which technical implementation options are currently being used for integrating sound. Focusing on visitor reception, I will continue by discussing how visitors link the audio segments with the rest of the exhibition content and how sound is related to exhibition narratives on the basis of observations and interviews. In this context, I pose the following questions: What effects does sound have on the way visitors perceive the exhibition content (e.g., with regard to atmosphere, noise level, or interaction between visitors)? In addition to sound, what role does silence play in music exhibitions? Besides examining different technologies and formats for the use of sound in the otherwise visually dominated museum, this article also aims to show that ethnographic methods can be used to examine individual modes of reception, in particular concerning the perception of exhibitions and the handling of sound.

Conveying the Immaterial: Music Exhibitions Between the Visual and the Auditory

Besides the diversity of the museum contexts in which they can be found, a specific feature of music exhibitions is also the presentation of something intrinsically immaterial in a museum context. In addition to music,^[3] this also applies to the presentation of literature or performative art in museum contexts.^[4] As a means of conveying musical topics in exhibitions, musical instruments, documents, scores, and personal items of people discussed in the exhibitions are presented together with audiovisual media and information, often in text form. Most of the objects and related information are conveyed visually. The buildings hosting music exhibitions

can also have a relevant relationship with the exhibition theme and have a say in the exhibition design through architecture. Museums dedicated to musicians or composers in particular are often housed in buildings that are related to the respective person and included in the presentation as places historically linked to the exhibition topics. Through its external appearance, the building of the museum often is mainly known or seen as a (historical) site of a city and furthermore represents a place that is associated with the material and immaterial exhibition contents.

A museum is often associated with the idea of a place where the focus is on looking at works of art in silence. However, as Steffi de Jong^[5] as well as Kathleen Wiens and Eric de Visscher^[6] explain, this image of the museum, along with its conventions and rules of conduct, did not develop until the nineteenth century:

The 19th century museum model gradually endorsed a highly devotional and quasireligious relation to its artifacts, privileging the sense of view and thereby installing the need for quietness.^[7]

The location of music exhibitions in the museum and the presentation of musical topics about the material aspects of music go hand in hand with the exhibiting practice of making visual aspects the focus of presentation. This is particularly evident in the case of musical instruments, which, depending on the content of the museum, are presented under ethnological, technical, historical, musicological, and other aspects. Since musical instruments are usually not built for the purpose of being presented in a museum, a change of context takes place when a musical instrument is transferred to the museum collection or exhibition; the musical instrument becomes a museum object. This change of context appears paradoxical in the case of musical instruments, especially if they are often no longer allowed to be touched or played and are presented without a sound impression. As Gabriele Rossi Rognoni writes, many people's first associations with a musical instrument relate to the object, its appearance, and the aesthetic and symbolic meanings ascribed to it rather than to its sound.^[8] Even with this change of context, according to Rossi Rognoni, the function of the musical instrument as a producer of sound only plays a subordinate role, because the deciding factor for the acquisition of an instrument by a museum is rarely its sound but rather aspects such as material, decoration, age, provenance, or associations.^[9] In the museum context, the intermediate position of the musical instrument between its function as producer of sound and an aesthetically pleasing object becomes clear:

This nuanced relationship between the aesthetic and functional nature of musical instruments becomes extraordinarily simplified and polarised when these objects become part of a museum collection. Based on the observation of the majority of music museums and personal experience, it is clear that curatorial attention tends to focus on the cultural and intellectual information that the instrument conveys, while visitors' curiosity relates instinctively to its sound.^[10]

Even though this may not generally apply to all exhibitions on musical instruments, it does address a common problem with exhibiting musical instruments. As they are often presented in showcases behind glass, their appearance—itself saying little about their particular sound—is given more importance, thus putting the focus on musical instruments as art objects. Supplementary texts often convey information about the technology, history, or manufacture of the instrument, but they do not always allow conclusions to be drawn about the sound. In many music exhibitions, most of the instruments may not be touched or played, or only by museum staff members (e.g. during guided tours). The guestion of whether and under what conditions musical instruments from museum collections should be played has long been a subject of discussions in museums and musicology.^[11] As Frank Bär shows on the basis of a fictional conversation between a curator and a group of museum visitors, the curator of a musical instrument collection must always mediate between different positions on this issue: while museum visitors insist on hearing the respective instrument on display ("after all, this is a musical instrument, built to make music"),^[12] the curator argues that it is his job to protect the instrument, which has now become a museum object.^[13] In addition, the curator's responsibilities as "keeper of the historic heritage,"^[14] which include research, presentation, and management of the collection, contrast with the interest of the musician as an instrument player as well as the responsibility of the conservator, who is more directly involved with problems of deterioration.^[15] On the one hand, this shows the various positions, interests, and areas of responsibility represented in the museum that are related to the presentation of musical instruments. On the other hand, it again refers to the paradoxical situation that arises when musical instruments that were built to produce sound are presented in a museum. As Bär writes, there is a contradiction between preserving and exhibiting objects in museums, and the safest way to preserve the objects would be to keep them in complete isolation,^[16] but "absolute safe-keeping prevents all exhibiting."^[17] The curator must therefore always make a compromise and find a balance between preservation and presentation.^[18] Bär argues that musical instruments in the museum must be played under certain conditions and requirements.^[19]

Naturally, the main function of a work of art is to be seen—pictures in museums are therefore not kept covered with cloth to protect them from light. The same goes for a musical instrument: its main function is to produce tone and sonorities. Without that, it would be just a piece of furniture, an artisan object, or an instrument builder's model to be copied. Thus, in order to fulfill its museum function, a musical instrument actually should be played—just as pictures have to be shown.^[20]

One of the prerequisites for playing museum instruments is that the exhibits be played only by professional musicians. But to what extent is the museum audience, made up of musicians and non-musicians alike, involved here? Rossi Rognoni notes that the debate about the playability of instruments takes place primarily between curators, conservators, and musicians, while the expectations and reactions of the visitors receive little attention.^[21] How do music exhibitions specifically deal with preserving the object and conveying its functionality as a musical instrument? To what extent do music exhibitions meet the needs of their audience to hear the instruments or to offer them a haptic experience? How do visitors react to these possibilities? In order to shed more light on these questions, I will focus in the following on visitor research. First, I will explicate the methodological approach of this research in the museum.

Studying Visitors: Field Research in Music Exhibitions

For this article, I chose three exhibitions as case studies: the Musée de la musique in Paris, the Musical Instruments Museum (MIM) in Brussels, and the Music Collection at the Munich City Museum. I chose these three exhibitions because they implement sound in different ways, because all three are permanent exhibitions, and because they display a large number of musical instruments. The case studies will be described in fuller detail in the next section of this article. I collected the data used for this article by investigating various music exhibitions in Europe through extensive field research in context of the research project "Music on Display," using ethnographic methods.^[22] I will explain this methodical approach in the following to show how insights about the reception of exhibitions can be gained through ethnographic research, especially when dealing with sound and other exhibition elements. The data were collected through research stays of several weeks on site. The focus was on exhibitions as the part of the museum where selected objects are presented to a public audience.

In addition to museum-analytical investigations of the exhibition structures and of the perspectives of curators, the study also takes exhibition reception into account. Following the approaches of Eilean Hooper Greenhill,^[23] who carried out visitor studies in various museums, and Sharon Macdonald,^[24] who uses ethnographic methods in museums, I used field notes to document and analyze the visitors' reactions to the exhibitions. This includes observations on questions such as: How do visitors move through the exhibitions? Are there exhibition elements that are more widely accepted than others? How do visitors deal with interactive stations including sound? In addition, I spoke with visitors during their visit and guestioned them in short informal interviews about their general thoughts on the exhibitions.^[25] As I experienced that many visitors had less mental and/or physical energy to be interviewed after concluding their visit of the exhibition, especially in large museums such as the case studies in question, I instead chose to speak with them during their visit. Speaking to the visitors directly allowed me to ask follow-up questions or rephrase my questions in order to prevent possible misunderstandings, for instance due to language barriers. Conducting the interview in the space of the exhibition itself (as opposed to the museum café, for example) also made it possible to refer directly and specifically to various exhibition contents (e.g. to point to a certain exhibit). With this method, however, it must be noted that the visitors may not have viewed the exhibition in its entirety and can therefore only refer to certain parts of the exhibition when making statements. In addition to the visitor perspective, the reception of the exhibitions also includes my own perception. In addition to participating through observation, I also experienced the exhibition content from an autoethnographic perspective (e.g. through trying out sound stations myself) and documented it via field notes.

Sound in Music Exhibitions

As a starting point for further discussion, I briefly describe three music exhibitions in Paris, Brussels, and Munich in the following,^[26] focusing on the available sound features and their implementation (based on on-site field research between 2015 and 2018). I selected these three as case studies for this article since they incorporate sound in their presentations in different ways, yet all three are permanent exhibitions and display a large number of musical instruments. Then I discuss how the audio content can be linked to the rest of the exhibition content and how this affects the reception of the exhibition. The **Musée de la musique** is located in the Cité de la musique—Philharmonie de Paris.^[27] It was opened in 1997; the collection evolved from the Conservatoire de musique de Paris^[28] and, according to the museum brochure, comprises over 7,000 instruments and objects related to music from the seventeenth century to the present day, 1,000 of which are presented in the exhibition. At the entrance to the exhibition rooms of the Musée de la musique, visitors receive a museum brochure with a room plan and an audio guide device with headphones. Audio guide segments can be selected by entering digits via the device. The segments include spoken text for children and adults, as well as music clips. The list of audio recordings is available on the museum website. The sound of videos shown on monitors in the exhibition can also be accessed via the same device. Therefore, visitors have to position themselves near the respective monitors. In addition, there is a so-called "Touchez la musique" station on each floor of the museum. These are interactive stations that also provide texts in Braille and convey information about certain instruments through haptic contact. In addition, an event called "Musicien au musée," in which a musician demonstrates his or her instrument and answers questions from the audience, takes place every day in certain areas of the exhibition.

The **Musical Instruments Museum (MIM)** in Brussels was founded in 1877 and has been housed in an art-nouveau building in the city center since 2000.^[29] The collection includes around 8,000 objects.^[30] Until a few years ago,^[31] visitors were given a portable device with headphones that allowed them to listen to music as they approached certain showcases, indicated by a loudspeaker symbol on the floor in front of them, without having to trigger them by, for instance, pressing a button. The respective music example started automatically when the visitor approached a showcase. A picture of selected instruments and a short text could be seen on the audio guide display. The MIM also offers educational programs and guided tours through the exhibition.

The **Music Collection at the Munich City Museum** is located on the fourth floor of the museum. It was founded in 1940 and evolved from the private collection of Georg Neuner.^[32] The collection includes almost 6,000 musical instruments and sound objects from various regions of the world, around a fifth of which are on display in the exhibition.^[33] Visitors receive an audio guide on which they can select segments with spoken text and music excerpts by entering digits. There are also several interactive "Soundlab stations" where sound phenomena can be tried out. One of these stations can also be used to select audio samples for instruments that can be heard in the room through a loudspeaker; at other sound stations, audiovisual material can be accessed through headphones. In the back of the exhibition there are also listening stations with audio recordings of gamelan music and a monitor on which video clips with demonstrations of individual European instruments are shown.

The following systems can be distinguished at the three music exhibitions with regard to the technical implementation of sound:^[34]

1. Portable Systems

At all three music exhibitions, visitors receive a portable device with headphones that either allows them to access content via a keypad (Paris, Munich) or offers automatic playback (Brussels). With regard to the content-related connection between audio content and the rest of the exhibitions, as well as the use of audio devices, I was able to determine differences between devices with numeric entry and those with automatic playback through field observation: I observed visitors in both Paris and Munich who first looked at the showcase, then decided to select the respective audio clip and listen to it while standing in front of the showcase. Showcases are marked with numbers identifying the corresponding audio segments, which establishes a very direct content-related link between the audio segment and the showcase. Rather than providing a continuous audio tour, the audio guide segments in Munich and in Paris can be heard independently of one another. As I was able to observe in Paris in particular, many people decided individually which audio segments to select and where to spend more time listening. In addition to this individual selection, portable systems of this type also allow visitors to control the start, pause, repetitions, and volume of the audio samples themselves. At the same time, it enables several visitors to access and listen to them simultaneously, as visitors can listen to the same audio file via their respective device.

During my research stay at the MIM in Brussels, a device with headphones and automatic playback was used instead of a numeric entry system. The audio segments start automatically when the visitors reach certain spots in the exhibition. With regard to the reception, I was able to determine differences from Paris or Munich on the basis of my own perception: when I moved through the exhibition space, a musical segment often started before I was consciously aware of the corresponding showcase or the respective instrument. A picture of the respective instrument could be seen on the audio guide display. I first looked for the showcase corresponding to the music segment, then I compared the image of the instrument on the display with the contents of the showcase and looked in the showcase for the instrument shown and heard. I also observed this mode of reception with other visitors, who first heard the music (some began to dance or move to the music), then looked for the corresponding instrument in the showcase, and then compared it with the image on the display. In contrast to the numerical entry systems in Paris or Munich, the walking direction of many visitors was guided by the music rather than the visual.^[35] This automatic system therefore allows less freedom in the choice of music than the numeric entry systems, and listening is linked to physical presence at certain points in the exhibition (if you move too far away, the music sample can no longer be received). On the basis of my own perception, I was also able to observe that the fact that the sound is not consciously selected means that it serves less to convey information than to influence the atmosphere.



Figure 1: Showcase at the Musical Instruments Museum (MIM) in Brussels: On the floor in front of the showcase, a loudspeaker symbol is indicating the spot where visitors should position themselves for the audio segment to start automatically on their portable device; photo: Elisabeth Magesacher



Figure 2: Portable device with automatic playback at the Musical Instruments Museum (MIM) in Brussels; photo: Elisabeth Magesacher

All portable devices are equipped with headphones. I noticed that this has an impact on the atmosphere within the exhibitions. In the Musée de la musique in Paris in particular, I was able to observe that the people wearing headphones spoke very little and, above all, made an effort to speak quietly to one another, which resulted in a very calm atmosphere. Receiving the exhibition with headphones directed the focus toward the individual experience.

2. Stationary Systems

Another variant for the use of sound in music exhibitions is stationary systems (such as listening or media stations), which, in contrast to portable systems, are located at certain positions in an exhibition. In the Munich City Museum, for example, audio and video segments as well as photos that correspond to the theme of the room can be accessed via a media station in the first exhibition room. One of the segments relates to a particular showcase in the same room. The instruments are displayed on a screen as they appear in the display case, and when visitors touch the particular images, a short audio sample is played. However, the exhibited instruments are not directly visible from the media station, and it is not possible (while wearing headphones) to move far enough from it so that the respective showcase is in view. In contrast to portable devices, it is therefore not possible to simultaneously listen to and see the exhibited instrument. This link in content must be established by the visitors themselves, which is facilitated at this media station by the images of the instruments on the monitor. As with portable systems, visitors can also decide for themselves which segments to go into in greater depth. Another aspect that applies to listening stations in general is that they require regular maintenance. If the stations or the associated headphones are defective, the audio segments cannot be accessed either. The number of people who can use the listening station at the same time also depends on the number of headphones available.^[36]

3. Playback via Loudspeaker

In addition to the use of portable or stationary devices with headphones, another variant for the use of sound in music exhibitions is transmission via loudspeakers. In the Munich City Museum,

sound impressions of some of the instruments on display can be selected via a button at the interactive Soundlab station "Wunderkabinett."^[37] In contrast to the use of headphones, which allow for individual listening, the music can be heard by all those present in the room. As I was able to observe, the transmission over loudspeakers meant that some visitors became aware of the station as soon as they entered the exhibition. Visitors in smaller groups tried out the station together; I was also able to observe that the stations were an occasion for conversations among visitors who did not know each other before visiting the museum. In addition, loudspeakers deliver the audio segments to visitors as a group, allowing significantly more communication than at exhibitions with portable devices with headphones. Furthermore, the type of content (music/text) of the portable device has to be taken into account. I observed that in Brussels—compared to Paris or Munich—there was considerably more verbal communication between visitors while using headphones. This could be due to the fact that the audio guide in Brussels offered only music recordings (and written text on the display, but no audio text), whereas the audio guides in Paris and Munich included spoken text.



Figure 3: Interactive Soundlab station "Wunderkabinett" in the Music Collection at the Munich City Museum; photo: Elisabeth Magesacher

Through my own perception, I was able to conclude that speaker sound changed the atmosphere of the room compared to headphone sound. The simultaneous perception of the exhibited instruments and the sounding music samples directed my perception from their role as museum objects more strongly toward their function as musical instruments. Playback via loudspeakers is also used in many museums in conjunction with stationary systems. For example, the media station at the entrance area in Munich can also be operated via loudspeakers instead of headphones, for example during tours with larger groups. In Paris, too, the audio guide device can be operated with loudspeakers instead of headphones.

4. Interactive Stations, Mediation Programs, and Live Music

As mentioned at the beginning, visitors to most music exhibitions are not allowed to touch or try out the instruments on display. Many music exhibitions therefore offer interactive stations that convey the acoustic impression or the functionality of the exhibited objects to visitors or enable haptic contact with them. In the Munich City Museum, visitors can try out sound phenomena through a series of "Soundlab stations." These interactive stations enable visitors to get to know "sound phenomena." At each station, visitors find a description of the phenomenon as well as short texts including precise instructions for carrying out a sound experiment. The stations are distributed across the exhibition rooms and correspond to the respective room theme. At the "Bronze Kettledrum" station, for example, visitors can play a hpa-si, a bronze kettledrum from Myanmar. A text indicates that there are differences in sound depending on whether the drumhead is struck at the center or near the rim of the drum. The location of the station within the exhibition area enables visitors to establish connections with the instruments on display (behind glass). A visually very similar drum is located in the showcase not far from the Soundlab station. Due to the spatial proximity, it is easy to make the connection with the exhibited instrument. With regard to the use of the Soundlab stations, I was able to observe that small groups of visitors in particular tried out the stations together and had a lot of fun, which should not be underestimated as a motivation for visiting the exhibition.



Figure 4: Interactive station "Bronze Kettledrum" in the Music Collection at the Munich City Museum; photo: Elisabeth Magesacher

The exhibition at the Musée de la musique in Paris also features interactive stations. On each floor there is a "Touchez la musique" station, which enables visitors to have haptic contact with certain instruments. The content of the station corresponds to the main theme of the respective

room. For example, in one room a viola is on display, and in another room, two lamellophones. In both Paris and Munich, these interactive stations are housed in the exhibition rooms. Although this positioning has the advantage of making it easier to relate the station to the rest of the exhibition, it also generates noise in the exhibition rooms. This creates a contrast in exhibitions with an otherwise rather calm atmosphere. Especially when the exhibition in the Munich City Museum was visited by groups of people, simultaneous use of several Soundlab stations quickly resulted in noise. In Paris, I was able to observe how the otherwise consistently calm atmosphere, caused by the people wearing headphones, was broken near the "Touchez la musique" stations. This has less to do with the absolute volume of the stations than with the volume relative to the otherwise calm atmosphere in the museum. In addition, with regard to the "Touchez la musique" stations, I observed that many visitors were initially not sure whether they were actually allowed to touch the instrument on display at the station—so some visitors hesitated and initially tried the stations very cautiously.



Figure 5: "Touchez la musique" station "La sanza" at the Musée de la musique in Paris; photo: Elisabeth Magesacher

Sounding music is also used in the three music exhibitions for educational programs or guided tours. In addition to various events held in separate rooms that are not discussed in greater detail here, there are also formats within the exhibition area: in Paris, musicians demonstrate their instruments in special areas of the exhibition rooms as part of the "Musicien au musée" series, while at the MIM in Brussels and at the Munich City Museum, selected instruments are demonstrated by museum staff during guided tours or as part of educational programs that take place within the exhibition space. Concerts are regularly held in the last room of the exhibition at the Munich City Museum, a practice which has a long tradition at the museum.^[38] All of these events are held within the exhibition rooms, creating a soundscape in the exhibitions.

Music Exhibitions: Between Music, Noise, and Silence

As shown by the three examples presented above, music exhibitions implement sounding music

in different ways. Visitors often spoke positively of existing listening opportunities but also regretted it when they could not hear a particular instrument or demanded more listening content. A visitor of the Music Collection at the Munich City Museum said the following in an interview:

I liked the ability to...hear some of the music for particular instruments. And it would be nice if you could have done it for all of them, not just a selection. But that was quite interesting.^[39]

As a means of providing visitors a sonic impression of the instruments on display, audio recordings^[40] are often made available through portable devices, listening stations, or loudspeakers. In terms of content, audio guide segments and listening stations include spoken segments with or without music excerpts for different target groups (adults, children, etc.), music recordings of different lengths, and so on.

When it comes to the connection between the exhibited instruments and the sound impression they leave, it is noticeable that visual perception plays a major role: the audio samples are linked to the exhibited objects via numbers or symbols and are based on the exhibited instruments. The display of the audio guide at the Brussels MIM also shows a picture of the instrument. The emphasis on the visual is also evident when audiovisual material is used in addition to audio. As a result, the integration of sound is not just about the listening experience but also about conveying information, for instance in terms of context, playing style, or the making of the instrument. In addition to audio and video recordings, sounding music is also conveyed through guided tours or, in Paris, through the "Musicien au musée" program within the exhibition. Despite the fact that musicians usually bring their own instruments instead of playing exhibition pieces, this offers advantages over audio recordings: first, the sound is produced live, and second, the mediating person can enter into a dialogue with those present. The location of the educational program in the exhibition itself creates the framework for establishing references to the objects on display. In addition, mediation programs like the "Musicien au musée" offer something that the audio guide cannot, because, as Rossi Rognoni writes, a piece of music recorded on an instrument exhibited in the museum that visitors can listen to while looking at it provides information^[41] but has its limits:

However, it fails to reproduce the reallife connection between the generation of sound and the visual perception of movement (of the instruments, its parts and the musician's body) which are inseparable elements in the synthetic experience of live music. In this way, the sound recording results more in a sensory expansion of the information provided by the label (an external provider of information), than of the emotional experience provided by the instrument itself.^[42]

In addition, music that is played live in the museum also draws attention to the musicians themselves, thus making it clear that musical instruments are tools for generating sound but that the "music itself" is still produced by people. In addition to the interest in the sound of the exhibited instruments, visitors also expressed the need to try them out. As a visitor to the Musée de la musique said in an interview: "It's like going to a food museum; you are hungry all the time."^[43] Many music exhibitions therefore offer interactive stations that allow visitors to touch certain instruments or try out sound phenomena, such as those in Paris and Munich. As András Varsányi writes, the aim of the Soundlab in the Munich City Museum was to enable visitors to gain knowledge through their own actions:

We are convinced that visitors will gain the most insight from interactive devices that allow them to produce sounds themselves "naturally," i.e. by mechanical means. This will always be superior to explanations presented through electronic media where visitors remain passive.^[44]

However, it should be noted in connection with the wish of visitors to try out the museum instruments themselves that touching or trying out an instrument should not be equated with playing the instrument. As Varsányi writes, many visitors want to touch instruments that are unfamiliar to them in particular and find out what they sound like. However, the result is often disappointment, as the sound may not be as expected.^[45] This is not surprising, since playing an instrument requires knowledge and practice.^[46]

In other words, one must realize that musical instruments are nothing but tools and need to be handled correctly. It takes a trained and talented artist—and a very complex interaction based on culture-specific education—to produce the appropriate sounds and ultimately what we call "music."^[47]

In the case of interactive stations, too, it is important to convey to the visitors how the instrument is to be played or the sound experiment carried out, as in Paris or Munich. In addition, interactive stations alone are not enough. According to Varsányi, the makers of the Soundlab have come to the conclusion that it is not enough to work with texts, cartoons, and film. What is crucial is rather personal communication in the form of concerts, lectures, and, above all, guided tours.^[48]

As the observations at the three exhibitions show, the chosen technical variant of music integration has different effects on the reception and the atmosphere of the exhibitions. Music played over loudspeakers and hands-on stations have positive effects on communication and the atmosphere at the exhibitions; at the same time, intensive use of hands-on stations in particular can lead to an increased noise level, at least for a short time. In contrast to portable devices or listening stations with headphones, it is not possible to withdraw from the sound except by leaving the room. Other museums therefore often accommodate interactive stations in rooms separate from the exhibition area. A disadvantage of this variant, however, is first that the accommodation of several sound offerings in one room can in turn result in a high noise level. As Robert Fry writes of his experiences at a science center, visitors who conduct interactive experiments with enthusiasm transform the room into "a noisy space wherein acoustic chaos reigns,"^[49] which is related to the focus on the individual interactive elements: "However, for visitors to so much as approach an exhibit intellectually, they must wade through a distracting cacophony, after which there is no guarantee that they will be able to concentrate enough to absorb its content."^[50] Second, the connection of the sound content to the rest of the exhibition is made more difficult by the spatial distance; the interactive stations are housed in a separate room apart from the exhibition. It is precisely the contextual connection between interactive stations and exhibited instruments that provides a better understanding of the exhibited instruments. Furthermore, interactive stations within the exhibition space in the museum, as a visually shaped place, also enable a change in reception behavior; in addition to looking at instruments in showcases or reading texts, visitors engage actively.

As I have observed, there is significantly less communication at music exhibitions in which most of the audio content is transmitted via portable devices with headphones, which leads to a calm, subdued atmosphere within the exhibition space. In the Musée de la musique in Paris in particular, I observed that people who wore headphones communicated only very cautiously with one another. This calm atmosphere contrasted with the daily educational programs in certain areas of the exhibition, which, however, were very well received by the visitors. The music played aloud in the room created a contrast between elements received by seeing and hearing through headphones and the live music.

The fact that there are still questions surrounding the inclusion of sounding music in exhibitions and its impact is connected to the idea of the museum itself. Historically, the museum is a place of the visual, often connected with the idea of a place where the individual confrontation with the exhibited works of art or objects takes place in silence. This makes the museum a place of silence. As Steffi de Jong explains, the rule that art should be viewed in silence has applied since the opening of publicly accessible museums in the nineteenth century, and the "privilege" of being able to speak out loud is reserved for museum staff, especially museum guides, who are supposed to convey information to the visitors as well as regulate the volume in the exhibition.^[51] In contrast to the silent exhibition rooms, the museum shop and the café established themselves early in the history of the public museum as rooms in which noise could be made.^[52] Many museums also set up rooms for cultural programs and film screenings.^[53]

This image persists to this day, so in many museums silence results not only from the wearing of headphones but also from rules of behavior and prohibitions (eating, drinking, speaking loudly, running, touching) that they have in common with libraries. However, as Eric de Visscher explains, the museum was not always quiet but was initially a place dedicated to music, poetry, and intellectual exchange.^[54] The establishment of collections (of manuscripts and later objects) led to a divergence between visual arts such as painting or sculpture and music and poetry, ultimately leading to the equation of "art" with "visual arts" and thus to a separation of the senses in the museum.^[55] In addition, the idea of the silent museum is a fallacy, because as Nikos Bubaris writes, "wherever there is human presence and activity, there are sounds."^[56] As Bubaris points out, the concept of the silent visitor leads to "sound-making" being viewed as a problem and being equated with "noise," and it is therefore no coincidence that sound is more likely to find acceptance in museums "that do not have the 'aura' of high culture, for example, in science centers and temporary exhibitions, rather than in permanent collections of art museums."^[57] Music exhibitions are located, in view of the variety mentioned at the beginning of this article, between the positions outlined by Bubaris: on the one hand musical instruments are exhibited behind glass, similar to paintings, while on the other hand many music exhibitions are more likely to be located in the science center area, as they have elements that are meant to be tried out.

Bubaris takes a critical view of the use of headphones:

Despite the positive perceptions about the potential of sound, it is still treated as a tool to be used with caution for fear that it may introduce problems and disruptions in the museum's effort to communicating its meanings. Hence, the contents of sound and its diffusion in space are controlled as much as possible, usually with the use of audio technologies such as headphones and directional speakers. An unwitting side-effect of such practices is that visitors are no longer just silent viewers and readers but are now also becoming silent listeners.^[58]

Although, as mentioned, silence in museums also results from rules of conduct and prohibitions, it can also be seen as a potential. Karsten Lichau differentiates between different forms of silence, including (a) "explicit silence," which is brought about more or less consciously, (b) silence as not explicitly perceived but forming an indispensable prerequisite or condition for activities such as learning, sleeping, concentrated work, or medical healing, (c) silence as an acoustic background that allows other sounds to emerge, including the silence of listeners of a

concert audience, and (d) silence outside of human perception, for example absolute silence in outer space.^[59] The silence in music exhibitions can appear in the first three forms: as an explicitly silent environment through rules of conduct, as a place of learning and concentrated reception of exhibition content, and as a place where concerts take place or sounding music is played in a different format in front of the audience. Especially in larger cities, museums are not only places where musical topics are conveyed but also form a contrast to street and everyday noise and act as a space for silence, as a counterpoint to noisy everyday life. The quiet atmosphere does not necessarily have to be a restriction but may also serve the purpose of facilitating concentration. In order to use this potential of museums as places of silence, musical instrument exhibitions in particular could focus more on hearing and perception themselves and, in addition to providing information on the objects on display, also convey awareness of hearing, thereby guestioning existing listening habits and listening as a culturally learned process. For this purpose, separate areas designated for listening to music could be created in the exhibitions, as is already the case in some music exhibitions.^[60] Other areas could offer space for interactive sound experiments, such as the music exhibitions mentioned above, allowing visitors to experience the sound through their own actions. Fry suggests "the cultivation of an acoustic environment that enhances the visitor experience without undermining it."^[61] This, according to Fry, does not mean creating a "library-like stillness" or an amusement park or a lively shopping mall, but instead finding a compromise: "What's needed is a conscious hybrid—a place where people can laugh and get loud, make music or make chaos, while still being able to hear themselves think."[62]

Conclusion

The integration of sound in music exhibitions and the associated curatorial challenges demonstrate the paradoxical situation that is posed by exhibiting musical instruments as objects of art and at the same time as tools for producing sound in a visually oriented museum. The case studies in European museums presented in this article show how curators of music exhibitions use sound in different ways to give visitors a sonic impression of the instruments on display. While the museum still is considered a place of the visual, often associated with silence, it uses more and more technologies for implementing sound, with different effects on communication, atmosphere, and noise level. The discussion about music exhibitions between noise, music, and silence arises in particular with interactive hands-on stations in exhibition rooms and sound reinforcement via loudspeakers. This also shows the intermediate position of music exhibitions between science center and museum and is related to the question of how music exhibitions position themselves and which aspects of the music they want to convey. Especially for conveying sound, play, and functionality, participatory elements and personal communication in the formats described above are indispensable.

The discussion of sound content also leads to the topic of silence. On the one hand, silence results from rules of conduct that were shaped mainly in the art museum of the nineteenth century and appears to a certain extent contradictory for the presentation of musical topics. On the other hand, however, silence can also be seen as a potential. While visually conveyed information is often also accessible outside the museum context, for example through the internet, a stronger emphasis on hearing and perception training in music exhibitions could offer a unique experience found only in museums. In addition, this article aimed to show that

ethnographic methods such as observation and interviews are relevant alternatives to evaluations or assessments as methods of documenting individual modes of reception in museum research, and especially in visitor research, in particular with regard to the perception of exhibitions and the use of sound features.



References

- I conducted field research in the Musée de la musique in Paris (Cité de la musique—Philharmonie de Paris), the Musical Instruments Museum (MIM) in Brussels, the Music Collection at the Munich City Museum, the Music Department at the Tropenmuseum (Amsterdam), the Musikmuseum: Basel Historical Museum, and the Museen Dahlem: Staatliche Museen zu Berlin. ↑
- 2. María del Mar Alonso Amat, Elisabeth Magesacher, and Andreas Meyer, *Musik ausstellen: Vermittlung und Rezeption musikalischer Themen im Museum*, Edition Museum 53 (Bielefeld: Transcript, 2021).
- 3. Bettina Habsburg-Lothringen, "Das Unsichtbare zeigen. Zur Vermittelbarkeit von Tondokumenten in Ausstellungen," in *Musikausstellungen: Intention, Realisierung, Interpretation; ein interdisziplinäres Symposium*, ed. Andreas Meyer, Folkwang Studien 19 (Hildesheim: Olms, 2018), 23–32. ↑
- 4. Das Immaterielle ausstellen: Zur Musealisierung von Literatur und performativer Kunst, ed. Lis Hansen, Janneke Schoene, and Levke Teßmann, Edition Museum 28 (Bielefeld: Transcript, 2017). ↑
- 5. Steffi de Jong, "Museum," in *Handbuch Sound: Geschichte Begriffe Ansätze*, ed. Daniel Morat and Hansjakob Ziemer (Stuttgart: J. B. Metzler, 2018), 291–95. ↑
- 6. Kathleen Wiens and Eric de Visscher, "How Do We Listen to Museums?" Curator: The Museum Journal 62, no. 3 (2019): 277–81. ↑
- 7. Ibid., 278. ↑
- 8. Gabriele Rossi Rognoni, "Preserving Functionality: Keeping Artefacts 'Alive' in Museums," *Curator: The Museum Journal* 62, no. 3 (2019): 404. ↑
- 9. Ibid., 407. ↑
- 10. Ibid., 404. ↑
- 11. Ibid., 404-7. ↑
- Frank P. Bär, "Spielen oder nicht spielen? Die Perspektive des Konservators / To Play or Not to Play? From the Perspective of the Curator / Jouer ou ne pas jouer? La perspective du conservateur," in *Piano-Perspektiven: Die Klaviersonaten W. A. Mozarts auf historischen Hammerflügeln* (Nuremberg: Verlag des Germanischen Nationalmuseums, 2006), 80. ↑
- 13. Ibid. 1
- 14. Ibid., 91. **↑**
- 15. Ibid. 1
- 16. Ibid., 84. 1

- 17. Ibid. 1
- 18. Ibid., 85. 1
- 19. Ibid., 89-90. **↑**
- 20. Ibid., 86. 1
- 21. Rognoni, "Preserving Functionality," 407. ↑
- 22. Alonso Amat, Magesacher, and Meyer, Musik ausstellen, 20-25. ↑
- 23. Eilean Hooper-Greenhill, "Studying Visitors," in *A Companion to Museum Studies*, ed. Sharon Macdonald, Blackwell Companions in Cultural Studies 12 (Oxford: Blackwell, 2006), 362–76. ↑
- 24. Sharon Macdonald, *Behind the Scenes at the Science Museum*, Materializing Culture (Oxford: Berg, 2002). ↑
- 25. Interviews were conducted in German, French, or English. ↑
- 26. The focus is on the exhibitions as a publicly accessible part of the museum. Mediation programs, concerts, and other events outside the exhibition space will not be considered in greater detail. 1
- 27. The Philharmonie de Paris, where special exhibitions are presented, opened next door to the museum in 2015. ↑
- 28. Musée de la musique, "Histoire du musée," accessed April 29, 2022. 1
- 29. *50 instruments insolites: Les coups de cœur des visiteurs du mim*, ed. Joke Krause and Cécile Marchéchal (Brussels: Renaissance du livre, 2010), 9–11. ↑
- 30. Ibid, 9. 1
- 31. This is based on field research conducted in 2015. \tach
- 32. Münchner Stadtmuseum, "Permanent Exhibition: Music," accessed April 29, 2022. 1
- 33. Ibid. ↑
- 34. It should be noted here that some sound offerings may correspond to different categories, e.g. when a portable device can be operated both with headphones and with loudspeakers, for example during guided tours. ↑
- 35. I was able to make similar observations in the exhibition "David Bowie is...." This touring exhibition opened at the Victoria and Albert Museum in 2013 and was shown from March 3 to May 31, 2015 in the Philharmonie de Paris. At the entrance to the exhibition, visitors were given a device with headphones that could automatically broadcast music when they entered a room. Here, too, I was able to observe that the music takes on a leadership role and introduces a new room theme by starting a new music clip. On the basis of my own perception, I observed that I first perceived the music and then concluded from it the connection to the respective room. As one entered the exhibition with headphones and automatic playback, the music acted as the "soundtrack" of the exhibition visit. ↑
- 36. This also applies to exhibitions in which, instead of portable devices, only headphones are given out, and there are headphone plugs in the exhibition. This system suits visitors who want to use their own headphones for hygienic reasons. Similar to listening stations, simultaneous listening by several people depends on the number of headphone plugs, and the sound quality also depends on the headphones used. ↑
- 37. As mentioned, it is not always possible to clearly classify the various offers as belonging to a particular category. This Soundlab station is one of the interactive stations, because audio samples can be called up at the push of a button, but it is discussed here because the music samples are played over loudspeakers. ↑

- 38. András Varsányi, "Making Museum Audible: Reflections on Implementing a Soundlab within a Museum of Musical Instruments," *Music in Art: International Journal for Music Iconography* 39, no. 1–2 (2014): 296. 1
- 39. Interview on July 13, 2016; interview conducted in English. ↑
- 40. It is not always clear whether these are actually recordings of the exhibited instruments or whether similar instruments can be heard. ↑
- 41. Rognoni, "Preserving Functionality," 410–11. ↑
- 42. Ibid. ↑
- 43. Interview on August 7, 2016; interview conducted in English. ↑
- 44. Varsányi, "Making Museum Audible," 307. ↑
- 45. Ibid., 294. 1
- 46. Ibid. 1
- 47. Ibid., 294-95. 1
- 48. Ibid., 307. 1
- Robert Fry, "Delightful Sound and Distracting Noise: The Acoustic Environment of an Interactive Museum," in "Environments of Learning," ed. Wendy Pollock, special issue, *Journal of Museum Education* 27, no. 1 (2002): 14. ↑
- 50. Ibid. 1
- 51. De Jong, "Museum," 291-92. 1
- 52. Ibid., 292. 1
- 53. Ibid. 1
- 54. Eric de Visscher, "Music in Museums: A Model for the Future?" in Meyer, Musikausstellungen, 13. ↑
- 55. Ibid. 1
- 56. Nikos Bubaris, "Sound in Museums: Museums in Sound," *Museum Management and Curatorship* 29, no. 4 (2014): 391. ↑
- 57. Ibid., 392. 1
- 58. Ibid., 400. 1
- 59. Karsten Lichau, "Stille," in Morat and Ziemer, Handbuch Sound, 218-19. ↑
- 60. The former music exhibition at the Tropenmuseum in Amsterdam circumvented this problem of sound production by allowing visitors to try out various singing techniques in an area separated from the rest of the exhibition space by an (almost) soundproof glass door. ↑
- 61. Fry, "Delightful Sound and Distracting Noise," 14. ↑
- 62. Ibid., 17. 1

Cover picture: Display case in the Musée de la musique (Cité de la musique – Philharmonie de Paris); photo: Elisabeth Magesacher.

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