Sound Studies and Sonic Arts Reader

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Table of Contents

On the Early History and Typology of Sound Installation Art

Volker Straebel

"Time is *inner space* – space is *outer* time.
(Their synthesis) *Figures of time* etc. Space and
time arise simultaneously."[1]
Novalis

In the discourse surrounding sound art, sound installation occupies a key position. Unlike radio art, sound poetry, or music performance, and perhaps only comparable with sound sculpture and net art, sound installation cannot be subsumed by an established art form and remain on its periphery, but instead demands special consideration as an original and essentially intermedial form. Considered to be first realized in 1967, sound installations have become increasingly prevalent since the 1980s. By now, with intermedia installation having established itself as a paradigm of art production at the turn of the century,[2] it has become difficult to distinguish sound installations from other types of installed media art. If an attempt is to be made to trace an early history of sound installation while maintaining a distinction from the altered understanding of music that resulted from performances of extended duration, it must focus on the history of this art form's establishment – in this case, from the perspective of the works and the discourse that accompanied and in part preceded them. The following proposal for a typology of sound installation art may be seen as a suggestion to counter the temporal-historical course of development with a systematic view of technical approaches and artistic processes. This seems necessary not only because an overview of linear influences can barely be identified within the field's increasingly rapid development, but also in order to counteract the conflation of artwork and technique, with which artists and distributors alike seek to establish easily identifiable personal styles.

In the United States, the term "sound installation" initially referred to technical set-ups for sound systems, particularly in movie theaters.[3] In the mid-1960s,

1 Novalis, *Notes for a Romantic Encyclopaedia: Das Allgemeine Brouillon*, 172.

2 De Oliveira, Oxley, and Petry, *Installation art in the new millennium*.

3 In the New York Times from July 15, 1928 (p. X2), the Astor Theatre advertised the last silent film screening before its temporary closure "during the introduction of MGM sound installation." Cf. the use of the term "sound installation" in Golden, "Sound Motion Pictures in Europe," 11–26.

the term underwent a shift in meaning and was used to refer to works of art based on sound diffusion. David Tudor stated in a 1984 interview that he had conceived of "a more or less permanent sound installation" in 1966 or earlier.[4] The earliest use of the term "sound installation" in an artistic context is generally attributed to Max Neuhaus, who claimed it for his works in a 1982 interview and dated it back to the early 1970s.[5] The term can be found in press releases from as early as 1976.[6]

The distinction between sound installation and sound sculpture poses a problem. While the former seems to presuppose a reference to space, the latter can refer to individual sound-emitting objects. This distinction is contradicted by the fact that artists have also used "sound sculpture" to refer to works that lack a sculptural object. Bill Fontana has spoken of "sound sculpture" in connection with the live transmission of environmental sounds from one place to another,[7] while using the term "sound bridge" to describe radio transmissions between distant cities in which there is no concrete reference to the site of sound reproduction.[8] The fact that sounds themselves are like objects in character and may be perceived as sculptural, even in compositions that are not ostensibly spatial (one can consider, for example, Edgard Varèse's spatial concept in *Intégrales*),[9] may explain this lack of conceptual clarity. Looking back on his early investigations into spatial sound movements (1969–1975), Bernhard Leitner explained "the sound itself should be understood as a building material, as an architectural, sculptural, form-creating material like stone, plaster, or wood".[10] In addition to the object-like character of the sounds, the derivation of installation from an expanded concept of sculpture makes it difficult to clearly distinguish between sound installation and sculpture.[11]

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4 Tudor and Fullemann, "…performing is very much like cooking." For the identification of this classification as early as 1965, see Rogalsky, "Idea and Community," 71.

5 See Neuhaus and Duckworth, "Interview (New York, 1982)," 42–43. In Neuhaus, *Sound Works Volume 1*, 42–49.

6 Regarding the work of Max Neuhaus, cf. Rockwell, "Max Neuhaus," 50; h.r.h., "Miscellaneous News," 291.

7 Cf. Fontana*, Oscillating Steel Grids*; Fontana, "The Relocation of Ambient Sound," 143–147.

8 For example, *Satellite Sound Bridge Köln – San Francisco* (1987) or *Sound Bridge Cologne – Kyoto* (1993) – see Anonymous, "Werkliste Bill Fontana (Auswahl)," 73.

9 Cf. la Motte-Haber, *Die Musik von Edgard Varèse,* 197–207.

10 Leitner, *Sound:Space*, 23.

11 On the distinction between sound installation and sound sculpture, see Gertich, "Klangskulpturen," 137–190.

Historical Origins

Between Concert and Installation

While the traditional concept of music assumes a performance of limited duration that is experienced by the audience in its entirety, sound installations are of potentially infinite duration. The listener is free to move around in the space and to determine for themselves how long they wish to stay. This mode of interaction corresponds to that of the visual arts. Similar rules apply to the experience of festival and processional music, which constituted early forms of background music.

Erik Satie's *Musique d'Ameublement* is often referenced as a precursor to sound installation art. This music was performed live, but was intended to have a presence not unlike furniture which remains in a room without particularly being noticed. A first public performance of *Musique d'Ameublement* conceived jointly by Satie and Darius Milhaud took place on March 8, 1920, as part of a concert and theater event at the Galerie Barbazanges in Paris. The audience was asked "to take no notice and behave as if there were no music. This music would have the same presence in life as a private conversation, a painting, or a chair on which one may or may not wish to sit."[12] In his autobiography, Milhaud pointed out that the piano and the three clarinets were placed in the four corners of the room and the trombone on the balcony, so that "the music might seem to come from all sides at once."[13] The notion of acoustic space that is characteristic of sound installation was therefore already present.

Satie had already conceived of the idea for *Musique d'Ameublement* two years earlier in reaction to the use of waltzes and opera fantasies as background music even though they had been "written for a different purpose."[14] As if anticipating the industrial implementation of Muzak, he countered: "We wish to establish a form of music designed to satisfy 'useful' needs. Art is not among these needs. *Musique d'Ameublement* creates vibration; it has no other purpose; it fulfills the same role as light, warmth, and comfort in all its forms."[15]

In the instrumentation for the pieces conceived of as *Musique d'Ameublement*,[16] Satie did not take the expected spatial situation of the performance into account. When the American patroness Mrs. Eugène Meyer commissioned him to furnish her study acoustically in 1923, he chose an instrumentation of piccolo, clarinet, bassoon, horn, trumpet, percussion, string quartet, and double bass that would have hardly had sufficient room in the *Cabinet Préfectoral*. Milhaud, who

12 Myers, "A Music Critic in Paris," 543.

13 Milhaud, *Notes without Music*, 122.

14 Satie, "Musique d'Ameublement" (1918, text), 31.

15 Ibid. In contrast to Muzak, Satie was not necessarily aiming to influence the listener emotionally, instead he was concerned with an objective music, a *musique pure*.

16 Satie, *Musique d'Ameublement* (1917–1923, score).

had arranged the commission, later speculated that it would have been necessary to "have had it recorded and played over and over again, thus forming part of the furniture of her beautiful library (...) adorning it for the ear in the same way as the still life by Manet adorned it for the eye."[17] Although more than four decades had passed since the invention of the phonograph and suitably large horn gramophones had long been used in public places, Satie continued to pursue live performance situations with musicians.

Vexations (1893) is another work of Satie's that, due to its long duration, can be seen as having an installation-like character. The score for this work, which was neither published in Satie's lifetime, nor mentioned in his correspondence,[18] contained the following text: "In order to play the theme 840 times in succession, it would be advisable to prepare oneself beforehand, and in the deepest silence, by serious immobilities."[19] John Cage, who had been familiar with the score since 1949 and arranged its first publication,[20] already considered a performance with 840 repetitions in 1950, thus interpreting the hypothetical statement as instructions.[21] In 1958, he was still under the impression that such a performance would not be tolerable,[22] but five years later set about organizing the first complete performance of *Vexations.* The concert at New York's Pocket Theater on the 9th and 10th of September 1963 featured twelve different pianists and lasted 18 hours and 40 minutes.[23] Both Cage's comments on the experience of duration and repetition in this performance[24] and the fact that the *New York Times* had the concert reviewed in its entirety by five alternating critics indicate that neither the organizers nor the listeners understood the event as a performed installation.[25]

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17 Milhaud, *Notes without Music*, 123.

18 Cf. Orledge, "Understanding Satie's 'Vexations'," 391.

19 Satie, "Vexations" (1893, text). Translated by Silke Haas. In Satie, *Schriften*, 19. – "Pour se jour 840 fois de suite ce motif, il sera bon de se préparer au préalable, et dans le plus grand silence, par des immobilités sérieuses" (Satie, "Vexations" [1893, score], *Pages Mystiques,* 2).

20 Satie, "Vexations" (facsimile), 8+; cf. Peter Dickinson, "Introduction," 9.

21 "My mind runs now to Satie's Vexations, a short piece to be played 840 times in a row." (John Cage, "To the Editor" *Musical America,* December 15, 1950, in Richard Kostelanetz, ed., *John Cage: An Anthology*, 90).

22 "True, one could not endure a performance of Vexations (…), but why give it a thought?" (John Cage, "Erik Satie" (1958), in Cage, *Silence: Lectures and Writings*, 78).

23 For a description of the performance see Cage, "Brief über die Uraufführung von 'Vexations'" (1965, to J. Bernlef), in Metzger and Riehn, *Erik Satie*, 47.

24 "I think that the experience over the eighteen hours and forty minutes of those repetitions was very different from the thought of them, or the realization that they were going to happen. For them to actually happen, to live actually through it, was a different thing. (…) I had changed and the world had changed." (Interview 1973, in Kostelanetz, ed., *Conversing with Cage*, 223).

25 Ericson, et al, "A Long, Long Night (and Day) at the Piano," 45, 48.

When La Monte Young presented a realization of *The Tortoise, His Dreams and Journeys* for the first time in the same hall the following year, he created the illusion of a very long performance by letting the audience in only after the musicians had already begun to play.[26] The group, which soon bore eternity even in its name as the Theatre of Eternal Music, had already formed around La Monte Young in 1962 to play very long sustained notes. Starting in 1964, the musicians played chords composed by Young in just intonation.[27] Even though each of their performances lasted only one evening, Young had the idea that any chord that was played would last continuously, starting at the moment of its conception.[28]

Young had developed the idea for a *Dream House* in 1962[29] and first realized it in his loft in New York – albeit with interruptions – from 1966 to 1970: "We sang, worked and lived in this harmonically tuned acoustic environment and studied its effects on us and on the various people who were invited to spend time with the frequencies."[30] Although electronic devices such as sine wave generators and synthesizers were employed, Young considered it a performance. He understood the piece to be an "actual living organism,"[31] and not only because the sound generators were not completely accurate in the first years and the frequencies would slowly shift (hence the title *Drift Studies*).[32] Ideally, the *Dream House* should be a building inhabited by musicians, its rooms filled with sounds transmitted from

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26 Cf. Potter, *Four Musical Minimalists*, 71.

27 Cf. the frequency tables for *Pre-Tortoise Dream Music* (1964) in Gann, "The Outer Edge of Consonance," 158, and for *The Obsidian Ocelot* (1965) in Potter, *Four Musical Minimalists*, 75.

28 "It lasts forever and cannot have begun but is taken up again from time to time until it lasts forever as continuous sound in Dream Houses where many musicians and students will live and execute a musical work." (Program notes, 1964, Young and Zazeela, "[… In Dream Music]"). In 1968, in connection with a performance of *Tortoise, His Dreams and Journeys*, Young stated that the piece was endless and had already been going on for four years. (Johnson, "A La Monte Young Diary," 89). Due to this understanding of the ongoing presence of the works, individual realizations often bear the date and time of the beginning and end of the performance in the title.

29 Young mentions this year in 1996 (Young and Zazeela, "Continous Sound and Light Environments," 218) and otherwise acknowledges *The Four Dreams of China* from 1962 as "the inspiration for the idea of the Dream House" (Young, Zazeela, and Gagne, "[Conversation]," 483; cf. Young, Zazeela, and Duckworth: "[Conversation]," 253). In statements prior to 1969, the Dream House remains an unfulfilled dream: "(I) would prefer Dreamhouses or truly Eternal Theatres with a more permanent installation, which would allow us to perform in one location for longer periods – weeks, months, and hopefully, in time – years." (Young and Kostelanetz, "My own feeling is that if people aren't carried away to heaven I'm failing. [Interview]," 216).

30 Young and Zazeela, "Continuous Sound and Light Environments," 218.

31 Young and Zazeela: "(… In Dream Music)," unpag.

32 Cf. Gann, "The Outer Edge," 173.

the performance space. In order to ensure a continuous performance, about 80 musicians would have been required.[33]

During the two weeks of the first public presentation of the *Dream House* at Galerie Heiner Friedrich in Munich in 1969, La Monte Young and Marian Zazeela participated in the performance at irregular intervals. The acoustic environment was created with their singing, a six-voice Moog synthesizer, and a Hewlett-Packard sine wave generator all using the same sound system. Together with the electronic sound generators, the performers followed the score of *Two Systems of Eleven Categories*. The two tape decks provided for in the schematic – one to record directly from the console and the other to record in the space – were used solely for documentation purposes.[34] The fact that all sounds are generated live is fundamental to the concept of the *Dream House*. Thus, the technical staff is instructed to leave the synthesizers and amplifiers running outside of opening hours with the volume turned all the way down.[35]

Extended Duration

Cage's revised attitude towards the possibility of a complete performance of *Vexations* indicates that a shift related to extremely long performance durations must have occurred at some point between 1958 and 1963. This change can be seen in the context of the Happening and Fluxus movements of the time, whose protagonists had attended Cage's experimental composition class at the New School for Social Research in New York in the summer of 1958.[36] Allan Kaprow, who with his *18 Happenings in 6 Parts* (1959) is considered the founder of the Happening, provided a definition of this new art form in 1966, in which he mentioned a possible duration of more than a year: "A Happening is an assemblage of events performed or perceived in more than one time and place. Its material environments may be constructed, taken over directly from what is available, or altered slightly; just as its activities may be invented or commonplace. A Happening, unlike a stage play, may occur at a supermarket, driving along a highway, under a pile of rags, and in a friend's kitchen, either at once or sequentially. If sequentially, time may extend to more than a year. The Happening is performed according to plan but without rehearsal, audience, or repetition. It is art but seems closer to life."[37]

The Happening thus established an art form with works that elude any sense of conclusion in the perception of those who experience them. This is not only

33 Cf. Young, Zazeela, and Duckworth, "(Conversation)," 253–255.

34 Cf. Young and Zazeela, "Dream House," unpag.

35 Cf. Grimshaw, *Draw a straight line and follow it*, 122.

36 Cf. Altshuler, "The Cage Class," 17–23; Straebel, "Die Geburt des Intermedia aus dem Geist der Musik," 90–99.

37 Allan Kaprow, "Definition," in Kaprow, *Some Recent Happenings*, 5.

because of their spatial complexity and the simultaneous concurrence of independent events, but also due to their sheer duration. There has been repeated experimentation with extended duration in performances and events in the New York art scene since 1963. That year, Andy Warhol attended the performance of *Vexations* organized by Cage and completed his five-and-a-half-hour film *Sleep*, which shows 22 shots of a person sleeping.[38] Yoko Ono's three *Room Pieces*, in which the performer is instructed to spend a week, ten days, or a month in a room, are likewise dated "Winter 1963."[39]

In 1965, Europe followed suit with the Happening *24 Stunden*, in which artists such as Joseph Beuys, Charlotte Moorman, Nam June Paik, Tomas Schmit, and Wolf Vostell performed in individual rooms of Galerie Parnass in Wuppertal.[40] Two years earlier in the same location, Paik had set up his *Exposition of Music – Electronic Television*, an environment consisting of sculpturally modified pianos prepared with electronic devices, modified television sets, and other "objets sonores."[41] "Is the TIME without contents possible?"[sic], he asked on the exhibition poster, thus emphasizing the contradiction in his undertaking to exhibit music.[42] Most of the objects presented in the gallery had an independent sculptural character and would produce sound for a limited time when activated by the public. Considering this a sound installation, in which the piece as a whole transcends its individual parts, would perhaps be problematic. However, for the artist, who had trained as a composer, this marks a departure from a concept of music based on an established form with beginning and end. The result was a situation that remained spatially and temporally open, in which visitors could interact with the sound objects themselves.

This marked the realization of what had first been envisioned with Paik's *Symphony in 20 Rooms* in 1961: the arrangement of musical and sculptural material in a number of rooms that could be experienced in any order for any amount of time.[43] In one of his texts for the *New Ontology of Music,* Paik differentiated very precisely between the distinct forms of concert music, sound installation, and acoustic environment activated by the visitor: "In the normal concert, the sounds

38 Cf. Joseph, "The Play of Repetition: Andy Warhol's 'Sleep'," 22–53.

39 Ono, "Room Piece I – III," unpag.

40 Cf. *24 Stunden*; Baltzer and Biermann (Eds.), *Treffpunkt Parnass Wuppertal 1949 – 1965*; Schneede, *Joseph Beuys – Die Aktionen*, 84–101.

41 Cf. Schmit, "Exposition of Music"; Jacobs, "Dokumentation," 65–79.

42 It is certainly no coincidence that Paik, who had studied composition with Wolfgang Fortner, chose the homonym "exposition," which can refer to either an art exhibition or the first section in sonata form, as his title.

43 Paik, "My Symphonies," 76. *Symphony in 20 Rooms* does not seem to have ever been realized; at any rate, there is no evidence of a performance in the chronologies of Paik or Fluxus literature. Michael Nymen surmises that it was a draft for *Exposition of Music*, which was not realized until two years later. (cf. Nyman, "Nam June Paik, Composer," 87).

move, the audience sit [sic] down. (…) In the *Symphony for 20 rooms*, the sounds, etc., move, the audience moves also. In my *Omnibus music No.1* (1961), the sounds sit down, the audience visits them. In the *Music Exposition*, the sounds sit, the audience plays or attacks them."[44]

By overcoming fixed musical form and a narrative-driven temporal structure, which he likened to sex in terms of its fixation on development and climax, Paik referenced the ideas of Karlheinz Stockhausen, who in 1960 told him of his (abandoned) piece entitled *Paare.* This piece was to have neither a defined beginning nor a fixed end: "The audience may come into the concert hall and leave freely. And come back. All the while the music continues, for five or six hours or more until the last listener has left."[45] This was directed towards Stockhausen's concept of *Momentform*, a form he had been implementing since *Kontakte* (1958–1960) in which self-contained musical states ("moments") follow one another, "having already begun and able to continue indefinitely." The composer sought to "blow up the concept of time – more precisely, the concept of duration, yes, to overcome it"[46] and saw the potential outcome in "pieces with an infinite duration," which are presented in special halls on tape or by live musicians like permanent film screenings, "regardless of whether anyone is listening or not: the listeners can come and go as they please and whenever they want."[47]

It was Paik, however, who took the idea of extended duration to the extreme, announcing in 1962 that he would compose a piece of music lasting 99 years,[48] and in 1964 drafting his utopian *Symphony No. 5*, a verbal score in which "WHEN to be played is equally important as WHAT to be played."[49] In this piece, actions are assigned to individual dates and to some extent times, which Paik compares to the liturgical tradition of referring to certain passages and chants on certain days and times of day.[50] The intervals at which the actions take place are written in years ("1000th year, winter," etc.), alluding to an infinite duration, and were only added by hand in an ecstatic gesture in a revision of the typescript.[51]

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44 Paik, *We Are in Open Circuits*, 24.

45 Paik, "To the *Symphony for 20 Rooms*" [1961], unpag.

46 Stockhausen, "Momentform," 199. "… immer schon angefangen haben und unbegrenzt so weiter gehen könnten… (den) Zeitbegriff – genauer gesagt: den Begriff der Dauer – zu sprengen, ja, ihn zu überwinden".

47 Ibid., 205. "… ganz gleich, ob jemand zuhört, oder nicht: die Hörer können kommen und gehen, wenn es sie danach verlangt und wann sie wollen".

48 Paik, "New ontology of music," unpag. (in the leaflet's text collage).

49 Paik, *We Are in Open Circuits*, 45.

50 "Imagine how matin services in the early mornings sound completely different from vesper services in the evenings, although melody is almost same for the outsider." (Paik, "New ontology of music," 94).

51 Cf. Paik, "Symphony No. 5" (1964/65, Facsimile) in *Fluxus/Video*, 88–99.

The notion that scores do not necessarily have to be performed was the basis for the emergence of the utopian compositions of the Fluxus artists. Freed from considering the practicality of their ideas, concepts emerged on the border between verbal score and fictive instructions with poetic appeal. "Music –/ for the mind / by the mind / of the mind"[52] postulated Paik in *Readmusic* (1962), and Giuseppe Chiari explained in the playing instructions for *La Strada* (1964) that he would almost always prefer to see the actions stated rather than executed.[53]

In relation to sound installation art, two of Marcel Duchamp's early creations are significant in the way they seem to anticipate the genre, regardless of their feasibility. His *Box of 1914* contains a photographic facsimile of a handwritten note that reads "Faire un tableau de frequence:"[54] The text occupies the upper third of an otherwise blank, irregularly trimmed sheet of paper in portrait orientation. The colon emphasizes the prompt-like character of the text, especially since there is enough space on the page to create a statistical frequency distribution table. Or do "frequencies" refer to sound? In the influential American edition of Duchamp's writings, Arturo Schwarz translates this as "Make a painting of *frequency*:,"[55] which steered research on Duchamp onto the trail of radiotelegraphy, electromagnetic waves, and X-rays in *The Large Glass*.[56] Although it is an appealing idea that Duchamp was thinking of a "tableau of sounds" in 1914, this interpretation has not been verified.

The sheet of paper in his *Green Box* from 1934, which bears the title *Sculptures Musicales*, offers more clarity: "Sounds lasting and leaving from different points and forming a sounding sculpture which lasts."[57] In 1964, an interest in this concept, which Duchamp never realized, can be traced among the Fluxus artists.[58] John Cage interpreted this text in 1989, emphasizing its possibilities for performance in his *Sculptures Musicales: Exhibition of Sound Sculptures*. Although the acoustic and/or electronic realization can be of "any duration," the publication of the verbal score and his classification of the text as a "work for variable instrumentation"[59] indicates an understanding of the work as a piece of music to be

52 Paik, "Readmusic – Do it yourself – Answers to La Monte Young," 104.
53 Cf. Chiari, "La Strada," unpag.
54 Duchamp, "The Box of 1914," Reproduction: 333–337, Image 72.
55 Duchamp, "The 1914 Box" (1914), 25.
56 Cf. the chapter "The Large Glass as a Painting of Electromagnetic Frequency" in Henderson, *Duchamp in Context*, 98–110.
57 "Sons durant et partant de différents points et formant une sculpture sonore qui dure" (Marcel Duchamp, "Sculptures Musicales" [1934], 47).
58 Printed in English in Brecht, "Events: scores and other occurrences," unpag.
59 Cf. *John Cage (catalogue)*, 33.

performed. This reflects the occasion for which Cage's score was written, namely as music for the piece *Inventions*, choreographed by Merce Cunningham.[60]

La Monte Young's *Composition 1960 #7* is similarly situated between concept, installation and performance. A fifth formed by B and F#, notated in the treble clef with whole notes, bears the performance instruction "to be held for a long time." Each note has a tie leading into the empty space behind the interval, underscoring the sound's duration.[61] Written two years before the first draft of *Dream House*, the piece is completely restricted to the motif of the sustained interval that Young had developed in *for Brass* (sic, 1957) and *Trio for Strings* (1958). An early concept for a sound installation? More likely a step along the way. The context of their creation situates Young's *Compositions 1960* in the environment of the Event and the Happening, which the composer later noted as being "most effective when performed in a conventional concert setting."[62] At the premiere at the AG Gallery in New York on July 2, 1961, George Maciunas, Jackson Mac Low, Toshi Ichiyanagi, Yoko Ono, and other artists from the Fluxus scene played string instruments continuously for three hours,[63] while a performance given the following year by a string trio lasted 48 minutes.[64] "To be held for a long time" thus seems to have been interpreted as a directive for action rather than a description of a situation or a mentality. Concept art, the term for which Henry Flynt had developed in 1961 in relation to La Monte Young's conception of music, was only just emerging.[65]

Sound Transmission (Radio)

The possibility of releasing sounds from the immediate presence of listener and performer by means of transmission, storage, and reproduction was a basic prerequisite for the emergence of sound installation art. Acoustic media make it possible to place sounding material freely in space and time and to modulate it electro-acoustically, or even enable its production in the first place. While purely acoustic sound installations have remained an exception, early examples of the genre made use of the radio metaphor with the live transmission of sound.

In his 1933 study *Rundfunk als Hörkunst*, Rudolf Arnheim described the scene at the harbor of a southern Italian fishing village where a waiter on the café's ter-

60 Vaughan, *Merce Cunningham*, 247–249, 301.

61 Young, "Composition 1960 #7" in: *An anthology of chance operations*, unpag.

62 Young, "Notes (on *Composition 1960 #7*)."

63 Ibid. Henry Flynt, on the other hand, reports that George Maciunas had spoken of a "battery of cellists." (Flynt, "La Monte Young in New York," 66).

64 Trio for Strings was premiered at the same concert. Cf. Klein, "Concert Devoted To La Monte Young," 16.

65 "(C)oncept art includes almost everything ever said to be 'music'" (Flynt, "Essay: Concept Art [Provisional Version]" 1961, unpag.)

race was listening to German folk songs that he was receiving over the radio from an English station: "That is the great wonder of radio. The ubiquitous presence of what people somewhere else are singing and saying."[66] The fact that, since 1935, distant places have been acoustically connected to each other through "ring broadcast" underscores the general awareness of the unmediated simultaneity of radio.[67] However, the radio audience – at least in the United States – still expected live speech and music performance, with the exception of explicit concerts of recordings, well into the 1940s.[68] This is the only explanation for the panic that erupted in 1938 when CBS broadcasted Orson Welles's radio adaptation of H. G. Wells's *The War of the Worlds* and listeners believed what was styled as a documentary report on alien landings to be real.[69] Earlier works that self-referentially addressed the media-specific circumstances of radio (such as Hans Fleisch's *Zauberei auf dem Sender* about the disturbance of broadcasting operations in 1924)[70] also followed a narrative structure and were radio broadcasts with the character of a live event.

The two works considered to be the very first examples of sound installations were both created in 1967 and made use of technology for radio broadcasting and telecommunications. For *City Links: WBFO Buffalo*, Maryanne Amacher transmitted sounds from eight different locations in Buffalo, New York and the surrounding area via 15 kHz telephone lines to the studio of the campus radio station WBFO at the State University of New York at Buffalo. The material was mixed live to create a 28-hour radio piece.[71] In a 1988 interview, the artist used the term "installation" to refer both to the (hidden) set-ups of microphones in various locations, such as the window of the New England Fish Exchange on Pier 6 in Boston Harbor (1973–1978), and to the continuous transmission of the sounds.[72] In her *City Links* series (1967–1980), Amacher addressed space in two ways, first of all through the interconnection of sounds that occur simultaneously in different, spatially distant locations ("Spaces distant from each other./ Together in time. Like Music."[73]), but also in the distance of the sound sources from the microphone, which Amacher

66 Arnheim, *Rundfunk als Hörkunst*, 13.

67 A ring broadcast on October 27, 1935, involved 31 countries in Europe, North and South America, and Africa, including Australia, Japan, and India. ("Programm Deutschlandsender 27.10.1935," 13.)

68 Hutchens, "It Doesn't Have To Be 'Live'," 7.

69 See Holmsten and Lubertozzi, *The Complete War of the Worlds.*

70 Flesch, "Zauberei auf dem Sender," 25–35.

71 Amacher, Bartone, and Monahan, "[Interview]," 4.

72 The sounds from the harbor in Boston were first transmitted to Amacher's studio, then to a studio at the Center for Advanced Visual Studies at MIT. Thus, there was one "installation" of the microphone at the harbor, but two "installations" in the sense of continuous sound transmission (cf. ibid.).

73 Quoted in Willis, "A sound ambience from inner space," section B, 3. In 1976, Amacher connected Boston, New York, and Paris.

understood as an essential parameter of musical creation. Before her series *Music for Sound Joined Rooms*, begun in 1980, Amacher seems to have understood her works mainly as performances, describing the availability of sounds from different places as "some fantastic synthesizer."[74] Instead of the radio metaphor, she draws a comparison with a musical instrument that must be played.

Like Maryanne Amacher's first *City Links* broadcast, Max Neuhaus's *Drive-In Music* was also created in collaboration with the University of Buffalo. From October 1967 to April 1968, it was installed along Lincoln Parkway in front of the university's Albright Knox Art Gallery. Motorists were asked to tune their radios to the low to medium wave range below 550 kHz as they drove. Along a half-mile stretch of the parkway, 20 weak radio transmitters were mounted on the trees and linked in groups to seven sound generators that responded to subtle changes in temperature, humidity, and brightness.[75] The motorists heard overlapping electronic sounds and could use their speed and direction of travel to determine the development of the musical event, which was unique for each driver. Even though the sounds were not directly perceptible, requiring two instruments – radio and car – to be experienced acoustically and spatially, musical form appears here for the first time as a function of space. For Neuhaus, linking space and time in the free movement of the listener became the core of his artistic work: "Traditionally composers have located the elements of a composition in time. One idea which I am interested in is locating them, instead, in space, and letting the listener place them in his own time."[76]

It was through the medium of radio that Max Neuhaus had made the transition from performance to installation. For the first realization of *Public Supply* in 1966, he asked his audience to call a New York telephone number during a 90-minute broadcast on WBAI and play sounds or recordings of their choosing. Neuhaus processed and mixed up to ten simultaneous signals live and broadcast his mix on the radio with a delay of a few seconds so that listeners could send the broadcast back to the studio via telephone without generating any unintended feedback.[77] After the experience of 1967's *Drive-In Music* that functioned without an interpreter, Neuhaus, in his next piece with audience participation via telephone, did not return to radio performance, but established a system without any interpreter. The electronic system *Telephone Access* (1968), which was hosted by

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74 Amacher, Bartone, and Monahan, "[Interview]," 4.

75 Cf. Neuhaus, "A Max Sampler," 54–55. The length of Lincoln Parkway has repeatedly caused confusion. The area covered by Neuhaus from the junction on two directional lanes to Bird Avenue at Soldiers Place measures half a mile. Neuhaus also mentions this as the length in his introductory text for the "prototype version." However, when the idea for the piece is described at the beginning of the text, a whole mile is mentioned.

76 Neuhaus, "Program Notes," 34.

77 Neuhaus, "A Max Sampler," 51. Max Neuhaus had been exploring electroacoustic feedback since 1963 as part of his work as a percussionist. Cf. Max Neuhaus, "Notes."

Fairleigh Dickinson University in Madison, New Jersey and could be called over a period of six weeks, automatically transformed spoken words into sounds, creating an individual listening space for each participant. In this work, Neuhaus renounced the public nature of radio transmission, allowing the intimacy of the telephone to be experienced as he had the privacy of the car.[78]

The term "translocation"[79] refers to the live transmission of sounds that are altered solely through their chosen media and situational re-contextualization. In addition to Maryanne Amacher's *City Links* series (1967–1980, see above), another example of this is Richard Maxfield's *Mechanical Fluxconcert* from the 1960s, for which "(m)icrophones are placed in the street, outside windows, or hidden among audience and sounds are amplified to the audience via public address system."[80] For *Kirribilli Wharf* in 1976, Bill Fontana used an eight-channel soundscape recording from the wharf of the same name in Sydney Harbor, which he played back both spatially and temporally staggered as a sound installation.[81] Until 1983, the sound artist continued to combine live transmissions with sounds previously recorded at the site of the installation or in its surroundings (*Sound Recycling Sculpture*), before he abandoned the establishment of multiple temporal layers enabled by sound recordings for a structure more comparable with the radio metaphor.[82]

In 1969, Wolf Vostell drew on the idea of the radio as an instrument for deciphering electromagnetic waves, sending sinusoidal oscillations into induction loops and equipping visitors to his installations with sculptural objects that made the sounds audible. These were described as functioning by means of "receptive induction coil(s)," "electronics in aspic," "amplifier in sardine can," and loudspeakers: "Take the electro-acoustic board in your hand. Walk around the rooms with it to find the magnetic fields."[83] In this case, the transmission of sound is not only employed as a technical means but is thematized in the mediality of its structure. Additionally, without a receiver, the sound installation appears as a space with acoustic and electromagnetic connotations, even if it cannot be perceived as such. The experience of sound also occurs through imagination and speculation and references the history of a concept of music that posits a sounding beyond

78 Neuhaus, "A Max Sampler," 56.

79 Föllmer, "Klangorganisation," 219–221. Bill Fontana uses the term "Relocation" (cf. Fontana, "The Relocation of Ambient Sound")

80 Maxfield, "Mechanical Flux-concert," 40. The date of this, though unknown, can be narrowed down by the use of the word "Fluxconcert" starting in 1964 and Maxfield's death in 1969.

81 Fontana, "Australian Sound Sculptures [liner notes]," unpag.

82 Fontana, *Klang Recycling Skulptur*; Fontana, "The Relocation of Ambient Sound."

83 Vostell, *Happening & Leben*, cf. "Induzione: Due stanza d'azione psicologica," 104, and "Telemetrie: Die Akustische Straße: Ein Publikums-Aktionsraum," 95.

quantifiable objects, one of harmony of the spheres and the idea of the world as a "universal lyre."[84]

Sculpture

Sound installation art is linked to the concept of sculpture in two ways. On the one hand, sculptures and objects that produce sound by themselves or can be sounded by a viewer (or visitor, user) have been produced since the 1950s. On the other hand, the concept of the installation as a staged space to be entered and traversed can be derived from an expanded concept of sculpture.

Around 1952, the brothers Bernard and François Baschet began to design sound-producing sculptures out of metal or glass rods. Used in concerts with the group *Structures Sonores* starting in 1957, and later as playable sculptures in public spaces and for music education and therapy, the objects feature distinctive conical forms made from sheet metal and have a visual, sculptural character beyond their function as instruments.[85] Unlike the experimental music instruments made by Harry Partch, the Baschet brothers' objects have a distinct sculptural appeal, the acoustic function of which is not always immediately apparent. Starting in 1963, Fluxus artist Joe Jones created his *Music Machines*, which consisted of found musical instruments on racks of his own creation that were played by motor-driven mechanisms. This was managed without performers, though they could also be combined into ensembles or used in performances.[86] Jones can thus be associated with the tradition of kinetic art, in which time is articulated through movement and the sounds it creates. Jean Tinguely, a pioneer of kinetic acoustic sculpture with his *Relief sonore* (since 1955),[87] combined performance and machine art in his "self-destroying construction No. 1" *Hommage to New York.* In 1960, this sculpture, which was equipped with motors, radios, and a modified piano, self-destructed within half an hour in a massive spectacle that took place in the garden of the Museum of Modern Art.[88]

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84 Thoreau, "Walden," 420.

85 Baschet, François and Bernard Baschet, "Sound Sculpture," 107–114; Baschet, Bernard, "Structures sonores," 393–403.

86 *Percussion for Five* was performed in 1963 at the Pocket Theatre in New York (see Image 4 in Joe Jones, *Music Machines*, unpag.) The first assemblage of percussion instruments may allude with its title *1st Construction* (1963) to the early works for percussion ensemble by John Cage (cf. image in Joe Jones, *Musikmaschinen*, unpag.)

87 Tinguely sometimes referred to musical forms in his titles (e.g. *Mes Etoiles - Concert pour sept peintures* (1958). Image in Hahnloser-Ingold, Margrit, et al., eds. *Museum Jean Tinguely Basel: Die Sammlung*, 140–141).

88 Klüver, "The Garden Party," 74–83.

The other line that can be drawn from sculpture to sound installation is the large-scale installation that visitors enter and walk through. An early example of this is the exhibition *Dada-Vorfrühling*, which opened in Cologne in April of 1920. Visitors entered the partially covered courtyard behind Brauhaus Winter through a men's restroom and were greeted by a girl wearing a white first communion dress and reciting obscene poetry. Among the objects on display was one by Max Ernst, for which an axe was provided so that it could be destroyed by the audience. Site-specific spatial installation, performance, and visitor participation were thus already established at this point.[89] Kurt Schwitters' 1920 outline of Merz stage and theater, which preceded his *Merzbau* (1923-1937) and was translated into English for Robert Motherwell's 1951 anthology *The Dada Painters and Poets*, had been well-received by John Cage and the movement around the Happening. In places, it reads like a production script for an intermedia environment.[90] Marcel Duchamp, with whom Cage had been in contact since the 1940s,[91] had in his role as *Générateur-arbitre* for the 1938 *Exposition internationale du surréalisme* in Paris requested that 1,200 coal sacks be installed on the ceiling of the Galerie Beaux-Arts in 1938, creating a dusty, gloomy atmosphere. At the opening, visitors were given flashlights to illuminate the paintings hanging on the walls. In the process, they also encountered a bed and a small pond that Duchamp had arranged, and listened to a broadcast of German military music.[92] This marks the line between exhibition design and independent installation, which Daniel Buren considered to have finally been completely crossed in 1971.[93]

The "environment," developed in the context of the Happening's emergence in New York, may be considered a predecessor of installation art. Describing the environment in which an action or performance takes place, which can be pre-existing or designed, but is usually temporary,[94] is comparable to a stage set that can be traversed by actors and visitors alike. Max Neuhaus initiated his *Listen* series in 1966, entitled "Field Trips Thru Found Sound Environments," in which visitors expecting a conventional concert or lecture were driven to an already existing "sound environment." These included such places as power plants or sub-

89 The descriptions of this Dada exhibition, which preceded the better documented *Ersten Internationalen Dada-Messe* 1920 in Berlin, diverge from one another in their details. Cf. Richter, "Dada-Kunst und Antikunst," 165–166; Ruben, *Dada and Surrealist Art*, 98–99; Ades, *Dada and Surrealism reviewed*, 105–106.

90 Schwitters, "Merz," 62–64. On Cage's reception of Schwitters, see Straebel, "… that the Europeans," 80–94.

91 Cage, Roth, and Roth, "John Cage on Marcel Duchamp," 72–79.

92 Altshuler, *The Avant-Garde*, 122–124.

93 "Hasn't the term *installation* come to replace *exhibition*?" (Buren, "The Function of the Studio," 56. Emphasis in original.)

94 Kaprow, "Happenings in the New York Scene," 20.

way tunnels.[95] Richard Kostelanetz, who in 1968 prefaced his interview collection *The Theatre of Mixed Means* with a typology of the new theater of the 1960s, introduced time as a consideration with the concept of the "kinetic environment," thus introducing a dynamic understanding of the environment, which up until then had been dominated by a sculpturally static concept of space. More precisely planned and situated in a more clearly defined space than "pure Happenings," "kinetic environments" are structurally open in relation to time and, due to their formal set-up, can encourage active participation from the audience.[96] Kostelanetz, who like other theorists of the new theatre viewed John Cage less as a composer than as the "putative father of the mixed-means theatre,"[97] described the concerts of La Monte Young's Theatre of Eternal Music as kinetic environments. In this case, the understanding of space as dynamic can be contrasted with the understanding of sound as spatial and sculptural: "(U)sually the sound can entirely envelop both the room and the spectator's [sic] consciousness."[98] Six years later, John Rockwell used the terms "timeless sonic environment" and "installation" almost synonymously in a newspaper review in connection with the same situation, the latter including Marian Zazeela's light projections that were so characteristic of the *Dream House*.[99]

A Proposed Typology

Examining the early history of sound installation art has uncovered not only historical precursors, but also varying approaches to the history of ideas surrounding the genre. The scholarly discourse concerning sound art is characterized by Helga de la Motte-Haber's diagnosis that it has transcended historical artistic paragons and responded to a demand for synthesis within the arts.[100] In our context, the focus has been less on the theoretical framework that accompanies art and instead on the works themselves and the question of how artists and their contemporaries attempted to classify these works. It has been shown that, depending on the theoretical background or interest of the interpreter, similar pieces were read as concert, Happening, exhibited environment, or installation. The following typo-

95 Neuhaus, "A Max Sampler," 50.

96 "(S)tructurally open in time and, as forms, capable of encouraging participational attention" (Kostelanetz, *The Theatre of Mixed Means*, 6).

97 Ibid, 50.

98 Ibid, 6.

99 Rockwell, "La Monte Young," 67.

100 Cf. la Motte-Haber, *Musik und Bildende Kunst*; la Motte-Haber, "Klangkunst," 11–65. On the debate over whether sound art should be understood as a new musical genre, cf. la Motte-Haber "Kangkunst – eine neue Gattung?", 12–17 and Barthelmes, "Klangkunst," 117–126.

logy of sound installation art does not claim to be definitive. Instead, its intention is to identify aspects that may be of varying degrees of relevance for a number of different works.[101]

Sound

The compound term "sound installation" makes reference to sound as the defining material. Sound installations are – at least fundamentally – defined by their acoustic component, which can be real, potential, negated, or imagined.

The acoustic material can be played from storage media (either with repetition in loops or alternating superimposition of several repeating layers) or produced live. These two approaches can be connected in the live selection, processing, and/or electroacoustic manipulation of samples or pre-produced material. Sounds that are produced live may originate from systems of electronic or digital sound synthesis, electromagnetic instruments or experimental arrangements, algorithmic compositions or electroacoustic processes of transformation (of any measured data, including data from interfaces or interactive systems). In addition, there is sound transmission ("translocation"), the amplification of "small" sounds, acoustic feedback loops, and the integration of found acoustic material (from radio, the internet, etc.). Mechanically ("acoustically" as opposed to "electro-acoustically") generated sounds are always live. They either originate from the existing acoustic situation of the location, which is then modified, or are produced by mechanical instruments, devices or automated constructions, objects, or by traditional or modified musical instruments.

In sound installation art, the diffusion of sound is often structured spatially, and its perception is determined by the acoustic properties of the architectural space and the position of the listener.

Installation

Ilya Kabakov distinguishes between "small installations that consist of a combination of several objects (...), those that lean against the wall and occupy the entire wall or part of the floor (...), and those that almost completely fill the space allotted to them."[102] The "total installation" is ultimately "a completely transformed

101 For a typology of technical approaches, see Supper "Technische Systeme," 119–134.
102 Kabakov, Über die "totale" Installation, 13.

space."[103] While Kabakov refers exclusively to interior spaces, sound installations have also been created outdoors from the very beginning.[104]

In sound installations, mechanical or electronic sound generators, playback devices, and sound emitters (loudspeakers) may be hidden or appear as visual or sculptural elements, either by themselves or integrated in a sculptural context. Unlike sound sculpture, sound installations may be created without such elements.

The sound installation is an artifact. A pre-existing situation might be considered an environment unless it is designated an installation by the artist (as would be the case, for example, with a readymade) or presented in a way that gives it the character of an installation.

Time

The sound installation is of a long duration. It lasts longer than the visitor could possibly stay, and because it changes over time, eludes any sense of conclusion from their perspective.

If repetition is clearly perceptible in the acoustic material (e.g., if the repeated loops are shorter than the time spent by the visitor) and this repetition is not intentionally thematized in the work, the piece is more likely a concert installation or an installed presentation of a work (such as the screening of video art in loops).

In sound installation art, the linear temporality of music is often transformed in the notion of simultaneous coexistence of visual art. Time then becomes a function of space, where the visitors structure the acoustic event in time through their own movement in space or by deliberately directing their attention.

Space and Place

Since spatial perception takes place largely through hearing, the presence of an acoustic event determines the experience of architectural space.[105] The sound made by an installation generally influences the experience of the listener on an intermodal level. Sound installations are defined or influenced by the acoustic properties of the spaces where they are presented. They may be site- or situation-specific if they thematize these or other architectural interdependencies, or – as intermedia installations – reference historical or other cultural implications of the space through their content. Sound installations are often presented outside of traditional (and intentionally neutral) art institutions in order to engage with the

103 Ibid, 27.

104 Cf. Föllmer, "Klangorganisation"; Tittel, "Visuelle und akustische Zeichen," 96–108.

105 la Motte-Haber, "Audiovisuelle Wahrnehmung," 202–208.

characteristics of spaces that are (re-)discovered and established as places in the process: "(I)n what I do the sound is the means of making the work, the means of transforming the space into place" (Max Neuhaus).[106]

Beyond the notion of installation in the spirit of (static) sculpture, sound installations can also be located in technical or virtual spaces (e.g., radio, networks, etc.) and experienced by (mobile) listeners regardless of location. One extreme example of sound installations in this regard are algorithmic compositions that can be set up on any computer.

The Interpreter

Early sound installations were often difficult to distinguish from extremely long concerts with live musicians. Alvin Lucier's statement that there has often been the problem of deciding which of his works should be installed and which should be performed[107] relativizes the assumption that the sound installation is an art without interpreters. Since the 1990s, musicians or performers have once again been appearing in "performed installations" as optional or essential elements.[108] The range extends from the "exhibition" of sound production or performance to the integration in an installation context (as would take place in a Happening) to the creation of a situation similar to an installation solely through the presence or activity of performers.

One aspect that has received little attention so far is the role of the curator or conservator, as it can be seen as that of an interpreter, in the installation and adaptation of sound installations.

The Listener

To a certain extent, the individual who enters a sound installation also becomes an interpreter. They are free to determine the time and duration of their stay and are often confronted with an aesthetic object that is formed solely through their individual perception. With their actions, their movement in the space, and by consciously directing their attention, they interpret the installation, which presents itself as a field of possibility – especially in the case of art that is interactive in a technical sense. Sometimes, on a basic acoustic level, the mere physical presence of the visitor already influences what will occur.

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106 Neuhaus and Loock, "Interview," 130.

107 Lucier, "There are all these things happening," 520.

108 Straebel, "Die Berliner Szene," 47–49; Nollert, "Performative Installation," 8–29.

Generally, sound installation does not establish a situation in which the audience sits opposite the music (often taking place on a stage) to observe and listen, as they would in a concert. Instead, the sound shares the space with them and surrounds them. The listener is "inside the sound," just as La Monte Young described the experience of durational sounds in 1960.[109]

After the End of the Renaissance

As previously stated, musical performances of extended duration, as well as simultaneous performances, spatially structured environments, and interactive environments that can be activated by the visitor, inevitably elude a conclusive sense of understanding. At least in the formative phase of sound installation art, this manner of challenging the audience can be understood through Leonard Meyer's interpretation of the rise of randomization in music. In his essay "The End of the Renaissance," he examines this as an expression of existentialist doubt regarding meaning and causality in human existence and action, stating "Man is no longer the measure of all things."[110] Written in 1963, a key year in the development of extended duration in music, this was a diagnosis for music, literature, and art that would soon apply to sound installation art as well. In 1940, Jean-Paul Sartre had written in his *Psychologie-phénoménologique de l'imagination* that objects of perception, through the sheer abundance of their qualities, always exceed the awareness that one has of them and can therefore never be fully perceived: "it is this infinity of relations that constitutes the very essence of a thing. Hence a kind of *overflowing* in the world of 'things': there is, at every moment, always infinitely more than we can see."[111] If, as with sound installation art, objects of perception are in a constant state of flux, but elude any sense of conclusion beyond their long temporal extension because of their spatial differentiation, the perceiver inevitably finds themselves confronted with the aporias of their experience: "In a word, the object of perception constantly overflows consciousness; the object of an image is never anything more than the consciousness one has of it" (Sartre).[112] The material object of a work of art cannot be reconciled with the cognitive representation from which the aesthetic experience first unfolds.

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109 Young, "Lecture 1960," 81–82.

110 Meyer, "The End of the Renaissance?" 186.

111 Sartre, *The imaginary*, 9. "C'est cette infinité de rapports qui constitue l'essence même d'une chose. De là quelque chose de débordant dans le monde des ›choses‹: il y a, à chaque instant, toujours infiniment plus que nous ne pouvons voir; pour épuiser les richesses de ma perception actuelle, il faudrait un temps infini" (Sartre, *L'Imaginaire*, 21).

112 Sartre, *The imaginary*, 10. "objet de la perception déborde constamment la conscience; l'objet de l'image n'est jamais rien de plus que la conscience qu'on en a" (Sartre, *L'Imaginaire*, 20–21).

The emergence of sound installation art as a new genre is therefore not to be understood solely in the context of artistic synthesis, but along with land art and conceptual art as the liberation of art from the primacy of the sensory experience. It remains the case, as stated by Hegel, that "the work of art, as being for apprehension by man's senses, is drawn from the sensuous sphere,"[113] however, sound installations also reveal the perceptual conditions and limitations of those who experience them. This topos of self-reflexive reception aesthetics quickly became the paradigm for the discourse surrounding sound art.[114] While this poses the threat that the independent entity of the work will disappear when it is experienced, it does retain the perceiver as the point of reference for all things.[115] Man is no longer the measure of art; art instead assigns humans their place as inherently flawed viewers and listeners. The end of the Renaissance is followed by a new one, in which the world no longer appears centered around humans, and they instead remain aware of their own limitations as they confront it and themselves.

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113 Hegel, *Aesthetics: Lectures on Fine Art*, 32.

114 Sanio, "Klangkunst – eine reflexive Bewegung," 12–14.

115 For a detailed account of the shift from work to reception aesthetics, see la Motte-Haber, "Ästhetische Erfahrung," 408–429.

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