Daniele Balit

Quiet Discomfort
On Silence as Aural Discrimination

"The twentieth century is, among other things, the Age of Noise. Physical noise, mental noise, and noise of desire – we hold history's record for all of them. And no wonder, for all the resources of our almost miraculous technology have been thrown into the current assault against silence. That most popular and influential of all recent inventions, the radio, is nothing but a conduit through which pre-fabricated din can flow into our homes. And this din goes far deeper, of course, than the ear-drums. It penetrates the mind, filling it with a babel of distractions – news items, mutually irrelevant bits of information, blasts of corybantic or sentimental music, continually repeated doses of drama that bring no catharsis, but merely create a craving for daily or even hourly emotional enemas."[1]
Aldous Huxley, *The Perennial Philosphy*, 1945

"One can affirm the presence or perception of an object when it is present and perceived, when it is absent and perceived, and when it is neither present nor perceived."[2]
Pierre Quercy, quoted in the *Dictionnaire abrégé du surréalisme,* 1938

In 1970, invited to the *Information* exhibition at MoMA, the artist Markus Raetz presented a set of photocopied drawings in a variety of forms ranging from sculpture to simple actions to be performed by visitors[3]. While most of these "possible projects" were left untitled, one of them named *Silence Piece* attracts our attention by its way of encapsulating the changes in the relationship to the audible in the post-*4'33"* era.

In the piece, a listener wearing headphones connected to an amplifier can be seen listening to sounds captured by a microphone coming from an inaccessible space – a kind of locked box, described by Raetz

as a "totally soundproofed space". However, inside this space nothing seems to produce sound, as the title suggests. In keeping with the work-as-transmission model that curator Kynaston McShine had placed at the centre of his exhibition *Information*, Raetz's work approaches silence as a signal, a silence captured and transmitted to the listener.[4]

Raetz's drawings can be inscribed in the conceptual line of possible but not necessarily realized perception (to paraphrase the statement by Lawrence Weiner, who was also part of the exhibition). A few months earlier the artist Michael Asher had also confronted visitors at the MoMA with what we could define as another "silence piece", this time in the form of a sensorial and environmental experience. The work was part of the *Spaces* exhibition curated by Jennifer Licht (December 1969–March 1970). In contrast to *Information*, *Spaces* focused on art as an experience, proposing a "spatial encompassing experience" where "one is presented with a set of conditions rather than a finite object".[5]

Asher's installation, realized through structural modifications of the gallery's architectural and acoustic elements, presented the visitor with an empty and silent space. Unlike Raetz's room, however, the space was not entirely soundproofed, since an acoustic channelling effect made ambient noise from other parts of the museum perceptible. Phenomena normally excluded from focused attention were brought to the aural foreground: "Ambient sound from the exterior, such as street traffic, the interior, such as movement and voices of people in the corridor of the museum, as well as mechanical noises, such as the air delivery-and-return system".[6] Deprived of any bearings, the spectator moved through the empty space of the installation, exploring its different areas, aurally modulating those with sound and those that are muted. By this freedom of the attention, Asher had set up an experience aimed at questioning the modernist
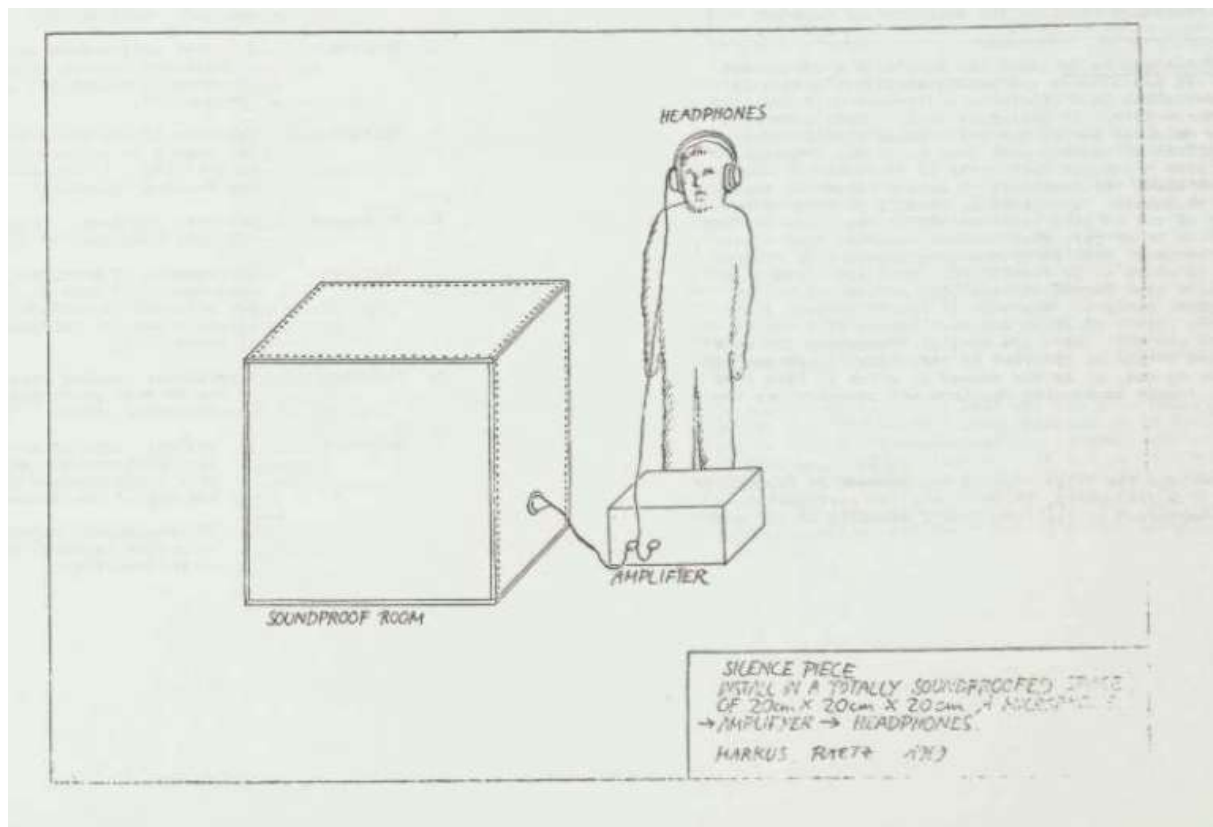
Fig. 01: Markus Raetz, *Silence Piece*, 1969, reproduction from *Information* exhibition catalogue.

approach to display and its visual and aural hierarchies.

Both Raetz's diagram and Asher's installation question the relationship between signal and noise. Their works explore the condition of "free fields", specific to anechoic chambers and their sound-absorbing surfaces, which provide for maximum signal clarity with any interference neutralized. While for Asher the free field is a means of deconditioning modernist systems of attention, Raetz's *Silence Piece* pushes this condition to the extreme of erasing the disruptive elements of the free field, going as far as placing the listener's body outside the room, thereby producing a paradoxical situation of prohibiting the unmediated experience of its spatial singularity.

While this removal of the context raises doubts about the possibility of actually carrying out the experiment (as the mediation system itself inevitably has a perceptible presence), it can also be seen as an ironic nod to Cage's experiment in Harvard's anechoic chamber, which found that silence is impossible.[7]

Our starting point will thus be this double "auscultation" of silence, one electric (and conceptual), the other acoustic (and experiential), which invites us to reconsider the relationships between audible and inaudible, between silence and noise, with regard to the encoding, construction and mediation processes that contribute to the renewal of these concepts.[8]
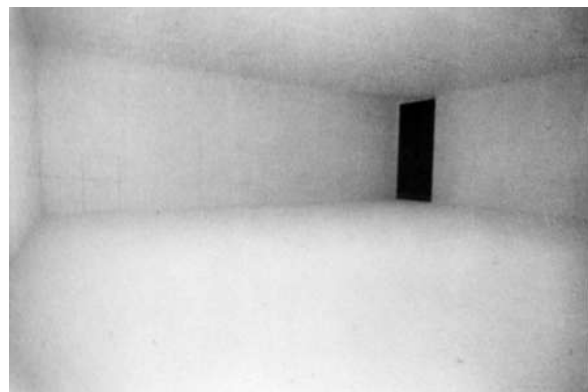

Fig. 02: Michael Asher, installation for *Spaces* exhibition, Museum of Modern Art, New York, 1969. Photograph © 2008 Claude Picasso.

We will consider the concept/experience dualism, as posed by the two exhibitions *Spaces* and *Information* at the turn of the American neo-avant-garde, and its articulation through practices that questioned institutional approaches to display while analysing their perceptual treatments.

Significant silence

A form of electrical reenactment of Cage's silent piece, Raetz's conceptual proposal raises questions on the nature of silence, by playing on the paradox of its (in)audibility. With *4'33"* Cage had reconfigured silence as a listening agency. The transformation of silence into a signal traced by Raetz's diagram extends this trajectory by making it part of the history of auditive media.

As concise as a statement, *Silence Piece* emphasizes the new "expressive power of silence" as Michel Chion calls it, and how this power is intrinsically linked, as he explains, to sound recording and broadcasting technologies.[9]

In this regard, the type of listening suggested by the diagram – an awareness of the device and the processes of encoding – is significant: it makes it possible to place silence in a context of transformations in the aural field of that time, and this beyond the ambivalences specific to Cage's position, which remained confined in a musical context. Douglas Kahn alludes to the contradictions of the Cagean "new aurality": "By midcentury, two decades after the first large onslaught of auditive mass media in the late 1920s, radio, phonography, and sound film had consolidated in the United States and expanded their overlapping positions. These media introduced on a social scale a newly pervasive, detailed, and atomistic encoding of sounds. […] Under the guise of a new aurality, an opening up to the sounds of the world, Cage built a musical bulwark against auditive culture, one founded on a musical identification with nature itself."[10]

In Kahn's reading, Cagean silence is only a system of noise abatement. One where the "amplified threshold of disappearance [of Cagean sounds] – silence, small, and barely audible sounds" produce a correspondent disappearance of "social, political, poetic, and ecological aspects".[11] Thus, Cage's silence is – for Kahn – a form of "silencing".

It is in this same context of media transformations that Kynaston McShine conceived *Information* according to a strategy – unlike that of Cage – of "straight information"; a way of opposing the forms of "distraction", "obfuscation" and even "deviance" that he associated with visual representation.[12] In this way, as Eve Meltzer points out, "sense perception is reconfigured as data transmission".[13] The idea of work-as-concept at the centre of the exhibition was explored, for the first time in a museum in the United States, through the forms of project, archive, diagram, or document.
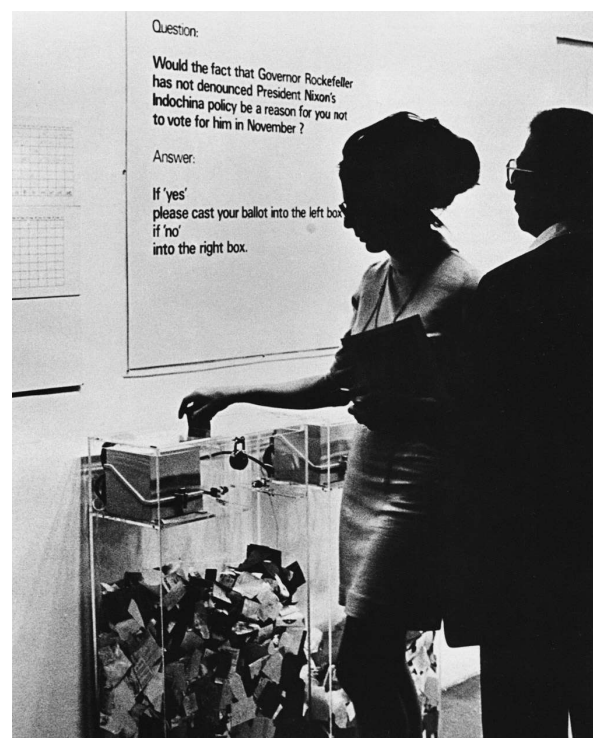

Fig. 03: Hans Haacke, *MoMA Poll*, 1970.

By emphasizing the impact of technology and telecommunications on art and society, *Information* provided a critical reading of systems and frameworks of power. As Meltzer observes, it aimed to interrogate "the invisible structures that secure the ideological function of art and its economic, historical, and cultural values."[14] Hans Haacke's *MoMA Poll*, the pre-electoral survey offered to visitors revealing the museum board's complicit silence in relation to Nixon's foreign policies, is the best known example of this.

Fig. 04: Installation view of Markus Raetz's *Untitled photocopied drawings*, part of *Information*, MoMA, 1970

Fig. 05: *Information,* July 2–September 20, 1970, MoMA.

Aiming at an institutional and socio-political form of silencing, Hacke's *MoMA Poll* focused on the political and financial network underlying the museum's display.

McShine's exhibition points towards a reading of the silence-information of Raetz's diagram as a way of problematizing the encodings and filters that have contributed to redefining the concepts and perception of silence. We can refer in particular to the notion of "significant silence" emerging from analyses of noise reduction and "domestication" techniques, spanning from those by Michel Chion to more recent sound studies. In many respects, this notion should be associated with the development of electric media since their origin, since, as Stefan Heidenreich observes, "from the age of electrical recording onwards, filtering conceals noise, reveals silence and creates supposed significance."[15] It is a "filter" that is not only "technical" but also "conceptual", as Melle Kromhout points out in his study on the latest techniques for noise reduction such as the Bose QuietComfort Acoustic Noise Cancelling Headphones.

Indeed, the discrimination operated by this kind of device, between "things that you don't want from things that you want", according to the founder of Bose,[16] acts under the influence of a constructed and subjectifying form of silence: "These headphones […] actively create silence at places where noise is in fact abundant. Both headphones and noise reduction function as a medium, reducing noise and producing a reconstructed sonic image of an imagined original, with silence artificially induced. This pervades the silence with a particular significance and sense of agency: it is carefully constructed and as potentially significant as any sound."[17]

As observed in the case of Raetz's diagram, the signal-to-noise ratios are destabilized: "It transpires that noise reduction not only produces its own notion of noise, but also inevitably influences the signal itself. The output of noise reduction – a particular kind of silence – can be seen as a fake-signal: created out of the reduction of noise and posing as information."[18]

Between constructed silences and the deconstruction of listening, we will now question, through this perceptual and conceptual filter, practices that have contributed to reconfiguring the stakes of the post-Cagean "new aurality".[19]

Silent nodes

Beyond his work at the MoMA, Asher explored different configurations of audio-perceptual environments in a series of installations, created between the 1960s and the 1970s. These attempted to subvert the norms of the white cube by freeing the visitor's focused attention, creating "a continuity with no singular point of perceptual objectification" in order to avoid the fabrication of "highly controlled area of visual perception."[20]

His installation at the La Jolla Museum of Art (1969) was also based on the treatment and organisation of some "nonvisual material"; the room's white surfaces were to produce an effect of "visual conformity between the walls, floor, and ceiling of the gallery."[21] On the other hand, the alternation of phono-absorbent and reflective surfaces, as well as the diffusion of sound, affected auditory perception and the exploration of space. As Asher himself describes:

"[a] constant tone [was generated] at a very low frequency (approximately 85 cps) which was amplified only enough to be audible. The vertical surfaces [of the room] responded to the sound frequency, which caused them to resonate as if they were tuned, while the horizontal surfaces, due to their sound-dampening effect, reduced the frequency. The cancellation of the sound waves occurred when these frequencies coincided. The sound waves cancelled each other out at a point exactly in the centre of the gallery and, on a diagonal axis, on the right hand side of each corner. Up to each point of sound wave cancellation, the sound increased gradually in intensity; whereas at the exact cancellation point none of the generated sound was heard."[22]

The silent nodes mentioned by Asher are the result of a cancellation of symmetrical frequencies, a process comparable to the techniques used in headphones: while those use a microphone to capture the targeted frequencies and a processor to produce symmetrical
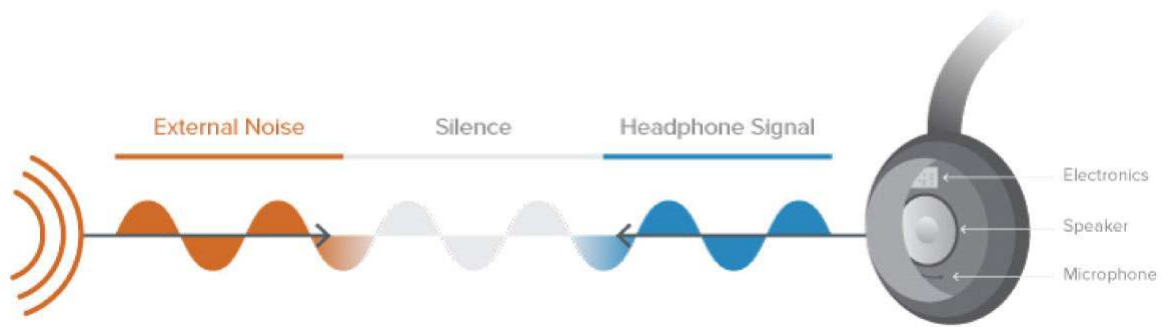
Fig. 06: Diagram of noise-cancelling headphone system.

frequencies that cancel those captured (see diagram fig. 06), Asher's installation instead uses reflections on the walls (thanks to frequencies calculated on the basis of the dimensions of the room) to perform the same frequency inversion. The result is identical: the construction of a silent zone by sound cancellation.
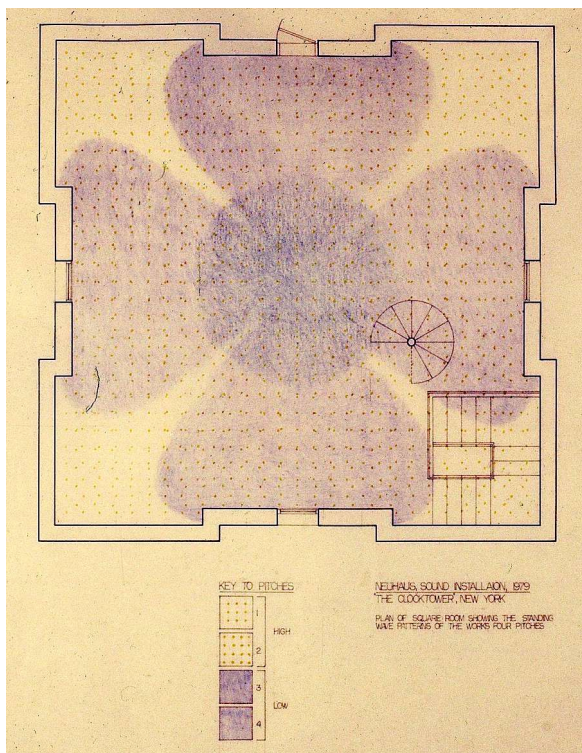

Fig. 07: Max Neuhaus, *The Clocktower*, *Plan of square room showing the standing wave patterns of the work's four pitches*, 1979. Courtesy Estate Max Neuhaus.

A comparable model of auditory space based on spatial and psychoacoustic adjustments is found at the centre of another installation created a decade later at the Clocktower Gallery in New York by artist Max Neuhaus (1979). The diffusion of four frequencies in the installation operated according to a similar principle, being based, in this case too, on room measurements, and producing a distribution of areas of auditory densification and rarefaction. Neuhaus's working drawing (fig. 07) offers a visual reading of the installation through the architectural plan of the space, showing, in the words of Alanna Heiss (founder of the Clocktower), "standing wave patterns of the work's four pitches, with yellow dots representing the highest, and blue dots representing the lowest. Neuhaus was both fascinated and despairing of the unusual challenges presented by the exhibition of sound in the Clocktower."[23] Three years before, in 1976, Asher had also intervened in the same space, this time with a simple and radical gesture: one limited to making a connection between the interior and exterior environment through the removal of the gallery's doors and windows[24] – a silent room being unmuted.

Beyond the question of possible influences between the two artists, it seems especially interesting to highlight some shared tools and methods, as part of a strategy that Hal Foster has defined as an "analysis of the conditions of perception" leading to a critique of the institution of art and its contexts.[25]

This analysis proposed by the two artists then begins with the walls of the gallery, and their role in the processes of a determination of the audible, between auditory intensification, frequency cancellation and construction of silence.

If the infra-perceptive dimension is part of the climate of dematerialization famously described in Lucy Lippard's *Six Years*, Asher and Neuhaus are primarily interested in developing an awareness of the modes of *production*, *control* and *articulation* of the sensory

space, to paraphrase Jennifer Licht.[26] The gallery is then less an anechoic chamber in which to shut oneself off to listen to the "amplified threshold" of phenomena, than a contextual investigation site aiming to "engage a social space".[27] The two artists have developed a critical approach that focuses more specifically on the contexts of listening and the social role of sound for Neuhaus, while, in Asher's case, the sound mode is more in keeping with his tactics of targeting the structural system of art commodification.

Fig. 08: Michael Asher, untitled installation, The Clocktower, New York, 1976.

Unheard pitch

Invited to create a site-specific installation in MoMA's Abby Aldrich Rockfeller Sculpture Garden in 1978, Neuhaus pushed to the extreme the threshold experience that characterizes his oeuvre, to the point of placing it in a subsonic vibrational register.[28] He conceived a work producing non-auditory sensations that derive from the perception of air movements and vibratory phenomena, which he described as a "work with no sound of its own."[29]

To do so, Neuhaus used a ventilation chamber hidden under a grid to transform it into a "huge loudspeaker with a mouth opening of three meters".[30] "Contrary to common sense", as he adds, "the size of a horn does not determine its loudness; it determines its frequency limits. The bigger it is the lower it can go. The size of this horn allowed me to generate pitches which were below where we have a sense of pitch, subsonic frequencies."[31] In the handwritten part of the drawing made after the installation, Neuhaus described with precision the effect produced:

"This unheard pitch generated a terrain of regions where each audible sound in the garden was slightly shifted – a transparent overlay on the garden's sound landscape – making fine shadings of hue in the sounds of fountains, conversation and street."

The installation reinforced the function of the sculpture garden site, which operated as a threshold between the inside of the museum – with which it communicated via the ventilation chamber – and an external boundary defined by the auditory perception of the city's social activities. The aural experience was therefore subjected to a double filtering operation, that of the "unheard sound regions" of the work and that generated by the effect of distance from the urban environment.

Nevertheless, one may wonder whether Neuhaus's work-as-medium, and its filtering by the inaudible, should essentially be considered as another form of noise domestication. The question is warranted in the context of the "impregnation strategy" Kromhout refers to in relation to these techniques. A strategy operating "with a meaningful fake-silence, suggesting orderly, delineated, clear significance."[32] The "slight shift" effect brought by the Neuhaus installation[33], this unheard region made up of "fine shadings of hue", seems indeed to be designed to transform and make "meaningful" the auditory experience of the environment. The notions of transparency and subtlety evoked by Neuhaus also seem to suggest an imaginary of signal "purity" close to that of anti-noise techniques which, by binary opposition, attributes a disruptive character to the notion of noise.

In this regard, we can consider the filtering carried out through a perceptual "slight shift" of Manhattan's sound environment as a larger-scale undertaking: the one that Neuhaus had inaugurated in 1966 with the sound walk *Listen* (a travelling silence piece capable of redirecting the participants' auditory attention), which he developed through a series of sound works located in the public space. The silent installation at the MoMA, which was realized a few hundred metres from the installation inaugurated in Times Square only the previous year, in 1977, in an area of peak urban

acoustic energy, would complete this major operation of the auditory "impregnation" and "fine shading" of Manhattan.

However, the filtering implemented by Neuhaus, instead of targeting and separating "things that you don't want from things that you want", as noise reduction techniques do, intends above all to activate a relational and emancipatory dimension of listening – one in which the listener is invited to appropriate the aural processes and determine their meaning, developing an awareness of the work's mechanism and the conditions of perception associated with the site where it operates. Contrary to the binary ideology fed by the manufacturers of noise abatement techniques, the signal constructed by Neuhaus seems to take into account the instability of concepts and the processes involved.[34]

Between sense and perception, the significance associated with silence by Raetz, Asher and Neuhaus emerges as a notion that can question the institutional and social contexts of listening; thus acting at the point where Cage's concept of sound, according to Kahn, "failed to admit a requisite sociality by which a politics and poetics of sound could be elaborated within artistic practice or daily life."[35]
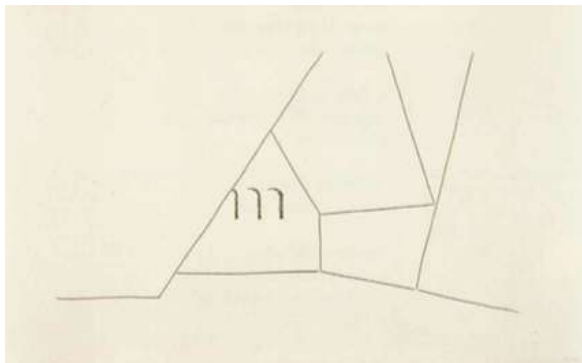

Fig. 09: Max Neuhaus, *Untitled*, pencil on paper, 1993. Sound work reference : *Rooms* exhibition, New York, PS1,1976, Courtesy Estate Max Neuhaus.

Airworks

It is interesting to consider a series of "airworks" by Asher and Neuhaus that reveal the stakes of a dematerialization which is primarily understood as a destabilization of the fixed states of matter. Air then offers the possibility of exploring a primordial medium of spatial perception even before a specific form is defined: "an elementary material of unlimited presence and availability, as opposed to visually determined elements",[36] states Asher.

Neuhaus had experimented with the idea of "shaping a different kind of air" not only at MoMA, but also at PS1, in 1976, where, invited by Alanna Heiss to the *Rooms* exhibition, he explored the opposite end of the field of auditory perception to the infrasound of MoMA: a hyper-sonic region produced by "two high soft tones / mixing at the upper threshold of hearing" according to his description of the work. His two inaudible installations were therefore based on the production of slight shifts in the perception of air, accelerating and detecting sound cycles until subsonic or ultrasonic frequencies were generated.

Asher, for his part, used industrial air generators, through which he obtained columns, curtains, and other forms of air densification in order to reorganize the spatial perception of the gallery space. This involved soliciting the viewer by means of variations in air pressure, as in the case of the installation created for the exhibition *Anti-Illusion* at the Whitney Museum (1969) "[where] the blower maintained a consistent level of air pressure along the grill and the laminar airflow gradually expanded from ceiling to floor, leaving unaccelerated air to the left side of the passage, so that the air flow could be bypassed unnoticed."[37]

But this perceptual indeterminacy also had to be maintained at the auditory level, as Asher explains by noting the importance of not being able to locate the source of aerial phenomena – "The noise level of the blower was also kept to a minimum so that it was hardly noticeable over the noise level of the room"[38] – with attention therefore paid to the balance between different sources of "noise" and to their mutual concealment preventing the emergence of any signal. Originally marketed as systems to repel insects from plants, the air generators used by Asher reveal the broader context of his investigation – as Jennifer Licht rightly observes in the *Spaces* catalogue, "Asher's materials are products of technology – the essential conditioning agents of our times – and meaningfully symbolize our environment."[39]
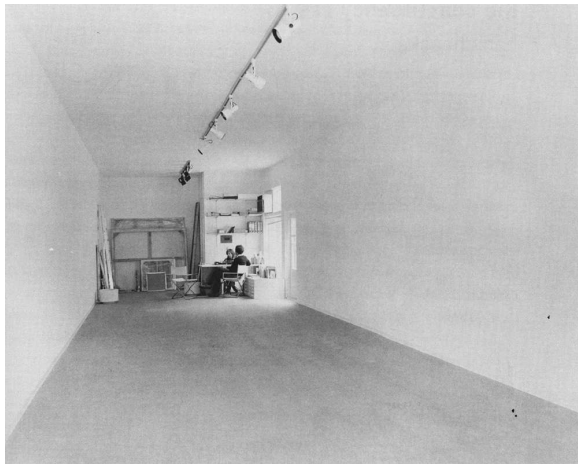
Fig. 10: Michael Asher, Galerie Claire Copley, Los Angeles, 1974.
© Lawrence Kenny.

By taking perceptual technologies beyond the white cube, Asher and Neuhaus's critique of listening is aimed at the management and control of the behaviour of living forms: a biopolitics brought about through the multiple forms of conditioning agents that characterize our time.[40]

Walled unwalled

A preferred tool for both artists, the architectural plan characterizes both Neuhaus's topographical approach to listening and, in a way that goes beyond the field of sound strictly speaking, the reading of the material, physical and historical conditions of the institutions that characterise Asher's research. Access to the plan makes it possible to intervene on the infrastructures and the distribution of the sensory space: not only in relation to the elements of separation and articulation, such as walls, doors, windows, corridors (just like grids and ventilation ducts), but also to those elements operating by material density and by properties of absorption and reflection.

Asher is particularly interested in questioning the display in its relationship between what is unseen and what is assigned a value of visibility, and therefore an aesthetic value; of deprogramming this anti-noise system that the modernist white cube represents with its neutralisation of everything that is not an aesthetic "signal". From this angle, we can understand the gesture of "complete material withdrawal" by which the neutral surfaces of the white cube are stripped, leaving traces of previous exhibitions – an action carried out at the Toselli Gallery in Milan (1973) that provokes "a feeling of relief" in Asher "resulting from the recognition of traditionally suppressed visual elements, [which] activated a perceptual and cognitive process. The ideological deconstruction of the architectural surfaces of the commercial gallery occurred simultaneous to their material deconstruction."[41]

These gestures took other forms: at the Claire Copley Gallery (1974), Asher made administrative speech, which is normally kept away from the experience of the work, audible by removing the partition wall; while at Pomona College (1970) it was the doors that were removed, allowing the external sensory environment (from the sound landscape to the climatic agents) to invade the silent space of the gallery transformed into an acoustic resonator. As in the MoMA exhibition, there is a reversal of the relationship between foreground and background sound, questioning the normative attributions of "noise" and "signal".
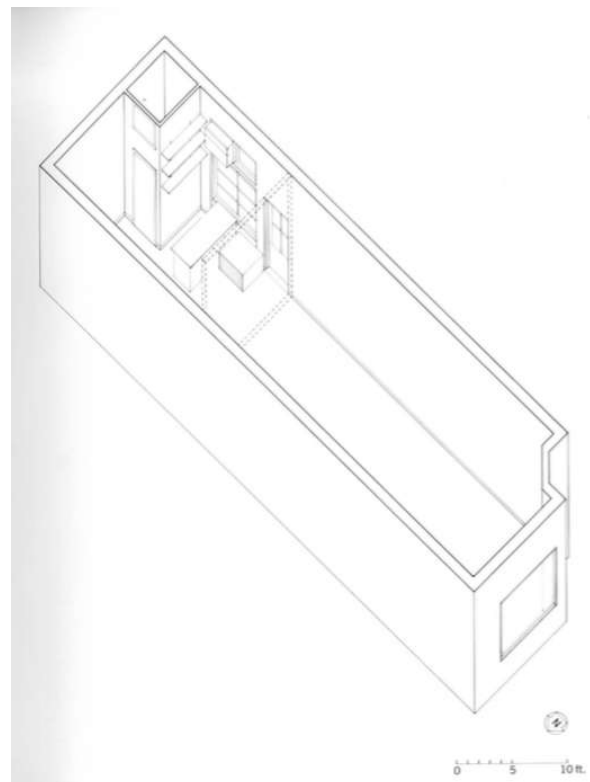

Fig. 11: Michael Asher, "Axonometric drawing of Claire Copley Gallery. Ghostlines show removed wall", Drawing by Lawrence Kenny.

When Asher asked the Van Abbemuseum in Eindhoven (1977) to dismantle and reinstall the glass panels of the room's ceiling and made these operations visible during the exhibition, he thereby drew attention to the alienation of the work necessary to present the work of art:

"By introducing alienated labor into the framework of a supposedly unalienated aesthetic production, the production procedures as well as the display procedures that constitute the work's exhibition value were, in this case, no longer disconnected from each other and were materially and visually accessible."[42]

By concealing and omitting sensory elements, Asher therefore analyses the construction of institutional silence – in a similar way to Haacke's *MoMA Poll*. This field of investigation is explored and significantly extended by the artist Lawrence Abu Hamdan, who relocates it in the current socio-political context. Abu Hamdan is also interested in the role of walls and the elements of architectural division, as their function as a barrier between private and public space must be called into question, as must their supposed material density. His project *Walled Unwalled* (2008) reconsiders Asher and Neuhaus's thresholds of perception in light of today's radically transformed issues : "Today we're all wall, and no wall at all [...] the wall is no longer physically or conceptually solid or impenetrable",[43] states Abu Hamdan about this video-performative piece which focuses on "some legal cases that revolved around evidence that was heard or experienced through walls, doors or floors. Focusing on crimes experienced at the threshold of perception, it considers how solid structures are increasingly unable to prevent the flow of information or to maintain the barrier between private and public space."[44]

In Abu Hamdan's work, the question of display thus becomes that of the mechanisms of truth production and new techniques of perceptual concealment. The "technologies of the ear"[45] at the heart of his practice allow him to propose reconstructions and alternative interpretations of events in legal or documentary frameworks.

Fig. 12: Lawrence Abu Hamdan, *Walled Unwalled*, 2018, Courtesy of the artist and mor charpentier, Paris.

Fig. 13: Lawrence Abu Hamdan. *Walled Unwalled*, 2018, Courtesy of the artist and mor charpentier, Paris.

This might be based, for example, on the detection and extraction of normally inaudible sound traces (as in the case of the *Earshot* project, which produces an auditive piece of evidence revealing the illicit nature of Israeli projectiles that killed young Palestinians); or on the study of specific acoustic functions like those related to the geology of a place such as the "shouting valley", a conflict and separation area located in the Golan Heights.

Such "forensic listening" makes it possible to model inaccessible space-time in order to materialise what he calls "fragile thrusts".[46] This is the case of the architecture and living conditions of the secret Saydnaya prison in Syria, which were reconstructed as part of a documentary project initiated by Amnesty International based on survivor earwitness accounts – hearing being the only possible form of spatial knowledge from the cells plunged into darkness.[47] Abu Hamdan used spatial simulation sound techniques based on auditory memories during the interviews to reactivate experi-

enced acoustic effects. It is then a question of providing "a body of evidence that focuses on silences, on whispers, on the distortions of memory, on the weird conflations between space and the body and the walls – on a whole series of things that emerged in this interview process, and this process of reconstruction, that does not yet have a language."[48]

The installation and the works produced following this investigation transpose these "evidences" into an artistic context, while appropriating the significant power of the display: *Saydnaya (The Missing 19db)*, documents how the prisoners' whispers have become four times less loud (a decrease measured as of 19 decibels) following the violent repression in 2011. Thus, "the 19-decibel drop in the capacity to speak stands as testament to the transformation of Saydnaya from a prison to a death camp." Auscultated like a silent piece, these 19 decibels make it possible to hear, as Abu Hamdan evokes, "the disappearance of voice and the voice of the disappeared."[49]

Abu Hamdan's work-as-transmission converts, once again, silence-information into a signal; but this time Cage's amplified threshold of disappearance of sound retains a political dimension.

Fig. 15: Lawrence Abu Hamdan, *Conflicted Phonemes*, 2012, Language analysis, Courtesy of the artist and mor charpentier, Paris.

Quiet discomfort

From the deconstruction of the display, to the impregnation of the Manhattan soundscape, to Saydnaya's missing sound, a genuine politics of listening becomes explicit in Abu Hamdan's work. The critique of institutional systems and the commodification of art of Asher and Neuhaus is giving way to the current urgency to redefine the space for artistic action within global conflicts and discriminatory policies – all the way to the frontier of activism, as shown by Abu Hamdan's *Conflicted Phonemes* infographic maps. Denouncing accent detection practices in the assessment
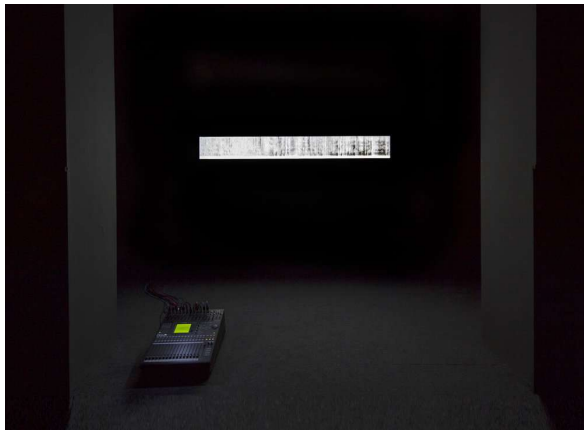

Fig. 14: Lawrence Abu Hamdan, *Saydnaya (The Missing 19db)*, 2017, Sound, mixing desk, light box. Courtesy of the artist and mor charpentier, Paris. Installation view, Sharjah Biennial 13, Sharjah Art Foundation, United Arab Emirates.
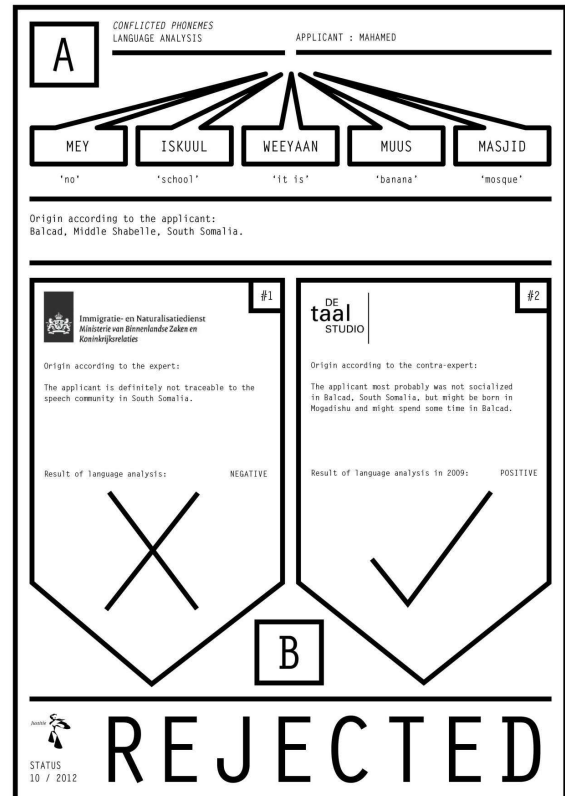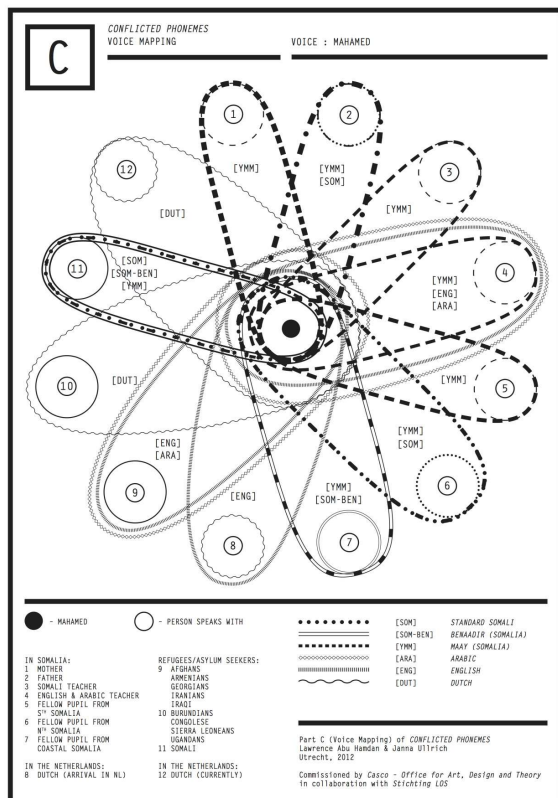
Fig. 16: Lawrence Abu Hamdan, *Conflicted Phonemes*, 2012, Voice mapping, Courtesy of the artist and mor charpentier, Paris.

of migrants' political asylum applications, these can indeed be used to oppose to controversial assessment methods; their purpose is "to offer the rejected/silenced asylum seeker an alternative and nonvocal mode of contestation."[50] Institutional perceptual analysis concerns, in this case, the conditions of speech pronunciation as well as its legal frameworks[51]. If the accent, or inflection of the voice, are the new site of a biopolitics exercised at the infra-perceptual level (by techniques of control of the individual sound texture), the noise reduction scheme of the QuietComfort headphones seems to offer the discriminatory model of this process: we find the idea of detecting and neutralizing "noise", as an external and "parasitic" element compared to the "signal", constituted in this case by the legitimate accent for an asylum application.

But this system of filtering between "pure" and "impure" accents is based on partial and inappropriate methods, according to Abu Hamdan's survey, to the complexity of the geopolitical situations to which they refer; the processes denounced by *Conflicted Phonemes* are necessarily reductive in relation to the wealth of information that the accents bring about the hybridization of languages across borders.[52] The signal is a false signal: the noise-cancelling device eventually impoverishes, if not erases, the signal.

Thus, post-Cagean auditory culture and its "significant silence", as we have seen from Raetz's diagram, now inhabit a terrain of social conflict linked to the *production*, *articulation* and *control* of a space that is increasingly becoming individual.[53] Faced with the technologies of the ear and their separation between desirable and undesirable,[54] the need to renew our conceptual and perceptual filters seems imperative.

Endnotes

1. Quoted in Douglas Kahn, "John Cage: Silence and Silencing", *The Musical Quarterly 81*, no. 4 (Winter 1997).
2. André Breton and Paul Eluard, *Dictionnaire abrégé du surréalisme*, Paris, Galerie des Beaux-Arts, 1938.
3. Markus Raetz, *Untitled* (1968–70), "53 photo-copied drawings of possible projects" (exhibition checklist).
4. MoMA, "Information", press release, July 2, 1970.
5. Jennifer Licht, *Introduction to Spaces*, exh. cat. (New York: Museum of Modern Art, 1969).
6. Michael Asher, *Writings 1973–1983 on Works 1969–1979*, ed. Benjamin H. D. Buchloh (Halifax and Los Angeles: The Press of Nova Scotia College of Art and Design and the Museum of Contemporary Art, 1983), p. 24.
7. As Eugenie Brinkema notes, "Cage's statement of negation, 'There is no such thing as silence', is simultaneously one of affirmation—of unintentional, contingent sounds; indeterminate sounds; the aural cacophonies of the performance space; the turning of pages; the whispering, doubting irritation of the audience—in other words, the totality of the otherwise excluded residue and sonic detritus marshaled and disavowed by traditional notated composition. Everything—intended and contingent—is therefore sound and is therefore music. Sonic context becomes sonic text; the environment itself becomes musical material." Eugenie Brinkema, "Critique of Silence", *Differences 22*, nos. 2–3 (2011): p. 214.
8. The term "auscultate" refers to the development of sound techniques and in particular to the social distance established by the stethoscope from the patient's body. See Jonathan Sterne, *The Audible Past. Cultural Origins of Sound Reproduction* (Durham: Duke University Press, 2003).
9. Chion speaks of the expressive power of silence referring to the way in which Dolby noise reduction techniques in cinema have given silence a new role: "The silence of the speakers plays an important role; […] thirty or forty years ago […] there was always background noise in the medium and the signal-to-noise ratio was completely different." Rémi Adjiman, "Entretien avec Michel Chion: de la recherche sur le son au cinéma aux pratiques de réalisation audiovisuelle", https://hal.archives-ouvertes.fr/hal-01711094/document. (Accessed 22 October 2019)
10. Douglas Kahn, "John Cage: Silence and Silencing", *The Musical Quarterly 81*, no. 4 (Winter 1997): p. 556. Huxley's opening quote comes from the same article.
11. *Ibid*. p. 557.
12. McShine quoted by Eve Meltzer, "The Dream of the Information World", in *Oxford Art Journal 29*, no. 1 (2006): p. 125.
13. *Ibid.*, p. 123.

14. Here, Meltzer is referring to the model of "infrastructural analysis" as defined by Joseph Kosuth. *Ibid.*, p. 124.
15. Stefan Heidenreich, "Rauschen, filtern, codieren – Stilbildung in Mediensystemen", in Sabine Sanio and Christian Scheib (eds.), *Das Rauschen* (Hofheim: Wolke Verlag), 22 (also for the notion of "significant silence").
16. Amar Bose quoted by Mack Hagood: "When Amar Bose sat in an airplane and dreamed up a way of 'separating things that you don't want from things that you want,' he was thinking of sound, not culture." See Mack Hagood, *Hush: Media and Sonic Self-Control* (Durham: Duke University Press, 2019), p. 181.
17. Melle Kromhout, "An Exceptional Purity of Sound: Noise Reduction Technology and the Inevitable Noise of Sound Recording", *Journal of Sonic Studies 7* (June 2014).
18. *Ibid.*
19. As stated by Kromhout, noise cancelling techniques operate "at the crossroad of several leading notions of noise: sonic noise (which operates in the domains of sound and acoustics), physical noise (in communication engineering and physics) and communicational noise (in information theory and computer science)." *Ibid.*
20. To quote Asher more extensively on his installation for the *Spaces* exhibition: "As a rectangular container with all of its surfaces treated the same way, the work created a continuity with no singular point of perceptual objectification, unlike phenomenologically determined works which attempted to fabricate a highly controlled area of visual perception. The various constituent elements and functions of the space were made accessible to the viewer's experience. This was in contradistinction to an installation that would insert a predetermined object between the viewers and their perception of the space, while, at the same time, attempt to control the viewers and their perception of the space, eventually creating a hierarchy between the object and the viewers where the viewers subsequently became subservient to the object." Asher, *op. cit.*, p. 30.
21. *Ibid.*, p. 18 and p. 22.
22. *Ibid.*, p. 18. For the silent environment of *Spaces*, however, Asher decided not to use a sound broadcasting device, unlike the project published in the catalogue.
23. Alanna Heiss, "Clocktower Installation, 1979", Clocktower [website] http://clocktower.org/exhibition/clocktower-installation-1979. (Accessed 22 October 2019)
24. On the audience reactions to this piece see Kirsi Peltomäki, *Situation Aesthetics: The Work of Michael Asher* (Cambridge, Mass.: MIT Press, 2010), p. 45–46.
25. "As an analysis of perception, minimalism prepared a further analysis of the conditions of perception. This led to a critique of the spaces of art (as in the work of Michael Asher), of its exhibition conventions (as in Daniel Buren), of its commodity status (as in Hans Haacke)—in short, to a critique of the institution of art." Hal Foster, "The Crux of Minimalism", in Hal Foster, *The Return of The Real* (Cambridge, Mass.: MIT Press, 1996), p. 59.
26. Licht, *Introduction, op. cit.*
27. Asher in Ginger Wolfe, "Michael Asher Interview", (2004) republished in *Public Knowledge: Selected Writings by Michael Asher*, ed. Kirsi Peltomäki (Cambridge, Mass.: MIT Press, 2019), p. 59.
28. This invitation came from the curator Kynaston McShine, as the initiator of the MoMA Projects series on experimental and emerging projects.
29. See the handwritten text of the drawing made by Neuhaus after the installation (Untitled, 1993).
30. Max Neuhaus, "Lecture at the Seibu Museum Tokyo" *Inscription, Sound Works Volume I* (Ostfildern: Cantz, 1994), 69.
31. *Ibid.*, on this work, see also Matthieu Saladin's text published in this volume.
32. Kromhout, "Purity of Sound", *op. cit.*
33. Neuhaus, *Lecture, op. cit.*
34. On the transparency of media see Craig Dworkin, *No Medium* (Cambridge, MA: MIT Press, 2013).
35. Kahn, "John Cage", *op. cit.,* p. 557.
36. Asher, Writings 1973–1983, *op. cit.,* p. 8.
37. *Ibid.* p. 8.
38. *Ibid.*
39. Licht, *Introduction, op. cit.*
40. On perceptual technologies see Jonathan Sterne, *MP3: The Meaning of a Format* (Durham: Duke University Press, 2012).
41. Asher, *Writings 1973–1983, op. cit., p.* 93.
42. *Ibid.* p. 182.
43. From the description text of *Walled Unwalled*, 2018
44. See the description of the piece on the Tate website https://www.tate.org.uk/whats-on/tate-modern/film/lawrence-abu-hamdan-walled-unwalled. (Accessed 22 October 2019)
45. See Apter, Emily, "Shibboleth: Policing by Ear and Forensic Listening in Projects by Laurence Abu Hamdan", in *October 156* (1) :100-115, May 2016.
46. See Ellen Agnew, "Have You Heard Lawrence Abu Hamdan? Analysing History, Politics and the Fundamentals of Listening", *Art Africa*, no. 11 (March 2018), p.51.
47. See "Explore Saydnaya – Inside a Torture Prison" in
https://saydnaya.amnesty.org ; and Eyal Weizman, *Forensic Architecture: Violence at the Threshold of Detectability* (Zone Books, 2017).
48. Abu Hamdan in Ellen Agnew, "Have You Heard", *op. cit.,* p. 51.
49. Lawrence Abu Hamdan, "Saydnaya", http://lawrenceabuhamdan.com/saydna. (Accessed 22 October 2019)
50. Lawrence Abu Hamdan, "Conflicted Phonemes", http://lawrenceabuhamdan.com/#/conflicted-phonemes (Accessed 22 October 2019)
51. Introducing his broadcast-works and his vocal-based "Audium" project, Max Nehuaus wrote: "I am also fascinated by the truly remarkable level of aural discrimination which we demonstrate through our use of language. If we look at our language sounds in the context of the total spectrum of sound possibilities that we are able to perceive, then we can see that these sounds that we communicate ideas and thoughts with occupy only a minute part of that spectrum. And the differences between them are also very small, so small that a non-native speaker has trouble distinguishing between many of them. Yet in our own language we go much further than simply distinguishing between its phoneme sounds. We can tell which part of the country someone was born in from small differences in the way these few sounds are pronounced. These differences are almost immeasurable, but yet we are able to distinguish them quite easily, almost automatically". Max Neuhaus, "The Broadcast Works and Audium", *Zeitgleich* (Vienna: Triton 1994). Republished on Kunstradio [website] http://kunstradio.at/ZEITGLEICH/CATALOG/ENGLISH/neuhaus2c-e.html. (Accessed 22 October 2019)
52. See Emily Apter, "Shibboleth: Policing by Ear and Forensic Listening in Projects by Lawrence Abu Hamdan", *October 156*, no. 1 (May 2016): p. 100–15.
53. On the notion of personal space in the age of modern mobility, see Hagood, *Hush, op. cit.*
54. To paraphrase Amar Bose's motto once again.

Translated from French by Marc Feustel

Abstract

In 1970 the artist Markus Raetz imagined a device for capturing and listening to silence, through headphones connected to a soundproofed space. A few years later, in 1978, an "audio epiphany" inspired Amar Bose, during a flight from Zurich to Boston, for the invention of noise-cancelling headphones capable of providing a "heaven of tranquillity" to world travellers. In 2016, the artist Lawrence Abu Hamdan, reconstructed a process of "disappearance of voice" and of a decrease in the level of the aural environment of the Syrian prison Saydnaya, measuring it by a 19-decibel drop in sound. Building upon these three episodes, this article treats the way in which silence participates in the construction of social space. Post-Cagean artistic practice, in particular that of Michael Asher and Max Neuhaus, has identified in the threshold between audible and inaudible a tool for investigation and critical analysis of the conditions of perception of the institutional display, In the age in which aural technology reproduces discriminatory models of control of the environmental space and of "cancellation of unwanted perceptions", this project will assume a specifically political connotation with the "forensic listening" of Abu Hamdan.

Author

Daniele Balit is an art historian, theoretician and curator. He teaches at the Institut Supérieur des Beaux-Arts de Besançon and is an associate researcher at TEAMeD/ Université Paris 8. He holds a PhD from Université Paris 1 Panthéon-Sorbonne and was awarded a grant by the Centre national des arts plastiques (Cnap) for a research on the artist Max Neuhaus. He is the editor of *Max Feed — œuvre et heritage de Max Neuhaus* (Isba, 2018) and co-editor of the anthology *Les Pianos ne poussent pas sur les arbres*, *Max Neuhaus* (Presses du Réel, 2018), a founding member of the curatorial platform 1:1projects in Rome, of the collective OuUnPo, and the initiator of Birdcage, an itinerant and temporary sound gallery. His recent curatorial projects include *Wetlands Hero* (Cneai, 2015, co-curator), *Max Feed* (Frac Franche-Comté, 2016), *Mix-Feed* (Isba Besançon, 2017), *Sound Unheard*, Goethe-Institut Paris, 2019, co-curator).