

A WORLD OF SOUNDS AND SPACES: SOME NOTES AND REFLECTIONS ON 2013

Sam Longmore

This essay seeks to address the ideas motivating the making of three of my works, *Presence.2*, (*as yet*)*Untitled* (*wall*) and *Memorials to Active Listening*, all created for SITE 2013, work presented by graduating students from the Dunedin School of Art. I hope to explain the theoretical context of the works through a description of salient aspects of their creation and of their relationship to the ideas behind them.¹

PRESENCE.2, 2013

Maurice Merleau-Ponty's contribution to philosophy might be summarised in one deceptively simple sentence – "I am my body."² It is this thesis which, opposing a dualism of mind and body such as that formalised in the meditations of René Descartes, stimulated my ongoing interest in the philosophical tradition of phenomenology. *Presence.2*, a work rooted in the proportions and acoustic properties of its site of installation, was born out of my interest in this area of thought which continues to inform my practice.

For *Presence.2*, I determined the axial modes of the installation site using the formula $f = c/w$.³ I then moulded three plaster oblongs using engineering software to calculate their proportions so as to ensure that (when interacted with by viewers) each would resonate at a frequency derived from the site's axial modes. This derivation caused the sounds emitted by the plaster to be sustained through their compatibility with the space's architectural proportions, resonating for an extended period in the room relative to other frequencies. Embedded within the plaster were contact microphones (piezoelectric transducers) which amplified the vibrations in the objects caused by the viewer's touch. So as to prevent a positive feedback loop developing, the objects were suspended from the ceiling of the installation site, isolating them from the vibrations caused by the footsteps of viewers and from the speakers to which they were connected.

Conceptually, *Presence.2* was concerned with each individual's experience of phenomena as well as their communal interaction. The work called for bodily engagement on the part of viewers, with the intent that the combinative and physical nature of this engagement would present corporeal presence as a precondition of subjective perceptual experience, while demonstrating the inherent effect that the presence and actions of others have on this experience. Multiple viewers could activate the work simultaneously as a community of individuals collaborating in the creation of a soundscape tuned to its site of occurrence.

In considering the installation in terms of the collaborative engagement it fostered, one might reflect on Daniel Muzyczuk and Agnieszka Pindera's discussion of Konrad Smolenski's work for the 2013 Venice Biennale, *Everything was Forever, until it was no More*. In the publication accompanying the work, Muzyczuk and Pindera explore the relationship between community, sound, site and power, along the way citing Jaques Attali's book *Noise: The Political Economy of Music*: "All music, any organisation of sounds is ... a tool for the creation or consolidation of a community, of a totality. It is what links a power centre to its subjects, and thus, more generally, it is an attribute of power in all its forms."⁴ In contrast to this image of the soundscape as an attribute of a centralised power, *Presence.2* engendered a soundscape controlled democratically by the community of individuals bound together in their mutual creation



Figure 1. Samuel Longmore, *Presence.2*, 2013, plaster; contact microphones, audio-equipment, Room 126, dimensions variable. Installed at SITE 2013, Dunedin School of Art, Dunedin.

and experience of it. Within the work, the potential of sound (organised or otherwise) to link a group of individuals to a particular site remained. However, the hierarchical character that Attali, Muszyczuk and Pindera associate with soundscapes was removed; each individual viewing the work was partially responsible for the sonic nature of the environment they inhabited, each partially dictating the presence and intensity of the soundscape produced by the work, which was acting as an element or node in the 'centre' of this community.

Parallels between the 'identity' of *Presence.2* and the identity of the subject as it is presented by Merleau-Ponty might be drawn. For Merleau-Ponty, subjective identity develops as a "mosaic of sensations" with "no specific direction;" it is something constituted dialogically through an open-ended relationship to the phenomenal world, coming always after and as a result of perceptual openness and engagement.⁵ Each experience of *Presence.2* was simultaneously unique – as a result of the presence and actions of the viewers interacting unpredictably with the installation as subjective bodies within the space – and predetermined – through its being conditioned by the acoustic character of the exhibition site with its fixed proportions. The work's 'identity,' like the identities of its viewers, cannot be pinned down as singular; many experiences of it could be had, each differing from the next and adding richness to the work's overall and cumulative identity. If one could define an essential or constant character for *Presence.2*, it might be thought of as the sum total of the countless possible combinations of sounds produced by viewers interacting with it.⁶

The tension between *Presence.2*'s predetermined nature, on the one hand, and its reflexive relation to viewers, on the other, was further extended: the perception of the work's sonic character was dependent not only on viewers' actions, but also from the place where it was perceived, changing in accordance with the viewer's shifting position within the site of installation.⁷ A remark by the American composer John Cage is particularly apposite to this aspect of *Presence.2*. Cage stated not only that "everything we do is music," but also that "we are all in the best seat [from which to experience this music]," underscoring the notion that a single event can be perceived in a multitude of ways and also that the aural experience of sonic phenomena is inherently related to the location in which it is acquired. The many different perceptual experiences that *Presence.2* offered its viewers reflects my belief that none of the manifold modes of perception – aural or otherwise – of a single event can be taken as authoritative or superior to any others.

Through the spacing of the plaster rods, *Presence.2* foregrounded another concern inherited from Merleau-Ponty's phenomenological epistemology and the legacy of '60s minimalism – the perceiving subject's corporeal relation to and physical navigation of real space, i.e. the experience of perspective and movement in space – though it did so in a way which did not necessitate academic lensing or prior art historical knowledge. The distance between the suspended objects was such that viewers moved through the room in order to interact with each one. The work's sonic character was directly related to the point within the space from which it was experienced.⁸ The viewer's passage through the work's invisible sonic field offered a variety of aural experiences which shifted in pitch and volume. Moreover, the work was responsive to the presence of viewers within the installation space in ways which went beyond their direct engagement with it through physical action, responding also to the effect their bodies had on the acoustics of Room 126, to which the plaster rods were 'tuned.' Considered purely as a physical object, the presence of the viewer – as individuals or part of a group – passively altered the behaviour of sound within the room through a disruption of its passage. In this way, the viewer's physical presence in the installation space conditioned the soundscape created by the work to almost the same degree that it was conditioned by their direct interaction with it, or by the space itself.⁹

While Merleau-Ponty's theories ground my own work within an accepted philosophical system, some attendant issues arise. One relates to his understanding of what can contribute to a philosophically valid understanding of the external world; a second relates to his view that, assuming they share the same perceptual faculties (the ability to see, hear, touch, smell and taste), any two subjects should have the same experience of this "true world," and events occurring within it.¹⁰ I do not object to the presupposition of the existence of a phenomenal world external to us, and ostensibly accessible only subjectively through the perceptual faculties (in the sense of individual subjects

having subjective experiences in/of it); however, the problems inherent in the absolute priority given to individual subjectivity should be clear. As a collective and non-hierarchical affirmation of intersubjective experience, *Presence.2* existed as a material critique of this position.¹¹

If *Presence.2* can be thought of as a negotiation between nature predetermined and nature unplanned; between site pre-conditioning experience and (through attention paid to it) experience of site separated from it; between individual subjective experience and experience entwined with that of others, then it is a work which can be situated within a history of "object-based sound installation." This has been well described by Ethan Rose in the *Leonardo Music Journal*, where he describes the site of exhibition as something consciously considered, a key factor in the conceptual grounding and reception of the work.¹²

(ASYET) UNTITLED (WALL), 2013

Set into a specially constructed wall at the Dunedin School of Art, five speakers oscillated at varying speeds and intensities, suggesting high volume in the absence of perceivable sound. In addition to constituting a formal exploration of sonic material, *(as yet)Untitled (wall)* was concerned with the poetics of experiencing silence and also with our knowledge of things which we know to exist, but which do so outside of our direct perceptual relations. On one level, the work might be thought of as a kinetic sculpture, on another as an audio work received by the eyes of its viewers. For this work, I created a two-channel, three-movement composition using subsonic frequencies ('sounds' below 20 Hertz). The frequencies used in each channel – too low to be responded to by human ears – corresponded to a set of 50 randomly generated integers between 5(Hz) and 18(Hz). The duration of these frequencies corresponded to another set of integers between 1(sec) and 5(sec). The randomness of the numbers was derived from atmospheric noise, "which for many purposes is better [more random] than the pseudo-random number algorithms typically used in computer programs."¹³

To take randomly generated numbers as the main structural element in composing *(as yet)Untitled (wall)* was a decision partially indebted to the work of American composer John Cage, whose importance in the history of avant-garde music and 'sound-art' cannot be overstated.¹⁴ However, although it shared compositional strategies with Cage (and others), neither *(as yet)Untitled (wall)*, nor any of its compositional aspects, can be thought of as *music*. For if music rightly reckoned is nought but sounds organised in time (in the definition of Edgard Varèse), we are then left with a picture of sound being the material of music just as paint is the material of painting. This view (which I feel is still apposite today) implies that one of the primary requirements of a *musical* work is the presence of *sound* which then needs to be *organised*. In turn, for sound to be *sound* it, ontologically speaking, requires the perception of an auditory body (a listening subject or object such as a microphone or recording device). In light of this understanding of music as something involving the organisation of sounds, and sound as something which essentially requires perception, *(as yet)Untitled (wall)* cannot be described as music (at least not in relation to its human audience); the frequencies used in it cannot be said to be sounds as they cannot be heard by human ears. The viewer's inability to perceive the sub-sonic frequencies of the work renders them something other than 'sound,' and my authorial application of a structure on the randomness of the numbers generated as something other than 'musical composition' – music being, by definition, "the organisation of sounds."¹⁵

Though it cannot be correctly considered music, *(as yet)Untitled (wall)* was nonetheless indebted to Cage for more reasons than the aleatoric methods used in its composition. In the deployment of frequencies which fall outside of the narrow band of the sonic spectrum perceivable by human ears, *(as yet)Untitled (wall)*, much like Cage's composition *4'33"* (1952), problematised the idea that silence exists as the total absence of perceivable sound.¹⁶ The act of listening to the work, which through the violent oscillations of the speakers was visually suggestive of high levels of volume, was experientially the act of listening to the surroundings. Those sounds with acoustic areas overlapping the area of the work became its aural focal point, standing in for the sounds missing from the oscillating



Figure 2. Samuel Longmore, *(as yet) Untitled (wall)*, 2013, 6" speaker cones, subsonic sound, audio equipment, dimensions variable. Installed at SITE 2013, Dunedin School of Art, Dunedin.

speakers – much like the ambient sounds produced by the audience stood in for the sounds missing from the piano in 4'33". In contemplating the work, viewers were removed from day-to-day life and were able to experience the silence (i.e., the ambient sound) which surrounds them. At the moment that viewers became aware of the ambient soundscape of their environment, an ontological transformation took place: the sonic material shifted from 'silence' or 'noise' (for the two are one and the same) to a soundscape perceived. Thus perceived, non-sounds became sounds – silence begat noise and vice versa.¹⁷ Here again the influence Cage's practice and writings on and around silence is apparent – instead of producing sound, *(as yet) Untitled (wall)* foregrounded those sounds which existed around it (previously masquerading as silence).

It is instructive to dissect silence more thoroughly in relation to this work. Following Cage, Kate Callaghan has written on the social-cultural production of 'silence,' noting the primacy given to certain sonic events at the expense of others. In her essay "Some Thoughts on Voice and Modes of Listening," Callaghan considers how privileging of this kind impedes a potentially fuller subjective engagement with the phenomenal world, astutely observing that "as a city dweller, silence requires my removal from day-to-day life, which is full of ambient industrial noise." Having posed the question, "if we are constantly surrounded by sound, then what do we hear?" she answers, "in the same way that

we do not always see, we make choices about which sounds are valorized and which are 'noise' ... Our choices are of course often more complex since the two modes may overlap: as in silence equated to removal from industrial 'noise'; silence created through cultural valorization of 'natural' over urban sound."¹⁸

If we look further into the para-ontologies of sound and silence, we find a paradox linking *(as yet)Untitled (wall)* to the work of Toshiya Tsunoda, an artist who specialises in recording extremely quiet sounds such as the minute variations of air pressure inside a pipe or bottle.¹⁹ Once again, Callaghan eloquently explains why the frequencies used in *(as yet)Untitled (wall)* do not qualify as 'sounds':

If sound is merely a means by which energy, constantly alternating at great speed between potential and kinetic energy, is passed through air or other medium as pressure waves, then it is a phenomenon which occurs over both time and space. Secondly, this event requires a subject in order to hear via the auditory perceptions of the ear. To use the old example: if a tree falls in the bush, empty of auditory subjects, does it make a sound? By our first definition, yes, of course, but by the second due to the absence of auditory subjects, the tree is silent.²⁰

In light of this understanding of sound and silence, the paradox linking my work to Tsunoda's emerges in the form of a question regarding the ontological status of sound and silence. If sound can be correctly thought of as sound only on being heard – if the falling tree is silent without the presence of a subject or object to hear it – what then is the status of the phenomenon Tsunoda records before he records it (too quiet to be heard without his specialised equipment and techniques) – or, of that which causes the speakers in *(as yet)Untitled (wall)* to oscillate (unheard but visibly present)?

Although the topics discussed above are formal in nature (relating to sound as a material, to the practice of musical composition where it is most commonly encountered, and to the dialectic relationship between sound and silence), *(as yet)Untitled (wall)* also gestured poetically (though perhaps more emphatically) outwards. While its form embodied concrete examples of the physically un-sensible (i.e., atmospheric noise and subsonic frequencies), *(as yet)Untitled (wall)* gestured allegorically to other facets of reality that we are incapable of incorporating into our lived experience, in particular pointing up the limits of intersubjective phenomenological epistemology. To help elucidate these abstract notions, I would ask the reader to consider the subjective experiences had by 'the Other,' and whether it is possible for us as separate subjects to truly share such experiences. At first this proposition may seem to represent a challenge easily overcome by interaction through simple conversation; however, signs delivered orally are vague – there is always uncertainty where language is concerned. Ambiguity remains and always will.²¹ In order to avoid a discussion rooted purely in linguistic theory (on which I am no authority), it is enlightening to consider the work of Henri Bergson in relation to this critique of 'shared experience' – the proposition that it is impossible to understand for oneself the experience had by the Other:

In *Time and Free Will*, Bergson discusses how we might be able to relate to the psychic states of the Other:

Hence we have to distinguish two ways of assimilating the conscious states of other people: the one dynamic, which consists of experiencing them oneself; the other static, which consists in substituting for the consciousness of these states their image or rather their intellectual symbol, their idea. In this case the conscious states are imagined instead of being reproduced; but, then, to the [static] image of the psychic states themselves some indication of their intensity should be added, since they no longer act on the person in whose mind they are pictured and the latter has no longer any chance of experiencing their force by actually feeling them.²²

Bergson's perceptions allow us to make some inferences regarding the importance and unknowability of the generative experiences which call psychic states into being. According to Bergson, we only understand the emotional states of the Other through *dynamic* experience, that is by experiencing them ourselves, and that to attempt to understand them *statically* is to reduce both the state and the subject to an "intellectual symbol!" The intellectual image of the Other's psychic state necessarily excludes the experience of the phenomenon which caused that state. To the mental image acquired, the intensity of the state experienced by the Other can only then be added through

imagination – it is always partially assumed. A *static assimilation* of the Other's experience is always insufficient, for without direct experience of the event which called up the state in question in the Other's psyche (and of which the state's intensity is a direct correlative) a total understanding of the state is always beyond the assumptive (secondary) subject. Intensity of feeling is thus related to an external cause which as imaginers we did not (and cannot) experience for ourselves.

Furthermore, by virtue of occupying a separate body, we perceive phenomena from a different perspective to the Other.²³ This essential difference is a combination of two elements: physical difference (for even when observing the same phenomenon, as separate subjects we cannot concurrently occupy and observe from the same point in physical space) and biographical difference (for even if that physical difference could be overcome, if two objects could exist in the same place in space at the same moment in time, it is impossible that they and I could have had the same experiences throughout our whole lives up until that moment of mutual experience. Furthermore, it seems impossible that our experiences of the environment in which we were brought up should not in any way condition our responses to phenomena thereafter).²⁴ It should by now be clear how, in light of these differences, direct experience of phenomena is affected by extrinsic elements which are specific to each perceiving individual; and why, therefore, the subjective experience of the Other is, as far as I can reason, intrinsically unknowable, unassimilable, an aspect of reality outside of our means of understanding even if the object of our perceptions is identical.²⁵ It is to this fundamental realisation, among other things, that (*as yet*) *Untitled (wall)* points.

MEMORIALS TO ACTIVE LISTENING, 2013-14



Figure 3. Samuel Longmore, *Memorials to Active Listening*, 2013, concrete, mp3 players, earbuds, acetate records, dimensions variable. Part I.



Figure 3. Samuel Longmore, *Memorials to Active Listening*, 2013, concrete, mp3 players, earbuds, acetate records, dimensions variable. Installed at SITE 2013, Dunedin School of Art, Dunedin.

Let us cross a large modern capital with our ears more sensitive than our eyes.

Luigi Russolo²⁶

Memorials to Active Listening was a segmented project carried out in three phases: the first dealt with recording and re-presentation, the second with presentation and site, and the third engaged all of these elements simultaneously.

The first phase of the work existed somewhere between direct and mediated experience of an aural environment, blurring the line between the two while taking up R. Murray Schafer's theory of *schizophonia*, which finds its etymological roots in "[t]he Greek prefix *schizo* [which] means split, separated."

Schizophonia refers to the split between an original sound and its electroacoustical transmission or reproduction. It is another twentieth-century development. Originally all sounds were originals. ... Since the invention of electroacoustical equipment for the transmission and storage of sound, any sound, no matter how tiny, can be

blown up and shot around the world, or packaged on tape or record for the generations of the future. We have split the sound from the maker of the sound.²⁷

This phase of the project consisted of mp3 players embedded in roughly hewn concrete cubes, with a set of earbuds protruding from one of the faces playing sections of soundscapes experienceable at four distinct locations. Each concrete cube was installed at the site corresponding to the recordings on the player encased within it, thereby creating a simultaneously direct and mediated listening experience of a soundscape at the physical location which produced it. The death of the batteries powering the mp3 players acted as a temporal limit on how long the cubes spent at their respective sites, referencing the spatiotemporal specificity of the sounds before they were 'recorded.' After recording the sounds and encasing the mp3 players inside the concrete cubes, the digital files were removed from my computer, ensuring that the soundscapes were preserved only temporarily in the form outlined above. The object of this phase was to highlight the spatiotemporal specificity of sound, while utilising properties of acousmatic sounds (those separated from their visible sources) to facilitate a more concentrated listening experience.²⁸ After I had deleted the digital traces of the sounds from my computer, the 'recording' of the soundscapes could then more accurately be called a stretching of their availability rather than an archival act of preservation.

Like *Presence.2*, the first phase of *Memorials to Active Listening* was essentially concerned with the viewer's navigation of space and sought to place this in the foreground of the viewer's experience, alongside an awareness of the individual characteristics of spaces as they were presented to them through their aural faculties. From the works' placement at disparate, though conceptually and materially relevant sites, a roundabout link to the land art of the 1970s might be drawn; however, the sites for phase one were chosen primarily for their specific and geographically distinctive aural properties rather than for their visual appeal – aural land art, if you like. As there was no public promotion preceding their placement, encounters with the *Memorials* could not be had intentionally; rather, viewing was dependent on chance, a serendipitous blundering into the work's localities.

The second iteration of the work took place as part of SITE 2013. The four concrete cubes, now mute through the inevitable failing of the batteries powering the concealed mp3 players, were redisplayed in the gallery of the Dunedin School of Art. In this phase, the initial engagement with notions of site specificity continued, despite the fact that the institutional venue chosen for the second phase contrasted with the off-site locations of the first. Where the first part of the project solicited experience in the world at large, the second dealt with the experience of the art gallery as a specific observational site, with its own connotative and signficatory effects. As *objets d'art* located within the DSA gallery, the cubes adopted a consciously sardonic (post-)minimal stance; in order to note the imperfections on each crumbling face, the viewer was required to physically shift within the gallery space. As Merleau-Ponty put it in *The Phenomenology of Perception*:

It is true that external objects too never turn one of their sides to me without hiding the rest, but I can at least freely choose the side which they are to present to me. They could not appear otherwise than in perspective, but the particular perspective which I acquire at each moment is the outcome of no more than physical necessity, that is to say, of a necessity which I can use and which is not a prison for me: from my window only the tower of the church is visible, but this limitation simultaneously holds out the promise that from elsewhere the whole church could be seen.²⁹

Alongside the cubes, four transparent 12-inch lathe-cut acetate records were presented at DSA. On the a. sides the records contained sounds once present at the recording sites, while the b. sides consisted of compositions by myself and other artists. The process of composition was inspired by *musique concrète*, with my collaborators and I using the recordings from phase one as raw material from (and with) which we set about composition.³⁰ After around 200 plays the sound quality of a lathe-cut record begins to deteriorate, so while the records were the closest this work came to any sort of permanence or preservation of the soundscapes experienced, they, like the mp3 players, continued to resist the archival urge. Again, they can be considered as a stretching of the soundscapes' availability, a further extension of the sounds once experienceable at the physical locations of phase one.

The third phase of the project took place at the Audio Foundation Gallery in Auckland where the records were re-presented to a wider listening community, this time audibly – playing until the sounds scratched into their faces were worn away by the needles of the record players. The records, each in an edition of five, acted as essential elements within the rationale of the project – the *a.* sides represented the fading, physical objectification of the sounds experienced before and during the first phase of the project, while the *b.* sides alluded allegorically to the variation we can expect to find in the broader context of general experience in and of the world. Continuing to work with the project's overarching concern for acousmatic sound, the third phase consisted of a set of turntables on which the records spun continuously for the duration of the show. Although on one level this was certainly a celebration of the collaborative effort required to complete phase two, to view this phase of the project as an listening party, elevated and legitimised by the gallery as its venue, would be to skim over more fruitful readings and fall into a trap, the exploration of which was its objective.

The third phase of the project was ultimately concerned (once again) with the urge to archive and the temptation to consider recorded sound as substitutable for or equivalent to first-hand experience of the phenomena recorded. The way in which audio recordings create an impression that it is possible to segregate specific sounds from their wider environment, while at the same time preserving the potential for these sounds to be perceived as they might have been in their original context, gives rise to this temptation. This not only suggests that elements of experience can be authoritatively captured, but also that subsequent re-presentations of these elements can be made identical to each other. This impression is of course illusory – our perceptual relationship to anything which has been removed from its original context is fundamentally altered by virtue of its removal and by the methods used in removing it. This being the case, the reception of an audio recording should be taken as a new experience in itself, conditioned by its own specific set of factors.

In my project, the sounds were redeployed in a new context (city, venue, moment in time) affected by, among other things, the means and limitations of this re-presentation; the acoustic properties of the new space; and any ambient sound that may be perceivable from within the space's acoustic area, not to mention the connotations of the re-presentation site. All these elements are distinct from the factors conditioning the recorded phenomena's original context and combine to create a profoundly different experience of the phenomena. With each revolution, the sounds produced change and degenerate. The records, through their very use, are in the process of fading away, ensuring that each encounter over the period of the exhibition was unique. To have experienced the sounds of the records is to have experienced their passing gradually from existence at 33 revolutions per minute.

Grounded in the writings of Maurice Merleau-Ponty, **Samuel Longmore's** work occupies the space where his interrelated conceptual concerns for the phenomenology of aural perception and the experience of architectural space overlap. Sam has a BVA in sculpture from the Dunedin School of Art. He now resides in Auckland and is working towards an MFA at the University of Auckland's Elam School of Fine Art. His recent shows include "Everyday I Hear Things" (Audiofoundation Gallery), "Stand-Ins" (Elam ProjectSpace Gallery) and "Cross St. Project" (Cross Street Gallery, Auckland).

1. However, an a priori understanding of the concepts and discourses informing the works is not essential for their appreciation, and although these ideas are important in that they stimulated the works' creation, they were more or less trivial in terms of the experience of the works had by viewers. While the form of each project was designed to make understanding of the ideas behind it possible, the capacity for the work to create an immersive and meaningful experience for the viewer should not rely on their knowledge of these potential meanings. Thus, it was not my intention for the works' formal qualities to only communicate a didactic lesson or critique; it was much more important for the works to produce experiences that were engaging, without requiring specialised knowledge. To a point, each work was designed to be open-ended, with meaning detached from conception and ultimately sensitive to the viewer's individual, subjective experience.
2. Maurice Merleau-Ponty, *The Phenomenology of Perception*, trans. Colin Smith (London: Routledge, 1962). Note on pg 174 and p198. Full text available online <https://archive.org/details/phenomenologyofp00merl>

3. An axial mode is the specific length of a sine wave (i.e. its frequency or pitch) such that, when traveling along the shortest route between two parallel surfaces of an interior space, it returns to its point of origin just in time to reinforce its next cycle. $f = c/w$ where f = frequency, i.e. one of the three axial modes of the space; W = wavelength, i.e. the distance (in meters) of a round trip between two parallel surfaces, here the ceiling and floor); and C = the speed of sound, 343.2 m/s. The resonant frequencies of a space might be thought of as its acoustic signature, each space having a different set of tones which, having been reinforced by the architectural proportions of the space in question, resonate for an extended period within it relative to other frequencies.
4. Jacques Attali, *Noise: The Political Economy of Music* (Minneapolis: University of Minnesota Press, 1999), 6. Cited in Konrad Smolenski, *Konrad Smolenski: Everything was Forever, until it was no More*, eds Daniel Muzyczuk and Agnieszka Pindera (Warsaw: Zacheta – National Gallery of Art, Mousse Publishing, 2013), 33.
5. Maurice Merleau-Ponty, *The Phenomenology of Perception*, 249.
6. Also represented in the work were Alphonso Lingis' conception of *plastic subjectivity* and Aristotle's treatment of *potentiality* and *actuality* – the notion that the world experienced and the sense of self that experiences it are both emergent phenomena, pliant and tractable, forever in a state of 'becoming'. The sense of self is constituted gradually through a dialogue with the individual's environment and its associated stimuli, and the environment is continually affected by the subjects which populate it. For an introduction to Lingis' concept of plastic subjectivity, see Tom Sparrow, "Bodies in Transit: The Plastic Subject of Alphonso Lingis," *Janus Head*, 10:1 (2007), 99-122, at 101, <http://www.janushead.org/10-1/sparrow.pdf> [accessed 1 Oct 2014.]
7. This was due to the effect of *hotspots*, an acoustic attribute of a space which like an axial mode is directly related to its proportions. Acoustic hotspots can be thought of as points within a space where (due to the focusing effects of its architectural proportions) the nodes or anti-nodes of a standing sound wave are located.
8. In their book *Spaces Speak, are you Listening? Experiencing Aural Architecture* (Cambridge, Mass.: MIT Press, 2007), Barry Blesser and Linda-Ruth Salter carry out an extensive study of the history, usage and implications of "aural architecture." Their study includes a detailed treatment of this phenomenon and its effect on the perception of sound within interior spaces.
9. Herein lies the significance of the title "Presence".
10. In a posthumously published work, Merleau-Ponty addressed this bias, which he regarded as essential and inescapable: "it is the world I inhabit, the natural world and the historical world, with all the human traces of which it is made – still as soon as I attend to it this conviction is just as strongly contested, by the very fact that this vision is mine." (emphasis added). Maurice Merleau-Ponty, *The Visible and the Invisible*, trans. Alphonso Lingis (Evanston: Northwestern University Press, 1968), 5.
11. This view holds that each person has philosophically valid experiences of the world through their experience of it as a mind incarnate, relating to it though subjective engagement with it as a perceiving, corporeal subject. However, this position notably excludes the importance and influence on perception of variations in a subject's biography, cultural upbringing, gender, age and so on. The effect of these factors (which are external to direct perceptual experience) on an individual's knowledge of the world are discussed in more depth below.
12. Ethan Rose, "Translating Transformations: Object-based Sound Installation," *Leonardo Music Journal*, 23 (2013), 65-9.
13. "In reality, most random numbers used in computer programs are [only] pseudo-random, which means they are generated in a predictable fashion using a mathematical formula. This is fine for many purposes, but it may not be random in the way you expect if you're used to dice rolls and lottery drawings. RANDOM.ORG offers true random numbers to anyone on the Internet. The randomness comes from atmospheric noise, which for many purposes is better than the pseudo-random number algorithms typically used in computer programs." See <http://www.random.org> [accessed 6 April 2014].
14. Throughout his career Cage used chance operations as an alternative to the rigidly formal mathematical compositional structures prevalent at the time (such as twelve-tone composition or serialism) whereby sound was arranged according to a series of predetermined rules as opposed to conventions of melodic and harmonic structure. See Richard Kostelanetz, *Conversing with Cage* (New York: Routledge, 2003), 215.
15. See Edgard Varèse and Chou Wen-Chung, "The Liberation of Sound," in *Audio Culture: Readings in Modern Music*, eds Christoph Cox and Daniel Warner (New York: Continuum International, 2004), 17-21. That a distinction between music and "something else" need be drawn perhaps points to a state of anxiety suffered by those working with sound within schools of 'fine art.' The fact that (as yet) *Untitled (wall)* needs to be distinguished from music in the first place has few if any parallels in other art media, e.g. painting.
16. Silence has long been understood as the unacknowledged experience of ambient sound. Thus, both these works could be described as silent, even, albeit paradoxically, to have *produced* silence; however, on trying to experience (i.e. listen to) the silence produced, the viewer/listener inevitably experiences the ambient sounds perceivable from the space around them. Incidentally, in relation to Cage's employment of chance as a compositional tool, the length of '4'33" was derived from random operations relating to the classical Chinese text the *I Ching* and tarot cards among other things.

17. Noise can be defined as "that sound which occurs where it should not;" the existence of noise is a matter of subjective preference and essentially relies on the opinion of whoever is perceiving it. See Brandon LaBelle, *Acoustic Territories: Sound Culture and Everyday Life* (New York: Continuum, 2010), 47.
18. Kate Callaghan, "Some Thoughts on Voice and Modes of Listening", *Soundsite: the Online Journal of Sound Theory, Philosophy of Sound and Sound Art*, <http://www.sysx.org/soundsite/texts/02/VOICE.html> [accessed 4 March 2014; from 7 April 2014, accessible at http://www.intermediamfa.org/imd501/index.php?pg=blog&post_id=641].
19. For examples of Tsunoda's recording work, see Toshiya Tsunoda, *Extract from Field Recording Archive #1* (Wrk, 1997). Online at Discogs, <http://www.discogs.com/Toshiya-Tsunoda-Extract-From-Field-Recording-Archive-1/release/859187>.
20. Callaghan "Some Thoughts on Voice."
21. A trans-humanist argument might be made that the barrier language imposes upon us is becoming less of an obstacle as we increasingly immerse ourselves in a world mediated by the digital, in which we are presented with the immanent potential for real-time communication with speakers of other languages. However, some concepts cannot be simply translated from one language to another; and any attempt to do so only produces a crude approximation or imperfect facsimile.
22. Henri Bergson, *Time and Free Will: An Essay on the Immediate Data of Consciousness*, trans. F. L. Pogson (Mineola, NY: Dover Publications, 2001), 186.
23. The self-evident conditioning of experience by individual perspective is well covered by Merleau-Ponty in *The Phenomenology of Perception*. A further quote from Bergson is also illuminating: "As my body moves in space, all the other images vary, while that image, my body, remains invariable. I must therefore make it a centre, to which I refer all the other images." Henri Bergson, *Matter and Memory*, trans. Nancy Margaret Paul and William Scott Palmer (London: George Allen & Unwin, 1912), 43.
24. *Biography*, as the term is taken to mean in this text, and *memory*, as it is commonly understood, are interwoven to the point of merging. In *Matter and Memory*, Bergson comments on the conditioning of perception by memory/biography that "there is no perception which is not full of memories. With the immediate and present data of our senses we mingle a thousand details out of our past experience. In most cases these memories supplant our actual perceptions, of which we retain only a few hints, thus using them merely as 'signs' that recall to us former images." (p. 24) See further; *ibid.*, pp. 70, 123, 130 and 170.
25. This is intended here merely as an epistemological argument and by no means an argument for an intrinsic incapacity for learning or doing based on an intrinsic incapacity for knowing. See further; Merleau-Ponty, *The Visible and the Invisible*, 9-11, and esp. p. 10 on the problem of intersubjectivity.
26. Luigi Russolo, *The Art of Noises* (New York: Pendragon Press, 1986), 23.
27. R Murray Schafer, "The Music of the Environment," in Cox and Warner, *Audio Culture*, 29-39.
28. "[T]he acousmatic sound is split from its visual source and bought into an auditory field to participate in the making of a more concentrated listening experience." LaBelle, *Acoustic Territories*, 14.
29. Merleau-Ponty, *Phenomenology of Perception*, 104.
30. John Glasgow, Nicholas Graham, Lisandru Grigorut and Sefton Holmes each contributed material to a separate record.