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Sound as Evidence

Paradigms of Aesthetic Approximation in an Age of Geopolitical Crisis

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Sound as Evidence. Paradigms of Aesthetic Approximation in an age of Geo-Political Crisis.

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<1> Abstract

In introducing the special section, focus is brought on the topic of sound as evidence of geo-political crisis with the example of the research project where refugee asylums are silent /unrecorded. Beginning with a brief discussion of the conceptualization of evidence as a moral activity, the argument rises from the premise of the practices in-between art and science of the authors in the special section. These practices are framing sound as evidence using different variations of *aesthetic approximation* navigating a range of ubiquitous paradigms of meaning production with each their specific conceptual history all rummaging in a complex field of technologic mediation and layering. The challenge of any moral activity here is as daunting, as it is necessary.

<1> Departure

> The tradition of the oppressed teaches us that's the "state of emergency" in which we live is not the exception but the rule. We must attain to a conception of history that is in keeping with this insight. Then we shall clearly realize that it is our task to bring about a real state of emergency [1].

In 2015 the war in Syria combined with the horrific conditions in refugee camps throughout the Middle East caused people in large numbers seeking refuge in Europe, causing a geopolitical crisis. Like the Covid-19 lockdown that is framing the conditions of living and working while writing this paper, it signifies a 'state of emergency' that we must, as Benjamin wrote, attain to. The question is how we best evidence the crisis so that we may attain to it?

In 2018, a new site called Lyden af Danmark (The Sound of Denmark) was launched, as a research project aiming at collecting sounds recorded by people living in Denmark. From the 155 recordings and 294 individual sounds that have been uploaded until now, bird singing, and lawn mowers seem to dominate. However, the refugee asylums scattered around the country remain silent (or unrecorded) [2].

It is from this silence the editorial idea for this special section grew as a question: How can sound-based work or phenomena function as evidence in the situation we are in, which challenges all known conceptions of the 'objective' and 'subjective'. And with that, followed other questions: Are all the crisis we are witnessing (refugee, climate, covid-19) a crisis in how we are representing non-human and human relations based on the mediation of data [3]? Does it call for a reconstruction of

the 'technology' of evidence on the basis of how data is approached in the relational field between non-human and human agencies?

<1> The concept of Evidence

Not much work has been published on the role of sound in scientific evidence construction. [4] Some studies exist on sound and geo-political events, however whereas those studies are primarily focused on musical expressions by specific ethnic groups or musical genres [5], the topic of this special section is the role of sonically mediated phenomena in evidence-construction based on artist-research practices. A few recent studies, and calls for studies, in this area largely focus on visualisation strategies, typically of scientific data drawn from various surveys, statistics, and projections. [6] This lies safely within the way scientific knowledge is usually communicated 'as evidence', which commonly implies 'visualisation' or, as it has been termed, 'beautiful evidence'. [7] The focus of this special section is to look beyond the visual and ask what constitutes the construction of evidence and what else may also inform it, especially when considering production of knowledge on the fringe of or outside the traditional range of science.

The construction starts with the word 'evidence', which stems from the Latin *videre*, 'to see'. Further, the conception of 'beautiful evidence' used in the visualization of scientific knowledge constructs, as Edward Tufte demonstrates, the way scientists and people 'in general' think about the natural world [8]. If we attain to this historically, the acceptance of the use and practice of beautiful evidence has not been easily achieved. However, it is designed to meet both the standards of science as well as expectations of *consumption*. Since not only scientists, but also non-specialists (like politicians and journalists etc) operate with and navigate evidence, beautiful evidence is derived, as Edward Tufte argues, from the 'universal principles of analytical thinking' and should thus be regarded both as a moral and intellectual activity:

> Science and art have in common *intense seeing*, the wide-eyed observing that generates empirical information. Beautiful evidence is about *how seeing turns into showing*…" [9]

This special section is following a line of inquiry into the construction of evidence as 'a moral activity'. Far from being 'universal' as Tufte claims above, in the current situation of crisis and the multitude of data relating to it, the 'beauty' of evidence is 'situated' and 'partial' at best. Thus, the context of representation becomes an essential point of attention when turning *data* into *knowledge*. In proposing sound as medium of evidence, it relies on the epistemological assumption that we cannot access or work with pure data as it is, we need a representation of it, for instance statistic tables, graphics, auditory displays or ways of making the data appear to our senses or cognitive faculties. Data does not exist outside its mediation. Following this line of thought the medium by which data is represented is significant to both our scientific research of data and our scientific understanding of the world, as well as to the common public ideas of what data is.

<1> Technological Mediation

Instead of distinguishing between art and science it can be fruitful to distinguish between an aesthetic and a scientific mode of inquiry. [10] In the scientific mode we relate to the sounds we hear by analysing it following the scientific methods [11], in the aesthetic mode we listen to that which is being approximated with or through sounds. As Janne Holmstedt suggests in her contribution to this special section, '…the transformative role of sound and listening troubles Western knowledge systems in fruitful ways…' [12]. And, further, Laura Beloff proposes that,

> …it is hard to draw any clear conclusions about the experiment itself and its factualness, but rather one should point towards the question that has been asked by Mariana Perez Pobadilla: What does it mean to hear? I would like to ask additionally: What does it mean to hear through technological mediation? [13]

The difference between visualization and sonification is not a mere matter of superficial representing of 'the same' in different manners, but in a much more significant sense, it is a matter of conditioning both data and 'world'. This relation *is* intricate and not a simple equation. This special section seeks to unfold, through seven different approaches in the hybrid field between scientific and artistic practices, how sound is constituent of our relation to our ideas and understandings of the world as a 'constituted' and 'transformative reality'. Furthermore, it is my argument that, since our relationship to data is deeply related to the way ethical positionings are being formulated and implemented, sound as evidence is operating a paradigm of *aesthetic approximation* different from earlier aesthetic paradigms. It is depending on technological mediation.

Rather than 'showing' how things 'are', sound, as an inherently time-based medium, operationalize what things do [14] and how things go [15] as part of a process of knowledge creation.

In her article, Louise Mackenzie recognizes that technological layering opens up 'possibilities in thinking about how scientific information is interpreted and whether one perspective is necessarily more valid than another.' Mackenzie is working with non-human organisms (just like Janna Holmstedt and Laura Beloff) and questions how we as humans are able to evidence those organisms through a layering of visual and sonic technologies – or, rather, the limitations we face in evidencing those organisms. In this way, scientific and artistic practices are intertwined in the construction of evidence which is believable. Mackenzie concludes that,

> We are given to understand facts that are "developed…under our complete control", yet as technology rapidly escalates, and subjective choices are made, consciously or unconsciously, at each layer, the control of facts spirals out of reach. Our capacity to believe in these interpretations, therefore, is reminiscent of practices more closely aligned with a magical or spiritual sense of perception: the kind that requires a level of faith. Whilst this is of course welcome for the artist, what remains in working with technological layers is a requirement to be highly conscious of the responsibility that comes with being an author, rather than an observer. [16]

When approaching sound as evidence, the paradigm of *aesthetic approximation* is dependent on technological mediation. When we attain to the crisis in the spirit of Walter Benjamin, it is important to realise the conceptual history of the paradigms of *aesthetic approximation*. [17]

<1> The Paradigms of Aesthetic Approximation

The question regarding the moral action of constructing 'beautiful' evidence is pertinent in all the articles of this special section. Aesthetic approximation is distancing evidence from the positivistic notion of 'the existing'. [18] The problem with this conception is exactly the problem of this special issue, that 'the existing' is mediated and therefore appear to us based on aesthetic approximation. Those approximations, however, are useful in the sense that they operate an aesthetic trajectory (to use the term introduced by Latour) in navigating the field between non-human and human. Without them, we would not be able to organize the navigation in such a way that it can be shared and compared, as well as organized according to certain rules. [19]

However, as Louise Mackenzie in her article is also pointing out, the *aesthetic approximation* achieved through technological mediation making it possible to listen to phenomena otherwise out of human sensuous or conceptual reach, also creates a distance to that phenomena. [20] Proposing *aesthetic approximation* is not a quick fix replacing the positivist epistemology but should be seen as an attempt to point out, in a pragmatic way, what practitioners operating in-between scientific and artistic modes of inquiry are facing. *Aesthetic approximation* can be perceived from a history of conceptualizations which are constructed around 'paradigms' of certain epistemological assumptions. In this way, it is my claim, *aesthetic approximation* is enabling the artist-researcher to approach sound as evidence in more general terms but at the same time, it is creating a distance from 'the existing' and the 'moral process' the artist-researcher is attaining to. In my view, *aesthetic approximation* can be seen to be entangled in (at least) five paradigms of meaning creation (see figure 1), all of them critiquing the positivist epistemology, and the claim of scientific and technological 'objectivity'.

Paradigms of aesthetic approximation	Sense/perceptual	Conceptual / Hermeneutic	Contextual / Discoursive	CultureTechnique	Network / Actor
Epistemology	Subjectivity -> Object -> experience	intersubjectivity -> critical reflexivity, transcendance. Technology: instrumentalism	dispositif -> context, social constructivism. Technology: discoursive determinism	Dispositif->technology, radical determinism	network-->technics-> causality, relationalityl, techno-ethical constructivism
Status	Meaning is immanent	We use sensory experiences in our everyday cognition of the world, but these experiences are only of surfaces that hide a deeper reality. Real meaning is hidden beneath those surfaces (transcendence). Meaning (and reality) only appear to us (partly) by work with things through language and its conceptual horizons	Meaning is structured (or constructed) by a cultural language game, and therefore always framed and mediated - through discourse, cultural or social background, gender etc.	The influence of technology is hiding from us. Technology is our transcendence.	(Technological) objects exist independently of human perception, and objects have relationships that influence meaning independently of interpretation. Things have politics. Technology effects everything, effects us everywhere.
Sources	Baumgarten, Shusterman, Kant 'Aesthetic Judgment'	(Neo-Kantianism) Benjamin, Adorno, Jaspers. Kant 'reflective judgment'	(Post-structural) Foucault, Derrida, Haraway	Radical reading of Heidegger, Zielinski, Parikka, Zizek.	Serres, Latour
Production of meaning?	Subjective - based on the feeling of pleasure, without connection to interpretation or positivist accuracy	Inter-subjective. Relies on interpretation and its horisonts and limits.	Structural meaning creation - STRUCTURAL RELATIONSHIPS, which are not the result of human subjective perception and critical judgment, create cultural meaning.	Materiality / objects weight and impact on other objects. Meaning is an anthropocentric reduction. Technology and Media raise issues and questions.	Using the ANT (Actor Network Theory) approach in studying a given practice means turning a blind eye to common knowledge and the self-understanding of science, and instead becoming a meticulous follower of the relationality of practice, of what is actually done.
Modality (how you may recognize the paradigm)	Beauty / ugliness / feelings	Languages, shapes, patterns, borders, memory / history, dialectical	Structures and their appearance and history (genealogy).	Geneologies and archeologies of technology, media and culture. Art and affect	Materiality of non-human entities, the physical presence of technology, cause – effect relations

Figure 1. Morten Søndergaard: Five Paradigms of *Aesthetic Approximation* [21]

According to the transcendental tradition of critical theory (paradigm 2), production of meaning is instrumentalized by technology, which alienates humans from an authentic relationship to reality and the world: "All live alike, in the same worldless satisfaction of needs by identically replaceable things and materials; all are completely dependent upon each other for their concrete means of existence, yet without necessarily being in personal touch. The only freedom left to men by the calculable course of this endless productive machinery would be the freedom to watch". [22] The moral activity of *aesthetic approximation* is challenged by and confined to 'the freedom to watch'.

According to the post-structuralist position (paradigm 3), the 'freedom to watch' is relying on a constructed relationality between the subject and the world. The *aesthetic approximation* of that relationality is entangled by discursive formations and contextual conceptualizations operating as technologies of power and surveillance. [23] However, *aesthetic approximation* can be operationalized in constructions of other relations operating outside the dominating discourses, even if they are still mediated by technologies of seeing.

<1> Sound as evidence between scientific and artistic modes of listening

Technological mediation is constructing the inquiries into sound as evidence by the artist-researchers in this special issue in various ways. The epistemological questions may never be fully answered but nevertheless the *aesthetic approximation* of technological mediation is conditioning the moral activity of producing credible evidence of phenomena from fields and areas on the borders of uncertainty and imagination. Sound as evidence navigate those borders.

In this way, the authors of this special issue are relating conceptually to the challenges proposed by the different paradigms of *aesthetic approximation* and in doing that formulating an alternative to the dominant discourses on technology, specifically that of instrumentalization (following Jaspers) and determinism (following Heidegger). [24] [25] [26]

The authors could therefore be seen as being closer to the perspective of ANT, which proposes a 'social turn' (paradigm 5) where *aesthetic approximation* of technological mediation is *simply causal*.[27][28] Based on this perspective, the agency of (missing) sounds from geopolitical events (such as refugee asylums) may *cause* me to act in certain ways, but it would *never make me do it for a social reason.* At least, the overall focus of the authors in this special issue is on practice, and practicing, as an activity from which the production of cridible evidence follow as an effect rather than from interpretations of intentions. [29]

The practice of the artist-researcher is framing the field of sonic evidence-construction, which Janna Holmstedt terms as a kind of 'wet live-in, and thus a form of co-habitation in a fluid and dynamic environment.' In which, 'every recording as an act of erasure rather than as a document, or evidence.' [30]

As Tullis Rennie demonstrates, with inspiration from Salome Voeglin, 'practical philosophical intervention asks each of us to challenge the status quo.' Tullis Rennie suggests adopting Voegelin's proposed sonic imaginary mode of listening, in which 'sound illuminates the limits of the norm … and effects a different resonance that can grasp and communicate the possibility of the impossible.' [31]

The communication of the possibility of the impossible is a shared concern in all the articles in the special section, which is strongly connected to evidence as a moral activity. Trial and error mode of investigation and the highly self-constructed mode of interpreting findings from those investigations (Laura Beloff), speaks to the transformative potentialities (Holmstedt) of approximating the world through technological layering (Mackenzie) and fragile transductions (Højlund / Riis) with which the artist-researchers navigate the social resonance of imaginary listening modes (Rennie) actively attempting to attune the non-human and human field of negotiating crisis through sound as evidence. [32] [33] [34] [35] [36]

Stephanie Loveless proposes the flaneuse sonore, feminist soundwalking, as a way to recontextualize the 'practices of listening and walking' in order to 'seed new relationships to the world around us.' Moreover, Loveless concludes that,

> Feminist soundwalking moves us from eye to ear, from distant panorama to vibrating immediacy… At a historical juncture where ecological and political crises abound [artistic practices] offer ways to connect to who and where we are, to feel our enmeshment in the worlds around us, and to, most importantly, find new ways to respond. [37]

Freya Zinovieff & Gabriela Aceves Sepúlveda further demonstrate that, 'To listen attentively to the sonic, is to situate oneself at the intersection of geopolitics and sensory perception. They propose that the crisis is best studied in, what they term, 'Anthropocene Contact Zones'. Here, it is possible to listen to gain information, because, after all, as they conclude, 'information is power.' [38]

<1> Concluding Perspective

Geopolitical situations of crisis force us to look at the politics of evidence – and how it is being practiced. In doing so, it operates between scientific and aesthetic modes of approximation. It is this intricate relation between world, data, sound, representation and causality this special section is investigating. The main claim running through all the articles is that this relation *is* as intricate as it is challenging, and that we need to reimagine what evidence is, reclaim its politics, through sound.

References and Notes:

Søndergaard, Sound as Evidence - Paradigms of Aesthetic Approximation in an age of Geo-Political Crisis, 5 May 2020

1. Walter Benjamin, *Theses on The Philosophy of History*, paragraph VIII, CreateSpace Independent Publishing Platform (1940/1997). This paper builds on a presentation first made at the Politics of Machines Conference in Beirut, June 2019.

2. https://lyden-af.dk/projekter, accessed 3 May 2020.

3. With respect to the refugee crisis, the conditions in the camps, the diseases and lack of food etc are seen as non-human effects caused by war etc.

4. It falls outside the scope of this short article to deal with the interesting and recent studies of the use of sound in autopsies (used as material in a sound work by Jacob Kierkegaard) or the vast amount of legal studies of sound recordings used in court cases.

5. I.e. in: Street, John, "The Sound of Geopolitics: Popular Music and Political Rights", *Popular Communication*, 11:1, 47-57, DOI: 10.1080/15405702.2013.748316

6. Good examples of this might be: Lev Manovich's profound work on cultural analyses of digital culture; or Christopher Whitehead's excellent work on museums as 'visualisation technologies'.

7. Edward Tufte, *Beautiful Evidence*, Graphics Pr; First Edition (July 1, 2006), 7-9

8. Tufte [7]

9. Tufte [7]

10. Søndergaard, Morten & Vandsø, Anette, "Sonification and audification as means of representing." *The Aesthetics of Scientific Data Representation: More than Pretty Pictures* Lotte Philipsen & Rikke Schmidt Kjærgaard, eds, Routledge, 2017. (Routledge Advances in Art and Visual Studies).

11. An example of this mode could be from the Sound of Denmark project, aiming at analysing the sounds recorded to 'draw a detailed map of human and natural sounds in the country'. https://lyden-af.dk/hvad-er-formalet, accessed 5 May 2020.

12. Holmstedt, Janna. "Interspecies Bodies and Watery Sonospheres: Listening in the Lab, the Archives, and the Field." *Leonardo Music Journal* 30 (2020)

13. Beloff, Laura. "*The Hearing Test* – Evidence of A Vegetal Entity." *Leonardo Music Journal* 30 (2020)

14. Katherine Hayles, *How we think: Digital Media and Contemporary Technogensis*, Chicago of University Press (2012), 33. Hayles proposes that s*ound* is framed by 'materiality', which "emerges from interactions between physical properties and a work's artistic strategies." Furthermore, materiality is a property which is not just 'there', but emerges as part of an analytical act, "from the dynamic interplay between the richness of a physically robust world and human intelligence as it crafts this physicality to create meaning."

15. Sound, if approached in this way, is connected to the notion of agency realism, which, as Andrew Pickering explains, is "not the portrayal of how things look but how things go […] an experimental openness to emergence, and adaptation rather than control." Andrew Pickering. *The mangle of practice: time, agency, and science.* Chicago: University of Chicago Press (1995), 48

16. Mackenzie, Louise. "Microbial Sensing: Constructing Perception Through Technological Layers" *Leonardo Music Journal* 30 (2020)

17. Benjamin [1]

18. According to Auguste Compte 'the existing' is 'the real' (as opposed to the imagined), 'the useful', 'the certain and undoubtful', 'the accurate', the opposite of 'the negative', and turned against the fragmentation and dissolution in science and society in general.

19. B. Latour, *We Have Never Been Modern*, University of Chicago Press (1993)

20. Mackenzie [16]

21. This model is being developed by the author as part of larger study into the paradigms of aesthetic approximation and their cultural practices in the context of the research project Art in the Age of Information / SMK – The National Art Gallery in Copenhagen.

22. K. Jaspers, Man in the Modern Age, *Philosophy*, Trans. E. B. Ashton, 3 vols., Chicago: University of Chicago Press (1998), 1:112–13.

23. Michel Foucault, "On the archeology of the Sciences", *Michel Foucault: Aesthetics, Method, and Epistemology*, New York: The New Press (1998), 297-335.

24. Jaspers [22]

25. Martin Heidegger, *The Questions Concerning Technology*, Garland Science (1954).

26. Technological determinism is operational in KulturTekniken (paradigm 4), where the production of meaning is completely determined by technology. Aesthetic approximation is reduced to aestheticizations in a critique of subjective intentionality. Krämer, S & Bredekamp, H. "Culture, Technology, Cultural Techniques - Moving Beyond Text." In: *Theory, Culture and Society*, Vol. 30, No. 6 (2013), 20-29.

27. Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford: Oxford UP (2005).

28. Bruno Latour, Politics of Nature: How to Bring the Sciences into Democracy. Cambridge, MA: Harvard University Press (2004). Latour claims that scientific knowledge, like all knowledge, is constructed, but we need those constructions – the are ethically active as mediators of our own potential destruction (which we seek to avoid). What is important therefore is the way they are practiced.

29. As opposed to a phenomenological perspective where things are never involved in causal relations but are *intentional*; causality cannot be derived from pure descriptions. Instead, they are involved in relations of *congruency*.

30. Holmstedt [12]

31. Rennie, Tullis. "Socio-Sonic Interventions: Distributed Authorship in Socially Engaged Sound Practices" *Leonardo Music Journal* 30 (2020)

32. Beloff [13]

33. Holmstedt [12]

34. Mackenzie [16]

35. Højlund, Marie & Riis, Morten. "Transductive Wind Music - *Sharing the Danish Landscape with Wind Turbines*" *Leonardo Music Journal* 30 (2020)

36. Rennie [31]

37. Loveless, Stephanie. "Tactical Soundwalking in the City: A Feminist Turn from Eye to Ear" *Leonardo Music Journal* 30 (2020)

38. Loveless, Stephanie. "Listening Geopolitics and The Anthropocene Contact Zones of The Bali and Georgia Straight" *Leonardo Music Journal* 30 (2020)

Biographical Information

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