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Exploring the Sphere of Sound

https://sphereofsound.squarespace.com

"It is perhaps not premature to suppose that the artist, who develops the five-fingered hand of his senses (if one may put it so) to ever more active and more spiritual capacity, contributes more decisively than anyone else to an extension of the several sense fields…"

– Rainer Maria Rilke

Just as the nightingale sings in order to define its nest and mark out its territory, so do we occupy and at the same time empty out the universe with our thunderous techniques. Like the submerged cathedral of old, the earth is engulfed by noise.

– Michel Serres

Preface:

To compliment this paper, the supplementary website borrows tactics from electronic literature, something about which N. Katherine Hayles wrote extensively. This movement began in the late 1900's with the goal of questioning the embodied interactions users have when text, visuals, and interactive components are combined on computers. The website provides examples of each artists' work, and these examples are interpolated with text and audio with the theme of sound and noise in an effort to activate multiple senses when taking in the information. The visuals have a focus on facial components with the purpose of directing viewers to watch a mouth or

read the captions, as a way of embodying the experience of a deaf or hard of hearing person.

Sound helps designate our place in the world. This research website explores creative representations of the aural dimension and how they help inform our understanding of interpretations of sonic meaning. Via sound-based installations and performances, artists such as Tarek Atoui and Christine Sun Kim have deconstructed our existing idea of what it is to experience sound in order to expand how we define hearing. Cross-modal art like theirs offers us a tangible mechanism with which we can mediate our surroundings. Such explorations that keep embodied differences in mind and utilize technological components when creating art challenge how we understand perception and restructure the senses with which we process information.

To provide context for these examples, it is necessary to illustrate various historical interpretations of how the body reacts to sensory perception. While Jean-Luc Nancy reduced the body to "that in which sense is given and out of which sense emerges," others such as Maurice Merleau-Ponty have more thoroughly unpacked bodily experiences via a grasp of the chain of physical and physiological events. With these arguments in mind, we can look towards future instantiations of how the body will play a role in our interactions with the digital (and in this case, artworks that

incorporate the digital to deliver their messages), particularly from a posthuman standpoint.

Philosophers as far back as Aristotle defined the five senses and the process of sensing as going from potentiality to actuality, from perceived to applied meaning. In seeking to understand the body as more than just a signifier, per Nancy, Merleau-Ponty's understanding of the bodily experience may provide help. Merleau-Ponty stresses that we are conscious of ourselves and our body via the world. If we understand the senses as primary facilitators of this experience, in that they give meaning to external events/entities and our sense of place, and if we accept Merleau-Ponty's claim that we 'surge towards' objects to grasp them—then we can validate the need to broaden our definition of how we use the senses to identify these objects. (Merleau-Ponty, pg. 106) If we are drawn to objects in our search for their meaning and the meaning of their surroundings, then this resulting, subjective meaning can in turn be influenced or supplemented by these very objects.

With these understandings in mind, N. Katherine Hayles took this process one step further in *How We Became Posthuman*. "The posthuman view thinks of the body as the original prosthesis we all learn to manipulate," she claims, meaning that extending the body or replacing certain functions is inevitable. (Hayles, pg. 3) If the necessity for embodiment in order to interpret and give meaning to our surroundings is decentered in such a manner, more value is placed on external tools that assist with

cognition and the application of meaning. From here, couldn't we legitimize artistic approaches to new constructions of subjectivity and cognition in general?

Tarek Atoui is a hard of hearing Lebanese artist and sound composer. He has worked with Al Amal School for the Deaf in Sharjah, United Arab Emirates, since 2012 to gain knowledge about the Deaf experience of interacting with sound. (Council, 2014) This collaboration lead to a long-term project known as WITHIN, which culminated in musical performances and instruments with and for Deaf people. *Infinite Ear* continued this research and provided a multi-sensory and exploratory haven for deaf, hard of hearing, and hearing visitors alike.

The exhibition was part of the 2016 *Bergen Assembly*, Norway's triennial, for which Atoui was one of the Artistic Directors. It included several films, videos, artwork installations, sonic experiences, and innovative instruments all collected with the intention of providing an entirely new aural experience for visitors. "What we learned about vibrations and the perception of sound through working with the students and engaging with the participants in this piece, was that the potential of sound goes beyond regions or cultural characteristics," Atoui remarked. (Atoui 2014)

By choosing to work with the Deaf community, Atoui uncovered creative methods for interactivity and sensory mediation that might not otherwise have been possible. "*Infinite Ear* is an exercise in inhabiting hearings edge, hearings 'other' from without, and in inhabiting that which remains in excess of sound. It displaces,

attenuates and substitutes the organs and sounding apparatuses normally responsible for hearing and speaking. Instead, *Infinite Ear* versions hearing, denaturalizes it, and creates a conceptual morphospace composed of multiple kinds of 'hearing knowledges,'" Emma Goodhart writes in Council's online documentation of their explorations that led to the exhibition. (Council, 2014) The materials in the exhibition (such as the instruments, the environment) are the what create this 'hearing knowledge' in their tactile manifestations of signals such as the frequencies that turn into sound. Effectively, a new aural dimension is born, and is validated by its ability to create and transmit 'information.' While the auditory brainstem works with the inner ear to localize sound sources and parse out frequencies, people who are hard of hearing have reduced frequency selectivity and seek other, external resources to aid in perception of noise.

Thus, such variations on aural perception and interpretation can reshape our means for communicating messages and applying meaning to them. How we perceive sound is relative, adaptable, and fluid (contrary to a stagnant and standardized way of experiencing auditory signals). Council, a curatorial group that worked with Atoui on the exhibition, sought to challenge hearing by separating it from the ear's functionality with which we usually define it. One of their contributions to *Infinite Ear* was the White Cat Café, where visitors could choose from a menu of drinks paired with recordings of normally inaudible sounds ranging from a snowy landscape to the gravitational waves

emitted from colliding black holes. Perhaps a more literal approach to dissolving the boundary between hearing and nonhearing visitors were the sound massage sessions by artist Thierry Madiot. (Council 2016) Individuals could experience his medium by lying on designated tables and feeling carefully curated series of vibrations, illustrating how auditory signals can be transformed into tactile sensations that remain faithful to an intended message.

Designers from Kvadrat Softcells created FELT, a piece consisting of multiple panels with different textures that respond to touch. Each of these panels responded uniquely to different types of sound. Another instrument in the abandoned pool relies on bodily gestures (akin to communicating through American Sign Language) to transmit low-frequency sounds that can resonate in an audible tone depending on where the instrument is played. (Débatty 2016) On her blog, We Make Money Not Art, Régine Debatty described the benefit of these instruments created with deaf individuals, "By working together on the instruments, which appeal to both the hearing and deaf public, the aim is to convey to visitors from the perspective of deaf people how instruments and the sounds produced by them are perceived by the deaf community and how the instruments can be played in these circumstances." (Debatty) These experiences seem to put the nonhearing individual first, as they rely on vibrations and touch before audible noise, thereby flipping the script in the hierarchy of how able-bodied people experience the senses.

Similarly, artist Christine Sun Kim transcodes sound and meaning to produce unique artworks. Born deaf, Kim began her career making paintings. However, she wanted to "reclaim ownership of sound" by putting it into her art practice. (TED Talk) Particularly due to her experiences navigating a world that is not build for her deaf body, Kim has considered how she has to adapt her own behavior to fit into a world of sound. She views sound as "social currency," and by harnessing it in her art, she pushes back against normative exchanges of this currency.

Today, Kim works with gestures, visual cues, sound, and other traditional 2-D media as foundations for creating her work. In *Game of Skill 2.0*, which was presented as part of MoMA PS1's *Greater New York* exhibition in 2015, the artist hung a handheld device from lines hung across the ceiling. Visitors are prompted to hold the device and move forwards and backwards in order to play the audio. However, the need for 'skill' lies in the fact that the handheld portion must be held in a specific manner in order for the audio to play in a decipherable voice. (Kim) As users walk through the physical space to experience the sound, Kim provides a literal expansion of their auditory fields.

Game of Skill 2.0 requires both users and technology to work together to create meaning, a way of emphasizing the "mutually constitutive interactions between components of a system rather than on message, signal or information," like Hayles wrote decades prior. (Hayles, pg. 11) This deemphasizes abilities or inabilities of

components of the system and requires all parts, biological and mechanical, to work together to decipher information. And, just like the new forms of communication that emerged with the phonograph or the later, vibration-based instruments exhibited in *Infinite Ear*, such novel interactions with technology can bring about new understandings of how the senses enable those forms of communication. "It is through instruments that transformed perceptions occur and new 'worlds' emerge, but any new world is itself a modification of life-world processes," Don Ihde mentions in his book *Bodies in Technology*. (Ihde 2002)

The aforementioned interpretations of auditory signal processing portray an artistic approach to capturing and channeling sound as information. Historically, this has not always been possible without what Ihde called 'instruments.' Technological inventions in the twentieth century such as the phonograph enabled future people of all professions to experience the transmission of sound, and thus information, on a much larger and more complex scale. However, despite a need for hearing to acknowledge its utility, this mechanism owes its genesis to a Deaf person. Friedrich Kittler illustrated this in his book *Gramophone, Film, Typewriter*: "Blindness and deafness, precisely when they affect either speech or writing, yield what would otherwise be beyond reach: information on the human information machine. Where upon its replacement by mechanics can begin." (Kittler 1986) Thomas Edison, who was deaf in one ear, is credited with the invention of the phonograph. In 1877, Edison's

original impetus for his work in recording sound was to increase the speed of processing Morse telegraph messages. The machine ended up recording frequencies, or, vibrations per second. (Kittler 1986) In essence, these vibrations, ended up being a way for him to transfer his auditory processing system into his sense of touch, one of the more prominent examples of the early technological implementation of the Central Nervous System. Such an implementation enabled the transformation of internal, imaginary acoustic signals, into real information.

Initially, the phonograph was a way to simply record sound, but it provided the foundation for later, more modern data streams and recordings of everything ranging from psychoanalytical sessions and government propaganda to music and radio. In his discussion of the transmission of senses, Kittler references Rainer Maria Rilke's essay, "Primal Sound." Here, Rilke mentions his first experiences with recorded sound, and how they have informed one conception of the senses that he illustrates as a sort of sphere. "If the world's whole field of experience, including those spheres which are beyond our knowledge, be represented in a complete circle, it will be immediately evident that when the black sectors, denoting that which we are incapable of experiencing, are measured against the lesser, light sections, correspond to that which is illuminated by the senses, the former are very much greater." (Kittler 1986) These "abysses" between functioning senses seem to offer some sort of extrasensory potential for Rilke. Rather than being an empty void, they are full of potential for new

perceptions. This suggests that the way *Infinite Ear* or *Game of Skill 2.0* bend prior notions of sound are very fruitful, for there is content and room for possibility in the 'abyss' between one activated sense and another.

A few decades later than Rilke, scholar and philosopher Don Ihde explored the idea of the auditory field as shaped like a sphere even further in his book, *Listening and Voice*. "Were it to be modeled spatially, the auditory field would have to be conceived of as a "sphere" within which I am positioned, but whose "extent" remains indefinite as it reaches outward toward a horizon. But in any case as a field, the auditory field-shape is that of a surrounding shape." (Ihde, 1976) We are surrounded, immersed, penetrated by sounds such as symphonies and other forms of music. This 'surroundability' of the auditory field is what places us within it in order to find meaning in it. The ambiguity of this field, or sphere, is what leaves it open to interpretation, as artists and deaf/hard of hearing individuals have illustrated in their atypical approaches to perceiving it. "And while all these existential possibilities of the auditory field are present in sound, dramatic and selected variables reveal these qualities in more striking form," Ihde continues. (Ihde)

Both artists convey this 'surroundability' of our exchange with environmental sounds, and take advantage of Rilke's 'abysses' between senses by requiring audiences to create meaning from their artwork in ways that might not be obvious. From a biological standpoint, our ears transduce sound vibrations into electrical energy that

can be translated into information. This process of transduction that occurs in our cochlea is what makes sound meaningful. These artists use external tools to supplement this flesh-based, biological process to illustrate just how fruitful understandings of our posthuman relationship with technology and tools can be.

Conclusion:

The work in *Infinite Ear* portrays a way that technology can augment, instead of supplement or replace, tools for experiencing normative or supernormative sensory perception. Focused on the 'real' via vibrations like Edison's phonograph, information is transmitted via tactile sensation and body cues. The exhibition relays information via instruments and tools, and in doing so, almost refashions the human auditory systems. Similarly, Kim's representations of sound challenge audiences to adjust their bodily movement to uncover the messages in her work.

In her *Cyborg Manifesto*, Donna Haraway argued that human-machine combinations can push back against normative approaches to what makes a sensory, able body. Such a new translation of these systems, put in Haraway's terms, is "*the translation of the world into a problem of coding*, a search for a common language in which all resistance to instrumental control disappears and all heterogeneity can be submitted to disassembly, reassembly, investment and exchange." (Haraway 2000)

Merleau-Ponty spends time discussing phantom limb theories in *The Phenomenology of Perception*, and describes how the body inherently seems to reject

any physiological limitations: “What it is in us which refuses mutilation and disablement is an *I* committed to a certain physical and inter-human world, who continues to tend towards his world despite handicaps and amputations and who, to this extent, does not recognize the *de jure*. The refusal of the deficiency is only the obverse of our inherence in a world…” (Merleau-Ponty, pg. 81) He refers to the limitations of disablement as “regions of silence,” but these two artists move beyond such a claim by using their embodied understanding of silence to shed light into new abysses open for interpretation.

Kim’s and Atoui’s artworks communicate the experience of the self via non-normative means, and from such expressions emerge disability communities as equals to able bodied people. By presenting audiences with tangible representations of the subtleties of aural perception, they help us teach our bodies new ways to give meaning to our surroundings. In deprioritizing ability as a necessity in the delivery and perception of sensory information, and instead with technology as our enabler, boundaries between the five senses can be broken down in so as to guide us further into the sphere of sound.

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