Sounding the Museum

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Recording and Ethnography

Sound technology has had an important role to play in ethnography. Emerging from debates going back to the 1980s, the then-recognized "crisis of representation" led many researchers to embrace sound recording (alongside other recording media) with newfound enthusiasm (Makagon and Neumann 2009). This "phonographic turn" in ethnography increased the use of sound recording in aural history, and it also did much to diversify the uses of sound in the describing of people and place, with anthropologists like Steven Feld at the forefront of pluralizing the uses of sound beyond the documentation of voice.

Sound recording describes an assemblage of technologies, including microphones, recording devices, editing technologies and speakers, as well as an array of paraphernalia to interface these devices. Critical scrutiny in ethnography has tended to be directed either toward the assemblage as a whole or upon technologies related to the act of recording. In any work on the cultural histories and meanings of recording technology, this total assemblage must be acknowledged at the outset, but for the purposes of this article, I will focus on the loudspeaker and its peculiar affordances in relation to ethnography and museology.

I write as somebody with a keen interest in media history but also as a former professional sound designer with particular experience of creating sound installations for museums all over the world. In this article, I will posit two key arguments: First, that loudspeakers evolved according to a "vococentric" bias, that is, a focus on the reproduction of the voice and the acoustical assumption of voice as a normative sounding object, and secondly, that this vococentrism continues to obscure one of the central affordances of the loudspeaker, namely, its ability to act as a vehicle for a "sonic" augmented reality. The term *vococentric* was initially coined by Michel Chion in relation to cinema, which, he argued, "almost always privileges the voice, highlighting and setting the latter off from other sounds" (Chion 1994, 5).

I will conclude that a more complete and accurate account of the

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affordances of the loudspeaker would identify a device not equivalent to a "proxy voice" but more like a proto-augmented reality machine, something uniquely bestowed to blend the mediated and the real. Further, despite their ubiquity, speakers remain an underutilized, often insensitively deployed or even misunderstood medium in heritage curation because they are so seldom used in ways idiomatic to their inherent behavioral characteristics.

Vococentrism in the Audio Technology Assemblage

Recording technology has an inextricable relationship to the voice. Writing in *North American Review* in 1878 (Edison 1878, 533-534), Thomas Edison provided a list of possible uses for his newly invented phonograph. Eight of ten assumed the object of recording to be the voice. There were technological and cultural reasons for this. As to the technology, the very limited frequency response of early sound recording compromised the rendering of all sounds. As we have understood well since the advent of telephony, the semantic meaning of speech remains intelligible even when large parts of the signal are obscured. If this is true of our ability to make sense of heavily "compressed" textual information (such as our ability to read abbreviated text messages, or make sense of language with poor spelling and grammar), so too is it true of our ability to understand speech rendered through poor audio quality.

Other sounds fare less well. Without the coded redundancy of speech, where even a broken pattern enables us to reconstruct the whole, a delicately rendered field recording of wind in the trees or the complex interplay of harmonics in an instrumental ensemble loses more in mediation than does the voice (Truax 1984, 16).

Shortcomings of technology notwithstanding, the vococentric uses of recording followed a logocentric approach to epistemology that both audio technology and ethnography inherited – a Western culture founded on the Word as the privileged representation of the Platonic ideal (Derrida 1997). While poststructuralism offered a challenge to this privileging of word (and text) – not least in ethnography – it would be hard to argue even now that we have the intellectual tools or even the inclination to value non-word-based forms of knowledge as equivalent to the power of the word (Foucault 1975). If this is true of knowledge in general, it is especially so within the domain of sound. Our "aural" history – our history of listening to culturally important sounds – has in fact been heavily dominated by the

much more commonly used term *oral history*, history as spoken testimony (Abrams 2010).

Like photography, the recorded voice immediately assumed an indexical status, recording being a reliable vehicle for the rendering of embodied reality. Since the early days of sound recording, the indexical capacity of sound recording created the potential for sonic abstraction much as photography liberates painting from "the bonds" of representation. This theme was explored extensively by composers emerging from the *musique concrète* of the late 1940s onwards and into electronic music today. Notwithstanding certain notable exceptions, documenting our sonic intangible cultural heritage – whether artefacts, activities, or the acoustics of the environments we inhabit – remains a relatively low priority.

UNESCO defines intangible cultural heritage as going *beyond* "monuments and collections of objects" to include "living traditions or living expressions inherited from our ancestors and passed on to our descendants" (UNESCO 2023). Although this definition redresses a Western cultural bias in heritage protection, it perhaps perpetuates a paradigm of "safeguarding" or "preservation" that runs the risk of objectifying lived culture. If recording and reproduction apparatus have had a role to play in this problem of objectification, I would argue that they also have a future role to play in the solution.

The ephemeral nature of sound *constitutes* it as a form of intangible cultural heritage despite it often slipping through the definition offered by UNESCO. The ephemerality of sound means that notwithstanding our appreciation of architectural acoustics, use of heritage instruments and historic sound-making practices, it is mainly through sound *recording* that we preserve our sonic and acoustic heritage. Even as Jonathan Sterne and others rightly assert that sound has indeed been central to modernity, it nevertheless still represents a poor relation to the artifact and the digital image in heritage studies and museology (Sterne 2003).

Vococentrism in Speakers

In the pre-electrical era of sound recording, the iconic horn –famous from the His Master's Voice logo and used in early gramophones – provided an effective means by which to amplify the weak acoustic vibrations created by the device's stylus, by focusing sound energy in a highly directional way. The horn took its form from wind instruments, which in turn, had been influenced by the vocal tract (Titze 1991), and this vococentric model was crucial to the success of the technology. In those early days, the gramo-

phone would not have been loud enough without the focusing of the sound that the horn provided. However, with the advent of electrical amplification in the 1910s, and notwithstanding contexts in which high acoustic efficiency was required, the directivity of horns was no longer inherent or necessary to the behavior of electrical loudspeaker cones, which in theory were able to manifest a wide range of sound-radiation characteristics. By then however, an audio-spatial paradigm had already been initiated.

The Augmented Characteristics of the Loudspeaker

Unlike screens, which confine programmatic content to their own perimeter and surface, the behavior of loudspeakers has *always* been one of augmenting the acoustic reality of an existing space. Because this is not an attribute of the reproduction technology, but a characteristic of the medium of sound itself, this process of augmenting one sound onto another is seamless (Prior 2016). To this extent, this is also true of headphones. But unlike speakers, headphones remove the role acoustics play in mediating sound between the transducer (the speaker) and the listener, where the journey of sound would otherwise be mediated by the reflection, absorption, and occlusion of objects in its path.

Conversely, loudspeakers are necessarily located in a place that has physical –and therefore acoustic– characteristics of its own. It is therefore idiomatic to the speaker in ways it is not to headphones, to interact with the spaces in which they are situated. For the first sixty years or more of loudspeaker listening, our experience was monaural. Although early experiments in stereo reproduction date back to the 1880s, monaural reproduction was standard in home-listening environments until the mid 1950s, not common in cinemas until the advent of Dolby Stereo in the 1970s, and in the amplification of live music, later still (Handzo 1985, 418).

Sound emitted from a single speaker would be perceived as emanating from it. No matter what sound was being mediated, it would always gravitate back to the box that created it. Until the advent of stereo, then, loudspeakers retained their objectedhood, behaving like every other sound-emitting device, behaving as a substitute presence (a substitute voice), and as such, a definitive, bounded object in space.

Stereo listening disrupted this. Often attributed to the pioneering work of Alan Blumlein, the phenomenon of stereo listening relies upon two or more speakers (or indeed headphones) being used together, where differences in relative level and minute time differences between the speakers lead to the illusion of three-dimensional space, the so-called phantom

center. It should be underscored that this experience was unprecedented for human beings (Alexander 2000). Stereo sound represented an entirely new, media-specific notion of ensemble listening quite distinct from those we were familiar with in the natural world or in music.

We are familiar with multiple, similar sound sources operating together in a coherent way to form a soundscape. When we hear the sea, we are hearing billions of particles of water sounding together to form a gestalt. Wind exciting leaves in trees does the same thing, and the sounds of multiple engines and tires of multiple cars can similarly combine to produce what we describe as a soundscape.

In music, we have also evolved the concept of an ensemble, where we coordinate the performance of multiple instruments to combine to become more than the sum of their acoustic parts. However, the loudspeaker represents a different order of ensemble that has no precedent in either human culture or the natural world – the ability to combine in a form of unison that would be impossible outside of the context of an electrical assemblage. The space created by Blumlein's techniques resides *between* the loudspeakers, causing our aural perception of the speakers themselves to recede, ideally denying their objecthood to the point of disappearance. Unlike the intimacy of monaural listening, where sound gravitates toward the device that produces it, stereo sound is constituted in space and can only be apprehended *as* stereo once it has left the speaker and entered the space in which it is heard.

Conclusion

The original form of the loudspeaker derived from a horn, a form itself derived from the model of the voice. As such, the loudspeaker has evolved around precepts of vococentrism that also inhere in ethnographic culture. Stereo technology alerted listeners to the possibility of a mediated sound being able to augment the sound of a real space – a phenomenon of significant untapped potential in ethnography and museology. In this phenomenon was the potential to challenge vococentric precepts of static sound sources positioned in space and of vococentric program material, which privileges the spoken word over everything else.

Had speakers evolved in a period in which augmented reality was already being explored, the affordances of augmentation and mediation might have informed their development. However, theirs is an older history that saw the conventional speaker as we know it evolve to aspire to the

conditions of *virtual* reality, where the place in which they were situated ideally receded to the point of being nullified.

Taking sound as a quintessentially "augmentable" medium as a point of departure, sound, as mediated through loudspeakers, might find a more idiomatic function in heritage practices and the galleries, museums, archives, and libraries that play host to them. While the technologies that make this possible are well over 100 years old, I hope that changes in our understanding of knowledge itself and the renewed valuing of nontextual cultural and intellectual artifacts will broker a more idiomatic use of the speaker.

Such a turn toward exploiting the natural affordances of sound in augmenting the acoustic substrate of a physical environment might provide a powerful vehicle for the curation of our intangible sonic cultural heritage. As technologies now emerge in other sensory domains to extend and blend our physical and blended realities, we may also exploit the convergence of technologies previously specific to discrete sensory registers, so as to position the centrality of sound in future discourse and practice on extended realities. Some of this work is already underway, and while beyond the scope of this short article, a survey and analysis of the innovative deployment of augmentative spatial audio in sound art, ethnography, and museology around the world represents an exciting future opportunity.

Works Cited

Abrams, Lynn. 2010. *Oral History Theory*. London and New York: Routledge.

Alexander, Robert. 2000. *The Inventor of Stereo: The Life and Works of Alan Dower Blumlein*. London and New York: Routledge.

Chion, Michel. 1994. *AudioVision: Sound on Screen*. Edited and translated by Claudia Gorbman. New York: Columbia University Press.

Derrida, Jacques. 1997. *Of Grammatology*. Translated by Gayatri Chakravorty Spivak. Baltimore: John Hopkins University Press.

Edison, Thomas. 1878. "Phonograph and its Future." *North American Revie*w 126, no. 262 (May-June): 527-536. https://www.jstor.org/stable/25110210.

Foucault, Michel. 1975. *Discipline and Punish: The Birth of the Prison*. New York: Vintage Books.

Handzo, Stephen. 1985. "Glossary of Film Sound Technology." In *Film Sound: Theory and Practice*. Edited by Elisabeth Weis and John Belton, 383-426. New York: Columbia University Press.

Makagon, Daniel, and Neumann, Mark. 2009. *Recording Culture: Audio Documentary*

and the Ethnographic Experience. California, Delhi, London, and Singapore: Sage Publications.

Prior, David. 2016. "Loudspeaker Listening: Tabula Rasa or Augmented Reality." *Leonardo Music Journal*, 26: 3-6. https://doi.org/10.1162/LMJ_a_00957.

Sterne, Jonathan. 2003. *The Audible Past: Cultural Origins of Sound Reproduction*. Durham and London: Duke University Press.

Titze, I.R. 1991. "The Human Voice as a Biological Musical Instrument." In M*usic, Language, Speech and Brain. Wenner-Gren Center International Symposium Series*, edited by Sundberg, J., Nord, L., and Carlson, R. London: Palgrave. https://doi.org/10.1007/978-1-349-12670-5_22.

Truax, Barry. 1984. *Acoustic Communication*. Norwood, New Jersey: Ablex Publishing Corporation

UNESCO. 2023. "What is Intangible Heritage?" https://ich.unesco.org/en/what-is-intangible-heritage-00003.