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Sonic Space-Time: Sound Installation and Secondary Orality

Teri Rueb

Discussions of secondary orality have focused on the cultural impact of telephone, radio, and television. Sound installations, particularly those that map sound to space, present a new arena in which to consider such issues. These installations offer alternative constructions of space, time and narrative that differ distinctly from those produced by radio, telephone and television. Of particular interest are installations that engage real-time and asynchronous telecommunications. While such media tend to be associated with the non-local, their application in mapping sound to space ironically functions as a re-inscription of real space, real time, and the local – hallmarks of oral cultures and the secondary orality of sound installation.

Keywords: sound, installation, orality, literacy, interactivity, non-local

The sonic dimension provides a rich arena in which to explore alternative, non-linear constructions of space and time. Artistic modes of spatial analysis and representation, including architecture and sculpture, have traditionally privileged the visible over the audible, constructing space as tangible, concrete, rational and sequential. Sound, on the other hand, offers the construction of space as permeable, overlapping, ubiquitous, and simultaneous.

For the past six years I have explored the spatial and philosophical aspects of sound through interactive sound installation and augmented reality. The majority of this work involves the mapping of sound to space where invisible sonic overlays are made to correspond to a particular geographical area. These sonic spaces are accessed and activated by the movement of visitor-participants as they travel through them. Most of these works are large-scale outdoor installations that utilize global positioning satellite receivers (GPS) in combination with digital interactive sound.

Through this body of work I have begun to explore questions of orality and literacy as they relate to our experience of space and time in interactive sound installation. Interactive sound installation is distinguished by the delivery of sonic content in situ, such that content and physical context are tightly bound. Listeners actually traverse a physical space that is embedded with audio content that becomes charged with site-specificity, even if this relationship is unintended. This coupling of content and physical context can be viewed as a form of localization.

This emphasis on the local in interactive sound installation stands in contrast to the pre-occupation with the remote that usually dominates cultural discourse about interactive telecommunications technologies and artifacts. This paper seeks to elaborate the paradox of interactive sound installation as it relates to non-linearity and the non-local in interactive aesthetics. Even while sound facilitates non-linear constructions of space and time, its presentation in the form of interactive sound installation functions as a re-inscription of real space and real time.

Sound and Space

To explore the spatial qualities of sound through installation is to explore their philosophical implications as well. In contrast to the objectifying tendency of a western philosophical tradition based in ocular-centrism, sound offers an arena for alternative constructions of space and time, self and other, and by extension, our cultural identity.

Sound presents us with a world in which hard and fast boundaries do not exist. We cannot clearly distinguish the edges of a sound as we might with objects and physical spaces. Sound is mutable, fleeting and ephemeral. It bleeds, it leaks out, it attenuates and disappears. Sensually vibrant and immersive, sound is almost tangible, yet ultimately invisible. Yet for all its elusiveness, sound is everywhere and all encompassing. Unlike vision, which demands the proper orientation of our frontally located eyes, we hear sound with our whole bodies, not just with our ears. Because sound is directional with respect to its source, we can use it to gauge concrete spatial relationships. Sonar technology allows us to do this with great precision; however, relative measures of volume, location and speed can be detected with just our naked ears - even with our eyes closed. The crying of a child from several blocks away enters my world and conjures a picture in my mind, even as we are separated by walls, windows and lives that may keep us from ever seeing one another. Sound offers a blurring of boundaries between subject and object, self and other, swimming in shared sonic space.

Sound Installations

The structure of my sound installations can be likened to the flow of currents over a streambed. Using a variety of mobile telecommunications technologies including global positioning satellite receivers (GPS), laptop computers, pocket PCs, and cell phones I create databases of digital interactive sound that can be accessed as participants move through specific urban or natural landscapes. Participants use cell phones, compact disc players or specially designed portable location sensing systems in order to access and listen to these sounds. The collections of sound evolve over time with the addition of new recordings contributed by participants who are often local residents or everyday inhabitants of the chosen spaces. These sonic overlays are like shifting currents that flow across the physical surface of a landscape. The landscape and its inhabitants, like the shape of a riverbed, direct these flows and in turn, are potentially shaped by these sonic currents.

a. Trace (1996 – 1999)

The first piece I made that explored sound was Trace, an installation in which sounds were mapped to space along a network of hiking trails in the Canadian Rockies. By carrying specially equipped location sensing backpacks, participants could hear memorial songs, poems, and stories play in response to their movement through specific locations along the hiking trails. The piece was evocative of a cemetery, only, instead of physical monuments, visitors would weave their way through sonic memorials that dotted the landscape like so many cairns. The collection of sound recordings was designed to expand over time with contributions from interested participants.

b. Open City: Public Space and Civic Identity (1999)

Open City dealt with sound in an urban landscape. In this project, visitors wandered through a commercial neighborhood in downtown Washington D.C.. The space was augmented with a telephone-based archive of recordings that explored the impact of telecommunications technologies, especially cell phones, on the design and use of public spaces. Using pay phones or personal cell phones, visitors could dial a toll-free number that would present them with a series of recordings made as out-going messages. Each message was identified with a specific location in the neighborhood. At the end of the recording participants were invited to leave their own messages that would then be integrated into the out-going messages for future visitors to hear. In this way, the sound content of the installation evolved over time through visitor participation.

c. Invisible Cities | Sounding Baltimore (2002)

Invisible Cities: Sounding Baltimore is a project that seeks to engage residents of Baltimore in an effort to sound the depths of the rich oral and aural history of their city – a city that is increasingly defined in broad, superficial brushstrokes by its tourism industry or by tales of urban blight spun by suburban dwellers. The project consists of a series of sound recordings that are presented as invisible sonic overlays that augment the actual urban landscape. Sound recordings are based on interviews with city residents who have been asked to describe a space or experience in Baltimore using sound as the primary means of evoking a sense of place. Sound recordings, heard at the locations to which they refer, blend fictional and documentary soundscape elements with occasional excerpts of spoken word and music. Participants may choose to contribute sound recordings of their own by uploading or mailing contributions along with information about the preferred location of the sound recording. Through this process, the installation emerges as a community effort in which participants effectively “tag” the environment with invisible sonic content.

Secondary Orality

My experience in designing these works has led me to return to questions about memory and secondary orality that originally stirred my interest in memorial and memorial art forms many years ago.

Oral cultures are characterized by vastly different ideas about narrative structure, memory, temporality and identity than those held by highly literate societies. Echoes of these beliefs and their associated behaviors can be found in highly literate societies as an effect of the production, reception and use of new technologies associated with oral modes of communication and behavior. Walter Ong’s theories of primary and secondary orality offer valuable tools with which to analyze the nature and cultural impact of these new media forms, particularly as they are employed in sound installation.

Orality and literacy are terms used to refer to the relative dependence of a culture on spoken and/or written language. Primary orality is a term used to refer to cultures in which written language does not exist at all [Ong6]. Most modern and contemporary cultures exhibit blended oral and literate tendencies, especially as the structure of language, thought and behavior in oral cultures is latent in all highly literate societies. Secondary orality is a term used to refer to the emergence and cultural impact of technologies that facilitate oral modes of communication and

behavior in cultures that are highly literate (for example, radio, television, telephone, and computer) [Ong136]. Such technologies tend to re-introduce aspects of primary orality but with the critical difference that the technologies themselves, as well as the behaviors they produce, emerge from and exist in the context of highly literate societies.

Like many media forms associated with secondary orality, the sound installations described above engage aspects of narrative structure, memory, temporality, and modes of production and reception of the text (in this case sonic content) that bear significant resemblance to those that are dominant in highly oral cultures. While these parallels deserve thorough consideration, the focus of this paper is to consider the shared emphasis on delivery of content in situ that marks communication in highly oral cultures and contemporary sound installations.

a. Content and Context: Real Space and Localization

With no means of producing written records, oral cultures relied heavily on human memory and oral exchange for the storage and transmission of information. The necessity of memorizing large quantities of information gave rise to a variety of mnemonic techniques, both simple and elaborate. Narrative was a primary means of encoding information for transmission in oral traditions. Other techniques drew on this basic mnemonic function of narrative, but exploited it in the interest of preserving non-narrative knowledge. Of these various techniques, the architectural mnemonic emerged as one of the most highly developed arts of memory during the Renaissance. This system and the Aboriginal ritual of walkabout provide useful examples of context-dependent modes of communication in oral cultures that bear similarities to the secondary orality of sound installation.

The architectural mnemonic consisted of a system in which images and places were associated with each other in memory. A physical architecture was the basis for an imagined architecture conjured by the mind's eye. Images, constructed as evocative mnemonic icons that corresponded to bodies of information and knowledge, were projected into the spaces of this imaginary architecture. Information was recalled by mentally walking through this architecture to the location of the desired information. Visual icons embedded in these spaces would serve as mnemonic triggers to draw forth the necessary information stored as rote memorization. My sound installations represent a sort of externalization of the architectural mnemonic. Space becomes concrete, rather than imagined, as sound content is mapped to specific locations in physical landscapes. In these installations, content is increasingly localized and bound to physical context.

The ritual of Australian Aboriginal walkabout also reflects this emphasis on concrete space and the binding of content and physical context in oral cultures. The walkabout is a ritual in which narratives about gods/ancestors are recited as one walks through the landscape. Passed down by oral tradition, these stories function as both a record of the history of the people and a navigational technique. It is believed that the gods/ancestors are conjured by the song as it refers to their images reflected in geological features in the landscape. Like a roadmap, these landmarks and their appearance in the narrative guide the traveler. The songs are also believed to actually conjure the landscape, which in turn, triggers the recollection of the song as one walks. The structure of my sound installations is similar in that specific sound content is fixed to particular

locations in physical space. Visitors must traverse the physical landscape in real time in order to experience the sound content. Implicit in any journey, the path of one's movement through the installation suggests the arc of a spatialized narrative.

While the spaces of my sound installations are real, not abstract or imaginary, the various elements of sound content, as discursive constructions, frequently evoke fictive and non-linear time and space. This tension between the singularity and multiplicity of space and time is heightened by the fact that multiple sounds may be layered in a single location. This blurring of linear and non-linear space and time is even more exaggerated in the Aboriginal walkabout in which no distinction is made between physical and narrative space and time.

Sound Installation & Television, Telephone and Radio

Unlike the emphasis on face-to-face communication that characterizes oral cultures, my installations employ technologies that replace human presence and ambient sound with mediated forms including recorded sound. In this respect the secondary orality of sound installation resembles that of television, telephone and radio. However, the presentation of content in situ is a critical feature that distinguishes sound installation from television, telephone and radio.

Even in the case of portable telephones, radios and televisions, these technologies are still designed to deliver content independent of context – that is, the content is assumed to be the same whether you listen in the subway, on the street, or in the home. Content is, of course, variably framed by the context in which it is received, but for the most part this drift in meaning is unintentional on the part of broadcasters, writers or engineers who primarily imagine fixed viewing scenarios such as domestic spaces, or ubiquitous but arbitrary contexts as in the case of portable radios, televisions, and cell phones. The delivery of recorded sound in site-specific locations via mobile telecommunications technologies creates a host of effects with respect to secondary orality, but in the case of sound installation, it makes possible the direct linking of content and physical context. I also use these technologies to facilitate the contribution of sound content to my installations by participants and members of local communities, which represents an even deeper coupling of content and context.

Conclusion

The use of sound and interactive telecommunications technologies in my work allows me to create sound installations that blend real and fictive, linear and non-linear space and time. However, these works always return the participant to the grounded-ness of real space and real time in that they require visitors to physically traverse a space in order to access sounds that area mapped to the landscape. In this capacity, sound and telecommunications technologies, so often associated with non-linearity and the non-local, ironically function as further re-inscriptions of real space, real time, and the local.

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Biographical Statement

Teri Rueb is an artist whose practice blends traditional and new media in large-scale interactive installations. Her work explores the relationship between technology and culture with an emphasis on issues of time, memory, and the body. She lectures, exhibits and publishes widely in international venues including CAiiA Consciousness Reframed (Australia, 2002), ISEA (Nagoya, 2002; Paris, 2000), The Banff Centre for the Arts, The New Museum of Contemporary Art, Bell Laboratories, Interval Research, and the German National Institute for Research on Information Technology. In 1999 she launched "Trace" along a network of hiking trails in Canada with the support of the Banff Centre for the Arts. She is currently working on a sound installation that explores the psycho-social geography of Baltimore, Maryland.

Her work has been reviewed in a variety of publications including I.D. Magazine, Interactivity Magazine, and "Information Arts: Intersections of Art, Science, and Technology", MIT Press 2001. She is a recipient of numerous grants and fellowships for research in art and technology. Rueb is an Assistant Professor of Visual Art at the University of Maryland Baltimore County. She is co-founder of Utensile Design, Inc., a technology innovation firm that specializes in alternative interfaces for users with special needs.