Tuning the Interface for Relational Listening

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Abstract. This paper re-visits my creative and research experiences with the creation of sound-driven interfaces for navigation and performance, as part of a personal quest for space and identity. Involving geographical migration, its sonic experience and the connections mediated with internet technologies, the experience of listening and performing within dislocation refers not only to the development of technological systems, but also to the exploration of new forms of interacting with the self and others through listening and sounding in distant locations, inviting participants to the discovery of 'in-between' sonic spaces for being.

Derived from the need for a shared conceptual and technical framework, the project 'Sound Matters Framework' has explored, with other sound artists and researchers, practices of interrogation and relational playback for the creative interplay of field recordings and speech. The framework has evolved into the idea of creating *interfaces for relational listening*. What characteristics might be involved in such imagined *interfaces* and what *relational listening* means within contemporary contexts of dislocation, are the questions that I am formulating on this paper within the broader field of live interfaces.

Keywords: Migration, Sound space, Sense of Place, Relational Listening, Interfaces, Performing.

From navigation to Networked Performance

My creative research work has explored people's perspectives on listening to local and distant acoustic spaces, reflecting on identities and sense of place (Doreen, 2001). Specifically, within my experience of urban mobility and geographical migration, I have searched for new forms for interaction and reflected on what seems to be, in my personal experience, a collapse of known cultural *interfaces*. For instance, my perception and ways of navigating chaotically cities such as my native Bogotá in the 80's and 90's, with unstructured public transport, were radically changed when I first used underground public transportation in Barcelona. Wolfgang Schivelbusch refers to this phenomenon as the annihilation of the "traditional space time continuum which characterized the old transport technology" (1986, 36), brought about by the introduction of railway systems in Europe in the nineteenth century. While newer transportation became my *interface* to interact with the urban space, in a parallel manner, I was creating art[1] with multimedia interactive technologies using the metaphors and experience of the underground public transport network. This opened for me the possibilities of creating a virtual interface that might disrupt geographical, cultural and technological borders. Years later, I explored how *listening* to the commuting routine can reclaim the annihilation space time continuum, and expand the sense of space throughout sonic memory and history. Derived from an ethnographic work on London Underground's commuters' listening experiences and the memories left during their daily routine journeys, I created an Internet-based Interactive Sonic Environment[2]. The interactive structure incorporates architectonical and symbolic spaces, mainly derived from the sonic experience (Alarcon, 2007). I created a sound driven multimedia score that became a user interface (Figure 1). Subsequently, and as an expansion of this work, I created the Internet-based environment 'Sounding Underground' (Alarcon, 2009), an interface[3] that links urban soundscapes via commuters' journeys from the cities of London, Mexico and Paris. Each metro has its own screen-based interface, and the interfaces are interlinked in a sonic network that allows online visitors to experience *relationships* between the different sound environments. These environments encompass a structural continuity given by the narrative of underground public transportation spaces

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[1] https://vimeo.com/51626952
[2] https://vimeo.com/105343930
[3] http://soundingunderground.org

(entrance, tickets, corridors, platform and carriage) and are enriched by its overlapping in time and place where, by the navigation on the screen, different micro-narratives unfold[4]. Also, sonic spaces such as doors, trains arriving, steps, and amplified voice, emerge from the commonality of listening experiences in the three cities (Figure 2). The interfaces invited participants to listen to interrelations between sonically distant spaces, and within sounds of specific cultures:

> Wow, what an amazing soundscape. It is the accent of the world condensed into a synthesized experience making human of what I had always thought of as a mechanistic and rather alien environment. And in a stream of consciousness I find myself cushioned by the almost white-noise effect of the tube surrounded and reassured by the voices. But the voices aren't affected or forced or conveying any particular message. (Leslie)

> In particular, I was touched by the Mexico underground which is foreign to me - wonderful to hear the Spanish voices, the music, it sounded "lighter" somehow than the Paris and London counterpart. (Sylvie)
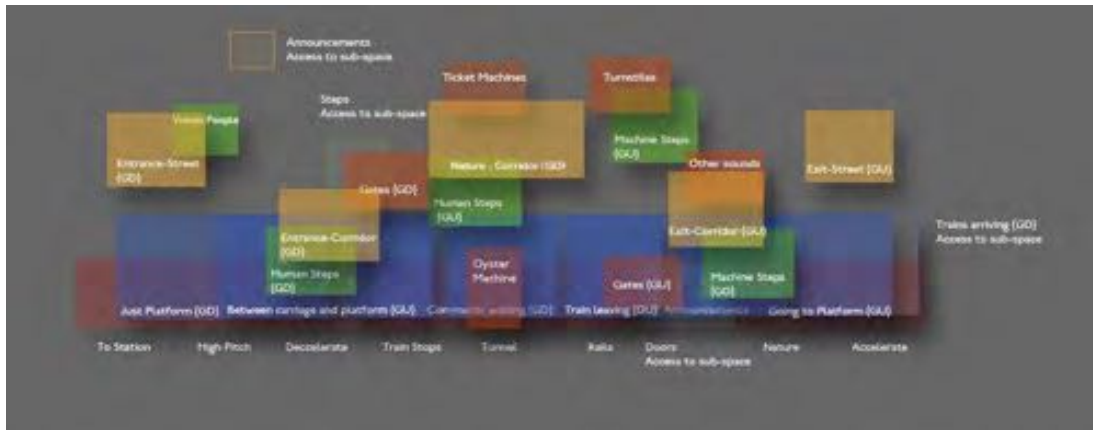

Figure 1. Multimedia Score Interactive London Underground

Figure 2. Entrance México. Sounding Underground

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[4] https://vimeo.com/28416673

In 2008, the desire to make a more interactive interface developed into performance, so I created the co-located networked performance 'Listening and Remembering' (Alarcon, 2011), a system for commuters to improvise in a networked manner[5]. I invited groups of four commuters to play with their voices while listening to a journey created with all the excerpts of sound selected by them during their metro journeys. Performers were surrounded by five loudspeakers, and on their screen-interfaces they had columns with the names of the other performers. Each time they wanted to share a memory triggered by the sound, they could voice it and record it through a microphone. This memory appeared on the interface of all participants who were able to trigger it. Each triggered memory was amplified through the loudspeaker located next to the person who was the author of the memory. The graphic interface was created in Max MSP[6] and helped to create a network of interrelations between performers (Figure 3). Narratives in the flow were emerging, and performers experienced sonic spaces such as "a 'real space' (as if they were in the metro), a personal 'memory space' (the memories they shared with their voices), and a 'performance space' (where the metro is perceived as a background space to develop any kind of sonic intervention)." (Alarcón 2011, 24).

With these virtual *interfaces* I wanted to encourage hybrid listening experiences interrelating individual and collective memories of acoustic space, and also performing in a networked manner with non-trained performers using speech and voice.

Figure 3. Improvisation Listening and Remembering. Paris MSH.

Later on, I experienced listening to my own migration through Pauline Oliveros' Deep Listening practice (Oliveros, 2005). This practice invites us to train our global and focal attention of the sonic space using the whole body, expanding our perception of sound as it travels in time and space, and establishing unexpected *relations* between us and the space. Since 2012, I have been evolving the experience on co-located networked performances into Internet-based telematic sonic performances, developing improvisations such as *Letters and Bridges*[7], between Mexico and Leicester, with migrants from all over the world, and *Migratory Dreams*[8], with Colombians living in London and Bogotá (Alarcón, 2014; 2015) (Figure 4). For these I have used high quality bidirectional audio software[9], spoken word, and interfaces created in Max MSP and PD for performers to trigger pre-recorded sounds to establish relations between local, distant and imagined spaces while improvising.

By strengthening the perception of time and space using networking technologies in the distance, I have been exploring sonic 'in-between' spaces to express feelings associated to migration. Mariana Ortega understands 'in-between' spaces as negotiations between internal and external spaces performed by a person in exile (2004, 27), reflecting one's existential spatiality. These negotiations also take place through what Franziska Schroeder calls Networked Listening (Schroeder, 2013). She suggests that in networked sonic performance the body is performing as if it was "in an in-between state" (224). For her there is a de-centering of performers' attention, "resisting one's self-preoccupation in order to allow for the essential unselfing, a state of moving from oneself to the other" (223):

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[5] https://vimeo.com/29055488
[6] The interface was created in collaboration with Peter Batchelor.
[7] https://vimeo.com/79626844
[8] https://vimeo.com/79622556
[9] Bi-directional technologies that I have used in telematics sonic performances are Jacktrip, Soundjack and TubePlug.

It's interesting because I can feel more than the place and the person… the place is in my mind, imagination or something, I have the connection with the person…I can feel very warm inside of the place of Sally, I don't know if I can feel also Charlie [Sally's Dog], but I can feel a sense of home there. (César Damián, performer Letters and Bridges)

I suggest that in this networked listening artistic practice, an alternative, individual sense of spatiality emerges when listening and making relations within the dislocation. I am interested in creating interfaces to access more deeply those "in-between" spaces, which expands one's perceived existential spatiality.

Figure 4. Migratory Dreams Telematic Sonic Performance. Bogotá – London.

Relational Listening

In 2015, I engaged in the 'Sound Matters Framework' research project, together with Cathy Lane, to address a need felt for shared conceptual and technical frameworks to creatively interplay with large collections of sound, specifically from field recordings and speech, and their trajectories in time and space. The proposed framework (Figure 5) focused on the processes of *Interrogation* – including the processes of creating meta-data, annotation, search and retrieval, and *Relational Playback* – i.e. the technical option of bringing different sound sources simultaneously into a listening environment, in order to enjoy and to create contextual and sonic relationships between them.
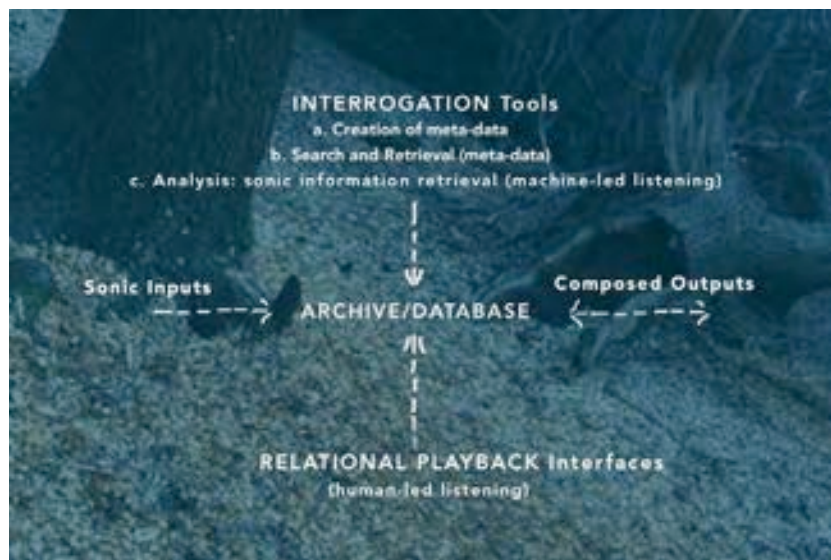

Figure 5. Sound Matters Framework

A needed link with *archives* having existing repositories, to access the sound material, can be seen in the framework. We gathered twenty researchers and artists working with field recordings and speech and asked them to reflect on the proposed framework[10] via interviews and a co-design workshop. We reflected on the nature of archives, the creation of algorithms for relational playback, and experienced some technological developments[11] including Open Source technologies that facilitate the mentioned processes[12].

The *Relational Playback* process was highlighted by interviewees as the most important process in creation and research with sound. This process is generally perceived as fluid, random, experimental, improvisational, compositional, performative and transformative. For the scholar Holly Ingleton, *relational playback* is the most fundamental process in her work, and she is interested in 'jamming' the reality of archives, focusing on the relationships between people and archival artifacts, possibly through mediated interfaces such as telematic technologies. These, she suggested, could bridge divides for making connections, and for 'undoing' traditional processes of the interrogation of data. On the other hand, anthropologist Rupert Cox refers to relational playback as a key process for ethnographic research. In his fieldwork he uses recordings to play to research participants; this practice opens the path of his research in unknown directions, as participants create relationships using their memory of the events. This takes the researcher into a new exploratory journey. Cathy Lane's major installations such as Memory Machine (Lane and Parry, 2005) and BEAM[13] exemplify her approach to memory and composition; for her, relational playback is where aesthetics can be developed and achieved by listening and developing sensibilities to the material, which is the only process that a computer cannot learn.

In the Sound Matters co-design workshop participants were asked to imagine scenarios that would enable creative interplay with large quantities of sound. Three options were proposed by them to establish relationships between sonic materials: mixing them at random according to sonic parameters; performing associative search using physical objects as triggers; and using interactive interfaces (e.g. conductive paint) that work with specific parameters of place, derived from associative tagging. Research into technological options to experiment with these processes brought into the framework open source applications and modular platforms such as Jamoma[14]. We envisioned Jamoma as helping the assemblage of functions to interplay with parameters of sound in a diversity of interfaces: screen-based, physical, interactive (Figure 6).
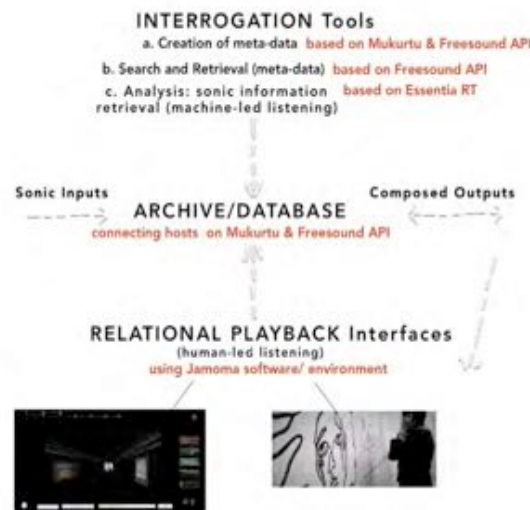

Figure 6. Framework incorporating open source technologies (images from Interfaces 'Sounding Underground' by Ximena Alarcón and 'Touch me not' by José Rizal: Audio book app, created using Bare Conductive (Touch Board, Ink)

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[10] Published stories can be read and heard on http://soundmattersframework.wordpress.com and a wiki of the project is available on https://wiki.research.data.ac.uk/Sound_Matters_Framework
[11] Applications developed with Freesound API, and Essentia Library, and also BBC speech to text new recognition system.
[12] https://vimeo.com/133219234
[13] https://cathylane.co.uk/projects/beam/
[14] http://jamoma.org/

Going further into *relationality* we suggested highlighting *listening* rather than 'playback' in the process that intertwines human listening and the exploration of technologically mediated interfaces. *Relational Listening* has been defined by Lawrence English (2015) as a concept emerging from the possibility to "listen to a listener's listening" (3). This perspective resonates with Shroeder's proposed 'un-selfing' in the practice of networked listening, and with Oliveros' Deep Listening in the expansion of the sound field when practicing global and focal listening and attention to inner and outer sonic environments. English highlights the technological input, suggesting that *relational listening* experiments with what he calls 'two horizons of listening': the first driven by a psychological and experiential listening within time and space, and the second related to technological devices, such as the microphone that amplifies, transmits and serves the listener's listening. He proposes relational listening as the ability positioned 'in-between' the 'internal psychological' and the 'external technological' listening (4).

Nourished by my own and other researchers' and artists' approaches when exploring space and time with sound material directly linked to place and memory, what characteristics might be involved in such imagined *interfaces,* and what does *relationality* mean within contemporary *listening* contexts of dislocation?

I suggest that *interfaces for relational listening* should explore real-time interconnections between sounds in shared and networked sonic spaces, allowing the incorporation of individual navigation and vocal expression, and random encounters between sonic materials and people's memories, provoking global (inclusive) and focal (exclusive) listening attentional modes. These shared sonic spaces could build on the strong relational nature of sonic 'in-betweeness', pursuing dislocation in time and space, supported by networks, though maintaining referential paths to their original locations.

In this manner, the options of returning to these sonic locations, either individually and collectively, could make possible the questioning, unmaking, and making of memory in contemporary contexts. As occurs with human migratory contexts, listening to native sound spaces after being immersed in-between spaces augments the awareness of the self and others, challenging fixed cultural boundaries and beliefs, opening paths for social transformation.

Conclusion

An evolution of a creative process involving navigation and networked performance interfaces derived from the search for sense of place, within the experience of migration, has been described. This serves as an experiential reference to the connections born out of dislocation and opens the field to explore relationships 'in-between' sonic spaces. In my specific works, access to these sonic spaces are reinforced by practices such as Oliveros' Deep Listening, and Networked Listening as described by Schroeder.

A shared sound framework proposed with Cathy Lane, and discussed with other sound creators and researchers, opens the field for thinking of the concept of *relational listening*, initially elaborated by Lawrence English, which helps bring the role of technology into the process of creating relationships with sounds, expanding the listener's listening. In this context, I have introduced the concept of *interfaces for relational listening* as live interfaces in shared sonic environments, which might open spaces for listening that rely on the relational nature of sonic 'in-betweeness'.

Within the contemporary rapid mobility of people between geographies, and the accumulation of sonic information about places and memories of place on hard drives and databases, *interfaces for relational listening* could become key tools for 'tuning' in our contemporary sense of place, questioning it, establishing connections, and offering sonic spaces for being.

Additional Information

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