

## MOBILE SOUND AND (RE)MAKING PLACE

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### ABSTRACT

Since the invention of the transistor radio, people have used mobile technologies to create privacy within the public spaces of urban environments. Devices such as iPods and mobile phones enable us to control social interactions in shared spaces -- ear buds signal to others that we are listening to music, even when nothing is playing and moments of social awkwardness can be alleviated by text messages, games and social networks. While it is easy to blame our devices for disconnecting us from the sights and sounds of everyday life, the connections and interactions made possible through pervasive computing enable us to transform our experience of urban life by creating new modes of engagement in, with and through the places where we live, work and play.

As we increasingly use our mobile devices to filter, augment and curate everyday interactions, our understanding of 'place' has moved from geographic specificity to spatial indeterminacy. Through a discussion of my own practice and other related artworks, I will examine how mobile sound artworks that rely on the body for context can shift the parameters of spatial practice from the body's position within physical space to the liminal space articulated by the moving body; how broadcasting sound through the body can facilitate new modes of sociality in public spaces; and how these temporary conditions and connections may be explored through networked performance.

### INTRODUCTION

In the modern city, mobile technologies work as social filters. In any lobby or coffee shop, we see people communicating next to one another, but not to each other. In many situations, our devices are used to avoid interacting with others – by appearing busy or unavailable, we are not obligated to interact with strangers. Since we can now connect to others from wherever we find a network, our sense of place, home and territory has become less dependent on physical location and more dependent on our connections and affinities. Home is no longer where we are from or where we live, it is wherever we are now.

My practice investigates spatial and social conditions within urban environments through interactive artworks situated at the intersection of sound, performance and mobile technologies. My approach to both sound and media is greatly informed by my experience of walking in urban environments, which I consider to be a form of personal and spatial encoding. I began working with sound and technology simultaneously out of a desire to articulate the immediacy of walking while carving out a sense of place within the acoustic ecology of the city. Over the past decade, I have navigated these spaces through a gradual progression from headphone-based artworks to interactive pieces that integrate, through embodied interaction, the affordances of objects with the expressive potential of the body.

Through a discussion of my own practice and other related artworks, I will examine how mobile sound artworks that rely on the body for context can shift the parameters of spatial practice from the body's position within physical space to the liminal, temporary spaces articulated by the moving body; how broadcasting sound through the body can facilitate new modes of sociality in public spaces; and how these temporary conditions and connections may be explored through networked performance.

### HISTORICAL PRECEDENTS

Sony introduced the Sony Walkman TPS-L2 in 1979. While versions of portable tape players had been available since the 1960s (and normally used for dictation) the concept did not gain traction until record labels began to widely distribute music on tape, along with vinyl. Modeled on the bulkier Sony Pressman, the Walkman was first introduced in Japan and sold over 50,000 units in the first two months. The device was conceived of by founder Masaru Ibuka as a way of listening to music while on long flights.

In *Sounding Out the City: Personal Stereos and the Management of Everyday Life*, Michael Bull examined how people use personal stereos, such as Walkmans and later iPods, as a means of transforming, aestheticizing and personalizing their experience of every day life. [1] Over a series of interviews, users described the experience of stereo use as cinematic, where ordinary encounters gain significance when accompanied by the right music and where alternative narratives can be constructed based on what is going on around them. While everyday experience cannot be controlled, it can be curated and users often described listening to music as a way of bringing a piece of 'home' with them out into the world. By navigating everyday experience through a personal selection of soundtracks, the body articulates its presence in space through its engagement in a sonic journey through space. It is not insignificant that most people listen to music as they move from one place to another and the sounds selected become intertwined with a shifting frame of visual reference.

Devices such as Walkmans, iPods and mobile phones also enable us to control and filter social interactions in shared spaces. In *The Sonic Composition of the City*, Jean-Paul Thibaud (tee-bauwed) describes the walkman as "part of an urban tactic that consists of decomposing the territorial structure of the city and recomposing it through spatio-phonic behaviours [...]the walking listener not only uses it to protect himself from the sonic aggressions of the city, but to also filter and enhance the events that give the place its meaning." [2] Headphones themselves function as visual signifiers of what he calls an "interphonic knot" the point of convergence between interior and exterior sonic spaces. In Bull's interviews, many users described how they used their headphones to control social situations – for example, several female subjects

reported using their stereos in the London underground in order to prevent unwanted attention from other riders and how they would leave their headphones on even when nothing was playing.

It is not surprising, then, that artists have used mobile devices to explore the relationship between the body and urban space. In 1981, Dutch Fluxus artist Willem de Ridder created *The Walk*, a site-specific sound piece for the city of Amsterdam. Comprised of three cassette tapes, the piece was designed to "lead the listener to wander the entire country following the artist's instructions recorded on a soundtrack that overlaid music, voice and story telling." [3] Justin Bennett's *Secret City* was an audio guide to the alleys and passageways of Middleburg, in the Netherlands. [4] Using a radio receiver and headphones, users were able to tune in to a series of 24-hour broadcasts that merged field recordings, interviews, texts and music.

Janet Cardiff's *Forest Walk* took place along the paths surrounding the Banff Centre for the Arts, leading participants through the sound of footsteps, instructions, observations and dialogue. [5] The piece, which, according to the artist, "didn't have very good instructions and the quality of my mixing was terrible since it was mixed on a 4-track cassette deck," set the foundation for future sound walks in sites such as Gairloch Gardens in Oakville, New York's Central Park and the Central Terminal in Kassel, Germany.

David Rokeby's *Very Nervous System* (1982-91) is an interactive sound installation that uses video cameras, image processing software and sound generating systems to transcode gestural interaction into experimental music. In 1992, he performed the piece outdoors, as part of the Potsdam 1000 exhibition in Potsdam, Germany. While the performance did not involve the use of mobile devices, it is nonetheless significant in that it activated public space by merging the objective, logical and empirical processes of computation with the spontaneous, expressive and intimate qualities of the human body.

Christina Kubisch's *Electrical Walks* are a series of augmented soundwalks that take place in various locations around the world. Audience members are invited to borrow a set of headphones, which generate sound in response to electromagnetic fields, WiFi networks, cell phone towers and underground power cables. [6] According to the artist, "*the basic idea of these sound spaces is to provide the viewer/listener access to his own individual spaces of time and motion. The musical sequences are experiential in ever-new variations through the listener's motion. The visitor becomes a "mixer" who can put his piece together individually and determine the time frame for himself.*" [6]

Teri Rueb's *Drift* (2004) is a locative sound walk that takes place along the tidal flats of the Wadden Sea in Cuxhaven, Germany. This pioneering artwork piece used GPS and custom software

housed in a PDA to situate mediations on wandering, walking and being lost to specific geographic coordinates. Users drift along the flats guided by the sound of footsteps. When the tide comes in, the piece shifts into the town.

### THE BODY AS SITE

Mobile technologies affect our understanding of place by positioning the body of the user as the primary site of reception. The positioning of 'body as site,' enables mobile and wearable sound pieces to shift the parameters of site-specificity beyond the realm of locative practice. Over the past three decades, site-specific practice has expanded from conceptual artworks that rely on a specific location for context to artworks that conceive of 'site' through a set of parameters that sit beyond physical location. In *One Place after Another: Site-Specific Art and Locational Identity*, Miwon Kwon argues that as increasing numbers of artworks address 'site' through economic, political or social conditions, our understanding of place has shifted from geographic specificity to spatial indeterminacy:

Dispersed across much broader cultural, social and discursive fields and organized intertextually through the nomadic movement of the artist – operating more like an itinerary than a map – the site can now be as various as a billboard, an artistic genre, a disenfranchised community and institutional framework, a magazine page, a social cause or a political debate. It can be literal, like a street corner or virtual, like a theoretical concept. [7] By broadening our understanding of site from a specific physical location to a set of shifting parameters, 'location' can instead exist as a set of temporary confluences that can engage audiences through a cognitive, as well as physical encounter with an artwork. By encountering 'site' through the body, gestures such as explorative walking become a form of cognitive mapping where the residual effects of the encounter represent a form of notation.

### THE BODY AS CONTEXT

In *The Functional Site or The Transformation of Site-Specificity*, James Meyer defines this space as a "functional site" which sits opposite the geographically-specific "literal site." According to Meyer, the functional site: may or may not incorporate a physical place. [...] Instead, it is a process, an operation occurring between sites, a mapping of institutional and textual filiations and the bodies that move between them [...] the functional work refuses the intransigence of literal site specificity. It is a temporary thing, a movement, a chain of meanings and imbricated histories: a place marked and swiftly abandoned. [8]

Because functional sites do not 'privilege' place, location need not function as a precondition and the moving body takes on new significance and authority. Movement through space engages the user in a series of shifting spatial parameters and through cognitive, as well as physical processes. In *Getting Back into Place: Toward a Renewed Understanding of the Place-World*, Edward Casey argues that "if place is where we inscribe personal meaning, [...]

then we are still ‘in place’ when we walk down the street listening to head phones or talking on a mobile phone. It becomes, however a different place with different inscribed meanings.” [9]

Soundwalking draws from this authority through the practice of listening equally to all sounds within the acoustic environment. Hildegard Westerkamp describes soundwalking as “any excursion whose main purpose is listening to the environment [...] exposing our ears to every sound around us no matter where we are.” [10] While sound walks can take place in literal geographic sites, works such as Andrea Polli’s *Antarctic Soundwalk* still rely on the temporary act of listening to contextualize the piece – the space becomes activated by the presence of the listening body. While all sounds originate from something, somewhere, the act of listening, without recording, positions the body as a temporary interface, where signals recombine and where site, sound and motion coalesce.

*Sonic City* by Lalya Gaye, Ramia Mazé, Daniel Skoglund and Margot Jacobs is a mobile artwork that re-imagines the urban environment as an interface for musical expression. The piece consists of sensors and a software interface that enables a user to “create a real-time personal soundscape of electronic music by walking through and interacting with urban environments.” [11] Sound is generated through a process of mapping ‘discrete input factors’ (incidental events, such as a car passing or a sudden change in route) and ‘continuous input factors’ (ambient events, such as heart rate and light level) to patterns of MIDI notes. The artists consider mobility as a form of interaction that combines gestural interaction and contextual awareness, creating a sonic dialogue between the user and the various stimuli within the environment. *Walking machine* (2003) is a wearable sound piece of mine that enables users to move through the city hearing the amplified sound of their own footsteps in real time. The piece evolved out of a desire to articulate the immediacy of walking, while carving out a sense of place within the acoustic ecology of the city. Users often explore the city as if in a playground, stomping on sewer grates, gliding through grass, splashing in puddles and jumping on garbage cans, while wearing the piece. The effect is that of a private game in a public space, where the simple act of walking becomes a form of embodied listening, gestural interaction becomes a means of articulating presence and play becomes both legitimized and liberated through technology.

Unlike early locative sound pieces such as those by de Ridder and Bennett or more recent examples such as Janet Cardiff’s *Her Long Black Hair* or Teri Rueb’s *Core Sample*, works such as *Sonic City* and *walking machine* can be performed almost anywhere. While geography is implied by the body’s position at any given moment, that position is always changing. The only constant is the body. In the same way that mobile devices expand our understanding of site to include the body, we can also expand our understanding of the body to include those devices. The following section will examine how sound generated through the

moving body heightens our experience of the acoustic ecology of cities by extending the edges of the body, not only into the site, but also into the space of others.

### NOISEMAKERS

In *Noise*, Jacques Attali historicizes economic development through sound, arguing that noise serves as a precursor to social and economic change. [13] Conditions within cities are often revealed through sound, indicating territory, demographics or functionality and politicizing urban space through its ability to invade the acoustic space of others and to affect behavior. As we continue to experience space through the private modes of listening, we become increasingly uncomfortable with the everyday noise and noisemaking of cities. While mobile devices enable us to connect to others, by silencing the social, we lose out on some of the eclectic experience of urban life.

One of the most significant encounters that informed how I think about broadcast occurred on the Queen streetcar in downtown Toronto in the summer of 2004. It was rush hour. I was on my way to work and sitting towards the back of the streetcar. A few minutes later, a boy of about fifteen sat across the aisle from me and began to blast hip hop from his headphones as loud as he could. As we approached the downtown core, it became more crowded. Instead of moving to the back of the streetcar, however, most passengers who were standing stayed towards the front. The soundtrack was distorted but not ear shattering, there were plenty of seats around us, the youth looked more or less like a middle class kid from the suburbs, but nonetheless, full grown adults preferred to crowd together than to sit down near us. This seemed to please the teenager immensely and he started to move around to the music and freestyle along to different passages under his breath.

Broadcasting sound through the moving body, whether through the act of walking or through gestural interaction with and through artifacts, can transform public spaces into social spaces through nonverbal modes of communication. Other artworks of mine, such as *Freestyle SoundKit*, *SOUNDBIKE* and *Swinging Suitcase* have formal and conceptual affinities with both private modes of listening, where mobile devices such as iPods infuse the space outside the body with personal significance and broadcast sound, which can instantly activate and politicize the social spaces of urban environments. *Freestyle SoundKits* (2006) are wearable sound pieces that generate and broadcast electronic dance beats as users move through urban environments, creating percussive soundscapes activated through collaboration, improvisation and one-upmanship. Drawing from the language of boom boxes and low riders, the piece articulates the presence of the user giving voice to the body and blurring the lines between body, artwork and site.

In *SOUNDBIKE* (2005) and *Swinging Suitcase* (2010), anthropomorphized sound and gestural interaction combine to reflect and then confound the relationship between user and

artwork. *SOUNDBIKE* is a mobile piece that generates and broadcasts laughter as it is pedaled through urban environments. The laughter starts when the bike reaches a cruising speed and then responds to velocity, enabling the rider to compose sound with his or her body. The speaker, which works as signifier, is housed on the back of the bike within a bright yellow case, separating the user from other riders and immediately drawing attention. When the piece is engaged, the rider creates a roving broadcast and human counterpoint to the urban soundscape.

*Swinging Suitcase* generates and broadcasts the sound of a flock of small birds in response to movement. Vocalizations are constructed from source clips of house sparrows, which are arranged into responses that range from single chirps to social chatter to scolding. When the piece is swung, the "birds" begin to make noise, which calibrate to reflect the rate of swinging – accelerating and multiplying in response to the gesture of the user and then confounding the interaction when they become "bored." As the user continually relearns the piece, the gestural interaction becomes more complex, shifting exploratory gesture into the realm of performance and using the cognitive process of the user as a compositional tool. As you 'play' the birds, the birds 'play' you.

### NETWORKED PERFORMANCE

In *Mobile Interfaces in Public Spaces: Locational Privacy, Control and Urban Sociability*, Adriana de Souza e Silva and Jordan Frith examine "how mobile technologies can be viewed as interfaces to public spaces, that is systems that enable people to filter, control and manage their relationships with the spaces and people around them." [14] Through a genealogy of mobile media starting with the pocket book, they argue that, rather than disconnecting us from physical spaces, mobile technologies work as social interfaces to public spaces, enabling us to frame our experience through content of our own choosing:

While some critics argue that mobile technologies lead to a disconnection from physical space, there is an equally strong counter argument by which we consider mobile technologies as an intrinsic part of people's experience of space [...] (Ibid, p. 45) By generating media and sharing it with others, we situate ourselves within the spaces we occupy, transforming public to private through social interaction. In *Re-Place-ing Space: The Roles of Place and Space in Collaborative Systems*, Steve Harrison and Paul Dourish define place as a space infused with meaning: Physically, a place is a space, which is invested with understandings of behavioral appropriateness, cultural expectations and so forth. We are located in "space," but we act in "place." Furthermore, "places" are spaces that are valued. The distinction is rather like that between a "house" and a "home;" a house might keep out the wind and the rain, but a home is where we live. [15]

My recent projects investigate, through networked performance, the ways that mobile technologies both situate and displace the

body, complicating our relationship to place, territory and community in both physical and virtual spaces. *Networked Derive* (2010) is a collaborative performance that takes place simultaneously between two geographically separate locations. Using mobile phones, twitter streams and a simple mapping system, performers in both locations engage in a series of occupations that coincide with the movements through the other city. The piece draws from the strategy described by Guy Debord in his *Introduction to a Critique of Urban Geography* from 1955, where he describes a friend using a map of London to navigate the mountainous Harz region of Germany. [16] *Networked Derive* follows a similar strategy, using paper maps containing one city per side and positioning them slightly askew. As each city reports its location to the other, the city receiving the coordinates locates the spot on the map and using a pushpin, makes a hole to the other side, turns the map over and goes to that location. The new location is then reported to the first city and the process continues. As users move from one location to another, each in their corresponding city, they form identical paths.

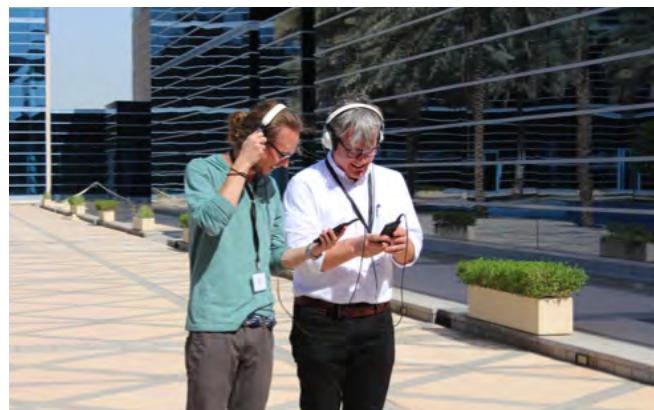


Fig. 1. *Triangulation Device*, 2004, Jessica Thompson, Android application. ©Jessica Thompson.

*Triangulation Device* is a participatory sound piece that generates improvised soundscapes using the movement of the body as a compositional device. The piece is performed simultaneously between two participants. Each participant is paired with a device, which encodes its location to the other in real-time, generating sound through the body and creating atmospheric soundscapes that unfold and change in response to their movement and proximity.

The project builds on two pioneering artworks by Canadian media artists: Vera Frenkel's *String Games: Improvisations for Inter-City Video* (1974) explored real-time video transmission at Bell Canada Teleconferencing Studios in Toronto and Montreal by inviting groups of artists to engage in an open-ended improvised performance by creating a cat's cradle between the two cities. Norm White and Doug Back's *Telephonic Arm Wrestling* (1986) was a real-time arm wrestling match between participants in Toronto and Paris.

The work has parallels with other projects such as *David McCallum's Warbike* (2007), a bicycle that generates electronic music as moves through open and closed WiFi networks, Brian House's *Quotidian Record* (2013), an album and artifact created by recording the artist's movements for a year and translating the data into sound and Mirae Rosner and Jesse Scott's *SoniCity* (2013), an Android application that transcodes pathways and velocities into sonic reverberations.

The movement through space, especially the exploratory, uneven patterns of wandering, engages the body through a series of shifting spatial and social parameters. Unencumbered by the confines of location, participants using the *Triangulation Device* are able to drift through cities in an almost tactile fashion, articulating social interactions through proxemic interaction, performative improvisation and play. By broadcasting sound into space through collaborative noisemaking, the project facilitates new and novel forms of sonic interaction that investigate how mobile technologies affect our understanding of our place in the world and our relationships towards one another.

In the same way that performing through objects merges the affordances of those objects through the expressive potential of the body, as seen in works such as *Swinging Suitcase*, the *Triangulation Device* extends the edges of the body to the other user. By generating sound through the moving body, users are able to articulate social interactions through direction, speed and proximity, creating new modes of connection through improvisation and collaboration. By broadcasting sound through gestural interaction, the *Triangulation Device* disrupts social conventions by facilitating connection, interaction and collaboration with others, reconnecting people through spontaneity, chance and serendipity and reclaiming urban space as a place for meaningful interaction with others.

## CONCLUSION

Mobile technologies enable us to filter, augment and construct our experience of the world around us, transforming 'space' into 'place' by replacing the acts of listening and speaking with sharing content and connecting with friends, family and contacts. As social networks facilitate more of our connections to the world, an increasing number of our everyday interactions are with 'people like us' [...] those who we share common interests, backgrounds and affiliations. So, while mobile technologies enable us to experience a sense of connection within urban environments, increasingly, those connections leave out the variety of events, experiences and communities that drew many of us to cities to begin with. Sound, then, through its physicality, itinerancy and invasiveness, enables us to re-make place by un-silencing the social and returning us, in meaningful and tangible ways, to the many places we call home.

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