Creative Sonification of Mobility and Sonic Interaction with Urban Space: An Ethnographic Case Study of a GPS Sound Walk

Citation for published version (APA):

Document license:
Unspecified

Document status and date:
Published: 17/03/2014

Document Version:
Typeset version in publisher's lay-out, without final page, issue and volume numbers

Please check the document version of this publication:
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PART III

WALKING AND BODILY CHOREOGRAPHY
CHAPTER 7

CREATIVE SONIFICATION OF MOBILITY AND SONIC INTERACTION WITH URBAN SPACE: AN ETHNOGRAPHIC CASE STUDY OF A GPS SOUND WALK

FRAUKE BEHRENDT

This chapter explores how mobile media and sound are experienced and in particular how locative technologies such as GPS can be used for the creative sonification of mobility. This is realized by examining Aura—the stuff that forms around you (hereafter Aura), a 2007 artwork by Steve Symons. In this work, participants equipped with headphones and a GPS-enabled backpack explore a city while listening to generative sounds that depend on their movement and location, as well as on how many people have been in the same location before. Aura was premiered at the “Enter_Uknown Territories” (hereafter “Enter...”) festival in Cambridge (United Kingdom) in April 2007. The piece adds an invisible digital sound layer to the existing architecture of Cambridge. It forces you to move, as standing still produces increasing “noise.” Because earlier participants have already left behind a trail of “noise,” you are “forced” to move onto un-walked territory. Aura changes your perception as you pay attention to a different architecture, to the sound art layer added by the artist. The experience provokes you to reexamine your senses and makes you think about the use of space and about the sharing of space. One participant recalls her experience as follows:

I was deliberately trying to find places where I didn't think people had been before. The sound was horrible when I first put it on. It was very loud; I had to pull the headphones away from my ears. Very urban and gritty sounding. And then, as I walked towards the trees it just fell silent, and it was really lovely hearing, something that was really mad suddenly became silent.
This account by an *Aura* participant gives us a first-hand impression of how people experienced and described the piece. I conducted semi-structured interviews with participants after they returned from their *Aura* walk (all names have been changed), observed participants, and took photographs and video. I also conducted an hour-long interview with Symons on site and participated in *Aura* myself. The interviewees proved to be very articulate in discussing their sonic, embodied, and mobile experiences. This chapter discusses the themes that were articulated in the interviews with participants and the artist in light of de Certeau’s arguments developed in *The Practice of Everyday Life* (1984) about spatial practices in urban space—such as the distinction between views from above and maps as *reading* and the embodied mobility of walking paths as *writing*.

**The GPS Sound Piece *Aura*: Sonifying Mobility**

At the “Enter...” festival premiere of *Aura*, the main festival area was located on Parker’s Piece (a park in the center of Cambridge), consisted of various tents, and had no entrance fee (Figure 7.1). The *Aura* checkout station was located in one of these tents (Figure 7.2), alongside various other media and sound pieces, many of which invited the audience to explore the urban environment. The fine weather on this spring weekend enabled most festival visitors to enjoy the sun outside and not spend much time inside the tents.

Parker’s Piece was a busy public space. People walked on their own and in groups, some with children or dogs, either “going for a walk in the park” or just crossing the green on their way through the town. Many people also spent a considerable amount of time in the park, where all sorts of activities took place: picnics, football games, people watching, cricket practice, children’s games, and so forth. Each of these groups occupied their own chosen section of the park, marking football goals with bags and coats, using trees for shade, putting down blankets as tables, and so on. This existing busy outdoor setting formed the backdrop for several of the mobile media pieces that were part of the “Enter...” festival, including *Aura*.

The “Enter...” festival was one of events taking place in the park, although in a more organized and permanent manner than the others. It consisted of a group of white tents housing a reception area, a café, and exhibitions of artworks. The festival area was intended to be open to attract a wide audience. However, given that many artworks relied on specific (and, in some cases, expensive) technology and equipment, the camp was surrounded by fences (and there were also several security guards), and thus did not look as inviting as I would have imagined. The lack of an entrance fee was intended to make it inviting to passers-by. But in fact, the vast majority of people I observed and talked to in the camp came explicitly for the event.

The tents forming the camp had a special dome shape, which was visually appealing, but due to being inflated (much like a bouncy castle) they were sonically challenging...
environments. The fans inflating the tents produced a constant background noise that interfered with the overall sonic experience. While Aura and several other mobile pieces were meant to be experienced within the broader environs of the park, participants first needed to enter the tents to access each piece’s “base station.” Here they familiarized themselves with the requirements of each piece (see Figure 7.2). This set-up influenced the kinds of participants Aura had, and, therefore, my interviewees. They were not “everyday” people walking through the park, happening to stumble upon the festival and the piece. The interviewees were people already interested in media art who had decided to attend the festival, and Aura was one of the pieces they experienced there.

Aura is described as a “multi-layered soundscape immersive game” on the festival website (Enter_). The artist labels it as a “located sound project” on his website and explains that Aura “explores notions of consumption and ownership within a space by allowing users to leave an audio trail as they move within the Real World.” He chooses to describe the piece further by using a visual metaphor:

Imagine a playing field after a fresh falling of snow. The snow lies evenly and untrodden. This represents an empty Aura sound world and, if you wore an Aura backpack, would sound like soft white noise. Someone walks across the field leaving footprints,
the snow is sullied, eroded; the walker has left a patina in the world. In the Aura world this patina is represented by filtering applied to the soft white noise. So a user walking with an Aura backpack will hear soft white noise (virgin snow) then lower tones will emerge as they cross the path left previously by another Aura user. (Symons, “artworks/aura”)

In the interview I conducted, Symons further explains his motivation for creating Aura and talks about the technology behind it. Again, it is interesting to note how he uses visual (painting) metaphors in his account:

It’s about consumption…. The interest in the idea that there is only a certain amount of art work out there and it gets consumed. So each user makes a path-, should make a permanent effect on it…. So the start of everything is blank. and it’s my virgin, pure world which sounds hūua or eee or chichi, depending. And as soon as the GPS starts reading it starts painting on this world…. This consumption is shown in terms of that the sounds change, they get more distorted…. Because people are coming out of the back of our domes…. This is all consumed. So people have to walk further and further…. Little spots emerge which haven’t been consumed. So you get little deposits of value.³
The whole *Aura* system consists of stationary base stations (Figure 7.3) and mobile back-
packs (Figure 7.4) and is designed to be self-sufficient, to function without the artist’s
supervision. The base stations are located in one of the festival tents and serve as check-
out desks for the backpacks. Screens located in the base stations also visually display
previous participants’ paths. The backpacks contain a custom-built computer attached
to large, binaural headphones. The sound of the piece is not prerecorded; it is gener-
ated in real-time, depending on the participant’s movement and on prior “consump-
tion” of sounds by others. *Aura* is a custom-made, open-source surround-sound system.
Symons explains the system design of *Aura*, outlining the development of the backpacks
and the software:

> The backpacks are bespoke systems; they are the worlds first solid-state Linux sur-
round sound systems…. As far as I know. Six channel Linux. It’s all using open source
software…. I have used Java…. And for the sound I have used Supercollider…. Plus
there is associated hard ware for compass and GPS, and then there are battery issues,
recharging. And what happens when you plug it in. Then it has to talk to the server,
so there is a network.  

The technical side of this piece is complex and utilizes an approach different than that of
other mobile sound artists, who often use off-the-shelf solutions like mscape. Although *Aura* is a sound work, it also has a visual aspect: the trails of people’s walks are displayed on the base stations (Figure 7.3). In our interview, the artist noted that he was not happy with the audience reaction to this visual aspect of the piece: “I’m a bit upset, everyone is obsessing over seeing their map. And that’s the last thing I want them to do…. I want people to walk.” I asked Symons to explain how he came to incorporate this visual aspect, especially as his earlier *Aura* 1 from 2004 did not feature any screens. He replied:

> Two things. One, they need to have a recharge point. And two, *Aura* 1 the galler-
ies were going: what’s in my gallery when *Aura* is out? Bags? ID? And people were
like: “Oh, not very…” And I get little tables in the corner, and people put all their
coats on there ‘cause they’d see all my backpacks. So it got a bit like, ok I need to work
in installation more.

The artist is not entirely comfortable about the piece’s visual mapping and I share his
unease. Symons explains how the relation between walking and the visuals were negoti-
ated in the design of the piece:

> There was this massive designing to work out what goes on at these base sta-
tions…. so there’s the base station [he is drawing while talking], walking, so listen-
ing, and then, … returning to base station. If these base stations are too satisfying, too
interactive, they’re not gonna walk. And it’s the walk that I want people to do. The art
is walking. It’s not here. This is just a practical lure. Ok, it looks nice, a nice box.

This distinction between the visual mapping at the base stations and the embodied walk-
ing out in the park resonates with de Certeau’s theory of strategies and tactics, wherein
walking is understood as tactical, mapping as strategic. For de Certeau strategies belong to the sphere of institutions and power structures, while tactics are in the realm of everyday actions by ordinary people. The reception of de Certeau’s concepts has often focused on the potential of resistance in the tactical realm. Mapping involves “flattening-out,” to use de Certeau’s term: “time and movement are thus reduced to a line that can be seized as a whole by the eye and read in one single moment, as one projects onto a map the path taken by someone walking through a city” (de Certeau 1984:35). The ease and pleasure of appropriating temporal activity in one glance, as opposed to the effort of walking and listening, is what makes both Symons and me feel critical about the visual part of his work—and explains why galleries and curators are so attracted to it. From the artist’s statements given above we can understand how Symons was ambiguous about the path visualization of Aura: While it satisfies the quick gaze of the passing festival visitor and has a more robust presence in the gallery, the “real” piece is in the act of walking (Figure 7.5) (away from the screens).

De Certeau has been discussed in the context of mobile art and hybrid spaces but not with reference to sound (Kraan 2006; Kluitenberg 2006; Altena 2006; Souza e Silva 2004). One of those considerations of de Certeau is by Tarkka, who notes that “The
'locative gaze’ conflates a god’s eye view—the frozen military ‘view from nowhere’ of satellite vision and atomic clocks—with the situated, embodied ‘pedestrian perspective’… coincid[ing] with Michael de Certeau’s distinction between strategy and tactic” (2005:17). Tarkka elaborates: “The participatory annotation of urban space fits well into de Certeau’s description of tactical practice—for what else is annotation than a writing in the margins, a commentary which is never taking the space over in its entirety?” (20).

De Certeau is very aware of the spatial component of practice, and this is productive for understanding mobile media: “In the technocratically constructed, written, and functionalized space in which the consumers move about, their trajectories form unforeseeable sentences, partly unreadable paths across space” (1984:xviii). Whereas space is often understood as an abstract concept and place as a lived-in space with some sort of meaning attached to it, in de Certeau’s conceptualization the meanings are inverted. De Certeau divides space into viewed space and experienced space (which is process), and links this to his concept of tactics and strategies: “To walk is to lack place” (103). A principal aspect of the piece *Aura* is that the artist wants “people to walk” because “the art is walking” as he states in the interview. During a public presentation of the piece at the festival he added that walking is also “very instinctive” (Symons 2007). Even though walking is instinctive, it is still work: the labor of walking and the attention the participants need to pay while walking and listening to *Aura* are asking for more from the audience than most traditional pieces of both visual and sound art.
De Certeau draws our attention away from city planning and toward actual situated activities, the space-making practices of the inhabitants of a city that make do with the planned space in various different ways, in “swarming activities of these procedures” (1984:96). It is interesting to pay attention to how these swarming procedures have changed with ubiquitous mobile media use. A close look at Aura allows us to do this. De Certeau believes that “the spatial practices in fact secretly structure the determining conditions of social life” (96). And our spatial practices are mediated ones. He aims to “follow out a few of these multiform, resistant, tricky, and stubborn procedures that elude discipline without being outside the field in which exercised and which should lead us to a theory of everyday practices, of lived space, of the disquieting familiarity of the city” (96). The present chapter is doing something similar: finding disquieting familiarities in the sonic world created by the participants of mobile art; discovering how space is lived in ever more commercialized and privatized urban spaces, with technology designed by the telecommunications industry to secure ever greater profits; locating resistant and creative practices while avoiding any romanticizing of these. Aura is one manifestation of creative space-making practices, pushing away from totalizing views, and toward the very activity of inscribing movement into space via sound.

De Certeau suggests that we try “to locate practices that are foreign to the ‘geometrical’ or ‘geographical’ space of... visual, panoptic, or theoretical constructions” (1984:93). For me, this sounds like a call for giving priority to the auditory but, for de Certeau, this
other spatiality, these “practices of space” are a specific way of operating, “an opaque and blind mobility” (93). He juxtaposes the “planned and readable city” with this other city that is made up of spatial practices, “a migrational, or metaphorical city” (93). He switches from totalizing vision to the movement of bodies.

The way GPS coordinates are often used in mobile and locative art projects can resonate with de Certeau’s totalizing vision from the World Trade Center (1984:93). The way one “sees” the movement of the city at once from a distance and from color-coded GPS traces suggests that it is possible to grasp the city and the mobile movements it is made from with one glance. Often it is forgotten or marginalized that the actual experience of these urban journeys—these movements of bodies through the city with their idiosyncratic, subjective, multi-sensory layered experiences—are complex and cannot be grasped in one fell swoop. This experience is reflected in the following account of David, one of the Aura participants: “I did feel slightly odd for the fact that I was walking around in circles but I was trying to get away from the sound.”

In The Practice of Everyday Life, de Certeau rarely makes sound productive in his descriptions. His accounts of everyday observations are strangely silent. For example, he talks about the “mute silences of memories.” However there are few instances where he is attuned to the sounds of the world; for example he contradicts his “silent memories” by recounting “a walk though the night, alive with sound” (1984:15). He is talking about a visit to Brazil; and from the same trip he remembers “the songs of the Brazilian saudade” (15). Elsewhere, he discusses reading and talks about “grumblings, tics, stretchings, rustlings, unexpected noises, in short a wild orchestration of the body” (175). De Certeau’s attention to sound seems to be connected with internal, bodily and private realms, with foreign cultures and with technologies (see the train description below) but not with everyday or Western culture. The public realm of the Western city is especially silent in his accounts.

Even when describing footsteps—as making up the city in their multiplicity of movements, weaving places together by this space-making practice of walking—his is a mute account. There is no sound to the footsteps in de Certeau’s descriptions, no heels clicking, no trainers being dragged, no polyphony of feet running down stairs. He is concerned with the temporality and the movement, but not with the sound. I argue that sound is a good reminder of temporality and spatiality: the echo of our footprints in the under-path is gone within fractions of a second while we are one step ahead already. The only time de Certeau mentions sound in connection with walking, he resorts to metaphor: “Walking affirms, suspects, tries out, transgresses, respects etc., the trajectories it speaks. All the modalities sing a part in this chorus, changing from step to step, stepping in through proportions, sequences, and intensities which vary according to the tie, the path taken and the walker” (de Certeau 1984:99; my emphasis). This focus on walking bodies and their trajectories is productive for mobile sound art: “The ordinary practitioners of the city live… they walk—an elementary form of this experience of the city; they are walkers, Wandersmänner, whose bodies follow the thick and thins of the urban text, they write without being able to read it” (de Certeau 1984:93; author’s emphasis).

De Certeau understands walking as a form of (tactical) writing and looking down on the city (the totalizing views as he describes them from the top of the World Trade
Center) as a form of (strategic) map reading. So, to walk is to write, to look is to read. Therefore, you cannot read the city while you are in it, you can only write it, because the map is an authored work. For him, paths are what you walk through “blind,” trajectories you push out with your body, and they do not necessarily have to follow roads (even if they do). The fact that you take a meandering path, or the fact that you always walk these steps and not those steps, is the process of writing your own trajectory. This trajectory is not known exactly to others before you actually perform it.

This distinction that takes “views” as reading and “embodied movement” as writing is a rather visual one. If we follow de Certeau’s suggestion to “[e]scap[e] the imaginary totalization produced by the eye” (1984:93) we should ask how reading and writing can operate in sonic ways too. What is the auditory equivalent of a view from above, of a map, of a path? For sonic reading you might have to be in the midst of the city, as listening from above or from a distance gives you a faint din, and possibly a few soundmarks, but no “overview” or map-like view of a city. To “read” the sounds of a city, there is no soundmap; you need to be in the streets, walking, listening to the city: to cars before crossing the road, the train pulling into the station, the busker in the park, a conversation on a mobile phone, music spilling out of a shop, the wind howling around the corner. Listening and walking might have features of both writing and reading. The temporal effort of listening and writing also suggest this connection, whereas the scopic snapshot from above is an effortless one.

In many mobile or locative art pieces, the participants need to walk in order to experience the work. The choices each participant makes in terms of direction, length of the walk, and time spent in specific locations, determine the participant’s experience of the piece. Each audience member makes his or her own version, and walking becomes remixing. Galloway and Ward, for example, describe how this practice allows “for multiple readings” of “narrative fragments [fixed] in physical space” (2006).

Hight (2006) also contributes to the understanding of walking as remixing in a text that focuses on locative narratives (especially those with a historic context) or, what he terms “Narrative Archeology.” His insistence on prioritizing the role of the situated experience of a walking audience is key for my understanding of mobile sound art. The participant determines the timeline of the experience: the order of the locations, the time spent at each location or in each sound zone, the pace, direction and duration of their walk. For his own narrative pieces Hight observes that:

In a sense, the ultimate end-author in locative narrative is the movement and patterns of the person navigating the space. The narrative is dictated by their choices, aesthetic bias in the physical world toward certain sections, buildings or objects to move toward and investigate and their duration and breadth of movement. The narrative is composed in sections, but is edited by the movements of the person with the locative device. (2006:3)

Walking is intrinsically temporal—and the same is true for sound. Therefore, mobile sound art experience is difficult to reduce to a point or line on a map, a link, a database
entry. The embodied mobility of walking, especially as articulated in public space, is a key aspect of mobile sound art.

In mobile sound art works such as Aura, the audience writes sound into space, but also simultaneously reads the existing soundscape as well as the added “virtual” sound layer. I argue that the distinction between reading and writing becomes less clear cut in an auditory context, where embodied trajectories might be able to do both: read and write.

**Friction**

One of the Aura participants’ I interviewed was twenty-seven-year-old Ben who lives in London and works for a theater company. He came to Cambridge for the festival to “get some ideas” for a project he was working on. Ben recalls his Aura experience: “I kind of felt a bit detached from where I was. So that the place where I was wasn’t as important as what I was hearing.” By focusing his attention on the auditory layer of the piece, Ben felt “detached” from his surroundings. His comment prioritizes the auditory space over the physical environment, in a manner similar to Bassett, who describes mobile telephony as constantly shifting between “attention” and “inattention” and often “prioritizes the auditory at the expense of the embodied and visual world.” I suggest that de Certeau offers another metaphor that is useful for describing the economy of these different spaces we inhabit in the hybrid city. Whereas in de Certeau’s experience of the city, his footsteps are silent, his traveling by rail is all about sound:

> Only the partitions make noise. As it [the train] moves forward and creates two inverted silences, it taps out a rhythm, it whistles or moans. There is a beating of the rails, a vibrato of the windowpanes—a sort of rubbing together of spaces at the vanishing points of their frontier. These junctions have no space. They indicate themselves by passing cries and momentary noises. These frontiers are illegible; they can only be heard as a single stream of sounds, so continuous is the tearing off that annihilates the points which it passes. (1984:112–13; my emphasis)

De Certeau describes the mobile technology of railway travelling as “rubbing together of spaces” and this metaphor can also be productive for contemporary mobile technologies of mobile phones, iPods, and mobile art. If the “rubbing together of spaces” cannot be read, I suggest listening to it instead. Aura provides an opportunity to explore virtual and geographic, sonic, and imagined spaces “rubbing together.” The artwork seems to allow for an alternative spatial experience: “in a way . . . it forces you to think about how you’re walking through a space in a completely different way,” as Ben described. I argue that we can conceptualize this “different way” of walking through space, the sensation of “feeling a bit detached,” as various “spaces rubbing together.” Such a conceptualization allows us to think about the kind of friction that is generated by all these different media, sound,
social and physical layers rubbing together in our encounters with (and within) contemporary urban spaces. By participating in Aura, a new hybrid sonic architecture is produced, one that is temporal and embedded and embodied. It is not commercial but an art space, with a different economy of power; for example, participants are allowed to fail, to take off the headphones, to invent their own path, to do it in their own time.

**Sound and Control**

With Aura, interaction with other participants happens over time. In theory, several of the backpacks could be out on a walk simultaneously. (Although at the “Enter_” festival this did not happen as only one was working and charged at a time.) You can detect traces of previous walkers, the trails of noise they left behind. Most mobile art projects work with the idea of “positive” traces, of leaving behind something “nice” or “interesting,” such as messages for others, audio snippets, colorful trails (Behrendt 2012). For Aura the opposite is the case: you leave behind something undesirable, you do not want to go where others have been, you want to find the un-consumed areas, the pleasant white noise, unexplored space, as indicated by “nice” sounds. Others have left behind trails of noise before, taking away choice from us; they have consumed some of the pleasant sounds already. This equates to a great deal of sonic control in Aura, as the noise makes people walk, forces them to explore virgin sonic territory. The artist had to negotiate these issues of control when he designed Aura. His account is ambivalent:

I can't, you can't make the audience do anything. I've realized. [laughing] Although I really want to make a maze. [laughing] That's a real control of it. I want to control them. They will do what I tell them. [laughing] … But even then, if you make a maze, with sound, where the walls are made of sounds, you know, you have to keep in the quiet bit, people will just walk over them. So you can't.¹⁵

The artist realizes that he has no means to control the audience trajectories:

You just have to try not to, I have decided. I make the system; I make it as flexible as I can. I set the direction of it… and then let the users do their thing. 'Cause if I try to anticipate everything… I mean they can, like 500 meters square, they can walk in any direction, at any speed… there's nothing I can do about that [laughing].¹⁶

These claims suggest that participants can “walk in any direction” but if we take his above comments into consideration, it becomes clear that those areas that are already “consumed” by previous participants are so unpleasant that they force subsequent participants to walk elsewhere. The system the artist developed does control the audience trajectories by sonic means.
Another aspect of sonic control—in addition to the nice sounds vs. noise—revolves around volume. According to David: “there is this noise you can’t get away from. Mmmm, other than taking off the headphones.” As I recall from my own experience of Aura, the piece was very loud. While I was walking around the park, I tried to find the volume control on the device. Even though I had been told that there was none, I still couldn’t resist searching for one. This issue of volume control is also illustrated in the audio recording of my own experience, in a conversation between a festival helper (Mary) and myself Mary advises me: “You may need to pull it away from your ears a bit as you go out here because it’s noisy, it’s quite loud.”

The issue of control of sound adds to the discussion around mobile media and music in urban space and how people aim to control the experience of urban environment and their moods with mobile music (Bull). Aura has an ambiguous relationship to sonic control: Participants do control the sound by inscribing a path of noise, but unlike with the use of a portable media player, they are not able to choose the sounds they hear. And, further, they have no control over their encounters with the trails of noise left by other participants.

**Feeling Self-Conscious**

Another theme that consistently came up in interviews had to do with the participants feeling “self-conscious.” In relation to their everyday mobile media use, this is remarkable. In everyday life, mobile media has becomes increasingly invisible and non-self-conscious (as illustrated by the spread of the mobile phone). Nowadays, having a mobile phone with you is the default position; one is only is conscious of it in its absence, as Ben’s statement illustrates:

I was really conscious of it [Aura] in a way that I’m not particularly conscious of my phone anymore. Although that’s always a weird one, isn’t it? ‘Cause if I ever leave my phone, then I’m very conscious of not having it… and I remember when I first got one feeling very much like I was connected to something, something new and something else… and… yeah, so I think there is definitely something akin to that early feeling of when I first got a mobile phone.

In Aura, participants try to locate this self-consciousness in the actual technology. Ben continues:

I think, it’s quite weird because you’re kind of walking around feeling expectant of something to happen, and my focus was definitely on the fact that I had this thing, this equipment with me and also, you do get a few strange looks from people with this weird thing on top of your head and people are not quite sure what to make of you.
David—a filmmaker from Cambridge in his late twenties who is “quite intrigued by... all sorts of installations... sound installations”—also felt self-conscious. In our interview, he first mentions the equipment and then realizes that he is not the only one equipped like this.\(^2\) His next explanation is that his movement in space made him feel self-conscious, as this did not match more common forms of walking around the park.

It was kind of an unusual experience because it wasn’t like you stand out wearing a headphones and a backpack, ‘cause many people wear headphones and a backpack. I did feel slightly odd for the fact that I was walking around in circles but I was trying to get away from the sound.\(^22\)

David tried to inscribe his name onto the space, claiming territory, using the virtual space to claim physical space, to make the hybrid space his own by walking his name—and again feels watched, self-conscious.

And the other thing which I realized that you could do with the GPS was that you can, once that’s traced, you could write letters and things like... I was trying to spell my name out on Parker’s Piece, so that was probably something else that people might have been watching me. Sort of “what the hell is he doing.” Kind of walking around in sort of strange shapes.\(^23\)

Emma is from Norfolk but “used to live near Cambridge.” She is thirty-three and works with her “husband in a[n] artist collaboration.”\(^24\) Emma is somewhat self-conscious about her media use in general, and also about mobile media use in public. Not fitting in with the crowd, her unusual mobile media behaviors (such as stopping while everyone is walking) make her feel uncomfortable, even vulnerable. This unease also applies to her Aura experience: “But also because you’ve got this big thing on your head you know that people, you’re looking different, you’re not blending in like you normally do [laughing].”\(^25\) Later on in the interview she tries to explain her awareness of other people by her changed sense of hearing: “I think I was just really aware of all the people on Parker’s Piece. I had to sort of negotiate a football game. And I felt like I was more likely to be kicked by a football because I couldn’t, I didn’t have my own hearing. You know what I mean. I was locked into this.”\(^26\)

Wearing the small Aura backpack and the headphones does not make you look much different than music aficionados you meet in the city. Still, the participants felt self-conscious about walking around with the Aura equipment, as we can see in the above comments. I suggest that the unease has not much to do with what the participants look like with the Aura equipment. Rather, I argue that it is located around the perception of self and others, and this perception is shaped by the content, i.e., my own music on the iPod, the artist’s sounds and noises, an unexpected phone call. I suggest that feeling of self-consciousness, of feeling different, is also located in the altered experience of space, an alteration conditioned by participating in an art work and perceiving the world in a different way through exploring the sounds generated by oneself and
others. Feeling self-conscious is not only about the devices, it is about altered sense perception.

How the participants of Aura feel self-conscious is also partly explained by the fact that it is a “discomfort walk,” during which you hear noise if you cross a previous participant’s path. This makes people feel as if they are not doing the “right” thing. The park where Aura takes place is full of “noise” in many places already. Additionally, the park is also full of all the “normal” park visitors that are walking around, having picnics, playing football, and so forth. Inside the park you have to negotiate this busy physical space, making sure not to step on other people’s feet, cross into their paths, or avoid being hit by balls. Inside the art space of Aura you are also trying to avoid treading on someone else’s path to avoid the “noise.” This double navigation of “spaces rubbing together” required by the audience also contributed to the feeling of self-consciousness.

In Aura, the senses are not mobilized in an ordinary way. This departure from “normality” can then be used to pinpoint this very normality. In everyday life we multitask, whereas this artwork focuses us on doing one thing at the time. I argue that mobile sound art reexamines our senses in playing with everyday patterns and rhythms of sense perception—while at the same time working with our everyday (mobile) media skills. The Aura headphones act as a kind of auditory picture frame for our senses.

**Moments of Breakdown**

Digital media artworks (almost) always include moments when they don’t function as intended or as expected. This section focuses on these relevant moments when media expectations break down. As Aura is a sound piece, one would expect an experience of “breakdown” would be associated with “silence,” with no sound coming out of the headphones. For example, if you walk too fast, the system is unable to keep up with the GPS readings, and this results in the sound cutting out. Symons is aware of this: “When I see people walking a little too quickly... I know it will jump. A bit like an LP jumping... the GPS works a bit slow and you might be better if you go slower.” Ben describes how he was uncertain of what to do when he experienced this cutting-out of the sound:

> Well, I was sort of confused when the sound kind of cut out at a few points and it cut out with a bit of a crackle. And so, and it sounded like the noise when wires have lost their connection. And I wasn’t quite sure that’s what happened... And then I was like “shall I carry on walking?” “Shall I take it back?”

In this quote “not working” is indeed associated with the sound cutting out, the headphones falling silent. This supports my suggestion that for a sound piece like Aura to be experienced as not working one would expect complaints about silent headphones. However, for some people, the opposite seems to be true: silent headphones still give
the impression that the piece is working fine. Some people went for a walk with an *Aura* backpack that was not working at the time (e.g., the battery was flat). The artist recalls that some people still enjoyed the experience:

But then people would still be coming back and be like “Oh wow, I heard all these wonderful noises.” But then … part of the work is, it does amplify, it is designed to amplify the real world as well. . . . They would just walk around with non-functioning headphones and say this was an amazing experience.  

For these participants the *Aura* headphones functioned as “auditory picture frames” for their senses, even when they were not working as intended. It did make the participants listen and appreciate their soundscape as “beautiful.” A different (almost opposite) experience of *Aura* not working is reported by John. For him, the main experience is failure—even though *Aura* works perfectly fine when he takes it out: “The trouble is that, that it didn’t work. . . . I got what I call noise . . . What is the purpose of the exercise?”  

His account is interesting because the interviewee is very critical, even hostile toward the piece. John is forty to fifty years old, lives just north of Cambridge, and is a mathematician, engineer, and musician. He has deep interest in media.  

One of my students there, he tells me that it didn’t work yesterday, or something, or they got it to work. So, I mean, it’s a bit embarrassing because I always like to support things like this, you know. But I had to sort of question their favorable gloss on it. It’s a shame really. At least I hope I understood what the goal of the exercise was.  

For John, “failure” is not about silence, it is about noise. He does not seem to be able to make sense of this intervention into familiar soundscapes, to make sense of the noise. One explanation for John’s experience of breakdown could be that he does not have the mobile media skills required: he is not experienced with iPods and mobile phones in the way the other interviewees were. He uses his mobile more like a “proper” telephone, or, in other words, only to make phone calls. He is not very aware that most people also use it for many other purposes, as the interview reveals.  

If we return to de Certeau’s notion of paths as writing and maps as reading, we could extend this to the “roadmaps” of expectations we might have toward mobile sound art (with the pieces as “reading maps,” and the actual experience of them as “writing paths”). There is a genre expectation in locative art (and more generally in interactive media art) that the sound one contributes is additive and somehow positive (for instance, in adding my voice to a tapestry).  

In *Aura* however, the participants add and encounter unpleasant “noise.” Arguably, in John’s head, there was already a roadmap of sound art as “adding nice sounds,” a cliché genre expectation of how mobile sound art operates. This means that this genre expectation, John’s roadmap, has become a strategy, rather than a tactic. The map already in his head did not fit while writing his path during the actual experience of the piece.  

It is not only the audience that experiences unexpected and unplanned aspects of *Aura*. Symons also had to make do with challenging conditions in developing the piece.
CREATIVE SONIFICATION OF MOBILITY AND SONIC INTERACTION

Working in public space and working with digital media is always a process of adjusting to ever-changing contexts, especially when working within the economic constraints of art on the fringe. Symons’s original plan was to encourage people to walk around a larger area in the city center of Cambridge where the artist mapped several zones with different sounds:

‘Cause it’s a city-wide thing and I was looking at the political, how much you can move within spaces, and what spaces have been used for…and I talked to people and found out the University areas and then I mapped that with a mixture of tourist map…. [I was looking] for areas which are closed off. Or areas which are used in different ways. Not physically, but on that conceptual cartography level. So I was just looking for social zones…. I made about…seven big zones of space which are the colored map on the screen. And I made different sounds, there are different sounds that operate in each of those spaces.34

The planned trajectory of walking though the city was supposed to be encouraged by the scattered locations of Aura base stations.

In theory there is a nice line where you’ve got Parker’s Piece, Market, and Kettles’ Yard [the three locations originally planned] at the top. And then that is a two-kilometer-square space. And there’s the main artery there. So people will naturally want to walk down there but that will get consumed quite quickly so you know there will be, they’ll start doing other walks…. That was the theory anyway, wasn’t it?35

However, during the development phase of the piece funding was cut in half. Also, the custom hardware and software system developed by the artist is very complex.36 Therefore, Symons had to adjust to the changing conditions and make do with the local environment. Two changes were made. First, only one backpack and base station were working and charged at any one moment in time (not the intended four). Second, the area of the piece was shrunk from city center to park-size. A resizing the area to Parker’s Piece, Aura only works within this “playing field.” If you walk outside this area, it will not work; there will be no sound on the headphones. For the audience and the artist there have been different moments of the piece breaking down that have provided us with an insight into how different these moments of sonic media breakdown can be experienced and articulated.

AMBIGUOUS MOBILE MEDIA EXPERIENCES

This last section of the chapter is concerned with the participants’ everyday use of mobile media. People walk the city in an aestheticized sound environment in their daily lives, e.g. with mobile phones and MP3 players. In his study of how iPod users aestheticize their urban journeys, Michael Bull argues that both mobile phones and MP3 players
are warming up urban space for the user, but at the same time they are making urban space chillier for everybody else (2007:12ff.). I am interested in the link between everyday and art experience, how they can speak to each other and inform each other. After discussing their Aura experiences, I also asked the interviewees about their experiences with everyday mobile and sonic media. This chapter shows that art experience can open up a participant’s senses, and, in this regard, asking people to reflect upon their everyday mobile media practices directly after having participated in a work of sound art can be productive. The Aura headphones act as a form of acoustic picture frame that enables participants to see and reflect upon their everyday mobile media use. Everyday mobile media experience such as mobile phone use is made conspicuous by the art experience.

One of the most striking findings of the interviews is how ambivalent the participants felt toward their mobile phones, as illustrated by Ben’s comment: “You know there is something really useful about having a phone but at the same time there’s a burden that goes with it ‘cause you can’t just go: ‘I’m just gonna go off now. Leave everything behind.’”37 Paul also feels ambivalent about mobile phones as we can see in the following two comments:

I use an MP3 player every day. I commute to London, so I use that to listen to music. It can play video but I don’t tend to use it for that, I just use it for music. I’ve got a mobile phone which I tend to use very little, as little as possible [laughing] . . . I like them you know and I like to be able to be contacted. They are very useful but I find them a bit intrusive and a bit annoying at times…. I just find that they take people’s attention away from wherever, from whatever they are doing at that time.38

Both Ben and Paul first stress the usefulness of mobile phones before admitting to also find them “intrusive,” “annoying,” and “a burden.” Bull identifies a major difference between MP3 player use (such as iPods) and mobile phone use in terms of control and continuity. Music listeners choose their music and have a continuous experience whereas receiving a phone call is beyond people’s control and disruptive. According to Bull, “[t]he two technologies represent two distinct, and largely contradictory, modes of relating to the management of time, space and ‘otherness’ in urban life: the continuous and the discontinuous” (2007:67; my emphasis). This is reflected in Paul’s comment above, where he states that mobile phones are “intrusive” and “take attention away.” The more continuous experience of being in a “bubble” of sound surfaces in my interview with David. His iPod use is interesting because he feels ambivalent about it and his description switches between his own use and that of “others.” His account oscillates around pleasure and danger:

I use an iPod from time to time… everybody is becoming more and more obsessed with these things and… it’s kind of weird ‘cause it’s all, in your own kind of bubble. When you start noticing you are doing it itself, if you are doing any activities or you’re cycling and you’ve got the headphones in, just… cycling with headphones, I’m slightly uncomfortable. So I just feel like quite sort of dangerous…. From time to
time, you know if I’m going for a long cycle ride, it’s quite good fun. To have some
good tunes and just ride the road, it’s good.39

Bull reports that iPod users express “ambivalence toward their [mobile phones]”
(2007:67), whereas their accounts of iPod use do not show ambivalence. In David’s
account we can see this ambivalence is also felt toward MP3 players. In my interviews,
the mobile phone accounts oscillated between “useful” and “annoying;” this iPod com-
ment is torn between the “danger” and the “fun” of listening to mobile music.

In addition to these ambiguous feelings toward their mobile devices, interviewees
also reported many creative ways of using mobile media. One of them is Ben’s use of
voice mail. There is an interesting tension between the playful and creative way Ben uses
technology and how he thinks of himself as being too shy to use features of his mobile
phone. I asked him about any musical or sonic use of mobile technology and he replied:

A couple of weeks ago I did in fact sing happy birthday down the phone to a friend of
mine…. I [am] often actually bored of leaving just ordinary messages on the phone
‘cause I’m a sort of theater person I suppose, I often… just make up characters and
leave stupid voices and stupid messages on the phone…. Little improvisation ses-
sions. To while away the minute. But I think other than that I tend to use things pretty
much for how they are designed. And actually a bit shy of using my phone to do all
the things it can do. I’m not, not sure why it can do all the things it can do.40

Despite his creative use of telephones (such as making up characters and stories, as well
as singing) he describes his telephone use as following certain standards, and even as shy.
Using mobile phones for creative practices such as making music has been increasingly
common over the last decade or so, especially with the rise of app culture (Behrendt
2012b).

Finally, from these “everyday use” sections of my interviews, I mention an account
from Emma that contradicts our “multi-tasking” expectations of media activities being
carried out while doing something else:

Well, I use my mobile phone…. I use the computer. But I’m very dyslexic so I find it
quite hard to navigate the Internet or respond to emails. You know, I do it a little bit,
but I feel I have a disadvantage because I can’t read very well. What other technology?
I use a camera. [Me: So you more likely to use an maybe an iPod or listen to music?]Yeah, no, I don’t. And I don’t listen to very much music. [laughing]… I find it hard
to multitask. So I never have music on in the background when I’m doing something
else.41

If we return to the earlier argument that I built on de Certeau’s comment regarding
“spaces rubbing together,” for Emma the “rubbing together of different spaces” (for
example the auditory space of an iPod and her surroundings), might produce too much
friction to bear. Discussing these everyday mobile media experiences after the Aura
experience has allowed me to access emotional and creative responses that are often dif-
icult to uncover in interviews.
Aura is an articulation of creative space making practices that allows us to shift our attention from the often totalizing views and “flattening-out” of maps toward the activity of inscribing sound into space via movement (de Certeau 1984:35). In Aura, as the stream of GPS data is fed into the generative audio software, the very movement through space generates sound—what I have defined as “sonified mobility” elsewhere (Behrendt 2010). There is also sound if you do not move, a static GPS signal is programmed to generate increasing noise, to encourage you to walk. Aura could be regarded as symptom-atic of contemporary urban space or even privatized space—where it is possible to move around, but often increasingly difficult to stop, to rest, to sit down, to linger, if it is not for a commercial reason.

Mobile sound art platforms are often concerned with adding “nice” sounds and similarly in “sonified mobility” contexts the movement or trajectory is often sonified in “pleasant ways” (Behrendt 2010, 2012a). In Aura people’s trajectories are sonified as “noise” whereas previously un-walked territory is experienced as “pleasant” sounds. In discussing the experience of the piece with some of its participants, I identified the key issues of friction, control, self-consciousness, ambiguity, and “break-down.” These themes manifest themselves in various ways in each audience member’s experience of the piece, in some cases producing discomfort and dissonance.

The form of the encounter is in the sensory register rather than in the rational one (as is the case with mobile sound art where the audience is invited to send text messages to interact with a piece, for example). While I argue that other artworks such as “smSage” by Redfern and Borland (2007) aim to enable communication to make (and break) transient micro public spheres in public space (Behrendt 2010), this chapter has been about co-existing in spaces in a way that is painful and difficult, where participants are (almost) stepping over people and falling over an artwork. The polyphony of the piece makes it dissonant; it is a visceral dissonance of sharing public spaces in asynchronous ways. Aura is not about rational forms of communication; it is about a visceral experience. In Aura, art space and everyday space co-exist in the same park in Cambridge, and the tensions of this co-existence—the friction between these spaces—is what has allowed insight into the sensory media experience of its participants.

The social aspect of Aura evolves over time, and happens without the direct interaction of its participants with one another. The idea of having some sort of shared social space without having to interact directly with other people might be typical of hybrid space, illustrating the ambivalence of wanting some social contact, while staying in the secure state of not having to communicate with strangers. There might be a desire to warm up more than your own space, or a desire to not cool down the urban environment by warming up your space (Bull 2007). Aura provides an opportunity to explore virtual and geographic, sonic and imagined spaces “rubbing together” via sound, as de Certeau might put it.
Notes

1. The festival topic was “Unknown Territories,” and its website advertises it as “exciting festival of interactive and playful public art events, live performances, a conference, workshop and club nights taking place throughout Cambridge” (Enter_).
4. Ibid.
5. Mscapes is developed by Hewlett-Packard. For a discussion see Behrendt (2010).
7. Ibid.
8. Ibid.
9. Of course, de Certeau wrote this before database or street surveillance, so he understands vision as “the thing that sees,” whereas in the age of CCTV (visual surveillance) and GPS (database surveillance) your body itself and its trajectory though space becomes “seen.” See Andrejevic (2009).
11. Many texts that deal with the relationship of sound, space, and the body do not consider walking (Ouzounian 2006; Brown 2006), but some mention it (Harris 2006). Walking has been discussed in relation to other art genres, but mainly with a focus on the artist(s) walking, not the audience (Careri 2001; Araya 2004).
12. Hight’s text gravitates around his own piece “34 North, 118 West” (2002, with Knowlton and Spellman), which delivers the narrative via headphones while also relying on the screen of the device for displaying maps.
14. Ibid.
16. Ibid.
20. Ibid.
22. Ibid.
23. Ibid.
25. Ibid.
26. Ibid.
31. Ibid.
32. Ibid.
33. For example “Urban Tapestry” (Silverstone and Sujon 2005).
35. Ibid.
36. As of 2009 no comparable system has been developed or made publicly available—the artist is still gathering funding to do so, so as to benefit the mobile sound and music community with a public release version.

REFERENCES

CREATIVE SONIFICATION OF MOBILITY AND SONIC INTERACTION