Curating Aural Experience: A Sonic Ethnography of Everyday Media Practices *By Dr. Milena Droumeva*

Abstract

In less than a decade, the cell phone's transformation from a tool for mobile telephony into a multimodal, computational 'smart' media device has engendered a new kind of emplacement and ubiquity of technological mediation into urban everyday life. This technological mediation is increasingly integrated into and co-constitutive of the very fabric of everyday experience and perception ranging from sensorial encounters with physical space to the enactment of epistemological and social practices. Leveraging a small ethnographic study in which participants used an iPod Touch to generate a series of personal media documentaries about their everyday sonic experience, this paper identifies the act of generating media artefacts is an act of mediated curation: it stages everyday life as content; it reconfigures perceptual practices, and frames patterns of mediated communication. Adopting the metaphor of curation re-frames traditional notions of aesthetic sensibility through concepts such as the 'photographer's eye' and the 'recordist's ear' as they historically transcend the realm of specialized expertise and become the purview of general everyday practice. In that, the boundary between art and documentation is thinly compressed into the simultaneously creative and epistemological act of curating everyday experience through the aesthetic politics of the smartphone. As a sonic ethnography, this study offers a unique model of doing research with technology that is rooted in a sensory approach to subjective experience and the performance of cultural practices.

Keywords

multimodal ethnography, field recording, mobile technology, new media, sound studies, curation, acoustic ecology

The senses in the social multiverse

Visions of technology increasingly engulfing us into a cyborg existence of halfbiological, half-technological materiality (Haraway, 1985, Stone, 1995, Dyson, 2009), have long furnished science fiction imaginings and fascinated scholars of the digital humanities. While holodecks and warp drive may as yet remain fiction, it could be said that a much more subtle technological (r)-evolution is at work: one that is indeed reconfiguring our bodies, senses, and surroundings, and is instrumental to our construction of meaning in the course of everyday life. Amidst the vast array of media forms to emerge over the last century, as well as the multitude of technological developments in communication and computing, the personal 'smart' device (or smartphone) represents a particular convergence of multimodal possibilities for public and private communication. This kind of technological mediation is increasingly integrated into and co-constitutive of the very fabric of everyday experience ranging from sensorial encounters with physical space to the enactment of epistemological and social practices in the course of cultural participation. Cultural media studies have for some time now concerned themselves with political economy, identity politics and 'reading' media as cultural texts, however, a new 'sensory' turn in the social sciences has en-livened such investigations, grounding them in both cultural and perceptual enactments of a wider new media ecology, located in the sphere of everyday life. Within this emergent conversation, visual culture still takes precedence, framing the discourse around media and the senses in somewhat occularcentric ways. This is precisely where considering other registers of experience such as the auditory, tactile and olfactory can enrich both conceptualizations of media and assumptions about everyday use of technology (Sterne, 2003; Bull & Beck, 2003; Kozel, 2007; Henshaw, 2013) and within these areas I consider specifically mobile aural practices.

While everyday capturing of audio material is not quite as widespread a cultural practice as everyday photography relative to the camera phone (Daisuke & Ito, 2003), current trends indicate a movement in the direction of increasingly multi-sensory capturing and sharing (Hamburger, 2014). In the time since its release in January of 2013, the Twitter social video application Vine, which brings sound and moving image together, made news by topping the mobile app charts with 3.6 million new users in the first 2 months alone (Weissman, 2013). Its success margin precipitated Instagram - one of the fastest growing photography-based social media networks - to introduce its own video module featuring its iconic photo filters: since its release in June 2013, Instagram video has generated over 130 million users and according to Neomobile Research (2013), projections based on current trends indicate that by the year 2017 two-thirds of all mobile data traffic will be video - that is, image and sound. At the same time, media analysts herald the race for an 'Instagram for audio' application that brings to the fore growing online social networks such as Soundcloud and Audioboom. Given these trends towards multisensory capturing that include both 'seeing' and 'hearing' with portable digital technologies, the focus on listening in this project serves to simultaneously delimit the ethnographic entry point at the sensory level, as well as harness the unique phenomenological possibilities that sound opens up, and take advantage of a wealth of literature that explores the auditory dimension of cultural production (Erlmann, 2004; Bull & Back, 2003; Sterne, 2012; Bijsterveld, 2013). As such, this work aims to bring an ethnographic perspective to the exploration of sensory experience situated in the sphere of everyday life – the ordinary 'praxis' of inhabiting a cultural space. It does so with reference both to 'routine' lived experience and to contemporary technological and media practices, which may be seen as "crystallizations of social relations" and learned sensory techniques (Bourdieu, 1981; Sterne, 2003). In other words, I ask, what can we learn about everyday experience, mediated communication and urban life by examining the way people listen with mobile technology?

Sonic Ethnographies: lessons from the field

Field recording, sometimes referred to as phonography (Drever, 2002), involves the capturing of 'found' soundscapes and other ambient research setting that may include but are not entirely focused on language the way for instance audiotaping interviews is a well-established form of collecting ethnographic data (Lane & Carlyle, 2013; Makagon & Neumann, 2009). Early cultural anthropologists such as Malinowski (1979) and Stoller (1997) routinely used audio recording technologies to document ethnographic

observations in the field (Makagon & Neumann, 2009; Sterne, 2003). Two of the more significant works in the history of contemporary sonic ethnographies include Steven Feld's (1993) exploration of the Bosavi forest in Papa New Guinea and R.M. Schafer's World Soundscape Project (WSP, 1973), which propelled the area of acoustic ecology as an international environmental and educational movement. Steven Feld's ethnomusicology offers a rich model for adopting sonic ethnography as an articulated methodology beyond its being an alternative form of data collection. Feld describes his practice of ethnomusicology as an ethnography whereby a researcher could maintain "a creative and analytic relationship to both the materiality and the sociality of sound" (Feld & Brennis, 2004, p.462). The WSP focuses extensively on listener experience and on the soundscape as both a material and a social ecology intimately connected to a sense of place, and does so through a normative ecological rubric. The WSP (1973) pioneered a number of innovative methods for collecting, analyzing and engaging with sonic content such as soundmaps, diaries, audio graphs, and soundscape composition.

More recent urban sonic ethnographies that are inspired by the acoustic ecology movement include the Finnish project One Hundred Finnish Soundscapes and several related initiatives (Kautonen & Koivumäki, 2010); the follow-up study Acoustic Environments in Change (Järviluoma et al., 2009); among many others. Uimonen (2010) in particular has discussed the use of social media and affordable consumer equipment as catalyst forces for engaging the public in soundscape conservation projects. Yet in many of these projects the precise nature of what is meant by 'listening,' subjectivity, and aural attention remain unproblematized, particularly in relation to the process of recording. One of the key methodological contributions of acoustic ecology and Truax's subsequent acoustic communication model (1984), is the concept of soundscape competence – a term that designates the kind of tacit knowledge that we mobilize towards listening in everyday life. It includes a perceptual understanding of sound's physical characteristics (estimating distance and general acoustics of space), as well as a culturally-informed approach to interpreting the meaning and significance of individual sounds within a wider sonic environment (Truax, 1984). Soundscape competence is thus a function of culture as much as it is a perceptual ability, and combined with the sort of 'audile techniques,' (Sterne, 2003) arguably engendered through the use of mobile technologies, it encompasses both mediated and unmediated forms of listening. Despite the moniker of 'competence,' which implies a normative ideal for a 'better' kind of listening, I take soundscape competence to represent a more agnostic characterization of aural attention: listening approaches and strategies that emerge in specific geographic and cultural contexts. For instance, the typical urban strategy of tuning out incessant traffic noise can be said to be an extension of soundscape competence (a protective mechanism really) resulting from the cultural conditioning of living in an urban environment.

Methodologically, the manner of accessing 'listening' is a necessary step in investigating the aural experiences of typical urban listeners. Soundscape ethnographies such as many of the initiatives undertaken by Uimonen (2010, 2011) or Järviluoma et al. (2009) incorporate guided soundwalking, audio recording and simultaneous interviews with participants. The ensuing limitations, given the Finnish studies are typically modeled after the WSP, are that they directly espouse acoustic ecology's ideals of raising awareness about the soundscape as an end in itself, rather than as a

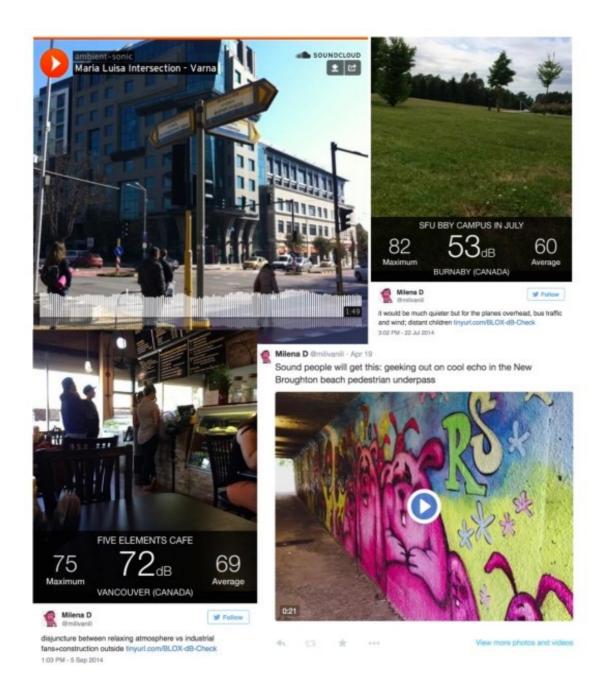
means towards researching other aspects of culture and social life. This is demonstrated through a focus on identifying 'significant' sounds that characterize a community, and a tendency to focus on ear-witness archetypes such as the 'long-term resident' or the 'newcomer' (Kautonen & Koivumäki, 2010). Rather than approaching the dynamics of aural experience as it happens in the flow of everyday life, these projects embrace an agenda of soundscape conservation at the onset; further, it is the researchers who control the recording equipment and by extension, the analytical focus. In contrast, emergent research projects in sound studies not only utilize accessible mobile technology, but also employ participatory, artistic and interventionist methodologies towards the exploration of urban space (O'Keeffe, 2015; Radicchi, 2010; Fërnstrom & Taylor, 2014). Along these lines, I wanted to have participants in my study make their own decisions about what, how, when and where to capture sound. I also wanted to understand the relationship between their everyday technological use and their practice of attentive listening; I wanted to allow participants to develop recording and listening practices over a period of time; and finally, I wanted to create an opportunity for a creative, transformative and reflective engagement with soundscapes. There are several operational assumptions that help situate this inquiry in terms of integral features of listening, mobile technology use, and participatory culture.

- Everyday listening as a problematic listening is a particular way of making sense of everyday experience, a particular way of paying attention, and the soundscape is an active element in orienting us both with regard to place and in our social relations with others (Feld, 1993; Schafer, 1977; Norman, 2012).
- Recording media as an everyday practice communicating about everyday experience through media representations is a particular feature of new media culture and is instrumentally supported by the emplacement, ubiquity and portability of smart technologies in everyday life (Squire, 2009; Ito et al., 2010).
- A technocultural problematic producing media artefacts as a way of engaging with and framing sensory experience engenders a mobilization of digital literacies and new media competence; understanding these requires recognizing each participant's approach to media production (Jenkins et al., 2006; Burn, 2009).

With these themes, the question at hand became: *how does listening with and through mobile technology re-mediate people's access and understanding of their own everyday life?*

The Everyday Listening Project: a case study

The case study for this project involved eight people (two groups of four) as participantinformants who were asked to listen with an iPod Touch for the duration of two weeks and capture daily 'aural postcards' of their everyday sonic experience, followed by group discussions. The prescribed format of aural postcards (Tonkiss, 2003) is somewhat analogous to the WSP's use of 'sound diaries' (1973), however, while sound diaries are largely textual and imply a record for internal reference, a postcard connotes a style and format of representation similar to an 'audio tweet' aimed both at expressing oneself and communicating externally. Framing each moment as a multimodal 'flashcard' captures not only the entry point into sensory experience as a moment in time, but also the convergence of representational modes used to communicate about that experience. While an aural postcard might seem like an oxymoron given sound's temporal nature, the cultural connotations of a postcard align perfectly with the way mobile device users create digital archives. Aural postcards, as I conceptualize them here serve as audio souvenirs referencing phenomenal experience, simultaneously a copy and a version of the 'original' experience. An aural postcard is a story about a particular sound or soundscape and it can contain one or multiple media artefacts, reflection in spoken or written form, a drawing, a map, or data (figure 1).



Audio player

Figure 1. Examples of aural postcards made by the researcher in various formats.

The tools that participants had at their disposal included the Recorder app for audioonly recording; the iOS built-in camera and video applications; Faber Acoustical's dB: a sound level measurement application which allows an overlay of decibel levels onto a still photograph of the environment; a suite of RTA (Real Time Analysis) audio tools; all the built-in iOS apps including Safari and social media apps for web access (in order to engender a 'realistic' everyday use of the device). Given the versatility of the tools and each person's unique relationship to everyday media production, participants

developed specific subjective approaches to capturing everyday soundscapes. The study was intentionally open ended as to the content of the aural postcards and the formats of capture, resulting in over 250 audio files and over 150 photos and videos. Durations of recordings varied from under a minute to over two hours. Some aural postcards included a set of different recordings - both visual and aural; other postcards comprised of a single recording or photograph. While the overall 'methodologies' for capturing everyday soundscapes were highly individualized across participants (figure 2, left), everyone adopted a combination of several media formats that I've categorized based on frequency of occurrence and shared format properties: the sonic highlight - a short vignette of a given soundscape with minimal or no introduction or voice-over; the process recording – the entire duration of an unfolding event; the live commentary – marked by voice-over on location; and the voice memo – a dedicated verbal reflection before or (typically) after a sound event. In addition, a number of participants also used the sound level meter app, which allowed them to generate a visual record of the sonic levels of a given environment or location in the form of a sound level photograph. Interestingly, typical soundscape settings featured in each participant's digital archive also constituted an individualized combination of several archetypal everyday spaces (figure 2, right). Furthermore, the more dominant a particular routine was in a person's life, the more purposefully they explored it sonically as part of this study (e.g. one participant who just moved apartments used the study to map out the sonic environments of her new building). Essentially, mediated listening served as an operational entry point into understanding and connecting with familiar or otherwise significant spaces, routines and ambiences in a novel and exploratory way.

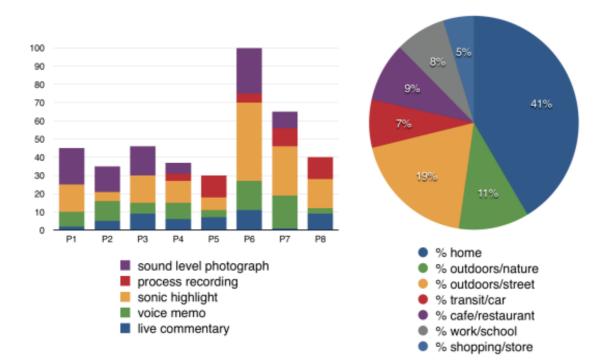


Figure 2. (left) Number and type of media artefact per participant (1-8). (right) Breakdown of featured soundscape settings (average across participants)

Considering each participant's contribution as a mini-investigation through the process of a sonic auto-ethnography, the structuring and choices around recording settings and content reveal unique perspectives about everyday life and relationships to everyday practice. Particularly striking was the contrast between representations of sonic experience as a temporally continuous flow (process recordings) versus everyday life as snapshot impressions, and 'samples' of sound (sonic highlights). Each aural postcard is in this way a particular mediated representation of an everyday experience, in the course of which new perspectives and listening experiences are elicited. 'Reading' the content of aural postcards through their respective documentary iterations reveals an alwayspresent interplay between pre-existing ideas about what it is that participants intended to capture, and reflections that arise out of the mediated sensory experience of capturing. The next section attempts to address some of these interplays as listening intersections, remediated through the format of the device.

Listening intersections in mediated aural practices

Revisiting already theoretically established links between sound, place and memory (Feld, 1993; McCartney, 2010) in relation to metaphors for understanding everyday life - as practice, place, movements and flow (Pink, 2012) - formed a starting point for mapping intersections that characterize aural postcards as listening encounters. Examining voice memos as intentionally reflexive accounts, I began to see several types of potential convergences between the 'actuality' of sensory experience and elements of its mediated representation. For instance, the featured sound was most often narratively associated with these three aspects: a place, a daily practice or the participant's identity. While reflections related to oneself often included voice memos, representations of places or routines consisted predominantly of non-narrated ambient recordings. Where postcards featured a specific everyday practice, sound was discursively incidental to the message conveyed, serving to illustrate and give 'life' to the activity at hand. I want to demonstrate these ideas with several aural postcards that present similar but slightly different 'pathways' or listening intersections, connecting in a really personal way each participant's daily routine with their sense of identity and place. "Starbucks patio" (figure 3) was recorded as a sound level photograph only (no audio recording) and discussed through a voice memo after the fact. This participant generally took a very systematic approach to documenting sound levels, using that as a point of entry to discuss architectural acoustics in relation to his subjective impressions of local soundscape ecologies. What converges here is attentiveness to place and space through an increasingly discerning listening practice.



I found one thing that always pops up when you are in open spaces and sort of listening for things, that it seems very impersonal, unless sounds are within a small bubble, in the city anyways, within like a 5 foot radius of you. It's hard to tell if you close your eyes that there are other people there, other than the fact that you can probably hear steps coming immediately by you. But if no one stopped or stepped within that bubble, I'm wondering how much you'd actually hear? It's so muffled by all the other noise. Now today on the patio it was one of those places where I think the acoustics were just so where you could, if you wanted to, you know, you're in a patio, everyone's in a sort of quasi-enclosed space. And even though there is a lot of noise, I could still make out what other people were talking about. Not only that but I could make out things like the grinding of like the silt under peoples' boots, like a couple of feet away.

Figure 3 Aural postcard from a participant at Starbucks

The second aural postcard comes from a participant who mobilized the study to explore their new apartment and the building's soundscapes from a point of personal significance (figure 4). Many of the postcards, such as this one, directly invite the imagined listener to come along on a journey of discovery, typically recorded in the format of live (video) documentary of discrete domestic sound events and sonic spaces.



Figure 4. Listening intersections: "Gas light stove" (Participant 4 aural postcard transcript)

Okay here's a sound that is new to me. Let's see how this goes, Watch this. That's amazing 'cause actually normally what happens when I try to use one the front burners on this range I get [clicking sound] this. It's really frustrating so let's see if we can repeat the magic. No, gas is dispersing. I guess it's just from over-use but the front burners on this on this stove are really difficult to light so that clicking sound has become a pretty big part of my everyday experience. Um I'll show you the back ones work though. [Clicking] look at that. I'll see if I can get this one going. It's kind of scary now that I listen to that.

Finally, the third example comes from a participant who suffered a sports injury at the beginning of the study and ended up exploring her local soundscape while on medical leave. As part of her treatment for a concussion she had to take many evening walks and avoid exposure to screens, which resulted in being attentive to the many ambient industrial sounds emanating from a nearby shipyard and power station. The context of discovery here created a resetting of sensibilities towards sound that is typically tuned out, and capturing it marked a unique relationship to her recovery process.

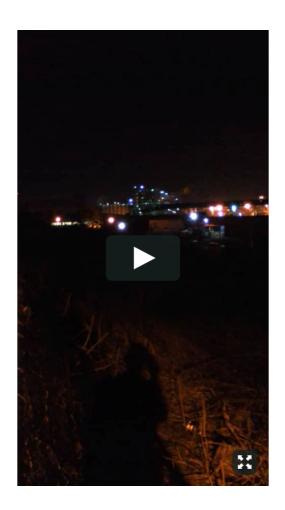


Figure 5. Listening intersections: "Walk on Wall Street at night" (Participant 8 - group discussion transcript)

Listening back [to my recordings], the noisiest stuff that we generally ignore on a regular basis is power, whether it's a vehicle or electricity or a plane. Listening to the soccer field you can hear the planes vividly, and listening to the quiet recording in my apartment you can hear the hot water and fridge and you can even hear some boats tugging in the port. Just it never ends, I think we just get used to that, noise as background noise, but it is definitely shocking to listen back in the recordings to find out just how much it overtakes the environment.

Recording as a way of listening

What these intersections help illuminate, is the way in which recording with mobile technology, that is itself so emplaced in everyday life, mediates and actively constructs particular cultural performances of listening. Unmediated listening is of course already part of everyday life, but it is precisely the technological mediation of the iPod that allows the externalization of these experiences, eliciting a range of observations, sensations and reflections that might not otherwise occur. In other words, the stories that

we tell ourselves and others when encountering the world with and through mobile smart technologies are in part configured and even elicited by their use. The process of speaking to and producing for a disembodied and fragmented audience (neither entirely self, nor entirely other) offers a distinctive means for mediating one's own thoughts and impressions. In fact, in technologically documenting listening sound ceases to be central: the process becomes about what participants unlock and understand about themselves and their environment while attending to the soundscapes of their lives.

This returns us to the question of how recording sound engenders particular relationships with the aurality of spaces, places and routines of everyday life in ways that are different from, for instance, producing photographic memories for an imagebased social network. What themes, impressions, discoveries and emotions arise as a result of giving prominence to listening? The listening intersections discussed in the previous section help us trace some of the inner workings of both primary aural experience and the layers of mediation that recording affords, making this a fruitful method for ethnographies that (increasingly) rely on collecting and representing digital media as 'data'. From this study I want to identify three aspects of mediated listening that warrant attention as specifically aural performances of engagement and inhabitation of urban environments: affect, or the way listening mobilizes emotional relationships to daily routine; residue, the sensory traces of experience retained through audio recordings; and presence, an enactment of listening subjectivity in the process of curating everyday experience. Affect, residue and presence characterize the way in which sound invites participants to inhabit a given environment, as well as the way in which mobile recording mediates the emotional context of everyday experience, through temporality and resonance. These three are not separate characteristics of listening, but convergent elements that help situate mobile sound recording as a particular cultural and sensory practice within new media culture.

Affect, Residue, Presence

Undoubtedly, the affective dimension of sound – how we feel about it – is a deeply ingrained aspect of listening as a form of sensory encounter. In the initial stages of the study I purposefully avoided framing discussions around 'pleasant' versus 'unpleasant' sounds, since this has the potential to derail a more comprehensive exploration of listening into the duality of 'likes' and 'dislikes.' Nevertheless, both the issues of noise and personal preference came up in all participant accounts. Affect and subjectivity were tightly entangled with the idea of 'attentive' listening itself, which translated to either being sensitive to unwanted and/or loud sound, or being able to pick out incidental 'cool and interesting sounds' from the surrounding environment. Interesting seemed, based on individual reflections and group discussions, to be the catch-all phrase for events, places, and practices worthy of recording both in terms of personal significance and for instrumental reasons: as a way of illustrating or communicating the general character of given soundscapes. In this sense, interesting also encompassed other symbolically meaningful properties of sound such as function, communicative and informational value.

Analogous to Daisuke and Ito's (2003) point that the camera phone constructs 'recording-worthy' content, the way technology mediated affective engagements in this study was that it allowed participants to explore a wide range of relationships to urban

settings through recording and capture. While some participants focused on the measurement of loudness through sound level photographs in an ostensibly 'objective' way, others focused on the emotional and connotative aspects of noise by way of sustained observation and reflection. The externalization of these relationships into particular media representations helped 'dramatize' and stage (Bijsterveld, 2013) the realities of urban noise, as well as each person's domestic soundscape and situate participants as embodied listening subjects. This way, the sensory residue accessed in the process of re-listening to one's archive of audio recordings facilitated unique discoveries and reflections and allowed participants to explore their emotional responses to sound (figure 5).

The sheer temporality of sound, accessed through a range of mediated formats (long vs. short recordings, decibel measurements, voice memos, videos) already disrupts the dominance of static forms of capture. Being present in space and time as a listening subject stands in contrast to the production of instantaneous photographic memories of the kind that permeate the social multiverse. Listening de-normalizes the normal of everyday life, by virtue of having to sit within the unfolding materiality of the aural, and stay present in the simultaneously physical, aesthetic and symbolic experience of listening (Droumeva, 2015). Despite some prominence given to noise, what participants reported as most engaging and transformative in the study was the re-discovery of a wide array of familiar and hitherto tacit everyday encounters with sounds that would often go unnoticed and unexamined: popping popcorn; the sound of wind; the soundscape of typing on a keyboard; the ambience of cafes and restaurants; the sound of making tea, etc. Attending to these soundscapes allowed participants to investigate their own attitudes towards everyday routines and reflect on them from a point of renewed significance. Here's how one participant framed her capturing experience:

I basically thought about what I'll record in the beginning of the day realizing that almost everything I do has a sound to it that's interesting. And because my inclination is to do long recordings of a process, I was taking a snapshot of things that I do in my daily life as opposed to 'oh there's an interesting sound right now and I'm gonna grab it.' It's more about the process of things I do, like when I look back at my recordings and what I've named them I realize my life is crazy, like ridiculous, and I learned that - I guess I already knew that! (Participant 5, group discussion transcript)

Doing sensory studies with technology

Through this case study, I sought to deconstruct and then re-construct the process of mediated curation of sonic experience, in order to explore a model for doing sensory research with technology. Reflecting on the way I represent this work, it strikes me that its 'product' could easily be a performance, a storytelling circle, or an interactive web project, as much as a research pilot study meant to inform future work. To that end, the intersections between listening, everyday life and technology presented here constitute preliminary conclusions, connections and relationships that gesture at larger themes of technological mediation, embodied by the concepts of affect, residue and presence. Dealing with technology in this way – attending to both sensorial experience and its digital remediations as 'data' – opens space to consider not only the curation of

everyday experience through media representations, but also the analysis and presentation of research data as itself an act of curation. The mediational role of technology is key here as it facilitates particular aesthetic sensibilities and modes for communicating significance. A 'capture-able' moment is no more primary than it is digital: an ostensibly technological, cyborgian convergence of mediated materliality. This is not to say that mobile recording technologies have single-handedly changed the way we listen and attend to everyday experience; rather, they co-construct the manner of mediated representation, by which we make sense of the everyday. Our smart devices prompt us to frame sonic experience in a multimodal fashion – through the microphone, through the camera, and through the interactive possibilities of the social web – as curatorial decisions, related to the staging of recorded content. Emplaced in the singularity of each listening moment, multimodal capturing affords the retention of phenomenal residue through an evocation of sensory presence and emotional context. Framing phenomenal experience – in this case listening – is thus a core characteristic of a more general new media sensibility – the curation of everyday life.

References

Bijsterveld, K. (Ed.). (2013). Soundscapes of the Urban Past: Staged Sound as Mediated Cultural Heritage. Transcript-Verlag.

Bourdieu, P. (1981). Men and machines. In K. Knorr-Cetina & A. V. Cicourel (Eds.). *Advances in Social Theory and Methodology: Toward and Integration of Micro- and Macro-Sociologies* (pp. 304-17). Boston, MA: Routledge and Keagan Paul.

Bull, M. & L. Back (Eds.). (2003). The Auditory Culture Reader. Oxford: Berg.

Burn, A. (2009). *Making New Media: Creative Production and Digital Literacies*. New York, NY: Peter Lang Publishing

Daisuke, O. & Ito, M. (2003). Camera phones changing the definition of pictureworthy. *Japan Media Review*. Retrieved from http://www.ojr.org/japan/wireless/1062208524.php

Drever, J.L. (2002). Soundscape composition: the convergence of ethnography and acousmatic music. *Organised Sound*, 7(1), 21-27.

Droumeva, M. (2015). Why There Will Never be Instagram for Audio. Blog series. *Canadian Association for Sound Ecology* (CASE). http://www.soundecology.ca/

Dyson, F. (2009). Sounding New Media: Immersion and Embodiment in the Arts and Culture. Berkeley, CA: University of California Press.

Erlmann, V. (Ed.). (2004). *Hearing Cultures: Essays on Sound, Listening and Modernity*. Oxford: Berg.

Feld, S. (1993). From Ethnomusicology to Echo-Muse-Ecology The SoundscapeNewsletter,8.Retrievedfrom

http://www.acousticecology.org/writings/echomuseecology.html

Feld, S. & Brennis, D. (2004). Doing Anthropology in Sound. American Ethnologist, 31(4), 461-474.

Fërnstrom, M. & Taylor, S. (2014). The Creative Soundwalk. Paper presented at the inaugural symposium on *Urban Soundscapes and Critical Citizenship*, Limerick, March 2014.

Hamburger, E. (2014, June 20). Surprise: Snapchat's most popular feature isn't snaps anymore. *The Verge*. Retrieved from http://www.theverge.com/ 2014/6/20/5827666/snapchat-stories-bigger-than-snaps-electric-daisy-carnival

Haraway, D. (1988). Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. *Feminist Studies*, 14(3), 575-599.

Ito, M. et al. (2010). *Hanging Out, Messing Around, and Geeking Out: Kids Living and Learning with New Media*. Cambridge, MA: The MIT Press.

Järviluoma, H., Truax, B., Kyto, M. & Vikman, N. (2009). *Acoustic Environments in Change*. Tampere: University of Joensuu Press.

Jenkins, H. et al. (2006). *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century*. White Paper prepared for the McArthur Foundation.

Kautonen, O. & Koivumäki, A. (2010). Soundscape stories and routes in Pirkanmaa. Paper presented at *Ideologies and Ethics in the Uses and Abuses of Sound*, Koli, Finland.

Lane, C. & A. Carlyle (2013). In the Field: The Art of Field Recording. Uniformbooks.

Makagon, D. G. & Neumann, M. (2009). *Recording culture: Audio documentary and the ethnographic experience*. Thousand Oaks, CA: Sage Press.

McCartney, A. (2005). Performing soundwalks for Journees Sonores, canal de Lachine. In G. Giannachi, & N. Stewart (Eds.). *Performing nature: Explorations in Ecology and the Arts* (pp. 217-234). Bern, Switzerland: Peter Lang Publishing.

Norman, K. (2012). Listening Together, Making Place. Organised Sound, 17(3), 257 – 265.

O'Keeffe, L. (2015). Thinking Through New Methodologies. Sounding Out the City With Teenagers. *Qualitative Sociology Review*, 11(1): 6-32.

Pink, S. (2012). Situating Everyday Life. London, UK: Sage.

Radicchi, A. (2010). Living Soundscapes, Historic Cities and the Design of Urban Landscape. *The European Landscape Convention in research perspective*, Bandecci & Vivaldi (Eds), Vol II: 152-155.

Schafer, R. M. (1977). *The Tuning of the World*. New York: Knopf. Reprinted as *Our Sonic Environment and the Soundscape: The Tuning of the World*. Destiny Books, 1994.

Squire, K. (2009). Mobile media learning: Multiplicities of place. On the Horizon, 17(1), 70–80.

Sterne, J. (2003). *The Audible Past: Cultural Origins of Sound Reproduction*, Durham, NC: Duke University Press.

Stone, A.R. (1996). *The War of Desire and Technology at the Close of the Mechanical Age*. Cambridge, MA: The MIT Press.

Tonkiss, F. (2003). Aural Postcards: Sound, Memory and the City. *The Auditory Culture Reader*. In M. Bull & L. Black (Eds.) (pp.303-310). Oxford: Berg.

Truax, B. (1984). Acoustic Communication. Norwood: NJ, Ablex.

Uimonen, H. (2010). The moving microphone: social media and acoustic communication. Paper presented at *Ideologies and Ethics in the Uses and Abuses of Sound*, Koli, Finland.

Uimonen, H. (2011). Everyday Sounds Revealed: Acoustic communication and environmental recordings. *Organised Sound*, 16(3), 256–263.

Weissman, S. (2013, September 9). 15 Stats You Need to Know about Vine & Instagram Video. *Oracle*. Retrieved from http://digiday.com/brands/15-stats-vine-and-instagram-video/

World Soundscape Project. (1973). *The Music of the Environment Series*. Schafer, R.M. (Ed.). Vancouver: A.R.C. Publications.

Acknowledgements

Heartfelt acknowledgements to Suzanne de Castell and Barry Truax for supporting this project, and to the editor and reviewers for their invaluable suggestions.

Bio

Milena Droumeva is an Assistant Professor of Communication at Simon Fraser University specializing in mobile technologies, sound studies and multimodal ethnography. She holds a PhD in education and has worked extensively in educational research concerning game-based learning and computational literacy. Milena has an extensive background in acoustic ecology and some of her new projects include urban soundscape research, sonification for public engagement, as well as gender and sound in video games. Milena has been recording and listening for over 14 years in Vancouver and Europe as part of her urban soundscapes and mobile media cultures research. You can find her musings on sound and other material goodies at www.natural.com.