Current location technologies have become tools used by contemporary artists, theorists, designers and scientists to reformulate our understanding of social engagement within an enlarged concept of place. These new mobile networks have altered the way people exist in and relate to spaces where the real and virtual world blend, blurring the lines of traditional spatial definitions and frameworks. This special issue provides a variety of perspectives and practices on the meaning and interpretation of today’s locative media.
Sound Cartographies and Navigation Art

IN SEARCH OF THE SUBLIME

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The telematic prosthesis increasingly reshapes our sense of the self and its relation to its surroundings. Today’s tracking technologies (GPS, geotagging) enable mobile, dynamic and more individual mapping that shortens the gaps between the panopticism, universalism and abstraction of classical maps and the real physical experience. Artistic practices employing navigation techniques explore the potential of individual everyday movement to generate and perform new sensory modes of existence and meta-level narratives that can often be referred to as “sublime.” Applied to digital practices, this term describes decentering, dislocation, and disruption of conventional contexting cues, challenging the reliability of ordinary senses for locating one’s subjective and objective “self,” enhancing the feeling of potenxia. The sound overlay creates additional interruption of natural expectations, the liminal in-between space within the created mobile soundscape. The paper demonstrates the diversity of artistic strategies in which mediation through geotagged sound constitutes transgression into augmented virtual space.

ABSTRACT

The dynamic of auditory knowledge provides then a key opportunity for moving through the contemporary by creating shared spaces that belong to no single public and yet which impart a feeling for intimacy: sound is always already mine and not mine... It exists as a network that teaches us how to belong, to find place, as well as how not to be long, to drift. To be out of place, and still to search for new connection, for proximity.

- Brandon LaBelle

INTRODUCTION

Space and time, the fundamental parameters of the experience of the universe, get their principally new and original treatment in contemporary mobile/locative arts. Using the simple everyday procedure – movement through space – as an anchoring point, they enrich it with meanings that often can be referred to as “magic,” or even “sublime”; that is, meanings that transcend locality. Artistic practices employing navigation techniques explore the potential of the individual everyday movement to generate and perform new embodied sensory modes of existence and meta-level narratives. Can locative media deepen...
our sense of embeddedness, recreating those ancient reality-maps where selfhood was co-extensive with community and nature? Or will these media further abstract actual relatedness, narrowing it to more quantifiable and qualifiable instrumental operations? What could be the specificity of auditory perception of space in comparison to more traditional forms of quantifiable and qualifiable instrumental operations? Our sense of embeddedness, recreating those ancient recordings of individual tours, maps have become more and more deprived of the “tour experience” component. If medieval maps were full of traces of personal explorations, their later iterations became more and more abstract, which in the end led to today’s rigid, static, and formal representations not of the landscapes themselves, but of existing knowledge systems (Foucault), ideologies (Wood, Harley), and social codes (Lefebvre). The issues of “space” – its mental and social construction and representation – converge on principles of connectivity and heterogeneity. Now, with everyone digitally empowered to be a new cartographer, Gilles Deleuze and Félix Guattari’s strategy of “releasing” the territory from its previous mappings (“determinantalization”) and placing new meanings on it (“reterritorialization”) becomes particularly relevant.

The shift from representational to post-representational cartography within the field of cartographic studies has generated a number of approaches towards maps, interpreting them as inscriptions (J. Pickles), propositions (Wood, Fels), immutable mobiles and actants (B. Latour), as well as practices (J. Corner, T. Ingold). Mapping is understood as actualization, an unfolding potential of a territory, it involves “processes of gathering, working, reworking, assembling, relating, sitting...” (that) allows certain sets of possibility to become actual.” Besides purely “capturing” elements of the real world, maps also “project back a variety of effects through their use.” It is these effects that emerge through the mobile artistic practice that is at the core of our current interests. Cartographic as a study of maps is challenged today to become a “critical cartography,” that is to engage political and social underpinnings behind the resulting representations. This is complemented by the field known as Critical GIS (Geographic Information System), which adds to the top layer of a map as a visual representation of geographical territory, other layers of meaning, thus giving an “exploded-view” of the territory. These layers may be photos, videos, animations, immersive visualizations, augmented reality (AR) inputs, often with explicit political focus and intention to deconstruct ideological and power implications in spatial representations. For the most part, the sound is used often in an illustrative manner, in addition to other elements, in order to enhance emotional connection with a place. Some of the examples below will illustrate the specificity of critical awareness that can be raised by activating the acoustic layer.

**LOCATIVE SOUND ART: CONTEXTS AND STRATEGIES**

The telematic prosthesis increasingly reshapes our sense of the “self” and its relation to its surroundings. Today’s tracking technologies (GPS, geotagging) enable mobile, dynamic and more individual mapping that shortens the gaps between the panopticism, universalism and abstraction of classical maps, on the one hand, and real physical experience, on the other.

Traditionally, the primary aim of locative media is to reintroduce additional – latent or neglected – meanings of a place, to raise awareness of spatial context and actively engage with it (that is what de Certeau implied by the notion of space as a “practiced place”). It resituates media content and interaction into the real world and thereby into everyday action, incorporating techniques of mixed-reality construction (e.g. Augmented Reality).

Sound is an immaterial and invisible matter, yet its impact on the experience of place can scarcely be overestimated. Overlaid with and geotagged to particular locations, it is capable of creating an eerie feeling of defamiliarization and displacement. What are the ways in which sound can serve as an indication of a location? What is the role of an abstract, non-mimetic electronic sound in evoking memories of locations?

Can the term ‘sublime’ be relevant in describing locative/ mobile/ sound artistic practices, and if so why?

There are various strategies that can be distinguished at the intersection between sound and locative art. It is not the aim here to provide any specific classification, which would be a subject of special analysis that can never be complete. Among the most distinguished are site-specific sounds and sonic interventions (in the style of the pioneers like Max Neuhaus), and soundscapes and field recordings (started by Hildegard Westerkamp). Krzysztof Wodiczka’s “Personal Instrument” was one of the first mobile projects that utilized the Sony Walkman (1964), a wearable sound filter based on the intensity of light hitting the user’s palms). The advent of GPS-enabled geolocation fostered the development of sound cartography and related collaborative documentary projects. Among the already classic interactive mobile sound projects are “Sonic City” by Ramia Mazé, Layla Gaye and Lars Erik Holmquist (2003), where music is created in real time as a direct result of the user’s movements through the city.

“Hlemmur In C” by Pall Thayer, (2004) a sound performance based on relational dynamics; Steve Symons’ “Aura,” (2007) environment of sonic traces left by movements of others, accessed by walking through a space equipped with GPS; Teri Rueb’s “Trace” (1999- ongoing), a site-specific sound route of memorial songs, poems and stories; Atau Tanaka’s “Mobile Music Making” (2004); “Odd Sympathies” by “Sans fapori” (2008), a “concert” where, as an alternate to sitting, the audience walks; reinterpretations and remixes of local soundscapes as in “Noise-man” by Dunne & Ruby (2006); or “Sonic Interface” by Akitusu & Maebaysashi (1999), and numerous sound walks through cities like Paris, London, Berlin, New York where both “mimetic” sounds or vocal narration are used here to enhance dynamic geographical visualizations.
SUBLIMINAL QUALITIES OF LOCALIZED SOUND

The sound overlay utilized in many of these projects may seem foreign, out of place and out of sync or registration. In a lot of ways this is due to the principal difference in operation between auditory and visual types of perception of space: what one hears may correspond to a radically different image than what one sees. The sound may alter the perspective of distance or suggest the presence of something obstructed from vision. Finding these discords, and creating narratives around them, is at the core of locative and mobile sound art. Fakue Behrendt, a historian and theorist studying these artistic practices, points out the fact that “the visual focus in the media world often implies a distant observer – this does not work for sound and locative media as these rely on immersion, not distance.”

An argument against this statement could be that vision-based media does not intend to distance, but rather, to connect and absorb the viewer beyond itself, carrying it in its wave, and inhabiting always the experience possible. Christoph Cox, a philosopher specializing in sound theory, looks for these conditions in noise: “‘noise’ is not an empirical phenomenon, not simply one sound among many. Rather, it is a transcendental phenomenon, the condition of possibility for signal and music.”

In the context of locative sound art, street noise forms the initial condition for an experience of urban space. Sounds of different locations, recorded by a device moving at high speed, and then mixed together, would be indistinguishable from one another, i.e. one would hear it as a noise, and following Cox’s logic – as a source of experience of the transcendental and the potential.

Close ties between sonic and spatial dimensions reveal newer conditions for experience as such. Acoustic perspectives have been already thoroughly studied from the physiological and phenomenological points of view, for example, in the field of psychoacoustics. Among the various discoveries in this arena are indeed the highly affective qualities of spatial sound. Omnipo Gram振兴る， pervasive, multilayered, subtle, sound can feel threatening (though still sublime). Artists, in their projects, just amplify what already exists as a background noise. Examples of technologies that produce such distressing effect could be LRAD (Long Range Acoustic Devices) and more directed sounds such as “audio spotlights,” or rooftop speakers directed at an individual passerby, following them in space, while creating the effect that the sound is contained within one’s head. Both technologies are powerful in altering states of mind and inducing certain messages on behalf of controlling institutions.

The issue of control also comes up, surprisingly, in regard to the allegedly harmless procedure of natural sound mapping where by archiving or selection, the creation of a special aesthetic order becomes the fulfillment of the same desire to inscribe rules, creating a certain subjective lens. One order is changed by another one. Yet, the political point here is freedom of alternation mapping is part of mobile practice, where the user gets access to a remote location via an alternative perspective (that in its turn can be replaced by another one). The examples below will illustrate some of the multiple strategies for creating these perspectives, the alternative and alternating ways to navigate both through physical and imaginary spaces. This does not present in any way a comprehensive list and should be supplemented by others, which would then allow one to formulate a special taxonomy, specific to practices engaging not only sonification of movement, but with the very concepts of cartography and navigation in a deeper way.

MODELS OF SOUND CARTOGRAPHY

Sound (or “sounding”) cartography can be created while on site, through direct engagement of the user-participate with a spatial environment. A different strategy would be an acoustic interpretation of the already existing maps and their graphic peculiarities. Sound becomes a simple reflection of relationships between lines and other parameters on the map, corresponding to them in a specially coded way.

A project by a Russian artist Evgeny Strelkov, “Sirenes” (2004), acoustically reinterprets a map of the Volga
River water reservoirs. Initially created as an indoor installation, today it exists as a web-based piece. Vocalizations of more than 10 water reservoirs are based on calculations of the distances between the shore and the source point of the Volga. According to the artist, the inspiration for the project came from the history of (industrial) development throughout the Volga basin and the river’s unique vocal traditions:

Water storages on the body of the Volga, like swellings, became symptoms of pathology: drowned lands and towns, water blooming, death of fish and toxic wastes in the bottom sludge...

Along with that, however, water storages are the personal file of the Volga: the shape of artificial seas reflects the surrounding topography, their size characterizes the human factor. [...] (And the Volga was always full of sound; the required skill of engine men on steamboats of the 19th century was to produce fanciful trills using steam whistles.) [...] the cryptic and chaotic music is filled with fragments of Volga songs pressed with time to two or three notes, shadows of steamboat horns, boatswains’ pipes, bell toots... These foghorns, like sirens’ voices, are only splinters of the acoustic replica of the Volga culture that is lost and could not be reached again: some fragments seem to be sweet and melodic, but randomness and sharpness of passages reflect the disrupted integrity of the Volga sonata.

The resulting cacophonous sound is an abstraction that, in playful and artful ways, attempts to address environmental and social issues of the Volga river basin. It is impossible to distinguish any of the sounds that are mentioned above in such a loving and romanticized manner in that they are clearly artificial squeaking sounds.

In 2008, the project was updated to a concert version, created by composers Olga Shaidullina and Anton Cherkassov, and performed by a string quartet. Now becoming a piece within another genre, no longer an interactive computer program, it nonetheless should be treated as part of the same project. Still based on electronic calculations, the sound of the strings imbues the piece with the qualities of a different aesthetic order, more human, more emotionally affective. What causes such an effect? What is subliminal about it? Is it the intensity of the sound and its sudden mysterious harmonies within the composition, or associations with the history of the river, or images of the bygone days and their inhabitants? Or rather, can it be the result of the procedure of cartographic distancing, with its sudden suspension above the realm of the physical? All of the above seem to be relevant and serves as an example of the aesthetic actualization of diverse layers of meanings on the basis of sonifying a cartographic “take” on a particular place. The beholder may remain physically static, but the temporal quality of sound enables an imaginary journey – not only through space – but through historical time and its cultural forms.

Another example of sonic interpretation of spatial data is “G-Turns” by a German sound artist Jens Brand. Space is taken here as a specific and potentially physically approachable territory, yet, our connection to it is mediated by sound. The player constructs an abstract version of a path between particular arbitrary locations on Earth. The visitor (of the installation or the website) can hear the chosen route, no matter how long it is (it may go around the globe and contain several “destinations”). The sound would be based on characteristics of the actual topography and be processed using two databases: a topographic database that contains the altitudes of all the mountains, valleys, skyscrapers and gullies; and a dynamic database that allows one to calculate the orbits of any public-use satellite. “The sound is calculated such that the shape of the topography equals the shape of the audio wave, in the same way that one would look at the latter with the aid of a 3D audio program (spectral analysis).” It is a Hi-Fi product which plays the Earth as a disc.
As in the previous example, mobility in its literal sense is reduced here to mathematical calculations and sound waves. It is the procedure of imaginary travel that makes this experience dynamic. Focusing the mind on an imaginative road may be compared to reading a guidebook or examining a trail map. Simultaneously, we are relocated to the position of a satellite and a geodesic instrument (measuring the altitudes). This is, again, an elevated perspective made possible through mathematical processing. Both traditional cartography and GoogleEarth made possible the access to what otherwise would remain as unrepresentable. Though we can look at the surface of the Earth and zoom in to specific parts, it is the aerial/satellite perspective, which does not give the view in relief, that is one of the most emotionally affecting characteristics of the experience, and is the most inspirational for artists. This aesthetic tradition, associated closely with the search for sublime experiences, may be called the roots of Brand's piece. The computer program is only a tool to add newer layers of meaning, to remind us of the challenge of representing the dynamic experience of the Earth's shape.

Both Brand and Strelkov ignore the physical, spatial position of the actor/listener. The experience is individual, not shared, which is the more common experience of spatial sound. How does it relate to other qualities of acoustic experience, by being inclusive, associative and non-dualistic? The associative dynamic of sound lends greatly to triggering associated forms of discourse and knowledge. The artistic choice to isolate the perceiver from the visual characteristics of the surroundings is to emphasize that the visual focus should be generated and directed from within the associative space of the imagination, with the experience of a sonified map being a key to it. As LaBelle writes, the “associative and connective process of sound comes to reconfigure the spatial distinctions of inside and outside, to foster confrontations between one and another, and to infuse language with degrees of immediacy. In this regard, sound studies and auditory knowledge contribute greatly to understandings of the ‘geographic’ and the modern legacy of spatial production with a view toward engaging the influential energies and ideological processes that lie in and around what we see and touch.” In this statement LaBelle follows the observation of Steve Connor, who likewise identified listening as an “act of imaginary projection and transference,” but also connected diffusing and associative auditory dynamics to “the switchboard experience” of modern life in general – in early telephone systems, radiophonic broadcasting, and cinematic matter, which would “necessitate a new shuffling between sight and sound.”

Be it conceptual or not, in one way or another, maps reflect actual mobile practices. An aerial perspective gives a quite realistic sense of the land and its surface – you can feel it, irrespective of the distance. But it is still sliding along the surface – the only procedure that vision allows. Beyond the visible surface there are plenty of geological, sociological and historical data to be perceived. One of the metaphors for digging inside those stories could be archaeology. Yet, here we would like to introduce the concept of Martin Howse (UK/DE) and the micro_research group – “psychogeophysics.” A more familiar term “psychogeography” is mashed-up here with earth science measurements (site forensics and geophysical archaeology), charting local and global geophysical effects like electromagnetic phenomena on people’s lives.
Howse is not a pioneer in introducing electromagnetism to sound art, or to mobile practices. The fascination with “deterриториализирован sound” available through radio transmission goes back, at least, as far as Schaeffer. One of the most famous recent predecessors is Kristina Kubisch, who since 1980 has been building her own self-designed headphones to provide the viewers/listeners access to their own individual spaces of time and motion.

Psychogeophysical interventions led by Howse and his colleagues (field-expert practitioners) are usually workshops during which speculative and fictional stories are being constructed, mapped and unisonified based on the detection of hidden environmental data, or infoscapes. In 2009, together with Shintaro Miyazaki, Howse developed a concept of “Detektors”, an open, collaborative project which uses sonic strategies and DIY-devices to reveal and archive recordings of an open, collaborative project which uses sonic strategies and DIY-devices to reveal and archive recordings of electromagnetic emissions and trans-sonic machinic assemblages. It is both a cartography and a database of user-generated geolocational sonic studies of electromagnetic emissions and audible rhythms produced by our everyday electronic devices. Detection is taken in its widest sense, as a “making sense of that which is”. For instance, in the summer of 2010, the site of the legendary Tempelhof airport in Berlin was explored through “divining”, “plotting,” a radio telescopy evening, “thoughtography” and “qualitative plant investigations” in order to imagine a future electromagnetical architecture of the place.

In one of his papers, Howse engages rich epistemological and physical connotations about aether, ephemeral substance existing between things, a precurser for both electro-magnetism and Einstein’s idea of interconnection between space and time. It is also a universal reference for the propagation of light, its omnipresence, and thus life existence. In parallel to the growth of scientific analysis, aether’s invisible nature has always been inspirational for many myths about the unexplainable and sublime occurrences happening within this enigmatic realm. Making manifestations of the imaginary audible and mapping them means not just to acknowledge their existence, but to give them authority, make them your spatial orienteers, and let them guide you.

This experience, like most of the mobile art practices with sound, is purely individual and performative, but it is often also expressly immersive (as was already pointed out). “Radioscape” (2004 – ongoing) by Edwin van der Heide (NL) is an immersive environment that explores the bodily relationship to the medium of radio.

In this piece, sources of sound already exist in the aether in the form of fifteen custom developed radio transmitters that are distributed over part of a particular city, each transmitting one layer of a “meta-composition.” The participant navigates this environment and shapes his/her experience through simple movement though space, while using a custom developed

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receiver that is able to mix the (received) signals from the individual transmitters and gather multiple signals simultaneously. "By interacting with the environment the visitors become 'inhabitants' of the organized transmitted signals. The visitors reorganize the area and assign new meanings to places."

In this case, there is no pre-given map; it was constructed on-site by the participants. Yet, their embodied experience of the sounds affects their vision of the space, leaving traces and impressions in the user-generated 4-dimensional mental map. The volatile qualities of the received radio sounds adds to the open, non-linear and constructed final image.

CONCLUSION

The described projects demonstrate the diversity of strategies in which mediation through geotagged and located sound constitutes a transgression into augmented virtual space. Due to the quality of the sound, which touches upon the abstract zones of pure imaginary, an experience is created of transcending the borders between material reality, into the dimension of the invisible or another, potentially possible, realm. Whether “playing the map,” or physically walking through space, the participant activates the hidden, volatile layers of spatial experience that escape definition. The common media used in these pieces, sound, is presented here in such diverse aspects as a trace of a landscape and its cultural history (Strelkov); as a direct acoustic representation, or acoustic cartography of that which is usually non-representational (Brand); as a way of detecting and representing hidden infoscapes, or sub-levels of the geophysical (Howse and van der Heide).

The associative and relational qualities of sound, intensifying the work of imagination, make us reconfigure not only our relations to particular locations, but the relations between locations themselves. Being part of the bigger and whole surface, locations become more fluid, they move. The experience of the acoustic orients our bodies in space and locates us within our surroundings – both visible and invisible. Thus, it at once immerses us in the physical present and transcends our embodiment, allowing access to something beyond the physical. Movement (even through virtual maps) and listening, together, orient us to location and beyond it. Sound cartographies are therefore maps of location, but also traces of the hidden and unconscious. The thrust of their experience is to find oneself in a situation of liminality and to rediscover one’s surroundings as subliminal. In this way the "total effect" of geography and place on an individual reveals itself. Totality, in its turn, is a result of an unconscious quest to connect with the unknown in order to rediscover and reconsider not only one’s surroundings, but oneself, one’s mental map as never fixed, always alive and responsive.

REFERENCES AND NOTES


5. Ibid., 18.

6. Ibid.


8. “Space is composed of intersections of mobile elements. It is in a sense activated by the ensemble of movements deployed within it. Space occurs as the effect produced by the operations that orient it, situate it, temporalize it, and make it function in a polyvalent unity of conflictual programs or contractual proximities... In short, space is a practised place.” Michel De Certeau, The Practice of Everyday Life, trans. Steven Rendall (Berkeley, CA: University of California Press, 1988), 17.

9. One of the worthwhile versions of taxonomies for mobile sound art is by Frauke Behrendt: Frauke Behrendt, “Mobile Sound: Media Art in Hybrid Spaces” (PhD diss., University of Sussex, 2010).


16. This is Kant’s famous ethical-aesthetic empowering version of the sublime, whereas the dialectics between positive and negative effects of the sublime were developed even earlier by Edmund Burke, focused more on the effect of overpoweredness, rather than is discovered in that state.


23. Ibid.


27. microresearch, the website of the artists; http://www.evdh.net/radioscope/index_more.php (accessed January 20, 2012).


30. Fascination by the enigmatic character of aether is apparent in the following passage by René Descartes: “…that these souls of material particles are endowed with knowledge of a truly divine sort, so that they may know without any medium what takes place at very great distances and act accordingly.” René Descartes, “To Mersenne,” in Descartes, Correspondence, ed. Charles Adam and Paul Tannery (1893), 396, quoted in Martin Howse, “The Aether and its Double,” in Spectropia, acoustic-space.net by RXC, October 2008, http://nico.co.uk/spectropia/Martin-Howse-eng.pdf (accessed January 10, 2012).


32. Ibid.
Current location technologies have become tools used by contemporary artists, theorists, designers and scientists to reformulate our understanding of social engagement within an enlarged concept of place. These new mobile networks have altered the way people exist in and relate to spaces where the real and virtual world blend, blurring the lines of traditional spatial definitions and frameworks. This special issue provides a variety of perspectives and practices on the meaning and interpretation of today’s locative media.