This paper explores the intangible aspects of space through a series of sound-mappings that took place in Edinburgh and Athens between 2006-08. One of our main conclusions is that sound is a rich and provocative tool for exploring space, due to the fact that it reveals qualities and information that a visual representation wouldn’t had been able to. A significant remark we made is that the exploration of space through sound does not predetermine the findings; we did not pose questions about pre-decided aspects of the places under investigation. On the contrary, within each different environment, the study of sound brought out different kinds of information. We also realized, that the experience of sound of a place lies in the tension between our attempt to grasp, and possibly map it, and the fact that sound – and atmosphere in general – naturally resists these endeavours.
ATMOSPHERE

I would say that the true focus of the film is there: in the background. And it is crucial to leave it as a background. [...] It’s the paradox of what I would call anamorphosis: If you look at the thing too directly, you don’t see it. You can see it in an oblique way only if it remains in the background.

(Zizek 2006)

Mark Wigley, tells us that Ambience or Atmosphere is what a building emits, what ‘clings’ onto it. He argues, ‘the atmosphere [...] is some kind of sensuous emission of sound, light, heat, smell, and moisture; a swirling climate of intangible effects’ (Wigley 1998). For Wigley, atmosphere, is what is experienced by the users of architecture and not the matter of the building itself. Steven Connor correlates atmosphere with the notion of ‘haze’ (Connor 2006). For Connor, haze scatters light, blurs vision, and creates optical effects but at the same time makes in-between space an entity in itself. The haze is a palpable atmosphere that blurs distinctions between material and immaterial, form and formless, visible and invisible. However, Slavoj Zizek considers atmosphere as that which creates a ‘background’ for living; if it is brought forth to our attention it is not atmosphere anymore – it is a group of analysed features of space, and its affect is inevitably different (Zizek 1991).

In order to investigate the notion of ambience and the non-visual sensation of space, we developed a series of sonic experiments – sound recordings of Edinburgh and
Athens, transcribed into maps in different ways. Sound mapping is not a common way for architects to interpret space. However, as Marshall McLuhan and Richard Cullen Rath argue, the emergence of new technologies and media causes a shift in the sensorium, a turn towards the sensuous and in particular towards the sonic (Cullen Rath 2003: 159).

**CHANGING MEDIA – EDINBURGH IN SOUND**

Mr. Robinson: Terrible places... Airports, taxis, hotel, they’re all the same in the end.

Mr. Locke: I don’t agree. It’s us who remain the same. We translate every situation, every experience in the same old codes. We just condition ourselves.

Mr. R.: We are creatures of habit... Is that what you mean...?

Mr. L.: Something like that. I mean, however hard you try it’s still so difficult to get away from your own habits. Even the way we talk to these people, the way we treat them, it’s a mistake. I mean how do you get their confidence? Do you know?

Mr. R.: Well, it’s like this Mr. Locke: you work with words, images, fragile things. I come with merchandise, concrete things, they understand me straight away.

(Antonioni 1975)

**Phase 01: exploring space through sound - transcribing the sound into text**

The first study attempted to create a sonic map of everyday routes within the city. The routes were sound recorded and transcribed into text by 10 volunteers and
ourselves. The sound track was played two to four times so as to have transcribed the sounds that were missed out during the first listening. It was interesting to see which sounds were initially missed out and were later on transcribed on the 2nd or 3rd listening.

Figure 1
Figure 2

The first category of sounds that were initially missed were those that came from an unidentifiable source or whose significance was not clear from sound alone. The second category is of the ones that the equipment was accidentally making; e.g. the irregular ‘clicking’ of the microphone on its cable. The medium – the sound recorder...
– is automatically blocked off; it ‘disappears’ from the sonic field under investigation. The recordist’s footsteps were also not transcribed in the first listen. We speculated that they were blocked off for two reasons; one that the footsteps were a constant background and therefore quickly fade out of focus and two, because they are part of the recording equipment and therefore considered not to be in the focus of the transcription. These sounds were of the ‘object ready to hand’, as Heidegger calls the equipment functioning as it is expected to, and which is therefore disappearing from our perception. Our care is focused on the work taking place rather than to the elements involved; the objects as such.

Interestingly, there was differentiation between what the listeners transcribed following an analytic method and what they described when they were asked to give a general idea of what the sonic fields sounded like. Some unspecified sounds of the background, which were not transcribed into text or diagram, had been unconsciously taken into account when the listeners described the overall impression or ambience. The ambience, or atmosphere, as what – according to Wigley – a place emits, was being reconstituted within their overall description, whereas it was not coming across through their sound transcription. The sounds picked out of the listening were closer to a representation of the concrete elements of space, whereas their complex layering was what constituted the ambience.

**Phase 02: diagram of sounds**

Having transcribed sound into text, we next attempted to represent it visually with a diagram upon a timeline, so as to explore further and more accurately their temporal proximity, their density, layering and duration.
Through this transcription method, we observed that we mostly notice new sounds appearing, whereas persistent sounds melt into the background. However, there are some exceptions: when an existing sound is of particular significance, such as someone speaking, or a musician playing, then this does not fade out when a new one emerges. This could be attributed to the semantic qualities of these sounds and
the perceived narrative thread that is established by words or musical motifs. Phenomenologically, we could argue that these two cases express, in some sense, the two kinds of care that Heidegger elaborates (Heidegger 1962: 238, 277). On one hand our care focuses onto what creates a rupture, a ‘breakdown’, disrupting the existing condition of things, and on the other hand our care focuses to what is ontologically near us, and within our concern (Coyne 1999: 149).

After these phases of the sonic mapping, we have to mention a kind of contradiction we fall within: The aural, as the condition that enables immersion, apprehends things in a unity, as ‘something one participates in experientially’ (Coyne 1999: 4,163), whereas the visual maps (like the ones of our case-study) refer to an analytic, fragmented approach to things. We realize that within our attempt to understand the sonic field of a city, because of its immersive, ephemeral and ambiguous nature, we tend to rationalize it, break it down into pieces and represent it with visual maps. The question, thus, gets transformed into the following one: Can an analytical visual diagram represent qualities of the experience or atmosphere of a place? Can our rational language and tools deal with elements of a non-linear nature? Can it handle non-visual elements – or elements that resist the analytical method?

The fact that some of this experiment’s outcomes cannot be put into words, as a rational conclusion or statement, makes this sort of knowledge or experience hard to be communicated, exchanged and documented. It is rather an experience, a feeling about the space what is gained. Language is closely related to visual metaphors – not sonic or tactile (Wishart 1996: 15). For that, as McLuhan claims, the emergence of new mediums affects the sensorium balance. The new recording techniques, and
the degree of complication of emerging communication ‘languages’ and devices create a new kind of sensorium field (McLuhan 2005: 72).

**Phase 03: Superimposing a geographical map of the city**

The static sonic maps of the city (that were previously presented) were to some extent informative about the city and the exploration processes, but, did not reproduce the experience of *time*. The sense of time, the sound itself, and its immediate richness and expressiveness, were presented by superimposing the actual sound of the route and an animated geographical map of the city (following the path that corresponds to the sound recording). This sound map had the form of a video which presented a dot moving along routes within the city, playing – at the same time – the sound of the equivalent route. At this stage, the most interesting outcome was the fact that the sound itself was far more engaging and informative than its visual representations with graphic symbols.¹

In what followed we picked out specific sound-spots in two different ways: (a) We selected some key-moments of an interesting sonic field along the recorded routes, and (b) we picked out 25 spots randomly, by superimposing a 5 by 5 grid on the map of Edinburgh. In the case of the selected spots, the most characteristic thing was the shift from one ambience to another, and this juxtaposition of the two successive ambiences made us conscious of the specific sonic identity of each. In the case of the static (‘random’) recordings, the atmosphere of the place emerged from listening to the spot itself, and out of its juxtaposition with the other randomly selected ones; the particular articulation of sounds, such as their layering, the
echoing, some exceptional sound-mark (Schafer 1994), created a unique overall feeling.
Through this part of the process, our suspicions were confirmed, that it was not the visual representation of sound that told us most about the atmosphere of a place but the sound itself. Although sound visualization was particularly useful for specific purposes (e.g. analyzing pre-set questions about sound levels, etc.), in our case listening itself provided a far richer and immersive experience of the places under investigation.
Phase 04: Would a being-in a map situation take us closer to non-rationally experienced qualities of space? And what narratives of the city would it bring forth?

Through the ‘Athens by sound’ project we explored, through sound, a different city, and this juxtaposition of the two cases – the sonic mapping of Edinburgh and Athens – revealed the value of such a practice. The map was developed in five layers (a to e): (a) 50 sounds to listen to with headphones hanging from the ceiling, (b) 50 sounds to read in words on the floor, (c) 25 videos presenting fragments of the city based upon sound, (d) a light geographical map on the wall ‘following’ the visitors’ movements, (e) the in-between space filled in with optic fibres creating an ‘aura’ of the visitors’ movement.
The sonic identity of Athens was not meant to be decided in advance, according, for example, to our experience of the city. It was rather meant to emerge from an arbitrarily collected library of sounds collected using a similar grid system to the one we used in Edinburgh. The grid was placed over the city and a recording was made at each node on the grid at various times of the day.

One recording, for example, was made near a central crossroad: a gypsy woman singing with a remarkable voice, people passing by, busses stopping, footsteps of various speeds, coins dropping, some young people talking. Another recording happened to be near a quiet crossroad, where a car accident took place a minute after the recording started; the sound of the two cars colliding is heard. Then there
was a brief silence followed by the voices of people shouting or quarrelling. Another track was of a local kiosk, and of the discussion between the people selling and buying thing, telling jokes etc.

These recordings provide several types of information, depending on your mode of listening (Chion 1994). Listening semantically, one may find out what kind of song a woman had sung, what an everyday conversation was about, or how much a sausage costs at a local butcher. Listening causally will tell us about the relationship between various sound objects in the recording while listening in the reduced listening manner, as if the whole sound track was a piece of music gives us information about ourselves as listeners. A combination of these listening methods helps us to re-experience the atmosphere dynamically. By putting these sounds in an installation, itself a space and place, we found that the sound map brought something of the ‘real-time’ into these recordings.

A common critique towards the way architects deal with sound is that they focus only upon sound’s technical characteristics (e.g. acoustics for theatres or insulation). As Bjorn Hellstrom argues, acoustic design has dealt with sound in a rather defensive way in order to keep the annoying sounds away, leading eventually to a flat background with no identity and character. He suggests, instead, that sound could be handled as a culturally loaded element that provides pleasant and engaging environments (Hellström 2005: 2,3).
INSTEAD OF CONCLUDING: UNPREDICTABLE MEDIA

Out of this study, it becomes obvious that sound can only partly be codified and transcribed into a visual incentive, and for that, architects are generally concerned with sound only in relation to acoustics specifications and noise levels or indeed the elegance with which it can be mapped (i.e. drawn). Having said that, we also need to acknowledge that, besides certain limitations, sound ‘transferred’ successfully the atmosphere of a place. In the case of the video-sound-maps of Edinburgh (phase 03) the atmosphere was revealed in the following way: The visual did not really matter, since it was very minimal and only illustrative. What mattered were the things that were supposed to pass before one’s eyes along the route, but were not actually visible; they were only heard. In the case of the space-installation map of Athens (phase 04), the intangible was approached by the ‘disappearance’ of the physical boundaries of the space, and by the dominance of the sonic and of the augmented representation of time.

We also noticed that by concentrating on an alternative modality, that of sound, alternative thoughts and experiences that could not had been easily imagined in advance were revealed. We may argue that visual mapping predetermines the aspects of the place questioned; whereas in our case, aspects emerged from the map as it was read (listened to). We observed that sound maps provide different types of information depending on the place or city observed. For example, the sound mapping of Athens revealed mainly stories about everyday events, customs of different group of people, open air activities taking place within the city, etc. On the contrary, the sound mapping of Edinburgh presented different kinds of information, such as about the physical structure of the city, the echo of the closes, the footsteps on metal, stone, asphalt, etc. Due to the climate and cultural attitude to space and
place, sounds captured were of different nature, and for that different kinds of narrative emerged. In Edinburgh, there were fewer outdoors activities and therefore, sound recordings failed to capture everyday situations, in particular, conversations. In the case of Edinburgh, therefore, the sonic ambience was mainly constituted by the reverberation of the built environment, whereas in the case of Athens, the ambience was mainly the result of man-made sounds and distinctly recognizable activities.

Through an evolving study of the sound of two cities, we observed that sound mapping is a process indicative of what Wigley and Connor refer to as ‘atmosphere’ or ‘ambience’; it expresses the tension between the elusiveness of sound and our desire to represent it. Through this process we realized that one of the most significant values of such an observation method is the fact that it does not predetermine the nature of the findings. It is open to every new environment and it allows it to reveal some of its particular qualities; some of the elusive elements that constitute its atmosphere.
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Bibliography


1 Parts of this work in progress had been presented at the Architectural Workshop, at the HTW University, in Chur, Switzerland, 12-13 June 2007.
2 The project was the winning entry at the competition for the Greek pavilion. The installation has been created by the ‘Athens by sound’ team (for Athens by sound team credits go to: www.athensbysound.gr). See also: KARANDINU, A., ET.AL. [EDS.] (2008) Athens by sound, Athens, Futura - Greek Ministry of Culture.
3 Created by the IntoThePill Video Artists; www.intothepill.net