

Acoustic Territoriality

Spatial perspectives in the analysis of urban sonic environments; R. Murray Schafer, J.-F. Augoyard, G. Deleuze & F. Guattari

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Chapter 1: Introduction

At many traffic lights in the Japanese city of Osaka¹, a sad melody plays at regular intervals. Traffic stops in both directions, and clear electronic tones float out into the urban space that is transformed into one large pedestrian zone, with people crossing the street in all directions at the same time. What, shortly before, was a noisy, heavily trafficked urban space, is now filled with people, the sounds of their conversations and footsteps intermingling with the slow melody. The city breathes out for a moment... until the music stops abruptly, and the loud cacophony of accelerations, gear-changes and constant humming of motors once again rushes through the streets, sending its sound-waves out into the urban space.

The melody marking the street's transformation from motorised to pedestrian territory offers not only a contrast to the city's usual rumble, but also to other designed sound elements in the Japanese built environment. Normally, upbeat cheerful melodies, fast talk and attention-grabbing effects predominate; the pedestrian melody is, by contrast, effective by virtue of its slow, and rather sombre, monotonal intonation. This discrepancy may also be one of the reasons why city planners have recently begun replacing this melody with a high-frequency bird- bird-like *piyo-piyo* sound, which, according to organisations representing the visually handicapped, makes orientation for the visually-impaired easier. A brief survey conducted by Colin Smith in connection with an article for the English-language local paper *Kansai Time Out* in September 2005, showed that when it was pointed out to local citizens that the previous melody had been replaced, most people – no matter whether they lamented the change, or welcomed it - observed that it had always made them feel "lonely and depressed".²

The reason for the melody's melancholy associations stems partly from the text originally connected with it. The melody is known in Japan from a song called *Tôryanse*, which can be

¹ The Romanisation of Japanese words in this thesis follows the modern Hepburn system. Long vowels are marked with ^, but these are omitted in proper nouns, in accordance with common usage: Tôkyo is written Tokyo, Ôsaka as Osaka.

² Smith 2005 p. 7.

translated as *Let me pass*. It relates a dialogue between the watchman of a holy shrine and a common passer-by wanting to use the path to the shrine, in order to take his child to celebrate its seventh birthday. According to Japanese tradition, a child's seventh birthday is considered the last major celebration of childhood. The watchman's message corresponds to the sinister mood of the melody: "Iki wa yoi yoi, kaeri wa kowai"/"it is easy to walk forward, but to turn back can be frightening" The dark meaning of this message can be interpreted either as an anecdote regarding rumours of child sacrifices at a particular temple, or, more generally, as a representation of the seventh-year birthday ceremony's character of a rite of passage.³ In any case, it is a promise of safety which is limited in time and which may cease the moment the watchman's song can no longer be heard. This clear connection between sound and safety can also be found in a Japanese singing game where the melody is used, similar to the English game "London Bridge", in which danger lures the moment the song falls silent, when an arch of arms falls down, catching one of the players.

Observing *Tôryanse*'s effect on urban surroundings illustrates a central premise of this thesis: that both designed and coincidental sounds, in an urban context, make a significant contribution to shaping and structuring the spaces in which people move and interact. The Japanese traffic authorities' choice, in 1975, of precisely this well-known song as a pedestrian signal emphasises how sound, as a behaviour-regulating instance, can draw on deep cultural meanings and memories, while also indicating an intimate connection between sound and safety. But the melody's function also goes beyond simply signalling safety from the dangers of the city. In addition to its semantic and socio-motorically trained meaning - which without doubt contributed to the original choice of this melody as a pedestrian signal - the melody also establishes a particular spatiality, by virtue of its acoustic qualities. The melody shapes the urban space.

A comparison with the bird-like *piyo-piyo* sounds that are now beginning to replace *Tôryanse*'s role, illustrates how the two acoustic signals each influence the experienced urban space in their own way. The *piyo-piyo* sound expresses a spatial form, in which urban

³ Smith 2005 p. 7. The full text is available on Wikipedia (<http://en.wikipedia.org/wiki/Toryanse> – 30/10 2012). In the Wikipedia entry, the song's final lines express a theme of death: "We've come to dedicate our offering / Going in may be easy, but returning would be scary / It's scary, but / You may go in, You may pass through".

space is structured by a series of points, and not, as with the *Tôryanse* melody, configured as an extended musical zone. To use a term borrowed from Jean-François Augoyard and Henri Torgue's comprehensive glossary of *sonic effects*, the high-frequency *piyo* sounds perform a hyper-localisation effect,⁴ while *Tôryanse*, on the other hand, with its slow drawn-out tones, is rather dispersed and diffuse, filling the open outdoor space. The song creates a zone between and around four loudspeakers, while the bird sounds create more precisely demarcated spaces relating to clearly marked points. The effect of the song can be observed in direct relation to the common form of pedestrian crossings in Japan, where all motorised traffic in both directions stops simultaneously, while pedestrians cross. On the other hand, the bird-call sounds seem better suited to the type of traffic regulation now coming into use increasingly in Japan today, where pedestrians cross parallel to the passing traffic. In this case, high-frequency sounds are able to permeate traffic noise, securing safe passage parallel with passing cars for the visually handicapped.

This mini-analysis of the way in which sound signals mark, structure and shape space, can help direct attention to more fundamental effects of sound than the noise/sonority dichotomy that often dominates discussions of sound in the public domain. Also in Smith's article in the *Kansai Times*, we find judgments of signal sounds as good or bad, "entertaining" or "boring", without such evaluations being set into any kind of spatial or functional context.⁵ Animated by observing a generally limited level of reflection on sound's spatial effects and its contribution to the formation of social space, this thesis seeks a conceptual and reflective foundation for the systematic analysis of sonic environments.

The present thesis is furthermore motivated by the observation of an increasing tendency to conceptualise surrounding sounds through a discourse on noise and its damaging effects on health. In an EU directive on the *Evaluation and Control of External Noise* from 2002, member states are required to map outdoor noise in larger conurbations, to make information on noise and its effects accessible to the public, and to base urban planning on the

⁴ Augoyard & Torgue 2005 p. 59.

⁵ Smith 2005 p. 7.

information obtained.⁶ As a result of this, a noise chart has been devised over the past ten years, showing all major roads, railroads, airports and conurbations in the EU⁷, as well as plans of action for the authorities affected by them. Noise mapping is now scheduled on a regular five-year basis. Although it may be hoped that this combined European effort will lead to an increased sensibility towards the role of sound in the urban environment, there is a danger that only the damaging effects of sound will be emphasised. Strategic measurements, on which mapping techniques are based, represent sound as a blaze of hazardous blue, red and yellow zones, invading residential areas. But this mapping does not show us how sound, as a part of everyday life, is connected to all kinds of ordinary practice expressing both sociality and territoriality. Urban life acquires form, context and rhythm not only through designed sound (as in our example with pedestrian signals), but also through habitually created and experienced sounds. The same sound may appear both stress-inducing and community-forming; the balance is not always determined by volume.

It is therefore my hope that this thesis' examination of methodologies for studying the sonic environments may, in the long run, contribute to a qualification of analysis and debate surrounding the acoustic conditions shaping local, urban and even global spaces. The need for this kind of critical reconsideration arises not only from the growing attention to noise pollution, but also from the increasing commercial interest in sound design, manifested through background music in supermarkets, the design of car-door closing sounds, and iPod-culture's inherent vision of a ubiquitous personal sonic landscape. The idea of a *natural* sonic environment, which was a satisfactory vision in the 1970s, must today give way to focusing on the ways in which the built environment acquires form and character through *acoustic design*.

R. Murray Schafer's soundscape term; the auditive as a research area

⁶ The project is formulated in the directive 2002/49/EC, passed in the European Parliament on 25th June, 2002.

⁷ In a report from the EU commission, dated 1st June 2011, the results of the survey are summarised as follows: 40 million people in the EU are exposed to noise above the level of 50 dB at night within urban areas, and over 25 million people are exposed to the same levels of noise outside urban areas. (p. 5) .

Our sensitivity to noise is a recurring theme in public discourses.⁸ A truly systematic approach to the potential for cultural analysis and critique within the auditive field, however, only finds sporadic expression during the 20th century, most often conceived through experimental musical practice. The work of Luigi Russolo, Edgar Varèse, Pierre Schaeffer, John Cage, Raymond Murray Schafer and Brian Eno, among others, has contributed considerably to the development of a discourse on sound and hearing. It is therefore no coincidence that academic interest in hearing and sound has primarily been located within the musicological field, while spatially oriented disciplines have experienced greater difficulties with the articulation of hearing's contribution to the way we experience architecture, art, and our surroundings in general.⁹

Of the above-named experimental musicians, two in particular have shaped their examination of the possibilities within sound and listening as systematic research projects. Radio-engineer and composer Pierre Schaeffer conducted systematic listening experiments in his radiophonic studio *Studio d'essai*, with the goal of establishing a so-called *typomorphology* for musical sound objects. The results of this comprehensive work were published in 1966 in his *Traité des objets musicaux*.¹⁰ While Schaeffer's work focused on the phenomenon of the individual sound object and on the possibilities for listening to it in a context-independent mode, Canadian composer and music-teacher Raymond Murray Schafer, in his combined research and compositional project, was concerned with the

⁸ In Juvinal's third satire (from c. 60-130AD), the nocturnal noise level in Rome is described as making it impossible to sleep – *even for the doziest emperor*. Arthur Schopenhauer (1788-1869) described very accurately how noise from city traffic, whipping sounds and rumbling carts disturbed his philosophical work and his ability to think straight (quoted in Schafer 1969 B pp. 20-22).

⁹ This tendency has recently been challenged by a series of publications on artistic and architectural practice involving sound. Brandon Labelle's two anthologies under the title *Site of Sound: of Architecture and the Ear* (LaBelle & Martinho 2011 and Labelle & Roden 1999) make significant contributions to this discussion. These publications find resonance Barry Blesser and Linda-Ruth Salter's *Spaces Speak, are you listening? Experiencing Aural Architecture* (Blesser & Salter 2007), which builds a bridge between the technical, humanistic and artistic disciplines in a synthesising and historically oriented presentation of auditive spatial experience. In addition, there have been a number of publications on sound art and sound installations, e.g. *Klangräume der Kunst* (Kiefer 2010)

¹⁰ Schaeffer 1966.

contextual characteristics of sonic experience. With the self-coined term *soundscape*¹¹ he drew attention to the fact that sounds, when experienced contextually, co-exist and interact within a field that can be compared with a musical composition. This observation opened up for the possibility of listening to and manipulating sounds in a particular environment in order to achieve better and purer sounds – as well as for reading combinations of sounds as expressions of the cultural, social and political environment in which they occur.

Schaeffer and Schafer's projects chart different directions for compositional practice, such as, respectively, electroacoustic composition and soundscape composition.¹² But beyond their specific innovative artistic projects, we find in their work also the embryo of projects whose relevance exceeds musical-aesthetic frameworks. Schaeffer experimented with phenomenological descriptions of sound, while Schafer's work opened up for analysis of relations between space and sound, propagated through the concept of *environment*. It is the latter project that the present thesis seeks to develop beyond Schafer's seminal work.

The World Soundscape Project and the World Forum for Acoustic Ecology

Three major events took place in 1969: R. Murray Schafer published *The New Soundscape: A Handbook for the Modern Music Teacher*, in which he sketched the outline of his subsequent soundscape project. The same year, the North American urban sociologist Michael Southworth published an article on "The Sonic Environment of Cities", in which, just as in Schafer's article, the term *soundscape* played a central role. Schafer and Southworth, presumably independently of one another, had both spotted the potential for critical analysis and design of the sonic environment, and attempted with, respectively, musical and cognitive-analytical approaches, to unpack the field's cultural-analytical

¹¹ Schafer 1977 A pp. 274-275. Schafer introduced the term in a musical context back in 1967, but it was not until 1969 that the term was used to describe the sound of the environment. In this thesis, I use the English term *soundscape* in reference to Schafer's work. The term *sonic environment* is used as a broader term independent of Schafer's work.

¹² In practice, it is difficult to separate the two traditions. A small group of composers including Hildegard Westerkamp, Barry Truax, and Francesco Lopez uphold the soundscape term for compositions which, in Westerkamp's words, are "a *vehicle* for deeper understanding of acoustic environmental issues and issues of perception, a *vehicle* for creating "more-than-meaning". (Westerkamp 2002 p. 136).

potential. The fact that the auditive by this time had become the object of broader aesthetic and ethical attention, beyond the musical field, is underlined by a resolution from Unesco's International Music Council in 1969, in which the individual's right to silence is established against infringements by recorded and transmitted music.¹³ The resolution highlights that the auditive had now gained priority over music, even within a musical forum, and the sense of hearing now appeared as an autonomously valuable and meaningful supplement to human experience.

In 1971, together with a number of colleagues, Schafer established the research project World Soundscape Project at Simon Fraser University in Vancouver.¹⁴ With support from Unesco, among other sources, Schafer's project gained broad international trenchancy. In addition to this, a lengthy essay on the project and its terminological, methodological and ideological foundation, "The Environment of the World", was prominently featured in Unesco's international magazine *Cultures* (published in English and in French), in 1973.¹⁵ With his term 'soundscape', and the attendant practice of registration and description that he was able to propose, Schafer managed to establish the foundation for an alternative form of description than that previously available from applied acoustics. His vision was to develop a new discipline, *soundscape studies*, which would treat the sonic environment's physical, social and aesthetic aspects with equal priority. Schafer invented a series of terms and developed them through specific projects of recording and description, as well as, later, in the collected presentation *The Tuning of the World*, from 1977.¹⁶ The theoretical unfolding of these terms and forms of experience connected with them, suffers from Schafer's deficit in the field of cultural theory, and from his rather eclectic use of inspirational sources such as John Cage, Marshall McLuhan and Pierre Schaeffer. This was one reason why the soundscape way of thinking never seriously won a place as a cultural-theoretical discipline, animating instead a broad field of artists and activists, some of whom in 1993 established the

¹³ According to Schafer 1973 A pp. 30-31.

¹⁴ According to the article on the World Soundscape Project in the web version of Encyclopedia of Music in Canada (<http://www.thecanadianencyclopedia.com/articles/emc/world-soundscape-project> 30th October 2012).

¹⁵ Schafer 1973 A. Schafer's article introduces the publication, and is followed by an article written by Pierre Schaeffer.

¹⁶ Schafer 1977 A.

World Forum for Acoustic Ecology (WFAE), within which they subsequently organised their work.

The development of the soundscape term within WFAE is largely marked by an uncritical adoption of Schafer's terms and values, albeit, as the name suggests, with an increased focus on *acoustic ecology*. Discussions on the foundation of the term and the organisation are conducted in the journal *Soundscape: the Journal of Acoustic Ecology*, as well as in some of the anthologies published through the organisation's work.¹⁷ But the basic orientation of the organisation lies within the field of artistic and activist work. Soundscape compositions and sound walks appear to be the preferred form of reflection, while terminological and methodological discussions are less prevalent. Attempts, for example by Swedish Henrik Karlsson, to draw the organisation in the direction of a more clearly formulated academic profile, experienced difficulties gaining a footing.¹⁸ Peter Cusack¹⁹, Paul Carter²⁰ and Catharina Dyrssen²¹ have attempted to introduce a more urbanity-orientated perspective, and Brandon LaBelle and Sabrina Breisameter have questioned the general scepticism towards modern electro-acoustic technology that characterises the soundscape mindset.²² But the organisation, founded by Schafer's pupil Hildegard Westerkamp, does not appear to be motivated for an actual deconstruction of Schafer's work, which may be the prerequisite for a new orientation within the field.

¹⁷ The journal *Soundscape: the Journal of Acoustic Ecology* has, until now, appeared in 12 issues, all of which can be found on the WFAE website: <http://interact.uoregon.edu/MediaLit/WFAE/journal/index.html>. References to the journal occur in the following version, downloaded in the period up to November 2012. Other anthologies that reflect the work that went on within WFAE: Schafer & Järvilouma 1998, Järvilouma & Wagstaff 2002 and Waterman 2002.

¹⁸ Karlsson 2000.

¹⁹ Cusack 2000.

²⁰ Carter 2003.

²¹ Dyrssen 1998.

²² As guest editors of an issue of *Soundscape. The Journal of Acoustic Ecology* (Breisameter & LaBelle 2002).

The soundscape term and auditive culture as a research field

A certain distance towards Schafer's work exists, both outside the WFAE, as well as inside, despite the fact that the soundscape term is often employed with or without reference to Schafer's book *The Tuning of the World*. The term seems to have become standard in attempts to place the auditive world of experience on an equal footing with the visual. But its elaboration and basis in Schafer's practice is only rarely subject to reflection, let alone criticism. This applies also to the wave of sociological, anthropological and academic cultural studies which, under headings such as sound studies or auditive culture, have focused on sound and listening over the past decade.

The Auditory Culture Reader, published in 2003, may be regarded as an early exponent for the renewed intensity in research within the auditive field. In the anthology, Schafer's article "Open Ears" appears as the first contribution,²³ and in an introductory text by editors Michael Bull and Les Back, Schafer is presented as a significant source of inspiration for many of the anthology's contributors, as well as being a source for the further development of the analysis of sonic environments:

Whilst many in the soundscape movement broadly reject the sounds of the modern urban world, we believe that Schafer's work can still provide the necessary tools for reaching a deeper understanding of contemporary soundscapes, urban or otherwise.²⁴

Bull and Back seek to distance themselves from the dogmatic line of the WFAE, by emphasising Schafer's relevance for the urban field. But the expectations of an urban perspective on Schafer's reflections, established by such a statement, are fulfilled neither in Schafer's own text in the anthology, nor in the editors' texts.²⁵ Schafer's name appears, according to the book's index, only four more times in the entire anthology, and at each instance his work is referenced in short phrases without any critical positioning, let alone

²³ Also in the equally influential anthology *Hearing History: a reader*, we find Schafer's text as the first – here, an excerpt from *The Tuning of the World*. Editor Mark M. Smith notes, however, in the introduction, that Schafer's work is "somewhat outdated". (Smith 2004 p. X)

²⁴ Bull & Back 2005 p. 21.

²⁵ In Les Back's text, Schafer is not mentioned at all, and in Bull's text, his name occurs only once, in a single, slightly unprecise, reference (Bull 2005 p. 360).

terminological or methodological reflection.²⁶ Schafer appears often in the role of a forefather, his work possessing primarily anecdotal value. But the question is, whether it is not precisely Schafer's work, more than any other contribution to the field, that has conceptualised a fairly common notion about the role of hearing and sound in modern culture.

Although Bull and Back's conviction of Schafer's continued relevance is supported by the present thesis, the claim that Schafer's work offers tools for understanding contemporary and urban sonic environments seems to lack substantiation. Schafer's preference for simple relations, expressed in his critique of the noisy, complex and abrupt sound relation generally experienced in cities, seems to undermine such a claim. When Schafer introduced a series of lectures on the topic *Sensing the City: Sensuous Explorations of the Urban Landscape* in 2005, he began his contribution by noting that he had been living in the countryside since 1975, in order to avoid the disorder and noise of the city, and therefore had little knowledge of the topic.²⁷ Although he has altered his position from time to time, there is no doubt that Schafer's position is basically anti-urban. An extension of the possibilities within the analysis of sonic environments towards a model that would be able to account for more complex, fragmented and dynamic sonic relations, demands critical consideration of Schafer's position – not least, because Schafer's work is one of the most resolute expressions of the widespread coupling of harmony and clarity that characterises the discourse on contextual sound.

It is hard to find critical readings of Schafer's work, even though he is generally recognised as being the author of the widely used soundscape term. Michael Bull – who, with his sociological studies of the use of iPods and urban experience, presents a specifically urban

²⁶ Bruce R. Smith names Schafer as an inspirational factor for his own work. Anthropologist and author of the so-called *acoustemology* trend, Steven Feld, similarly highlights a general inspiration from Schafer's work. Sociologist Jean-Paul Thibaud, today the head of research at the French research centre CRESSON, uses Schafer's term *schizophonia* about the walkman. Historian Mark M. Smith uses Schafer as a historical source.

²⁷ The lecture can be downloaded as a sound-file, and the transcript can be read on the website created in connection with the lecture series and exhibition with the same name at The Canadian Centre for Architecture: <http://alcor.concordia.ca/~senses/sensing-the-city-index.htm>. Quote from sound file 0.30-0.46 – downloaded 17th July 2009.

perspective within the auditive culture research field - names Schafer just once in a short note in his most recent publication *Sound Moves: iPod culture and urban experience*, but uses the soundscape term thirteen times.²⁸ In another leading study within the auditive culture field - Emily Thompson's *The Soundscape of Modernity*, from 2002 – we find the soundscape term in the title, but immediately on the book's first page the author attempts to cleanse the term of its ecological and noise-critical ideology (as attached to Schafer's formulation of it). Thompson further criticises Schafer's notion of the soundscape as a quantifiable and recordable entity, and extends the term itself to cover "simultaneously a physical environment and a way of perceiving that environment; it is both a world and a culture constructed to make sense of that world."²⁹

The notion that the soundscape term may be cleansed of all ideology meets resistance from anthropologist Tim Ingold, who in a short article titled "Against Soundscape" criticises the concept for its built-in ideology and its tendency to remove focus from the listening ear.³⁰ With four strong objections, he attempts to undermine the soundscape term, whose original value as a rhetorical means for increased focus on an undervalued register of the senses is now, in his view, obsolete. Ingold's main points of criticism are, that the idea of a soundscape – a *sound(land)scape* – distinguishes what is heard from all other sensory registers, desubjectivising the sonic experience, and objectivising and materialising sounds, rather than presenting them as media for experiencing one's surroundings. This type of phenomenologically-based criticism serves to direct attention toward major premises regarding method and value in soundscape research implicitly residing in the soundscape term. But Ingold's approach misses the point that the concept makes a valuable contribution to a particular research history, due to the ideological, cultural-theoretical and technological premises that contributed to its formulation, and due to the analytical possibilities that lie within its radius of meaning. This contribution may be in need of development, but not of

²⁸ According to the book's index (Bull 2009).

²⁹ With reference to the English translation of Alain Corbin's study of French village bells in the 19th century (Corbin 1998), Thompson defines the term 'soundscape' as an "aural or auditory landscape" (Thompson 2004 p. 1). The term is presumably a translation of the French term *paysage sonore*, used in Corbin's original French version (Corbin 1994). The same French term is used in the translation of Schafer's main work: *Le paysage sonore* (Paris: Lattès 1979).

³⁰ Ingold 2007.

dismantling. Few people have managed to formulate and test an effective programme for studying the registers of hearing as well as Schafer has. His impressive production pinpoints with great precision the analytical and design potential which has prevailed so strongly during the second half of the 20th century.

With the exception of Ingold's head-on assault on the soundscape concept, a strange silence has surrounded Schafer's work. On the one hand, within the WFAE, the values that formed the basis of the soundscape project forty years ago are generally accepted. On the other hand, in the present discourse on sound and listening there is a tendency to adopt Schafer's neologisms, such as *soundscape* and *schizophonia*, without further considering Schafer's contribution to sonic-environment research and to the conceptualisation of auditive experience in general.³¹ One of my aims in this thesis is to take Schafer's terminological and methodological contribution seriously, for a change, in order to develop possibilities for describing and analysing relations between environment and sound, through a critical and contextualising reading of his publications in connection with the World Soundscape Project. I aim to develop this approach by posing a confrontation between Schafer's project and (1) material from a specific urban environment in a small Japanese suburban shopping centre (2) a set of theories based not so much on the subject's experience of its surroundings' objective characteristics, but in the forms of sociality and territoriality most clearly and densely expressed within the urban framework.

Sound in urban studies

Traditionally, hearing does not play a major role in architects', town-planners' and designers' configuration of urban space, nor in the humanities' reflection on the urban area of experience. Like the realms of odour and tactile relations, the auditive realm is often

³¹ One exception is Ari Y. Kelman's article "Rethinking the Soundscape: A Critical Genealogy of a key term in Sound Studies" (Kelman 2010). Schafer's use of the soundscape term is studied here, as well as the term's later use by Fiona Richard, Charles Hirschkind, John Picker, Kay Kaufman Shelemay, Barry Truax and Emily Thompson. Kelman's study is an attempt to clarify the term's meaning and research value in a situation in which the authors in the field each seem to appropriate it for their own use. Kelman's analyses clearly demonstrate the confusion reigning in the use of the term, but downplay its research history.

under-represented in relation to the primacy of visuality, within design and planning processes.³² Most often, the question of sound surfaces after – or, at best, in the final stages of – the design process, in the form of a problematic of noise. Here, undesirable architectural relations are registered through measurements of resonance; undesirable planning through complaints about external noise; and social conflicts through complaints about noisy behaviour. Auditively sensitive design practice is found primarily within special disciplines directed towards the design of concert halls and their accessibility for the visually impaired, and research within this field is connected to these disciplines.³³

Not least within the specifically urban framework it seems strange that not more attention is given to the auditive. Cities have typically been connected with noise. The density of people, transport and manufacturing businesses in cities generally causes a higher level of sound, a greater frequency of sound events, and qualitatively more abrupt sounds than outside cities. On a symbolic level, the notion of urban noise also functions as a metaphor for the complexity characterising urban forms of organisation and experience, providing challenges to all attempts at overview and control.

Architectural critic and curator Mirko Zardini points out, in his essay "Toward a *Sensorial Urbanism*", that the domination of the eye at the expense of ear and nose is connected to an overall preoccupation for hygiene, control and safety.³⁴ Our visual overview seems to be disturbed by the city's noise and smells. But although it often seems that way, these sensory perceptions from sound and smell come not from the city itself, but from the people and machines that populate it. As Dutch historian Karen Bijsterveld has shown in her study of

³² Attention to the experiential dimensions of architecture made up of other registers than the visual, is articulated by architects and architectural writers such as Steen Eiler Rasmussen in his book *Experiencing Architecture* (Rasmussen 1964), Christian Norberg-Schulz in *Genus Loci: Towards a Phenomenology of Architecture* (Norberg-Schulz 1984) and Juhani Pallasmaa in *The Eyes of the Skin: Architecture and the Senses* (Pallasmaa 1996).

³³ Beyond a widespread literature on the topics' technical and acoustical characteristics, developed within the framework of the European Acoustics Associations (EAA) and other similar organisations, two contributions in particular are enlightening on the subject of concert-hall aesthetics: Catharina Dyrssen's exploration of analogies between musical and architectural form in buildings for music (Dyrssen 1995) and Emily Thompson's exploration of the relation between the development of acoustics as a technical discipline and concert-hall design in the USA in the early 20th century (Thompson 2004).

³⁴ Zardini 2005 pp. 19-21.

the discourse on noise in Europe and North America in the years 1900-1940, notions of noise are often loaded with cultural symbolism, through which challenges from new technology and migrant social classes are treated.³⁵ The noise of the city is often connected to all that seems strange and alien. Or, in Marion Segaurd's acute formulation: "Le bruit c'est l'Autre".³⁶

Regarded from a less alienating perspective, urban sound in all its intensity, confusion and unpredictability can also appear as a positive, maybe even homely phenomenon. In his song *Tag og kys det hele fra mig* from 1932, Poul Henningsen describes the sound of the city as "The city's shell-song / the sound of Copenhagen / just listen!"³⁷ Even the city's nocturnal rumbling, the sound of traffic and conversations outside windows, which in many situations seem to disturb the night-time peace, may be experienced positively: "The sound of the city at night. Life continues in the city after bedtime. A good feeling of being a part of something," and "night buses pass in the quiet night. Some of them *whine*. It is somehow nostalgic. Being alone in the streets in a city at night."³⁸

Hearing is, however, not a dominant topic for urban theory. Already in 1907-1908, in *The Sociology of the Senses*, urban sociologist Georg Simmel described the relatively impoverished position of hearing in relation to the city's ocularly-dominated sociality.³⁹ In an essay seeking to rehabilitate urban sound in its complex and unpredictable form, the

³⁵ Bijsterveld 2005 p. 182 & Bijsterveld 2008.

³⁶ In the anthology *L'oreille oubliée* p. 54 (Paris: Centre George Pompidou, 1982). Quoted from Reeh 2002 p. 399.

³⁷ Quoted from the introduction to a collection of texts edited by Palle Schantz Lauridsen in the series *Urbanity and Aesthetics*, which under the Poul Henningsen-inspired title *Byens konkyliesang* (The city's shell-song) discusses relations between cities and sound (Lauridsen 1999 p. 7). Original Danish text: "Byens Konkyliesang / den københavnske klang / lyt engang!"

³⁸ Quotes from my own research material, collected, in collaboration with Brandon LaBelle, in the summer and autumn of 2007. 200 postcards with 4 questions about experiencing domestic, street and city sounds were distributed to apartments in selected buildings in central Copenhagen. 39 postcards were returned, answered, to the Department of Arts and Cultural Studies. Both quotes are answers to the question: "Which sonic experience in the city do you most enjoy? And why?". See also Kreutzfeldt 2011.

³⁹ "Exkurs über die Soziologie der Sinne" in *Soziologie* pp. 483-493. Berlin: Dunker & Humboldt, 1908 p. Quoted from Reeh 2002 p. 395.

humanistic urban researcher Henrik Reeh goes through Simmel's arguments, a century later, and finds in them the outline for an auditive sociology. Despite Simmel's consistent upgrading of the sense of sight at the cost of hearing, he allocates to hearing a series of specific and not entirely irrelevant qualities such as: pacification of the eye, memory, registration of transformations and change, collectivity, and specificity. Although hearing, on Simmel's model, proves to be less well suited as a tool for urban sociality than sight, urban sound is regarded as an expression of the life of the city and a sign of "change and movement, action and experimentation".⁴⁰

This interest in urban sound as indicator not of stable urban forms, but of the city's dynamic life and source of experience and improvisation,⁴¹ actualises the need for reconsidering a term for noise that circulates not only in acoustics' mapping of *external noise*, but also in the soundscape concept of noise as "undesirable sound".⁴² Maybe, in the city's unbidden and unstructured sonic perceptions, indications of the practical and formative use of the city may be found - what Michel de Certeau called "the opaque and blind mobile characteristics of the bustling city".⁴³ In any case, the analysis of sonic environments seems to articulate a level of spatial and spatialising practice which de Certeau finds expressed in the practices of everyday life. Listening to the city's sounds without referring to the noise-vs-sonority dichotomies that often dominate musically-enlightened interests in environmental sound,⁴⁴ may contribute to articulating a different, and more dynamic, spatiality than that which finds its expression in architecture's visual representation – and may even contribute to a more multi-faceted grasp of the analysis and design of the urban environment.

⁴⁰ Reeh 2002 p. 110.

⁴¹ Reeh 2002 p. 110-111.

⁴² Schafer 1977 A p. 273. Reeh criticises this definition as "over-simplified, narrow-minded and subjectifying" (Reeh 2002 p. 398-399).

⁴³ de Certeau 1988 p. 121.

⁴⁴ R. Murray Schafer is not alone in his attempt to make urban and architectural spaces into the object of analyses conducted according to musical parameters. Danish architect Steen Eiler Rasmussen also demonstrates in chapters on "hearing architecture" in his book *Experiencing Architecture*, how acoustic impressions can be processed using musical categories of experience. He analyses architectural space according to which types of music are best performed within it (Rasmussen 1959 pp. 224-237). Also in the TV programme *Noget mere om Arkitektur /More about architecture* (DR 1968), Rasmussen focuses on the acoustics of architectural spaces – also in smaller musical forms, such as street calls.

Sonic effects and CRESSON

Many of the questions and challenges already outlined for the project of this thesis – an *urbanisation of the analysis of sonic environments* – found qualified solutions among the extensive research within this field undertaken under the leadership of French philosopher, city-planner and musicologist Jean-François Augoyard, at the research centre CRESSON (Centre de recherche sur l'espace sonore et l'environnement urbain) of the École Nationale Supérieure d'Architecture de Grenoble. The fact that this work was not known to me at the start of my project illustrates that CRESSON's work has primarily had an impact in the French-speaking cultural sphere, while its exchange with the English-speaking soundscape scene has so far unfortunately been limited.⁴⁵ The translation of CRESSON's pivotal terminology-generating and encyclopædic publication from 1995, *A l'écoute du l'environnement: Répertoire des effets sonores*, into English in 2005 bodes well on this front, even though on several ideological and methodological points a certain incompatibility prevails between the urbanity-critical soundscape milieu and the pro-urban CRESSON.

Jean- François Augoyard established the theoretical and methodical foundation for CRESSON's work already in 1976 with his doctoral thesis, later published under the title

⁴⁵ R. Murray Schafer reviews *A l'écoute du l'environnement: Répertoire des effets sonores* in the *Yearbook of Soundscape Studies 'Northern Soundscapes' Vol. 1, 1998* and is positively disposed, although he attempts to even out ideological and methodical discrepancies between the soundscape approach and CRESSON's way of thinking by subsuming CRESSON under the World Soundscape Project's overall goals (Schafer 1998). Schafer's text is included later in an abridged and slightly edited version, as preface to the English version of *A l'écoute du l'environnement - Sonic Experience: A Guide to Everyday Sounds* (Augoyard 2005, translated by Andrea McCartney & David Paquette).

A meeting between the two milieus was initiated during the conference *Stockholm, Hey Listen!* 9th-13th June 1998, arranged by Henrik Karlsson. Researchers from CRESSON (Augoyard, Jean-Paul Thibaud, Nicolas Remy, amongst others), leading members of WFAE (Barry Truax, John Levack Drever, Keiko Torigoe and Gregg Wagstaff) and researchers from other related organisations took part. Papers from the conference were published in Karlsson 1998.

The most ambitious attempt to introduce and apply CRESSON's research, both regarding sonic effects and the analysis of urban sonic identity (as developed by Pascal Amphoux) for an English-speaking readership, was made by Swedish architect, musician and sound designer Björn Hellström, in his thesis *Noise Design* from 2003 (Hellström 2003).

*Pas à pas: Essai sur le cheminement quotidien en milieu urbain.*⁴⁶ Here, Augoyard develops a method for analysing *inhabitant rhetoric*, with the aim of uncovering a number of figures by which residents in a block of flats adapt to their surroundings. While in *Pas à pas* Augoyard was interested in pedestrians' figures of movement, he later shifted his interest – within CRESSON's framework – to the experienced effects of sound by which interview subjects experience and describe their surroundings. Early on in the centre's work, the term *l'effet sonore - sonic effect* - was established as a paradigmatic axis of rotation, facilitating the compilation of a common and, in principle, inexhaustible instrumentarium for the analysis of contextual sound perception. Environments are experienced according to 82 of these *sonic effects*. They are further described in wide-ranging articles contained in *Sonic Experience: A Guide to Everyday Sounds*. Despite the work's encyclopædic and categorical character, the individual entries and accompanying notes present a highly interesting dialogue with the predecessors of the project within sonic-environment as well as urbanity research, including R. Murray Schafer.

In its methodological, theoretical and ideological viewpoints, CRESSON's work represents in this context a highly relevant supplement – and alternative - to Schafer's soundscape model. Above all, due to its comprehensive and precise definitions of central concepts a far more precise practice of description is made possible in the analysis of sonic environments. In addition, CRESSON's methodical and theoretical roots in the research of everyday life sets up a completely different model for the relation between sonic environment and subject than Schafer did with his work. With the centre's focus on sonic effects and their spatial functions, the field is widened to the analysis of much less stable relations between space and sound than that which can be conceptualised on Schafer's landscape analogy. While soundscape in its technical registration (whether cartographic or phonographic), is configured as a series of stable qualities attached to a restricted location, the registration of sonic effects through the subject's changeable perceptions – even when subjected to adaptation qua re-narrative – offers insight into far more dynamic and less clearly demarcated spaces of urban experience.

⁴⁶ Augoyard 1979. Translated to English as *Step by Step. Everyday Walks in a French Urban Housing Project* (Augoyard 2007)

While CRESSON's analysis of sonic effects, both at a theoretical and methodical level, seems rather to be an alternative than a supplement to Schafer's soundscape analysis, the two conceptual worlds in this thesis will be combined under a pragmatic perspective, as it is above all my intention to develop the foundation for analysing sonic environments in an urban context. This is not a case of methodological plurality, but rather an attempt to combine two perspectives through a theoretical and methodological development of each. In the case of the analysis of sonic effect, this will occur through the examination of a more general level in the practices of registration, description and analysis than the original approach's focus on registering individual perceptual effects through so-called *écoute reactive - reactivated listening*.⁴⁷

The sonic effect, as described in CRESSON's vocabulary, bears the stamp of subjectivity. For example, ubiquity is described as the *effect* of experiencing difficulty or impossibility in localising a sound source.⁴⁸ Although focused on individual experience, the description allows the observation of the effect at a more general level: as a *situation* in which it is difficult or impossible to localise a sound-source. This practical-analytical displacement from subjective experience to the observation of a situation can be specified, at a theoretical level, through the development of Jean-François Augoyard's concepts of *la marque* and *le marquage*. Several of Augoyard's individual texts from the period between CRESSON's foundation in 1979 and the publication of its vocabulary in 1995, contain interesting studies of sonic practice's territorial character.⁴⁹ In these texts, the subjective concept of the sonic effect is subordinated under a more extensive field of active sonic *marking*. This notion of expressive *marking* fades somewhat into the background in *A l'écoute du l'environnement. Répertoire des effets sonores*, but will be developed in the present thesis on the basis of French philosophers Gilles Deleuze and Felix Guattari's reconstruction of ethology's concept of territoriality, which has also been a significant source of inspiration for Augoyard.

⁴⁷ Augoyard 2008.

⁴⁸ Augoyard & Torgue 2005 p. 130.

⁴⁹ Augoyard 1982 and Augoyard 1991.

Acoustic territoriality and sonic environments

This thesis' overriding ambition pursues an intuition, which to an increasing degree has been articulated in recent cultural studies, both within geographical, sociological, anthropological, art-historical and philosophical traditions: namely, the desire to express a more dynamic and flexible grasp of space – a notion of space that seems to have been suppressed by a modern preference for visual and cartographic spatialities. In *A Thousand Plateaus. Capitalism & Schizophrenia 2* from 1980, Deleuze and Guattari give this relationship a concise formulation with the terms "l'espace lisse et l'espace strié".⁵⁰ *Smooth* and *striated space* comprise two different models of space in Deleuze and Guattari's way of thinking, exemplified, respectively, in the desert and the city – models which rarely appear as each other's antithesis, but far more frequently are *translated, transverted, reversed and returned* into one another.⁵¹ The study of the mechanisms by which this dynamic arises is intensified in a chapter entitled "1837: Of the Refrain".⁵² Here, Deleuze and Guattari carry out an innovative reconstruction of the concept of territoriality found in the work of prominent ethologists such as Konrad Lorenz, Nikolaas Tinbergen and Irenäus Eibl-Eibesfeld, with a view to displacing ethology's substantial and aggression-dependent territory to a field of practice: "Territory is in fact action", they write.⁵³ What within ethology, and not least in Konrad Lorenz' interpretation,⁵⁴ is regarded as an instinctual distribution of space, a precisely balanced distance between individuals, becomes, in Deleuze og Guattari's analysis, a function of expressive signs, by virtue of which space is organised as converging and overlapping zones distributed in space as well as time. Deleuze and Guattari find in territoriality a possibility for portraying a comprehensive sociality, which not only divides,

⁵⁰ Deleuze & Guattari 1980 p. 592.

⁵¹ Deleuze & Guattari 2003 p. 474.

⁵² Deleuze & Guattari 1980 pp. 381-433.

⁵³ Deleuze & Guattari 2003 p. 314.

⁵⁴ The work referred to here is the popular-scientific and extremely influential *Das sogenannte Böse: Zur Naturgeschichte der Aggression*. (Lorenz 1963) translated into English as *On Aggression* (Lorenz 1966)

but also gathers individuals into a community or reciprocity around what they call *agencements – assemblages*.⁵⁵

The focal point in this work of Deleuze and Guattari is the term *ritournelle*, translated in English as *refrain*, which draws on a productive duality. The term has both a specific and a broad meaning within music, but also plays on an etymological proximity to ethology's notion of *ritualisation*. Deleuze and Guattari pinpoint a potentially extremely fertile field for cultural analysis with their focus on *refrains*⁵⁶ (rhythmically repeated, stylised and ritualised expression). They cast the refrain as not only, as in the rituals of ethology, a possibility for avoiding species-inhibiting aggression, but also a proper construction material, through which the experienced environment is structured or territorialised. The refrain seems particularly well suited as a conceptual framework for approaching noisy or sonorous details in the sonic environment – details which are rarely articulated in the analysis of sonic environments, but which seem crucial to the modern urban experience of incohesive and disparate sonic perceptions. The refrain is an expression that draws attention to itself by virtue of its repetition, even without the actual presence of a signifying and significant material. If anything, the notion of the refrain must be seen and heard as a strong pivotal point for the continuous production of meaning, and for the distribution of space.

Territoriality and socio-geography

Deleuze and Guattari's development of the notion of territory towards a practical term, conceptualised as de- and reterritorialisation, has gained prevalence not only philosophically and cultural-theoretically, but also within geography.⁵⁷ The established idea of national territory is in decay on a number of fronts. Sociological globalisation theory has stressed that

⁵⁵ The translation of the French term *agencement* to the assemblages is discussed in Chapter 3, where I bring the term into use.

⁵⁶ The translation of the French term *ritournelle* to the English term *refrain* is discussed in Chapter 3. I prefer a more direct translation maintaining the etymological plurality of the concept, but have chosen to follow Brian Masumi's English translation

⁵⁷ An example of how this reconstruction of the notion of territoriality has gained acceptance in geography's more legal and political dimensions is David Delaney's introduction *Territory: a short introduction*, in which the author argues for a dynamic and social interest in territoriality, through analyses of de- and reterritorialisation mechanisms – albeit without reference to Deleuze og Guattari. (Delaney 2005).

the global world order today is controlled by different, less clear, notions of territorial space than those characterising local and national relations.⁵⁸ Recently, Saskia Sassen has described a series of *territorialities* that are comprised of national and global elements. On Sassen's view, the global network of financial centres, a global civil society and new legally-defined geographies represent different types of *analytical borderline bases*.⁵⁹ This latter form of territoriality, the form arising from international and local legal relations, together with specific political and military balances of power, is explored in Eyal Weizman's detailed study of the relation between the state of Israel and the occupied territories, in *Hollow land, Israel's architecture of occupation*.⁶⁰ Even in its relatively stable and traditional form, territory is, in practice, under constant development – a fact easily observed by a glance at a classroom map from one's own school days, which no longer reflects a contemporary geography of power. Similarly, within the socio-geographical tradition, there have been various attempts to define territoriality not as a fixed power structure, but as the result of a power strategy oriented towards the control of space.⁶¹

Basing the concept of territoriality on the observation of hostile powers, however, runs the same risk as ethology of overlooking the fact that territoriality can also be voiced in more peaceful affiliations and active assimilations into one's surroundings.⁶² Faced with a tendency to allow aggression and power games' modes of expression to dominate our understanding of territoriality – and of nationality, for that matter - Deleuze and Guattari's reconstruction of ethology's influential theses represent an extremely relevant contribution to studying the ways in which meaning and sociality are spatially distributed through sensuous qualities. Actually, it seems possible, as Sassen shows, that the study of diverse

⁵⁸ Manuel Castells formulated, in 1996, in the first volume of his trilogy on the information society, the idea that social space in the modern information era is experienced rather as "space of flows" than a "space of places". (Castells 2002).

⁵⁹ Sassen 2006 pp. 386-389.

⁶⁰ London: Verso, 2007.

⁶¹ Robert David Sack's *Human Territoriality: its theory and history* is a standard work within this field. Here, territoriality is defined as "a spatial strategy to affect, influence, or control resources and people, by controlling area" (Sack 1986 p. 1).

⁶² Urban researcher Henrik Reeh warns, in the anthology *Territorialitet: rumlige, historiske og kulturelle perspektiver* (Tonboe 1994) – in which the conflict in Ex-Yugoslavia forms the basis for a series of attempts to identify the territoriality term – against a tendency to, under the impression of "international politics' current hot spots", base a determination of territoriality on its exclusive and excluding aspects. (This article is re-issued in a revised version in Reeh 2002 pp. 306-333).

forms of territoriality, in the form of financial, practical, legal or even symbolic and expressive analyses of surroundings, may contribute to the registration of modern spatialities and communities.⁶³

Territoriality, environment and non-place

Such an endeavour is highly relevant seen in the light of the tendency towards the disintegration of place's analytical and practical precedence, perceived by Marc Augé in *Non-Lieux: Introduction a une anthropologie de la surmodernité* from 1992 as a drift from place to non-place.⁶⁴ Looking at the accumulation of delocalised transit spaces, such as airports, train-stations, motorways and anonymous hotel chains, Augé recalls place's value as relational, historical and identity-bearing, and puts forward the thesis that what he calls *supermodernity* has a tendency to produce non-places.⁶⁵ While the anthropological frame of reference has found confirmation in (and in turn further reinforced) the primacy of place, the challenge from these less distinct and signifying localities seems to demand a different and less identity-seeking appreciation of space and its significance for those who inhabit and use it.

In this context, it is interesting that Augé finds a core example of *place* in the structuring of villages around a central church and spire.⁶⁶ The influence of village bells on the identity of village inhabitants is studied in French historian Alain Corbin's *Les cloches de la terre* from 1994⁶⁷, as producing "an auditory space that corresponds to a particular notion of territoriality, one obsessed with mutual acquaintance."⁶⁸ A corresponding interest in the

⁶³ Under the heading *Acoustic Territories*, Brandon LaBelle studies the acoustic relations characterising six types of urban place: the underground, the home, pavements, streets, shopping malls, the sky/radio. The concept of territory is used here to refer to types of place whose significance is constantly displaced by "political processes, tensions, itineraries and movements between and among different forces" (pp. xxiv-xxxv). LaBelle's thesis, in his inspiring study, is that each of this type of place contains particular sonic characteristics, that contribute significantly to their definition and role within modern culture. (LaBelle 2010)

⁶⁴ Augé 1992, Augé 1995.

⁶⁵ Augé 1995 p. 78. The term *supermodernity* is used in the English translation of the French *sur-modernité*.

⁶⁶ Augé 1995 p. 76-77.

⁶⁷ Corbin 1994.

⁶⁸ Corbin 1998 p. 95.

convergence of place, community and sound is found in R. Murray Schafer's chapter on "the acoustic community"⁶⁹ and in an ambitious registration project conducted in five European villages, where the ideal community is traced as one in which the ringing of bells can be heard by all inhabitants.⁷⁰

Confronted by the tendency observed by Augé and others – that communities develop less within a restricted location – place seems to be increasingly challenged as a significant and meaningful framework for anthropological and cultural-analytical investigations.⁷¹ Already the first registration project of the World Soundscape Project, in Vancouver,⁷² seems limited in its scope, because it attempted to describe a modern capital's sonic environment through a model measured on the sonic, social and physical environment of a village. On the other hand, precisely the confrontation of such a nostalgic model with the noisy and loudspeaker-controlled environments of the modern city highlights the need for alternative models. With its frustrations and disappointments over modern urban environments, the soundscape project thus seems to pinpoint a conceptual problem. It is conceivable that the analysis of sonic environments' modern forms - particularly when regarded in terms of practice and refrain, as well as the ways in which technology shapes and reflects modern urban space - may articulate specific forms of acoustic territoriality, by which contemporary spaces and communities are defined. It is far from certain that such an interest for the sonic environment can be limited to the reinterpretation of the category of place, which Mirko Zardini, on the basis of Christian Norberg-Schulz and Gernot Böhme, identifies as a field of potential for a *sensory urbanism*: "[...] establishing a "sensorial city planning" that is capable of defining

⁶⁹ Schafer 1977 A pp. 214-225.

⁷⁰ Schafer 1977 C.

⁷¹ This is not to say that such a model is no longer relevant, as for example in WSP's studies of European village identity or architect-geographer Pascal Amphoux's studies of European cities' identities. Amphoux was affiliated with both CRESSON and Irec (Institut de Recherche sur l'Environnement Construit) in Lausanne, and has developed a method for analysing European cities' sonic identity. This is presented in *L'identité sonore des villes européennes: guide méthodologique* (Amphoux 1993). In his pre-study, *Aux écoutes de la ville* (Amphoux 1991), the method is tested on three cities: Lausanne, Locarno and Zürich. Finnish ethnomusicologist Helmi Järvilouma has, together with a team of younger researchers, revisited the five European villages that were the object of the World Soundscape Projects' *Five Villages* (Schafer 1977 C); she describes the project's methods and results in *Acoustic Environments in Change* (Järvilouma 2009).

⁷² Schafer 1978 A.

the character and atmosphere of places”.⁷³ Apart from such a planner-friendly research on atmosphere, it is possible that an interest for acoustic territoriality, in the long run, may be able to contribute to the analysis of contexts within which the experience of spatial forms such as place, space, passage, zone, etc., would be continually established, transformed and dismantled under the influence of social forms.

The thesis' project and structure

On the basis of the above introductory considerations, the present project may be described as follows:

Based on a critical reading of R. Murray Schafer's publications in connection with the World Soundscape Project, it is my intention to consider methods and forms of description involved in the analysis of sonic environments, with a view to developing a practice of describing and analysing complex and dynamic spatial and acoustic relations.

I will attempt to make a contribution to such a development at a theoretical level, partly through the identification of Schafer's predominantly urbanity-hostile perspective, and partly through the further elucidation of the concept of acoustic territoriality based on Gilles Deleuze and Felix Guattari's theory of the refrain, Jean-François Augoyard's concepts of sonic effect and sonic marking, and R. Murray Schafer's concept of the soundmark.

At an analytical level, I will seek relevant challenges through the meeting of a concrete and limited environment, defined here as the shopping area Ishibashi on the outskirts of the Japanese city of Osaka. The specific relations here both resemble and challenge relationships from the World Soundscape Project's urban registration project in Vancouver, at the same time as a different sensuous urban perspective may be established here, with the help of the cultural analysis of Japanese urbanism.

⁷³ Zardini 2005 p. 24.

The thesis is constructed in four main chapters. The first three each treat a set of theoretical-methodological issues, respectively: (i) Schafer's soundscape term, (ii) Deleuze and Guattari's reconstruction of the territoriality term, and (iii) Augoyard's sonic effect. The fourth and final chapter tests and further develops the analytical perspectives of the previous three chapters through the Ishibashi case study. The overall movement therefore goes from a critical reading of texts, by means of which the field of sonic environmental analysis is established (Schafer), via more constructive readings of conceptual frameworks and theories through which the field can be developed (Deleuze and Guattari, Jean-François Augoyard), to their testing on specific empirical material.

This theory-oriented construction enables the treatment of individual complexes separately, so that relevant cultural-theoretical, technological and ideological prerequisites can be presented and worked on with a view to their methodological development. The theoretical chapters focus on the unique characteristics of each position, as well as their mutual differences; in the concluding analysis chapter, a more synthesising method is used, in which analytical tools, rather than theoretical complexes, structure the presentation. This forces an analytical practice upon the specific socio-cultural environment – a task that would be difficult to develop theoretically.

The chosen environments, and the registrations I have generated as visitor and resident over a long period of time, are intended neither to be representative of Japanese nor of suburban relations in general. They serve rather as a specific and thought-provoking framework for the methodological project that is the topic of this thesis. It is not my intention to articulate a particularly 'Japanese' phenomenal world, but rather to use this specific framework as a fragment, within which a series of themes with broader relevance can be unfolded.

Choice of case material: Ishibashi Shopping Street

My personal encounter with Ishibashi precedes the period of the scholarship which led to this thesis. During an 18-month residency in Osaka, as research student at Osaka City University from October 2004 to March 2006, I lived close to Ishibashi and went there regularly. But it was not until I moved to another part of town, after 9 months, that I began to record the sonic environment of Ishibashi. My choice of Ishibashi as the topic of this project of registration and recording was therefore not based on convenience, but rather the fact that the area had come to represent, for me, one of the most characteristic *places* in Osaka.

Inspired by Schafer's *The Tuning of the World* and by a community of soundscape researchers in Japan, my project took on the nature of a soundscape study of Japanese metropolises. On days conducting field-work in Osaka's urban space, I sought places that would lend themselves to a reading, places that expressed an independent character – sonically, spatially, even atmospherically. I observed people, following the crowd in order to find the places they lingered, or the squares that Europeans typically expect to find in any city. My search was not – or not consciously, in any case – ideologically motivated, but rather methodologically. How should I begin to record and register the area? How could I delimit the subject?

Some long restless days in central Osaka's pedestrian areas above, at and below ground level, in the constantly changing sounds from various tannoy and speaker systems, or in the deep rumbling of a raised motorway, indicated that these spaces were not conclusively readable as places, but rather appeared as routes or spaces of transit within larger networks. As I initially concluded that the registration of these spaces seemed too great a task, I directed my interest towards a place with which I was acquainted (the shopping area around my former local train station, Ishibashi), which by virtue of its physically demarcated form and modest size could function as a laboratory for the testing of my practice of registration and description.

Thus the challenges to Schafer's methodical foundation were already outlined in embryo. It was a matter of finding methods for recording, describing and analysing complex, non-restricted and convergent spatialities, under the influence of urban noise and electro-acoustically added sound. Ishibashi represented, to some extent, an antithesis, in as far as it was still a case of a limited and well-defined space. But the renewed interest for the acoustic dimensions of the area made it clear that the area's unique and slightly stale character was, largely speaking, sonically marked by the area's pronounced sound system, in as far as 32 loudspeakers ensure mono-directional sound within the area. The area was subject to a significant acoustic territorialisation, without which the place would probably struggle to retain its independent character in relation to the diffuse and noisy infrastructural spaces surrounding it. More to the point: over time, it became clear to me that also within Ishibashi there is a spatial and acoustic dynamic, by which place and space are established, dismantled and redefined. With its delimitations, Ishibashi probably offers a (suburban and centre-like) contrast to Osaka's central urban space, but within this external territorial border, some of the same socio-acoustic mechanisms may apply. It is my hope that the analysis in Chapter 5 will be able to articulate some of the acoustic relations by which Ishibashi's environment is defined and developed; and that this analysis, despite its restricted and specific topic, in the long term will be able to cast light over the characteristic and less well-defined urban space's acoustic design and configuration.

English Summary

This dissertation presents an investigation of the methodology of sound environment analysis with specific concern to its relevance in modern urban space. Inspired by a growing interest in urban acoustics it investigates how sounds contribution to the urban life world is articulated within existing complexes of theory, and it outlines perspectives for alternative descriptive categories.

A major step in the tradition of sound environment analysis is the work of composer and music educator R. Murray Schafer in relation to the World Soundscape Project, where Schafer developed methods for registration, description, analysis, assessment and design of *soundscapes*. In the second chapter of the present dissertation a throughout reading of Schafers publications in relation with the World Soundscape Project is presented. The reading identifies cultural theoretical and normative aesthetic positions within Schafers work through which the soundscape analysis develops a distinct anti-urban perspective. In particular Schafers more or less reflected inspiration from contemporary American thinkers like Marshall McLuhan and John Cage is investigated.

In chapter three, as an alternative way into the auditory field of experience, the concept of territoriality is introduced. Konrad Lorenz' ethological concept of territoriality is investigated taking his *Das sogenannte Böse* as a point of departure, and a loosely founded hypothesis about territoriality's reliance on aggression is deconstructed using Lorenz' own concepts. Following is a presentation of Gilles Deleuze and Felix Guattari's reconstruction of etology along a similar path displacing the substantial end aggression reliant concept of territoriality into a field of practise, which has to do with the interchanging of—primarily sonic—marks.

Following Deleuze and Guattari's rich theory about territoriality and the ritornello, chapter four introduces another theoretical complex specifically related to the analysis of sound environments: Jean-François Augoyard's and the research centre CRESSON's work on *the sonic effect* as specific interpretations of contextual sound. By looking at Augoyard's former work, connections are established both to theories of everyday life and Deleuze and

Guattari's work on territoriality. The concept of sonic effect is then interpreted as a way in which the environment is (re-)marked.

In a final analytical chapter the presented theory complexes are tested in the analysis of a specific suburban area in the outskirts of Osaka in Japan. A particular accentuation of sensual qualities of urban space in Japan is outlined through Roland Barthes, Robert Venturi, Botond Bogner and Toyo Ito. It may be that the sound here takes more prominence in shaping flexible and dynamic urban space, though it is hardly a culturally specific phenomenon. The case material is rather thought of as a relevant generator for the development and testing of the potential of sound environment analysis in an urban context.

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