SOUNDWALKING AS METHODOLOGY FOR UNDERSTANDING SOUNDSCAPES

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Abstract

This paper describes the development of the soundwalking methodology and its use as a tool to engage professionals who work in the area of urban design and urban development (including city planners, developers, and architects). The paper does not report on the findings of this project as data collection is currently ongoing but rather reflects on the utility of soundwalking as a methodological practice.

1 INTRODUCTION]

Soundwalking is a practice that was devised by R. Murray Schafer, when he established the World Soundscape Project at Simon Fraser University during the late 1960s and early 1970s. It is an empirical method for identifying a soundscape and components of a soundscape in various locations. In the EPSRC-funded Positive Soundscapes Project (Davies *et al,* 2007) we have utilized and adapted this concept of soundwalking into a sociological methodology for identifying and understanding people's experiences and perceptions of the acoustic urban environment. Our soundwalk is a walk around an urban area where the senses are directed towards the sounds that are heard rather than the more commonplace sights that are viewed. We focus on everyday practices, as people move around and within the city environment with a view to understanding their professional and/or personal impressions of the relationships between the soundscape and the built infrastructure. This paper describes the development of the soundwalking methodology and its use as a tool to engage professionals who work in the area of urban design and urban development (including city planners, developers, and architects). The paper does not report on the findings of this project as data collection is currently ongoing but rather reflects on the utility of soundwalking as a methodological practice.

2 FROM SOUNDSCAPES TO SOUNDWALKS

In 1969 Michael Southworth wrote 'At a time when technological progress is bringing city sounds to the threshold of bedlam it is no longer sufficient to design environments that satisfy the eye alone' (p49). He argued for an exploration of the consequences of this acoustic stimulation on the quality of city life and conducted a field study on the perception of the Boston soundscape using deaf, blind and sighted/hearing participants. His subjects passed through the city in a wheelchair and 'investigated changes in the soundscape over time and under varied weather conditions' (p53) and, perhaps unsurprisingly, he found temporal and meteorological factors greatly influenced the perceptions of the urban soundscape. He also found that 'the visual experience of cities is closely related to the sounds that accompany it' (p65). In his study the route was referred to as a 'trip' but the clear objective was to determine what one can tell about the city merely by listening to it, to determine what type of sonic settings people prefer and dislike and how well the sonic and visual environments correlate (p54). These are all elements of trips through the city that have since come to be referred to as soundwalks.

The phrase soundscapes is often accredited to Murray R Schafer who wrote about 'The New Soundscape' in 1969. In the 1970s Schafer, through the work of the World Soundscape Project, documented changes in the acoustic environment throughout history and across cultures. His definition of a soundscape as a sonic environment reflected his engagement with the environmental movements of the 1970s, and he was keen to emphasize his ecologically based concern about the

'polluted' nature of the soundscape of that era (Schafer, 1994). A key part of this project was the practice of soundwalking, an empirical method Schafer devised for identifying a soundscape and components of a soundscape in various locations. Schafer and his colleagues used this soundwalk method to identify and record the soundscapes of Vancouver and, later, five European villages (see Schafer, 1977a; 1977b). Schafer and his colleagues on the World Soundscape Project recorded their soundwalks, although this is not an essential practice.

Westerkamp (1974, revised 2001) provides a useful introduction to the art of soundwalking and describes it as 'any excursion whose main purpose is listening to the environment'. She describes it as a kind of acoustic education, a purposeful act to 'expos[e] listeners to the total content of their environmental composition'. Further she says it is 'meant to be an intense introduction into the experience of uncompromised listening'. Westerkamp emphasizes the adaptability of the soundwalk method, being an act that can be performed alone or with others, taking in a wide geographical location or a more intimate, centered space. Along with others involved in the World Soundscape Project she is keen to emphasize the relationship between the individual and nature saying 'In urban life, however, close contact with nature tends to highly reduced. Nature ceases to be a companion with whom one lives and struggles day after day, and becomes instead a distant friend whom one likes to visit on occasion. Going for a walk is one way by which urban people attempt to regain contact with nature'.

Many others have gone on to adapt these concepts of the soundwalk and use it in a variety of contexts that extend the original concept beyond that envisaged by Schafer and his colleagues. Soundwalks have therefore been conducted in groups and alone, recorded and unrecorded, and for a variety of methodological purposes.

There is, however, a significant gap in the literature whereby soundwalks are utilized as a methodology in a variety of academic projects but without any constructive effort to evaluate their utility or effectiveness (however, see Adams et al (forthcoming) for a discussion of the effectiveness of a combined methodology incorporating soundwalks in engaging residents of the 24-hour city).

The following section discusses some of the literature which has utilized the concept of soundwalking and then leads on to describe the way in which the Positive Soundscape Project has develop and expanded upon this concept.

3 SOUNDWALKING METHODOLOGIES

A number of researchers have employed the concept of the soundwalk as a method to enable them to conduct research into the urban environment. This has led to a range of interpretations of soundwalking as a methodology and in this section a number of studies that have advanced the concept are described. Some have employed it as a means through which the researcher immerses themselves into the urban soundscape while others have used it as a way of engaging others into the practice of listening to and describing the city. Each has their value and usefulness and can be appreciated in relation to what it enables the researcher to contribute to the study of urban soundscapes.

Semidor (2006) describes how she utilized the soundwalk method to enable the evaluation of what is pleasant and relevant in an urban sound environment in relation to the activities undertaken in an area. Inspired by Lynch's (1960) concepts of place legibility (how easily people can experience the layout of a place) and imageability (the qualities of a physical object that give the observer a strong, vivid image) Semidor has incorporated soundwalks to record significant sound events which she terms *soundscenes* or *sonoscenes* (p960). She limits her walks to 30 minutes with the rationale that this 'corresponds to the distance which we can cover on foot in an average European city by keeping a certain homogeneity, either concerning the urban fabric or the activities, while remaining compatible with the variability of the same parameters'. For her research she emphasizes the importance of conducting the soundwalks several times a day on several days of the week in order to appreciate the temporal changes in the urban soundscape, and notes that selection of the route

depends on what is being investigated; 'we can for instance study different urban forms with a equivalent type of traffic, or a particular urban space with a large variety of the sound sources'. She records her soundwalks with a binaural microphone system plugged into a DAT recorder and supplements the recordings with photographs in order that the 'soundwalk becomes representative for the soundscenes that may occur in relation to the specific activities on the route taken' (p961). The recording of the soundwalk is supplemented with ethnographic notes and photographs and Semidor concludes that it is useful for identifying some of the components of the soundscape in order to evaluate the soundscape.

For Semidor the soundwalk is utilized as an ethnographic practice, where the researcher is the soundwalker simultaneously recording, photographing and taking notes on the urban environment. Her soundwalk incorporates a multi-modal observation of the urban environment, taking cues from the visual as well as the sonic environment. As it is the researcher alone who experiences the walk and interprets the data potential ambiguities due to different voices (urban designers, planners, architects) are minimized. However, this risks over-simplifying the outcomes of the research and it would be instructive to discover the outcomes if different soundwalkers experienced and interpreted the same route.

Further to Semidor's work described above, Venot and Semidor (2006) discuss the development of tools to be used by urban planners whose remit is to rehabilitate existing public spaces; 'these tools will enable them to take the acoustic dimension of the site into account and to anticipate modifications accordingly' (p1). Their methodology entails performing soundwalks prior to any rehabilitation as this will be representative of the original environment of the site. They emphasize that 'the nature of the urban fabric, the morphology of the public spaces, the texture of façade materials, … have great influence on the diffusion of sounds and thus on the auditory impression they produce'. Again they used a binaural microphone system along with a DAT recorder and it is the researcher who is the soundwalker. They demonstrate how their soundwalk methodology can be utilized by urban developers with a simple illustration of the effectiveness of an earth mound in a park in Brussels; they show that increasing the height of the mound creates a more efficient noise barrier in the high-medium frequency range and for the area behind the earth mound. The use of a recorded soundwalk is a practical and constructive way of vividly conveying the auditory change to the planner.

Berglund and Nilsson (2006) have also utilized soundwalks in developing a tool for characterizing the perceived quality of residential urban soundscapes. The aim of this tool is to enable the planning of exciting and/or restorative soundscapes in living environments and to move away from a focus on adverse characteristics such as unwanted sounds and sound levels. They emphasize the symbiotic relationship between landscape and soundscape (see Carles et al (1999) and Viollon et al (2002)) and emphasize that research on perceived soundscapes should take place in the context of the built environment if issues of sound are to be used in city planning. Across four study areas 106 residents participated in structured listening walks (Berglund and Nilsson don't use the term soundwalk in their paper). These participants were a subset of the 965 residents who had taken part in a questionnaire study. Each walk lasted about 90 minutes and the soundwalker listened at six listening places, including indoor and outdoor spaces, for 30 seconds each while binaural and monaural recordings of the acoustic soundscapes were made simultaneously. A pilot study determined that a 30-second listening period was the longest period possible for recalling and reporting on an immediate soundscape perception and determined the 12 descriptors that best characterized residential soundscapes. The participants used these 12 descriptors during the soundwalk to assess each stopping place. Berglund and Nilsson found that their tool for measuring soundscape quality during soundwalks in urban residential areas was proficient for identification and classification of residential soundscapes.

Adams et al (2006) also utilized and adapted the concept of soundwalking to develop a method for engaging city-centre residents in research into sustainable urban environments. This paper highlights the abatement approach taken within noise policy in the UK and Europe and demonstrates the importance of individual experience in assessing soundscapes, illustrating the subjective nature of soundscape appreciation. In their study participants were invited to identify a

10-minute walking route outside their house and around their local area and to mark it on a large scale map, centered on their home. This map was then used as the basis for a soundwalk of the local area. Given the multi-sensory nature of human interaction with their environment participants were asked to consider all their senses during the walk and to be aware of what they were smelling, touching and tasting as well as hearing and seeing. One researcher walked alongside the resident with a microphone mounted on a boom pole and attached to a DAT recorder. Residents were asked not to speak while conducting the soundwalk so that the microphone would pick up the urban sounds encountered and to enable them to focus on listening. The experience of the soundwalk was then used as the basis of a semi-structured interview with each resident. Adams et al identified a glaring gap between how policy treats sound (as noise) and how individuals treat sound (with more aesthetic nuances) and identified a need for research into how the positive aspects of soundscapes could be effectively incorporated into policy (p2396).

All these papers utilize concepts of soundwalking derived from Schafer's original vision in the World Soundscape Project. Where they diverge from his notion is that they all utilize it as a means to something else, rather than an end in itself. Each of the projects described above have found a way of using a soundwalk either to engage other people into thinking about their urban soundscapes or as a method through which a researcher can evaluate the soundscape in relation to the urban fabric.

In the next section the Positive Soundscape Project is discussed, highlighting the multidisciplinary nature of the project and describing in detail the development of the soundwalking methodology utilized.

4 THE POSITIVE SOUNDSCAPES PROJECT

The Positive Soundscapes Project is an interdisciplinary project devised in order to reconceptualize the notion of sound as noise and it brings together insights from sonic art, ethnographic investigations of the soundscape and quantitative psychoacoustics to provide a better account of the relationship between the soundscape and the perceptions of those within it. The main aims of the project are: to acknowledge the relevance of positive soundscapes, to move away from a focus on negative noise and to identify a means whereby the concept of positive soundscapes can effectively be incorporated into planning; to evaluate the relationship between the acoustic/auditory environment and the responses and behavioral characteristics of people living within it. To achieve these aims the project's objectives include (but are not limited to) determining what individuals/groups perceive to be component parts of the soundscape and how they value these components, classifying types of soundscape, and determining the factors constraining and influencing the creation of soundscapes. It is these objectives that the soundwalks will help to meet.

Soundwalking is an active form of participation in the soundscape, the essential purpose of which is to encourage participants to listen discriminately and to make critical judgments about the sounds heard and their contribution to the balance or imbalance of the sonic environment. The following section discusses in detail the soundwalks that were conducted in Manchester city centre with professionals involved in urban design and development (developers, city planners and architects).

5 SOUNDWALKING IN MANCHESTER

A soundwalk route (Figure 1) was determined through discussion with the project team as it was important that the route incorporated the requirements of each of the research strands. These requirements included identifying specific types of location (urban square, busy shopping street, shopping precinct, urban green space, pedestrianised street), ensuring they were close enough together to allow for a 30 minute walk, as well as identifying spaces within those locations where it would be possible to interview participants and make a variety of recordings (stereo, binaural, ambisonic and audio).

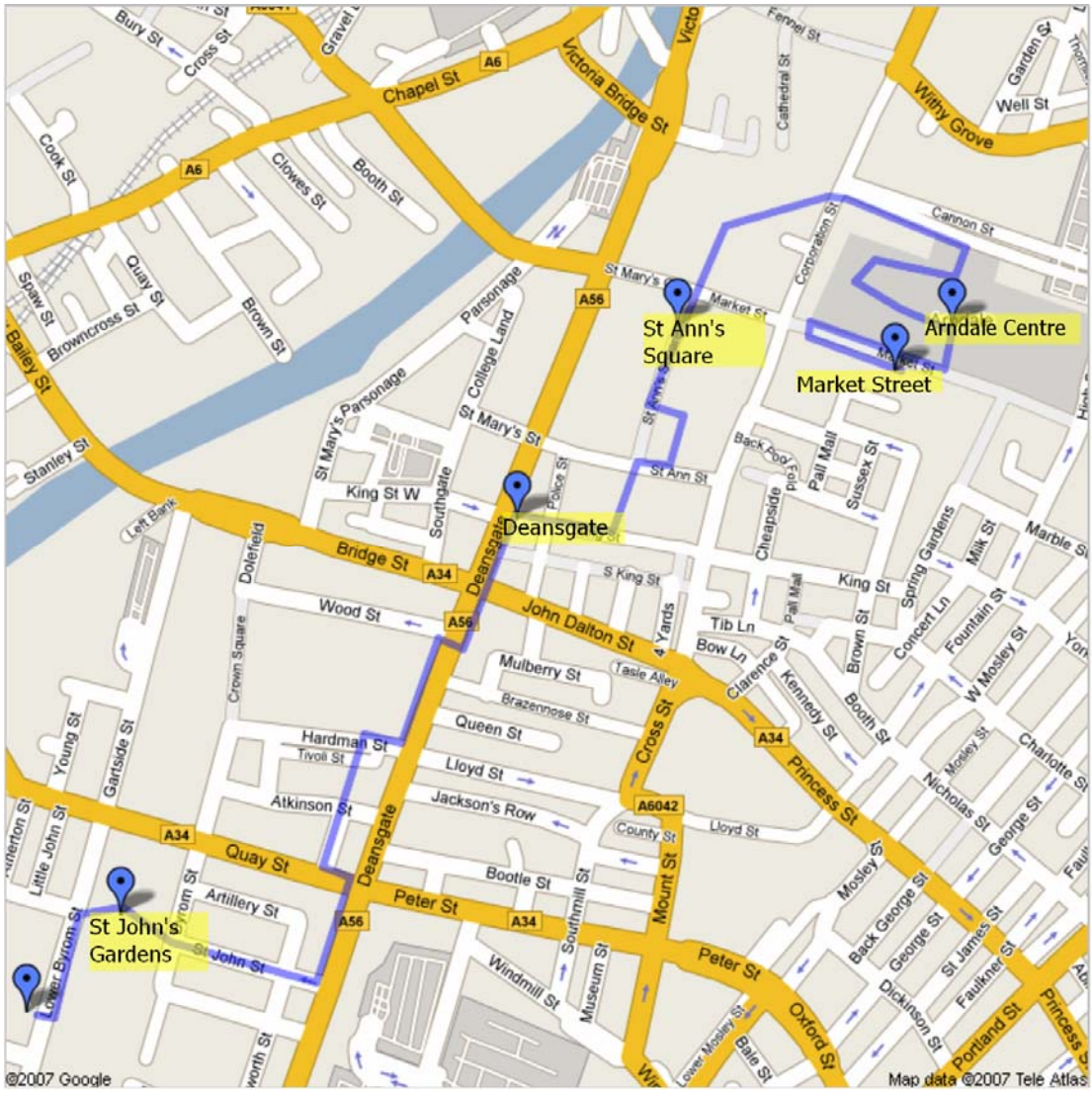

Figure 1: Soundwalk route in Manchester (source: Google Maps)

Each soundwalk started in St John's Gardens (urban green space) and ended on Market Street (pedestrianised street), stopping on Deansgate (busy shopping street), St Ann's Square (urban square), and the Arndale Centre (shopping precinct). A set of pre-soundwalk questions were asked of each participant in order to record details of their professional background, their impressions of Manchester city centre, how their profession currently considers urban environmental sounds, if at all, and what their expectation is regarding what they hear in the urban environment.

The soundwalk was conducted in silence and participants were asked to concentrate on what they could hear as they walked and to look at the urban environments they passed through (physical environments, infrastructure etc) in order to make connections between what they could see and what they could hear. At each of the five locations named in Figure 1 we stopped in silence for one minute in order to listen to that particular space. A set of location specific questions was then asked about what could be heard at the moment, what the participant liked most and least, whether anything dominated, what was in the background, whether the location sounded as the participant expected it to, how the location made them feel, what aspects of the surroundings of the location the participant thought had an impact on the soundscape, which aspects made the soundscape better and worst, how the participant valued the space and who they thought used the space. These questions were asked in the form of a semi-structured interview in order that the researcher could ask for more detailed explanations when it was felt necessary.

At the end of each soundwalk a set of post-soundwalk questions were asked. Participants were asked to think back to the five locations where they had stopped, but also to consider some of the other locations they had passed through on the soundwalk route. They were then asked whether they would say they had experienced a number of different soundscapes or one 'urban' soundscape. If they said they had experienced more than one they were asked to describe those soundscapes and to try to classify the different types of soundscape they had experienced. They were also asked if the soundwalk had changed their perception or understanding of urban soundscapes in any way and whether they were likely to consider soundscapes in their future professional work. They were then asked how that might work in practice and the restrictions that they felt worked against incorporating the concept of soundscapes into their professional work. Finally they were each asked which of the soundscapes they experienced on the walk worked well and why they felt it worked well.

In the following section we reflect on the utility of soundwalking as a methodological practice, as opposed to discussing the findings of the fieldwork in Manchester which is still ongoing, and which will ultimately be presented in detail elsewhere (see the Positive Soundscapes website for up-to-date details of the project, the fieldwork and publications arising from it).

6 SOUNDWALKING AS A METHODOLOGICAL PRACTICE

The practice of soundwalking with professionals was found to be an instructive way of collaborating with professionals working in the field of urban design and development. The innovative nature of the methodology piqued the interest of a number of professionals who had not considered the sound of their urban environments in their previous work. It was found that while all of them were aware of (and adhered to) regulatory aspects of noise control in their professional work the concept of considering the external sound environment and the relationship between the built environment and what could be heard was a novelty to many of them.

By conducting a soundwalk with these professionals it was possible for the researchers and the participants to have a shared sensory experience of the urban environments under investigation, thus enabling a deeper and more meaningful semi-structured interview to take place. Walking through the city and listening to it focused attention on what was being heard and was significant in enabling a more far-reaching exploration of the responses made about spatiality and the relationship between the built environment, the urban infrastructure, the design of the city, and its soundscapes. By routing the soundwalk through a variety of urban soundscapes it was possible to open up participants' ears to the different soundscapes in the urban environment, both the subtle and the obvious, effectively demonstrating to them that there are distinctions and engaging them in subsequent discussion of what this means for urban design and planning in the future. The intention now is to develop this methodology to enable participation by other city users and to conduct further soundwalks in Manchester, London and Coventry.

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