

Chapter 3

Sound is Not a Simulation: Methodologies for Examining the Experience of Soundscapes

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ABSTRACT

In order to design a computer game soundscape that allows a game player to feel immersed in their virtual world, we must understand how we navigate and understand the real world soundscape. In this chapter I will explore how sound, particularly in urban spaces, is increasingly categorised as noise, ignoring both the social significance of any soundscape and how we use sound to interpret and negotiate space. I will explore innovative methodologies for identifying an individual's perception of soundscapes. Designing virtual soundscapes without prior investigation into their cultural and social meaning could prove problematic.

INTRODUCTION

Simmel (as cited in Frisby, 2002) argues that the exploration and navigation of a space, particularly an urban space, impacts all of the human senses. Equally he suggests that when exposed to multiple inputs of both internal and external stimuli, we make choices, such as movement and interaction, based on the sensory information of a given space (Simmel, 1979). In the design of gameworlds, we must examine this concept of sensory input as both a method of navigation and socialisation.

Within a real world all the senses are exposed to information, sight, sound, smell, and touch. Within a gameworld, we are currently exposed to an overriding visual experience and minimal sound information. There is a deficit of sensory information occurring within this digital world and, as more people move towards gaming and virtual communities, this deficit must be examined. For digital virtual worlds to create a convincing immersive experience with the technology that is available, we must explore sound as well as sight in the construction of gameworlds from a sociological perspective.

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Thompson (1995) argues that when we enter virtual spaces or communities we leave orality behind: he sees no space for sound within virtual worlds or online communities. It has been prevalent in social and media theory to ignore the experience of sound in a space, whether that sound is produced by human activity or by other natural sources. It is my argument that sound plays a part in the social construction of space, whether real or virtual, either by its presence or absence. Equally, I will argue that sound which is produced by objects through reverberation and other acoustic qualities can affect how we navigate or place meaning in a space.

I will also explore the process of control which is dominating research into the Soundscape, this is primarily due to an increasing awareness of the side effects or apparent dangers of loud sounds on people.

The need to monitor and control sound in the environment has become a predominant research focus within soundscape studies. Sounds within urban centers are increasingly seen as a by-product of industry and technology: this has led to the creation of noise policies within a number of countries. Sound is increasingly seen as a measure of sound pressure levels rather than being seen as a social structure (Blessner & Salter, 2009, pp. 1, 2). This is significant for sound designers who wish to gather data on the meaning of sound within society. If a sound designer considers sound only in relation to volume, noise, or other objective criteria they might ignore the meaning sound beyond its output level. In looking at the social and perceptual aspects of sound we are constructing what Feld (2004) would call an *acoustemology* of the sound world. He increasingly acknowledges that soundscape studies, which react to human interventions to the natural soundscape, ignore cultural systems which develop as a result of being immersed and surrounded by sound.

The game space, or any virtual space which asks a person to become immersed in it, needs to be founded upon an understanding of the sociologi-

cal impact of sound on the individual and society. A game designer must also take into account the more abstract representation of sound that is experienced in art, cinema, and other mediated spaces. There is already a history of the experience of sound through mediatisation (Bull, 2000; Cabrera Paz & Schwartz, 2009; Cohen, 2005; Drobnick, 2004): the difference between these theories and the theory of game sound design is the concept of immersion, interactivity, and simulated reality.

What describes a soundscape, who defines the description and what models are used to categorise levels of sound and their meaning? There are no set methods for the study of acoustic ecology or the soundscape from a sociological perspective. I propose an interdisciplinary method which will draw on social theory, media theory, and sound design. In order to explore the soundscape we must incorporate different methods and theories to analyze the social impact of the soundscape, real or virtual on the individual and the group.

THE EXPLORATION OF THE SOUNDSCAPE

Some of the earliest documented exploration of the modern soundscape arose from within the arts and modern music composition. Those who practised the art of listening explored the changes in our early soundscape, technology was seen to change our soundscape, but this was not seen as a negative event (Luigi Russolo's 1913). Luigi Russolo's 1913 manifesto, *The Art of Noise*, posited that sound had reached a limit of invention, technological sounds allowed for an "enjoyment in the combination of the noises of trams, backfiring motors, carriages, and bawling crowds". He argued that in listening and using these sounds as types of music we would create an awareness of the rapidly changing soundscape. In an ever changing technological climate, we would increasingly be exposed to new types of sounds at a faster rate than at any time preceding mechanisation. The

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