## ORIGINAL ARTICLE

## Soundscape, sonification, and sound activism

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Received: 9 February 2010/Accepted: 1 August 2011/Published online: 1 September 2011 © Springer-Verlag London Limited 2011

**Abstract** In this article, the author will argue that the act of listening through public soundwalks and other formal and informal exercises builds environmental and social awareness and promotes changes in social and cultural practices. By examining the act of listening as an alternative pathway and comparing the research, writings, and creative work of leaders of the acoustic ecology movement (i.e., R. Murray Schafer, Hildegard Westerkamp, and Bernie Krause), the author hopes to shed light on these potentials. For purposes of comparison, projects that explore the sonification and audification of inaudible signals will be examined, including the work of Christina Kubisch. The process of audification and sonification of these signals will be examined in comparison to soundscape experiences in order to develop a theory of data sonification based on the soundscape. In order to build a community around the urban soundscape, in 2003, the author co-founded the New York Society of Acoustic Ecology. Through this endeavor, she co-created the ongoing NYSoundmap and Sound Seeker projects, which provide some practical research for this article. Thus, by comparing and contrasting theoretical writings with leading listening exercises, public soundwalks, soundscaperelated brainstorming sessions, and presenting field recordings in various settings, new methodologies will be documented.

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**Keywords** Soundscape · Sonification · Acoustic ecology · Audification · Soundwalks · Field recording

## 1 The political and social dimension of soundscape composition and soundwalking

"Soundscape" is a widely used term coined by Canadian composer R. Murray Schafer as an analog to "landscape" to define the collection of sounds in an environment. In Schafer's seminal 1977 publication The Tuning of the World, the natural and man-made soundscape was characterized with geography as the foundation. Schafer defined natural "keynotes" as sounds that arise from the overall geography of a specific area. "Sound signals" were defined as alarms and other sounds that carry information, and "soundmarks", like landmarks, were defined as elements of the soundscape that identify place in time as important historic markers that demand public protection. In addition to defining the field of acoustic ecology, The Tuning of the World was also a call to action, as it alerted readers to the widespread global disappearance of soundscapes and the urgent need for their preservation. For example, Schafer indentified "hi-fi" and "lo-fi" soundscapes and valued the endangered hi-fi, relatively quiet soundscapes with a wide amplitude range where it is possible to hear a large amount of detail, over lo-fi, loud and noisy environments created from large amounts of machinery where sonic detail is masked by the industrial sounds of modernity (Schafer). Schafer was part of a global movement called the World Soundscape Project (WSP) founded over 30 years ago by an international interdisciplinary community of artists, scientists, activists, and engineers that included Barry Truax, Howard Bloomfield,

