

**Acoustic Communication, 2nd edition.** By Barry Truax. Westport, CT: Ablex, 2001. 284 pp. and 1 computer optical disk. ISBN 1567505376 (pbk.).

*Acoustic Communication* is the second edition of Barry Truax' work, first published in 1984. Truax is a professor of both Communication Studies and Music at Simon Fraser University and also well-known as a composer of electroacoustic music and as the designer of the PODX real-time granular synthesis system. In the 1970s, Truax was a researcher with the World Soundscape Project, which is internationally recognized for its role in the development of the field of acoustic ecology. *Acoustic Communication*, 2nd edition, includes for the first time a CD-ROM, *The Handbook for Acoustic Ecology version 1.1*, edited by Truax.

I turn to the CD-ROM to begin, because of its great potential as a teaching tool, not only for Acoustic Ecology, but also for sound courses more generally. It is arranged as a set of Web pages with linked sound examples, for both IBM and Macintosh platforms. These pages can be browsed with Netscape 3.04 or higher, making the work accessible to people with slower computers. The work includes a thematic search engine, keywords, and an alphabetical index. The thematic search engine includes levels of acoustic interaction, analytical dimensions of sound, and a list of subdisciplines such as Audiology and Hearing Loss, Electroacoustic and Tape Studio Terms, Linguistics and Speech Acoustics, and others. Keywords range from general terms such as "communication" and "electroacoustic" to more specific words such as "decibel." The notes on each page vary in length: for instance, "electroacoustic" has a long and detailed page with many links and sound examples, while "metacommunication" has a very brief definition. Nevertheless, the Web pages are ideally suited for classroom teaching and individual student work, providing clear and concise descriptions, opportunities for further study, and relevant sound examples. The sources of the sound examples are either soundscape recordings or electronic syntheses. Each is under a minute long and often includes sound comparisons. For instance, on the electroacoustic page, the first example is one of milking a cow by hand, followed by its electrical equivalent. This short excerpt demonstrates the differences between these two sound environments, one acoustic and the other electroacoustic. But it has further implications as well: in the first excerpt, the cow is silent. In the second, she is mooing louder and louder, seemingly in some distress, an aural reminder of the systematic brutalities of factory farming.

The book includes updated references and extends Truax' arguments from his earlier work. I read the first edition of *Acoustic Communication* in 1991, while working as an independent sound artist. I was not affiliated at that time with any university faculty and found the book an excellent reference resource in such a situation. It introduced complex technical topics about sound in an accessible, clear, and straightforward way, without any of the aesthetic exclusions that seemed to characterize books on different genres of music and sound art. This continues to be true. However, although the book's cover claims that the text provides "a model for understanding all acoustic and aural experiences," it must be noted that Truax advocates a perceptually based approach in opposition to conceptual approaches, which he believes dominate the field to the detriment of the orientation he favours (p. xii). I believe that this opposition is problematic and that it is important to integrate both perceptual and conceptual approaches.

Book sections and chapter headings are the same as those found in the first edition. The first section, "Sound, Listening and Soundscape," introduces the energy-transfer model of signal processing in its opening chapter, followed by approaches to listening, voice and sound making, systems of acoustic communication, the acoustic community, noise and the urban soundscape, and acoustic design in chapter seven, at the end of this section. Each chapter ends with a list of relevant sound examples from the CD-ROM. Tech-

nical topics such as threshold shifts and sound propagation are discussed clearly and informatively. Truax' background in soundscape research is evident in his examples of people's responses to sound environments, used to illustrate arguments. For instance, fascinating insights on listening (pp. 17-18) are quoted from Jacques Lusseyran, a blind man. At the same time, Truax seems ambivalent about the usefulness of reception study to acoustic communication. He says that in order to discover the importance of sounds in a community, "One could conduct listener surveys, but the difficulty listeners have in articulating attitudes and types of listening experience would prove to be a limitation" (p. 27).

The chapter that prompted the most questions for me was the one on "The Acoustic Community." Even the chapter heading prompted a question: is there only one acoustic community? At the beginning of the chapter, Truax suggests an approach to community based on ecology. However, although he refers to the "lessons of ecology" (p. 65) and "social science literature" (p. 66) in relation to community, no specific references are provided to situate his arguments. On page 66, Truax claims that "noise is the chief enemy of the acoustic community." But is this true for all communities? For the acoustic community of a cultural minority or politically oppressed group, language or the proscription of culturally specific soundmaking might be a greater concern. The majority of examples in this chapter are derived from the research of the World Soundscape Project, which studied primarily Canadian and European communities. I would like to have seen more references to recent soundscape research on acoustic communities in other parts of the world as well.

The final chapter in this section, on Acoustic Design, is important in its intention to discuss principles of acoustic design that apply to work with many different types of soundmaking. It is difficult to find literature that discusses sound composition without submitting it to the aesthetic demands of a particular musical or artistic genre, or medium. This chapter is relatively short, and I wished for a more detailed examination of these principles, particularly as a teaching resource.

The second section of the book, "Electroacoustics—The Impact of Technology on Acoustic Communication," includes chapters on electroacoustic communication, electrification, the listener as consumer, electroacoustic media: audio mediation, the acoustic community as market, regaining control: electroacoustic alternatives, and electroacoustic design. The most substantive additions and developments to the book are in this second section.

Chapter 11 (on audio mediation), for instance, includes a detailed radio-programming analysis conducted in 1991. This chapter is very interesting in its close structural analysis of radio programming in relation to the factors of rhythm, intensity, and dynamic range, compression, and continuity. These perceptual factors are then related to the political and economic roles of radio. However, where alternative forms such as community radio are discussed, the similarities with commercial radio are emphasized more than the differences, which tends to minimize their potential as real alternatives.

Chapter 13 (on electroacoustic alternatives) is a good companion to the chapter on acoustic design, with its intention to survey a cross-section of many creative forms of sound production. Here Truax discusses Tony Schwartz' pioneering folkloric tape recordings of postal zone New York 19 in 1946, Ewan MacColl and Peggy Seeger's *Radio Ballads* at the BBC 1957-64, Imbert Orchard's documents in sound at the CBC in the '60s and '70s, and Glenn Gould's innovative radio documentaries of the same period. The two sections on text-sound and electroacoustic composition discuss figures such as Schwitters and Stockhausen, who are well-known from other sources. But Truax' discussion of documents in sound, and the final section on soundscape composition, are unusual. I have rarely seen these forms discussed elsewhere in any detail. However, there are some aesthetic limits here: Truax does not include popular forms such as rap in his discussion of text-sound, for instance.

This last exclusion is perhaps a result of the association that Truax makes between mass media and manipulation, in opposition to electroacoustic alternatives and creativity. There seems to be no room for creative popular forms (or manipulative electroacoustic alternatives) in this formulation. While I find *Acoustic Communication* an excellent teaching and research resource, I want to read it in tandem with reception theory and sub-cultural studies, which are more highly developed in popular-music studies, cultural studies, and ethnomusicology than in electroacoustic research. Reception studies give more situated accounts of particular communities, and while sound perception is sometimes minimized in such studies, this is not always the case. I also want to supplement the themes included in *Acoustic Communication* with readings of contemporary feminist theory: on the one hand, Truax is sensitive to what he describes as the “sexistbias” (p. 174) of audio technology, yet on the other hand he continues to portray audio production as almost completely male dominated (with rare exceptions such as Hildegard Westerkamp), without discussing recent feminist writing that celebrates the work of many women sound producers throughout the history of audio technology. It seems that Truax gives too clear an image of hegemony in audio mediation and production, without enough emphasis on diverse forms of resistance. That said, there are few authors who have taken on the daunting task of discussing the general role of sound in communication, without limiting the discussion to a particular area such as film sound, radio, sound art, or electroacoustic music. Truax’ work aims to discuss acoustic communication beyond the disciplinary boundaries of such works. This approach, as well as the inclusion of the interactive CD-ROM in this publication, makes it a welcome addition to the communication literature.

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