

A Second Life for Sound: Crossing Sonic Paths in Virtual Worlds

Article and Photography by Dr. Phylis Johnson

I am not the first to discuss the wonders of virtual worlds. A read of Edward Castronova's *Exodus to the Virtual World: How Online Fun is Changing Reality* (2007) is a good place to start to understand the potential of such environments and fascination with exploring life in technological microcosms. In 2010, I published *Second Life, Media and The Other Society*, a book that continues Castronova's discussion, but with a narrower lens directed at one virtual world. A chapter of that book was dedicated to the role of sound in immersive virtual environments.

Second Life is a virtual social network platform that allows its more than 20 million registered users to represent themselves or to create alternate identities, importing from the real world, archiving past and present, toying with history and the future, and considering real life consequences in a safe place of exploration. Art, history, science, literature and music are themes for communities. Second Life began as a blank slate, and members have remained encouraged by its founder's mission, Philip Linden of Linden Lab, to create in this new world, as well as to enjoy the creations of other residents. Admittedly, much of what is created replicates real life.

In October 2011, I celebrated my fifth year as a virtual resident of Second Life, and have felt compelled to share my sonic perspectives, noting the evolution from merely canned sounds to the growth of an acoustic community of composers, sonic artists and architects that have created increasingly authentic and credible soundscapes and installations. The conference theme – *Crossing Listening Paths* – seemed an appropriate launch pad to a discussion on technology's role in how some come to hear and understand sound, particularly natural, in virtual environments. Second Life is more than a metaphor for listening; it has actually contributed to a refocussing on how sound shapes our listening environment, be it real or artificial.

The Basic Premise

The idea that we can emulate nature virtually is one that stimulates curiosity and concern simultaneously. The environmental setting and ambience associated with virtual gaming worlds is not a primary focus in the field of acoustic ecology, other than what might be perceived as the consequences of substituting an artificial experience for reality. Some achieve a sense of solace in video game play, even with all the incessant "bings" and "bangs" that signify action. My thoughts, however, focus on "residential" virtual games like Second Life, where members form communities and experience a second life through exploration of varied environments. Members come together to share in art and amusement, and sound (as music, ambience and effects) often accompanies this alternative life. Second Life has gained the attention of numerous real life musicians, who perform at these

online live music venues set in a virtual world. One of the most prominent has been the British band Duran Duran that rose to fame in the 1980s. The band has toured twice internationally and created two albums in recent years. But on June 22, 2011, it opened a themed "sim" called Duran Duran Universe that is not intended primarily to promote music; rather, it is a project that has taken nearly five years and is designed to explore the potential of virtual worlds as artistic retreats and exhibition spaces. One of the band's artistic spaces is called Khanada Kinesis, in which the Second Life explorer enters a spiral filled with an array of sound and spoken word.

In Second Life, some virtual installations are intended as long-standing works, especially when the land (often referred to as a "sim") is used for the re-creation of a prominent city or time period or the creation of a fictitious setting. Pierre Schaeffer (2005) would likely envision the inclusion of a sound object within virtual worlds as one risky to the perceiver's interpretation, apart from the original source. In essence, the imported sound would take on its own meaning apart from the source. The soundscape of Virtual Greece, for instance, would not offer the listener the same sonic experience, as if he or she were actually in a Greek city. In contrast, Francisco Lopez (2005) would offer a completely different take on the listener's experience. The recorded sounds, by the very act of recording, have already been transformed. It is not their placement within Second Life that alters what is heard; it is the actual recording itself.

Second Life, however, may contribute to a different interpretation, by the fact that the sound is embedded in a different medium and is represented in a virtual landscape. The intention of the virtual artist may be to reinterpret the outer sounds into this inner space, or the virtual space may serve as an archive to preserve such sounds. In the former instance, the very idea that the sound was removed from its source calls question to its role in this new world in which listeners respond to it. It is no longer merely a means of removing the sound from the source, for it becomes also a matter of rehearing the sound in a new context, the virtual environment. Schizophonia, according to R. Murray Schafer (1977), is the separation of a sound source from its original locality and cultural context via recording or transmission, and consequently the sound loses its connection to the environment from which it was isolated. That sound was rooted in an acoustic ecological community. Schafer (1977) would likely see this separation from its source as counterintuitive to the idea of preserving the sonic environment from which this sound had originated. What if an environment had itself changed over a period of time and was devoid of the rich sound that once occupied its space? Is there a role for recreating such an environment through old recordings imported into the virtual environment? Virtual environments might be either viewed as the culmination of technological practices that

remove the listener further and further from real world experience, or simply another way for people to access memory and interpretation of experiences as presented by virtual composers and archivists.

Second Life can provide that cultural and educational immersive space to create and recreate soundscapes of small rural African villages or natural parks and refuges or even a world not yet possible in real life. For instance, you can experience Africa, China, Egypt, France, Greece, India, and Japan in the past, present and future – visually and sonically, not always to the extent of authenticity but that is changing as technology advances and becomes more user-friendly to artists. Second Life entangles science and fiction, and offers a space for the reinterpretation of sounds. The authenticity of these sounds might be evaluated case by case. In the same manner in which a sound installation at a gallery changes the context of listening, so does a virtual world at times.

Crossing Over to Virtuality

The very idea that sound is being imported into virtual spaces begs us to ask, what might one hear in a virtual world beyond music – canned and live. Apart from relaxing at the fairly common dance venues, some residents tap into the creativity afforded by virtual environments, creating soundscapes that combine everyday noises with natural sounds. Others create venues and amphitheaters to showcase original ambient compositions; still others create sound installations to complement virtual landscapes. Some soundscapes are responsive to environmental scripts, triggered by touch and location, as one enters a portal or physically clicks on an element such as a leaf or a painting. Yet, sound – in all its forms – is a significant element of the virtual soundscape.

One can recreate real life sound environments within virtual worlds, and this practice has significantly attracted attention over the past decade among some sound artists. Enter the world of Second Life, and the sound of birds, ocean waves, trains and so forth have become a regular part of virtual settings, as created by the various residents, laypeople and artists alike. Within Second Life, at virtual locations like New Babbage, you hear various industrial sounds coming together to create a Steampunk or science fiction scenario. Among the plethora of virtual worlds online and on the horizon, my focus has been on Second Life, a multiplayer role-playing game in which residents create the world. As a listener within an interactive environment, real life and Second Life converge to create the psychological context. As McLuhan (1951; 1964; 1967) espoused, technology extends our human capability. Increasingly our society is becoming connected online and virtually through social networks.

Virtual worlds thrive on interaction, memory and emotion, and in the instance of Second Life, a sense of physicality is experienced through online engagement. Nie (2001) tells us that the feeling of proximity can be interpreted as physical fulfillment in real life. In Second Life, proximity is expressed through animations and scripting, but it is the interaction of and among participants within an environment that shapes their responses; the memories and experiences that they bring to the encounter lend to their interpretation. Moreover, Aaron Ben-Ze'ev (2004, p. 1) concurs that while cyber experiences are not tangible—because their dimensions such as

distance and location are not physically measured—there is an experiential psychological imprint that infuses the virtual to the real within the mind of those engaged as listeners and viewers. He states, “Such a novel psychological reality is supported by sophisticated technology, but it is not defined by this technology;” Ben-Ze'ev purports, rather, “it is defined by the various psychological interactions occurring in it” (pp. 1–2).

In Second Life, one can teleport to the past and the future in a moment, and explore cities and regions across the world. The past and the future can be expressed simultaneously, and that of course has its own consequences, as in the ethics of rewriting history. Yet, history is usually and to some degree a matter of interpretation. There are a host of ethical questions here, with regards to such ends. I am merely arguing that virtual worlds do have a place in the understanding of acoustic ecology. Early 20th Century notions of noise and futuristic sound art (Russolo, 1967; 2005)

contribute to the crafting of soundscapes – music and environmental sounds – that accompany Second Life Steampunk communities, along with electronic and eclectic compositions and period music. The factory smoke stacks puffing on cue, rhythmically, give life to this fictionalized era, a reinvention of the industrial age and homage to the technological visions of Charles Babbage and

Nikola Tesla. Notably, there

is also a fascination with the importation of reality into Second Life. The ramifications of sampling the real sonic environment might appear worrisome to those not familiar with Second Life, and some might be aghast that certain soundscapes become part of an acoustic ecology remix.

Second Life and like forms can offer a perspective on how sound has impacted the past and offer both listener and composer the chance to learn from ecological abuses; what would our world sound like if certain care had been taken to preserve sonic environments now extinct? Perhaps such questions help one understand the consequences of our societal and ecological actions.

Importing Reality and Dreams into Virtual Worlds

A few years ago, some Walden enthusiasts created Henry David Thoreau's retreat on an impressive virtual lot in Second Life. By the time I discovered it, the land was mostly vacant. Things change quickly in Second Life, for it is a place of experimentation. I created my own little Walden in a skybox, importing natural sounds into the region from my field recordings captured during my visit to Concord, Massachusetts. The train sounds were scripted to play upon touch and proximity. To understand why people would choose a virtual visit to Walden rather than a real one might be an economic consideration in some instances; in other instances, it might be attributed to physical limitations. The Linden Lab and other organizations like Virtual Ability have made strides to accommodate disabled communities within Second Life, providing land and resources (Deeley, 2008). CNN Correspondent Steve Mollman (2007) reported on the opportunities for some disabled residents. From walking to flying to creating art and music, to being employed, virtual worlds offer some residents hope to experience life in innovative ways. A visual and



Athens, as conceived in Second Life

sonic replica of real life locations might allow some to experience certain sights and sounds when travel is not possible.

Why some intentionally choose to virtually experience life, either as a complement or to supplement one's real life experiences, is at the least a valid question for anyone, even acoustic ecologists, to ask. Numerous universities teach within Second Life, with some having exhibited soundscapes as installation pieces on their virtual campuses. Nonetheless, the members of Second Life are the creators. Individuals often form memberships within community groups of similar interest through networking at various in-world locations, such as live music venues, cafés, offices, beaches, and numerous artistic exhibition and installation sites. Initially, sound had minimal presence within Second Life, and then a variety of businesses began to offer "canned" sound effects, such as birds, wind and water to complement residential and office landscapes. At one point, it seemed virtual worlds might solely become a depository for natural sound recordings marketed to enhance visually pristine spaces online.

Most sounds in virtual worlds can be purchased in similar ways one might obtain environmental sound effects. Some artists have created authentic soundscapes to accompany their virtual lands. In Second Life, you cannot easily separate yourself from the visuals to solely appreciate the sound aesthetics in a virtual environment. I can note many times, sitting at the edge of a boat dock at virtual sunset, immersed in the beautiful visuals and surrounding harbor sounds. Such examples occur frequently in Second Life. Memories play a big part in Second Life: the idea of recreating places of beauty that one has experienced in real life.

In another instance, there are rural landscapes in Second Life, rich with sounds of farm animals and countryside ambience. When we encounter such environments within a virtual world, do we think about the natural counterparts that we have heard throughout our life, and those we have often taken for granted? Most soundscapes in Second Life lack the acoustic detail that surrounds us daily. But those captured and imported sounds, if done well, might contribute to our appreciation of natural sound in real life. Alas, while acoustic ecologists might concede that there are some interesting aspects to soundscape compositions in virtual worlds, many would be disinclined to redefine their practice to accommodate it. Virtual environments as immersive spaces are still removed from the original source and context. These concepts, however, offer some possibilities for experimental research in the way listeners perceive their worlds. Virtual worlds simulate real life, and the degree to which people experience these as valid to their identity is still under debate.

Sound in Virtual Geography

Midsomer Isle is a long-time virtual area that draws listeners into its mystical landscapes, mingling sonic elements into an ambient composition. Tourists also can create music on the island. The possibilities for sound in virtual environments, at times, seem limited to one's imagination. For many, virtual worlds are places for exploration and experimentation. Certain sounds in our real environments have become increasingly lost among a sea of noise and are barely audible. Second Life can call attention to sound. Installations are built with teams of visual and sound designers, and exhibitions run from a few weeks to months. *Dynaflour* was the creation of Douglas Story and Desdemona Enfield; it was a virtual installation of colors and movement enriched with sound by Dizzy Banjo. Banjo is the Second Life avatar of Robert Thomas, an interactive music composer. His credentials in Second Life include creating the music for the first soundtrack to a virtual location and thereafter he became instrumental to the sound design of a number of projects. The *Dynaflour* exhibition received 11,000 visits in 2008, and many more during its second showing two years later.

Tony Gerber, known by his avatar Cypress Rosewood, is a professional ambient space musician who performs regularly in Second Life to large audiences. His primary instrument is the Native American flute. Being among the first sound composers to cross over into virtual platforms, Gerber has provided sound design for major in-world installations, as well as performed more than 800 concerts for in-world audiences since 2006. He describes himself as a pioneer of live space and ambient music in virtual worlds. Rosewood and Bango have begun to pave the way for others, some of whom might lean more heavily toward the infusion of acoustic ecology practices in their virtual compositions. All that remains to be seen.

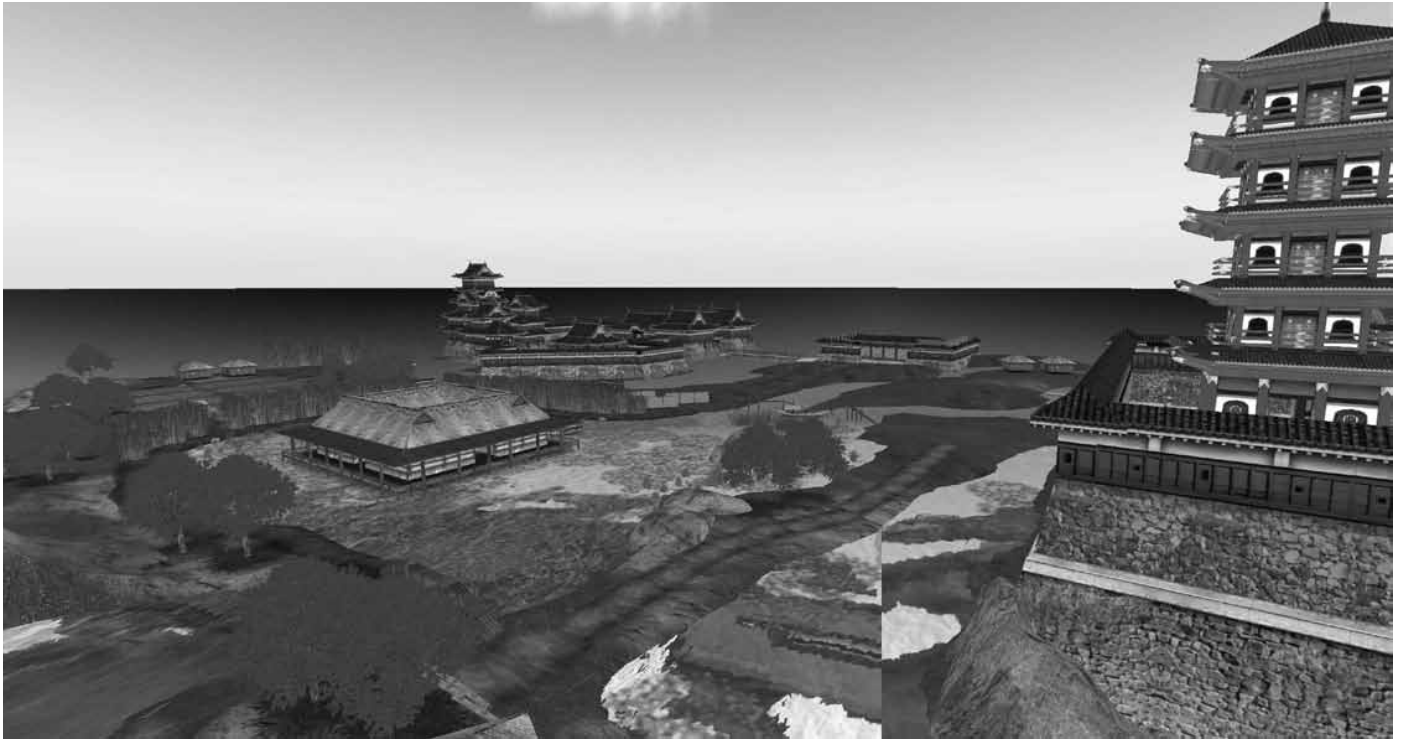
The New Media Consortium based in Austin, Texas has provided space for Second Life artists to exhibit their sound and visual installations on one of its sims, *Ars Simulacra*. A variety of work can be experienced there at any one time, virtually. In such cases, sounds can be imported, exhibited and preserved for their historical and cultural significance. Soundscapes designed to reflect real and imagined spaces might help us to understand how we as listeners and composers are impacted by sound in our various communities and environments. Virtual worlds can serve as sonic microcosms of acoustic surroundings in real world settings.

The Garden of Immersive Sounds in Second Life was among a handful of projects that demonstrated how virtual environments could create "sonic" reference points when, in this instance, sound was experienced as vibrating from within omnidirectional spheres. In another instance, *The Gallery of Musical Sculptures* has featured ambient, electronic and experimental performances from around the world, as well as sound sculptures, which are intentional sound objects created as artistic works, and might take the form of a statue or artistic sculpture (as might be viewed in real life) but in this virtual instance they contain scripted sound.

Madhu's Café invites people to listen to music from India, Africa, Latin America and Arab nations in the garden area, and the surrounding ambience is offered for meditation and relaxation. Or one might take a shopping trip to Bird Island to acquire an assortment of tweets and chirps to enhance his or her residential soundscape on personal virtual property. Second Life residents create bountiful landscapes rich with color and texture, ranging from ancient ruins, forests and ocean fronts. One can listen to ocean sounds and seagulls. The chirping of birds is fairly common to most natural soundscapes. Through the history of Second Life, regions have been constructed to emulate the appearance and cultural feel of certain nations, in part through the application of sound.

Based on my own observation, the soundscape in the sim Durrat AL-Ghawwa had been designed, at one point, to portray the spiritual aspects of northern Africa, and included a "call to prayer" embedded within. In other instances, one can hear the village bell in virtual towns, and such Schaferian soundmarks enhance the cultural and historical aesthetics of virtual locations, as they would in real life settings. The Sound Factory at Sanctuary Falls is visually and aurally an aesthetic environment with New England charm. Crossing a bridge you will hear water lapping beneath the wooden frame. Water dripping from an underground cavern adds to the feel and mystery of the village. As one stands on deck of a nearby boat, its gentle rocking against the water below periodically creates rustic-sounding creaks. Cicadas, water, birds and other natural-sounding elements lavish tourist ears with a fairly authentic soundscape – light, relaxed and it complements the region.

Hildegard Westerkamp (2003, online reference) cautions, "Our love-hate relationship with technology challenges healthy soundscapes....People in today's urban societies are surrounded by sound walls. Mechanical sounds cut us off from our communities. They also make it difficult to reach down to voices we all have -- singing and speaking voices." She continues, "Sound is about Place. Locality.



ABOVE: China, as conceived in Second Life.
 BELOW: Paris 1910, as conceived in Second Life

It surrounds us like water. We are inside sound waves, they are touching us all the time. We all depend on technology but mechanical sounds disconnect us aurally from our communities, wipe out natural sounds.”

How might we understand the immersive nature of virtual worlds now and to come, as contributing to or detracting from acoustic ecology? I propose further discussion on how sound might be virtually represented and contribute to our interpretation of reality. It is not a replacement for our natural environments. I say this with the understanding that our world view of nature is impacted, to varying degrees along this path, and to an extent that cannot yet be measured. However, is not such contemplation a worthy mental exercise? Virtual worlds offer us a chance toward speculation of the near and distant future, if we as acoustic ecologists, sound artists and audio theorists choose to consider such online spaces as worthy of our attention. There are those soundscapes designed to sound nearly authentic to time and place, even if that space is one that emerges from the pages of literary classics like those of H.P. Lovecraft or H.G. Wells. Many creators draw upon literature and movies for inspiration. Medieval villages and Victorian cities, as creative outlets, are designed to allow for role play in settings reflective of literature and historical interpretations. Sound underscores the intent of the

setting, adding variations of acoustic accuracy depending on the resourcefulness, imagination and innovativeness of the maker.

Sound artists Janet Cardiff and Hildegard Westerkamp among others have reconstructed history and culture through sound walks and installations, with varying goals in mind depending on the nature of their projects. With Cardiff, fiction and reality might converge within her interactive and interpretative pieces. Her work is set in real spaces, but there is a sense of displacement at times, although calling attention to the authenticity of her sounds. How we listen back to sound, whether at a gallery, museum or at the natural point of origin changes our perceptual understanding. A gallery space in real life has limitations as does a virtual installation. The locale, in and of itself, is rarely a fixed construct of place and time; the present is birthed from the nostalgic (Appiah 1992; 1995). One can only ever record a moment in time and place. Memories contribute to individual interpretations of sonic experiences. Imagined space shifts time and place, especially within virtual worlds, and our memories converge to accept both realities.

Converging Worlds

To borrow from cultural geographer David Harvey (2002), culture is rooted and transformed by space, physically and socially as people segue into various situations and environments. Breinig & Löscher (2002; 2006) discuss a similar idea called transdifference. Johnson (2006) extended their discussion by applying transdifference to sound: the idea that listeners interpret sounds from within their cultural framework and their interactions from within multiple spaces at a moment or a series of moments over a lifetime. Sound culture exists within the paradoxical geographies of the virtual and the real. New sound cultures within virtual environments are exported into our sense of reality. Sonic geography is a space of negotiation over time between the physical environment and the perceiver of the soundscape, depicting history and cultural artifacts (such as music) against a backdrop of modernity (Thompson, 2002; Sterne, 2003). Consequently would not what we hear virtually be imprinted within us, similarly, as one might process other life experiences?

One might easily argue that to import sound into virtual environments changes its authenticity, separating it from its original source.

True, the act of recording separates sound from its source and context as noted by R. Murray Schafer (1977; 1992; 2004) and Francisco Lopez (2005), physically and culturally. Regardless, virtual worlds offer potential for experimentation by sound artists and exploration by listeners. It is not necessarily the right or only path, but it is one of many sonic voyages worthy of discussion. Perhaps it might be a way to bridge the scientific and artistic communities through innovative partnerships, as well as call attention to those cultural practices that threaten the extinction of natural sound. It might also serve as a means toward advocacy of sound (culture) preservation through importation and archiving of natural sound. It might help some to discover the richness and diversity of nature virtually, only to stimulate desire for experiencing it first hand at the source.

From sound preservation of key geographic locations around the world to the virtual performance of sound in digital amphitheaters and concert halls, to the Foley work in the reconstruction of a Victorian landscape, *Second Life* offers a space for contemplation. It creates sound culture that pays ecological and artistic tribute to our past and present, and offers a glimpse, perhaps, of our sonic future. *Second Life* offers us an opportunity to rehear the humanities and arts through the science and technology of virtual worlds. *Victorian Soundscapes* (Picker, 2003) and so many other books, ideas and visions could be sonically expressed through virtual technologies. Acoustic ecologists might also find a welcoming space for their archiving of at-risk sounds and a means to promote and demonstrate the significance of global sonic awareness through the assistance of technically savvy communities of virtual artists.

References

- Appiah, Kwame Anthony. (1992). *In My Father's House. Africa in the Philosophy of Culture*, New York: Oxford University Press.
- Appiah, Kwame Anthony. (1995). The Postcolonial and the Postmodern, in Bill Ashcroft, Gareth Griffiths & Helen Tiffin, eds., *The Post-Colonial Studies Reader*. New York: Routledge, 119–124.
- Ben-Ze'ev, Aaron. (2004). *Love online: Emotions on the internet*. Cambridge: Cambridge University Press.
- Breinig, Helmbrecht & Lösch, Klaus. (2002). Introduction, Difference and Transdifference, in H.B., Jürgen Gebhardt & K.L., eds., *Multiculturalism in Contemporary Societies. Perspectives on Difference and Transdifference*. Erlangen: Universitätsbund, 11–36.
- Breinig, Helmbrecht & Klaus Lösch (2006). Transdifference, *Journal for the Study of British Cultures*, 13 (2), 173–185.
- Castronova, Edward. (2007). *Exodus to the Virtual World: How Online Fun is Changing Reality*. New York: Palgrave Macmillan.
- Deeley, L. (2008, March 24). Is this a real life, is this just fantasy? *The Times*. Accessed February 24, 2009, from http://women.timesonline.co.uk/tol/life_and_style/women/body_and_soul/article1557980.ece
- Harvey, David (2002). *Spaces of Capital: Towards a Critical Geography*. New York: Routledge.
- Johnson, Phylis. (2006). Hearing Transdifference: Sound, Strife and Sonic Processes of Cultural Negotiation. *Journal for the Study of British Cultures* 13 (2), 173–185.
- Lopez, Francisco (2005). Profound Listening and Environmental Sound Matter, in Christopher Cox & Daniel Warner, eds., *Audio Culture. Readings in Modern Music*, New York: Continuum, 82–87.
- McLuhan, Marshall (1951; 1967). *The Mechanical Bride: Folklore of Industrial Man*. Reprint 1951. New York: Beacon Paperback.
- McLuhan, Marshall (1964). *Understanding Media: The Extensions of Man*, Cambridge, MA: MIT Press.
- Mollman, S. (2007, July 10). Online, a virtual business option for disabled. CNN.com. Accessed July 12, 2009, from <http://edition.cnn.com/2007/BUSINESS/07/10/virtual.disabled/index.html>
- Nie, N. J. (2001). Sociability, interpersonal relations, and the internet. *American Behavioural Scientist*, 45 (3), 420–435.
- Picker, John P. (2003). *Victorian Soundscapes*. Oxford: University of Oxford Press.
- Schaeffer, Pierre. (2005). Acoustmatics, in Christopher Cox & Daniel Warner, eds., *Audio Culture. Readings in Modern Music*, New York: Continuum, 82–87.
- Russolo, Luigi. (1967). *Art of Noises* (1913), transl. Robert Filliou, New York: Something Else Press, http://www.ubu.com/historical/gb/russolo_noise.pdf (25 February 2006).
- Russolo, Luigi. (2005). The Art of Noises: Futurist Manifesto, in Christopher Cox & Daniel Warner, eds., *Audio Culture. Readings in Modern Music*, New York: Continuum, 10–14.
- Schafer, R. Murray. (2004). The Music of the Environment, in Christopher Cox & Daniel Warner, eds., *Audio Culture. Readings in Modern Music*, New York: Continuum, 29–39
- Schafer, R. Murray. (1992). Music, Non-Music and the Soundscape, in John Paynter et al., eds., *Companion to Contemporary Musical Thought*, London: Routledge, 34–45.
- Schafer, R. Murray. (1977). *The Tuning of the World*. Toronto: McClelland & Stewart. Reprinted 1994, Destiny Books.
- Sterne, Jonathan. (2003). *The audible past: Cultural origins of sound reproduction*. Durham: Duke University Press.
- Thompson, Emily. (2002). *The soundscape of modernity. Architectural acoustics and the culture of listening in America, 1900–1933*. Cambridge, MA: MIT Press.
- Westerkamp, Hildegard. (2003). Interview, Living Sounds. *Paula Gordon Show*, Accessed November 1, 2001, available at <http://www.paulagordon.com/shows/westerkamp>

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