The ways in which people today listen to sound, be it music, the noise of busy city streets, or another person’s voice on one’s smartphone, have been fundamentally altered by the wholesale switch from analog to digital audio technologies. More than this, the move from analog to digital sound has transformed what was once a collective, shared experience—people together hearing the unpredictable noises of the spaces they inhabit—to essentially a privatized one made possible through the introduction of earbuds and headphones, as well as digital audio productions like podcasts that allow the consumer to listen during moments of convenience. This is the central premise of musician and writer Damon Krukowski’s recent book *Ways of Hearing*, the textual complement to his award-winning podcast series of the same name. For academics and scholars who conduct research on or with digital audio forms like the podcast, Krukowski offers a helpful, generative narrative interpreting the unforeseen consequences that resulted from the arrival of digitized forms of audio and music in the late twentieth century. In his book, Krukowski build his thesis by examining, as examples, the mechanization of people’s understanding of “time” (through devices like the metronome), the disappearance of “nonverbal” sounds like background noise as digital devices compress those sounds in order to efficiently transmit data, and the ways in which online platforms like Spotify adapt to listeners’ interests through algorithms, thereby eliminating “analog” experiences (like walking into a local record store and discovering music they did not even know existed) that used to structure people’s relation to music. The result is a narrative of declension, for Krukowski laments the loss of those collective forms of hearing that once shaped people’s everyday lives, and criticizes the impact of digitized technologies on our perception of sound, music, and noise.

Krukowski does not present an optimistic picture of the state of “hearing” in today’s world of immersive digital media. His overall argument is a McLuhan-esque warning that the emergence of digital technologies has led to a “shift from analog to digital communications,” causing society to move from “a world enriched by noise” to “a world that strives toward signal only” (p. 133), meaning just those condensed sounds that people are “trying to pay attention to” (p. 117). Krukowski was the drummer in the noted indie rock group Galaxie 500 in the late 1980s and early 1990s, and his experience as a musician, in a band known for its embracing of “lo-fi” audio production methods, undoubtedly shapes his critical perspective on the rise of digital sound. As a musician, Krukowski writes, he experienced analog time as being “flexible” and elastic (p. 10), which meant that music was collectively experienced by those present in the moment of its creation (like a concert), and time could change in that real context—for example through a band slowing or quickening the tempo while playing a song during a concert. In his first chapter, he asserts that this idea of flexible “real time” was suppressed in the transition to digital recording machines in the 1980s and that machines like the metronome caused the rise of a “different sense of time” (p. 10) based not on the “real time” of human experience, but in terms of standardized rhythms and synchronization. In short, Krukowski warns that because of our move to a digitized world, it has become “harder to share a moment in time together” through our experience of sound (p. 20).

This approach results in a book that reads like a hist-
tory of technological determinism, informed by the author’s perspective on digital sound that suggests a wariness for the unintended effects of advanced technology on people’s listening habits and a nostalgia for the seemingly more democratic ways people experienced sound before the age of digital audio. Each chapter arguably adds an additional layer to Krukowski’s technological determinist narrative. In chapter 2, Krukowski considers changes in urban landscape and the seeming privatization of listening to music and sounds through the advent of headphones, personal audio devices, and digital podcasts. Although he does not speak to historical processes like neoliberalism—the privatization and free-marketization of the dominant social and political order—Krukowski makes similar politicized points: namely, that public spaces have become increasingly privatized through processes like gentrification and the creation of carefully designed acoustical buildings like Radio City Music Hall. The impact of these changes—the arrival of concert halls and headphones, essentially things to contain and administer sound—is that they reduce the opportunity to enjoy the “collective experience” associated with sound in public spaces. These changes, Krukowski admits, are why he became interested “in thinking back to earlier ways that we heard music” (p. 46). The remaining chapters each focus on a different aspect of the ways people listen to sound, exploring, for example, changes in the music industry, changes in the way people communicate (and even flirted) via telephone devices that used to include a richer array of background sounds, and changes in the consumption practices of music listeners. They all speak to Krukowski’s overall message that digital technology is shaping and impacting (in his mind to the detriment of shared human experiences) how we understand sound and how we listen to the forms of sound around us. Just as the medium of digital technology is influencing people’s ways of hearing, this technological determinist narrative frames Krukowski’s ultimate message: that people have lost something that was once analogous, and thus collectively experienced and shared by humans, in the embracing of all things digitized.

As a fledgling academic and researcher who is interested in the uses of sound, digital audio, and podcasting as part of his scholarly practice, I found Krukowski discussion of analog sound and analog production methods arguably the book’s most generative contribution. Krukowski is at his best when he relies on his personal experience as a celebrated “indie” musician and elucidates the affective richness of noise, nonverbal sounds, and lo-fi aesthetics. Scholars are already exploring the idea of “sound as affect” and the embodied dimensions of aural experiences.[1] Ways of Hearing, however, explains that not all production methods are equal in terms of their ability to connect affect, emotion, and feeling with sound. A key part of Krukowski’s support and celebration of analog sound and production techniques is that he believes analog sound is richer in its fullness of sound, noise, and meaning. In the sixth chapter, on “signal and noise,” Krukowski discusses the analog production techniques of acclaimed musician Brian Wilson and how his affinity for rich sound textures meant that some of the songs on the Beach Boys’ famous album Pet Sounds (1966) would include background “noise” like conversations alongside the “signal” of the actual song and music (p. 127). The noise was an important component in creating a richly textured soundscape on the album, and this richness of noise and sound was lost years later when Capitol Records digitally remixed the album. In the third chapter, on “love,” Krukowski explains how old analog telephones transmitted “the full range of sound picked up by their mics” (p. 62). The ambient and background sound that surrounded people’s voices meant that people “could feel one another’s presence” (p. 63) in a way that is no longer possible with smartphone technology that compresses our voices into “smaller data packets that are easier to share over digital networks” (p. 62). Academics who are engaging with podcasts and audio production should take note of Krukowski’s point that noise and analog techniques actually enhance the affective richness of audio. It suggests that analog audio can be an “arts-based” mode of expression that can generate important affective and experiential dimensions in ways that are lost in many digital (and indeed textual) forms of communication.

Because the book crucially focuses on the impact of digitization and its concomitant technological changes on people’s everyday aural experiences, the book misses multiple chances to consider the role of human agency in the history of technology’s impact on people’s lives. This is not to say that Krukowski does not include fascinating accounts of various people and their responses to the digital world, and there are multiple moments when Krukowski comes close to complicating the overall narrative of technological determinism by highlighting the seeming dialectic between analog “noise” and the move to compressed “signal” in the form of digitized music and communications. This is perhaps most apparent in the fifth chapter, on “power,” in which Krukowski brings in multiple perspectives—the late internet activist Aaron Swartz, punk rock band Downtown Boys, and DJ Jace...
Clayton—to make the point that the “flow of digital music” and “music tools” worldwide creates opportunities for social change from the “periphery,” people outside the power structures of the music and digital technology industries. By the end of the chapter, however, the reader is left with the interesting, yet seemingly unsatisfying assertion that “free communication online” is now affecting not only how music is disseminated and exchanged, but also how musicians earn a living (p. 87). Even in a chapter filled with the perspectives of people who live(d) in the digital era and responded to those conditions, we are returned to where we first started. At a time when social scientists are increasingly rethinking our understandings of human agency and the ways that people impact and are impacted by technology, I was left wondering about the possibility of continuities in this history of technological change, and whether people’s aural practices are really as different as it seems at the surface.[2] After all, aren’t humans shaped by those continuities that persist in the history of human experience along with the transformative changes that impact society? Are we not also locked in an enduring dialectic of change and continuation? This is not necessarily a critique of the book, but is an important subject that scholars of digital media should consider in their own critiques of digitization and its overall impact on sound.

Regardless, *Ways of Hearing* is a valuable resource for better understanding the rapid changes occurring in the world of digital media and contemplating what is being “lost” in the push to transform all previously “analog” sonic experience through the advent of the digital audio form. For academics who study digital sound, arguably the book’s most powerful contribution is the recognition that people’s listening and hearing practices are locked in a dialectical relationship with technological innovations and changes in the power structures of digital media and communications industries. Krukowski’s stated intention of contemplating the loss of analog sound leads his overall narrative to be declensionist and technologically determinist, but this does not diminish the importance of his key contention: that our “ways of hearing” are continuously being shaped by those technologies that purport to improve and personalize our listening experience, often at the expense of the richer, shared sonic experiences that came with people collectively hearing analog sound. For those grappling with the impact of digital capitalism on people’s relation to sound and music, *Ways of Hearing* will prove a helpful guide.

**Notes**


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