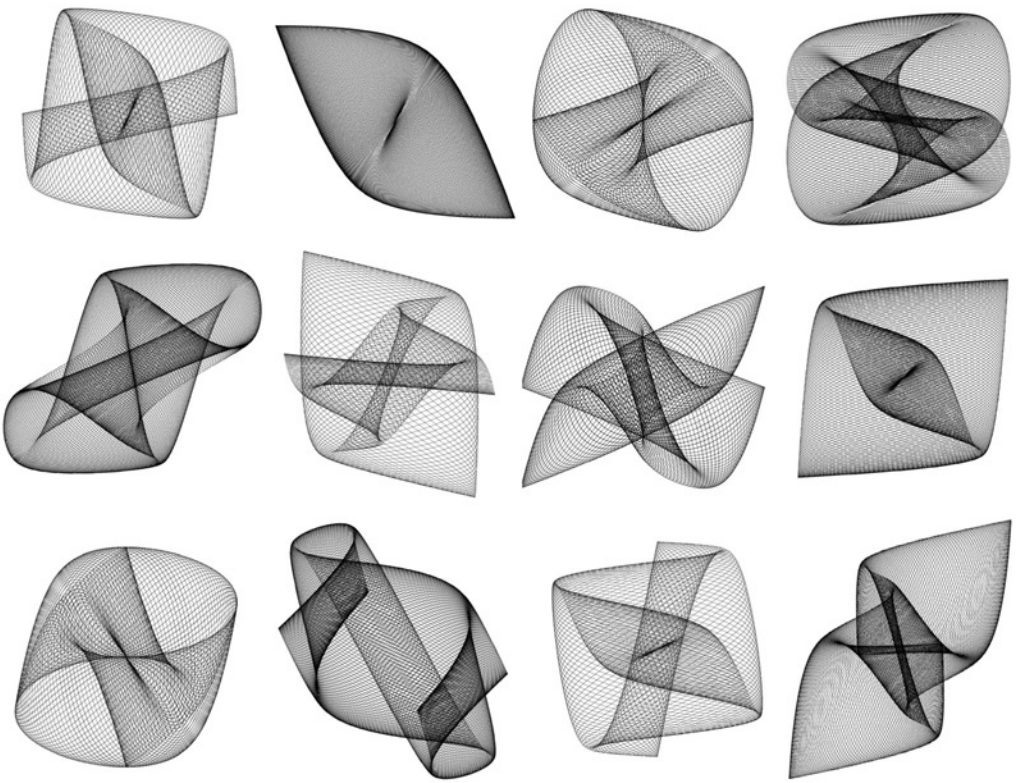
keywords in sound

DAVID NOVAK + MATT SAKAKEENY [EDITORS]



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contents

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noise

Sound studies have found in noise a subject of deep fascination that cuts across disciplinary boundaries of history, anthropology, music, literature, media studies, philosophy, urban studies, and studies of science and technology. Noise is a crucial element of communicational and cultural networks, a hyperproductive quality of musical aesthetics, an excessive term of affective perception, and a key metaphor for the incommensurable paradoxes of modernity. "Wherever we are," John Cage famously claimed, "what we hear is mostly noise. When we ignore it, it disturbs us. When we listen to it, we find it fascinating" (1961: 3). We hear noise everywhere. But what do we listen to when we listen to noise? What kinds of noises does "noise" make?

The Latin root of the word is *nausea*, from the Greek root *naus* for ship. The reference to seasickness captures the basic disorientation of the term: noise is a context of sensory experience, but also a moving subject of circulation, of sound and listening, that emerges in the process of navigating the world and its differences. Evaluations of noisiness vary widely between cultures and historical contexts: for example, many languages do not distinguish noise as a general category of sound.[1] Words like the Indonesian *ramé* instead describe the clamorous noisiness of social life in festivals and marketplaces and imply a healthy and lively atmosphere. Noise is associated with public sociality and carnivalesque performances (e.g., *charivari*) that playfully disturb the norms of everyday life. But as a keynote sound of industrial development and mechanization, noise is also recognized for its anti-social and physiologically damaging effects. It is inherent in technological mediations of sound, but it is also considered accidental and meaningless.

Noise is a material aspect of sound. It is discussed as a generalized property of sound (as "noisiness"); as a distinct sonic object within music, speech, or environmental sounds (as "a noise"); or as a totalizing qualifier for emergent styles (e.g., "that hip-hop stuff is all noise"). But its specific

qualities are hard to define. The closest thing to a quantifiable form of noise is the abstraction of "white noise," in which all sound frequencies are present at the same time, at the same volume, across the vibrational spectrum (Kosko 2006). But in practice, noise is always "colored," filtered, limited, and changed by contexts of production and reception. Simple loudness is another factor: at the right decibel level, anything, regardless of its original source, can become noise. Noise, then, is not really a kind of sound but a metadiscourse of sound and its social interpretation. The presence of noise indexes a larger field of differences, even as its own particularities remain undefined. "Noises," as Douglas Kahn puts it, "are too significant to be noises. We know they are noises in the first place because they exist where they shouldn't or they don't make sense where they should" (Kahn 1999: 21).

Noise is an essentially relational concept. It can only take on meaning by signifying something else, but it must remain incommensurably different from that thing that we do know and understand. Even in the fundamentally relativistic context of musical aesthetics, noise is defined by its mutual exclusion from the category of music. Yet noise is inherent in all musical sounds and their mediated reproductions; it has been used as musical material and can even be considered a musical genre in itself. Noise is a productive term of many other dialectical binaries of aurality, each of which outlines a different field of social knowledge. But as a discrete subject in itself, noise resists interpretation. It is the static on the radio; the mass of unbeautiful sounds that surrounds the island of musical aesthetics; the clatter of the modern world that indexes the lost sounds of nature; the chaos that resists social order; the unintegrated entities that exist beyond culture.

I will outline three discursive contexts of noise—aesthetic, technological, and circulatory—each of which has been productive for recent scholarship. Although they overlap in important ways, each follows a divergent trajectory of noise as a term of cultural production and leads to different conclusions about its status as a category of sound.

Aesthetics of Noise

Noise is typically separated from music on the grounds of aesthetic value. Music is constituted by beautiful, desirable sounds, and noise is composed of sounds that are unintentional and unwanted. But if noise

is nonmusical, music is noisy, and noise-sounds have always been part of music. In Western scientific thought, a formal categorical division between noises and musical sounds was established in the late nineteenth-century field of acoustics, through the classificatory schema of pioneering scholar Hermann Helmholtz (1885), which separated sound vibrations into "periodic" and "nonperiodic" waveforms. Many of Helmholtz's examples were environmental noises, such as wind and water, which could be distinguished from musical sounds by context. But nonperiodic noise is inherent in most instrumental sounds, such as the puff of air that precedes a flute tone, or the bowing sound on a violin. African *mbiras* use buzzers to add a layer of noise, and electric guitars are often modified with distortion pedals to create a noisier timbre (Berliner 1978; Waksman 2004). Helmholtz's analysis of noise reflected the epistemological sensibilities of Western music theory, which privileged tonal consonance and harmonic development over timbre, rhythm, and texture. Noisemaking percussion instruments such as cymbals and drums typically have a low status in this context, and their sounds are considered less meaningful in musical structures. The aesthetics of noise, then, correspond to different cultural valuations of sound, and reflect historical shifts in discourses of musical innovation.

Noise was explicitly developed as a sound aesthetic in modern music, even as its radical incommensurability with existing musical structures was reiterated throughout the twentieth century (Ross 2007). Italian futurist Luigi Russolo (1883–1947) is often credited as the first to bring noise into music, creating a set of noise instruments (*intonarumori*) to orchestrate the speed and power of industry, warfare, and the city, which he famously rhapsodized in his 1913 manifesto *The Art of Noises*. But Russolo's exemplary influence did not "emancipate" noise into musical history. Instead, the category of noise has continued to symbolize excessive, emergent, and unexplored materialities of sound, even as noise-sounds have become increasingly crucial in musical composition. Noise has been invoked as a modern aesthetic threshold from Henry Cowell to Edgard Varèse to Cage to *musique concrete* and "sound art" (Kahn 1999; Cox and Warner 2004; LaBelle 2006; Van Nort 2006; Licht 2007; Demers 2010; Rodgers 2010; Voeglin 2010). Noise-sounds have become definitive for the timbres of contemporary popular music through the widespread use of effects, synthesizers, samplers, and studio recording techniques (Gracyk 1996; Zak 2001; Moorefield 2005). But the aesthetics of noise also test the

centers of musical coherence against the margins of circulation. Musical styles are scaled according to their noisiness, from the least noisy (i.e., smooth jazz, new age) to the noisiest (and therefore least acceptable) form (i.e., heavy metal, techno).

A specific genre called has "Noise" developed since the 1980s among a transnational group of practitioners and fans who used the term to describe an extreme strain of electronic music (Hegarty 2007; Bailey 2009; Cain 2009; Atton 2011; Goddard et al. 2013) whose circulation between Japan and North America gave rise to the subcategory "Japanoise" (Novak 2013).[2] Since Noise intentionally lacks most features of musical sound and structure (tone, rhythm, structural development, etc.), the noisiness of Noise was difficult to qualify. But recordings are nonetheless evaluated as "good" or "bad" examples of Noise, described as deliberate products of distant music scenes, and aestheticized through particular aspects of their sound. Listeners identify their own affective responses—that a noise, for example, *felt* "harsh"—as aesthetic terms that help construct Noise as a global network of underground producers and fans. Through their attention to the special differences of noise-sounds, Noise was named and circulated as a capitalized musical genre (albeit a contested and endlessly emergent one), which was further endorsed by subgenres based on sound aesthetics (e.g., "Harsh Noise") and assignations of cultural origin (e.g., "Japanoise").

Technological Environments of Noise

In technological media, noise is a subject of excess and disruption. Information theory established a semiotic difference between meaningful signal and accidental noise (Shannon and Weaver 1949). Noise was the byproduct of technological reproduction that interfered with reception of a message (i.e., static in a radio transmission, distortion over a loudspeaker, or hiss on magnetic tape). The "signal-to-noise" ratio identified the balance of interpretable to uninterpretable sound, in which noise should be reduced as much as possible to maximize the efficiency of communication. But even in its pure distinction from signal, the presence of noise in sound communication is far from meaningless. Attention to noise helped listeners to perceive authentic relationships with technologically mediated sound and resituate music and speech in new "discourse networks" (Altman 1992; Kittler 1992; Sterne 2003; Clarke 2010; Mills 2011).

Noise also provides a kind of metadata that informs listeners about the context of reproduction. The level and quality of noise reveals whether the source of a phone call or radio transmission is local or long-distance, or how and when a recording was made: a sonic "glitch" can expose the contingencies of inscription and playback, even in the purportedly "lossless" transparency of digital media (Evens 2005; Chun 2006; Kelley 2009; Krapp 2011).[3] Noise also describes extraneous distortions and fluctuations in the electronic transmission, inscription, or storage of images, films, television, and video (e.g., "snow"); as in sound, visual noise has been harnessed for aesthetic productions. As such, noise becomes a signifying property of informal or underground media distribution, from Nigerian bootleg video markets to DIY networks of U.S. "independent" music (Larkin 2008; Novak 2011).

Noise is strongly associated with the built environments of industrial cities. While the term can refer to sounds of nature (e.g., thunder and lightning, animal sounds; Rath 2003), noise is usually understood as a technologically produced field of sound, which is superimposed on a natural or social environment. In ecological terms, noise is "pollution" that degrades the sonic balance of nature. But before its harmful subliminal effects can be corrected, noise must first be located and brought back into human consciousness from its ubiquitous but subliminal position in the modern soundscape. Although R. Murray Schafer used decibel meters to measure and map noise in urban soundscapes through pure volume, he further distinguished the effects of noise in the artificial mechanical continuities of background "lo-fi" noises (such as the "flatline" noise of highway traffic or the hum of a refrigerator) that blocked the discrete and transient "hi-fi" signals of nature and community.[4] For Schafer, it is not attention that brings noise into being but an entrained "deafness" to its debilitating presence: "noises are the sounds we have learned to ignore" (1994 [1977]).[5]

As noise was brought further into social consciousness, its recognition contributed to the inexorable fragmentation and privatization of urban space, through zoning, sonic surveillance, and acoustic shielding from public noise (Smilor 1977; Thompson 2002). But although projects of noise abatement helped to establish scientific measurements of noise and legal standards of loudness, regulations typically failed or were found unenforceable. Instead, noise was increasingly characterized as an inevitable byproduct of technological progress. The clamor of modern life cultivated individuated desires for silence and quietude, which reaffirmed

the unintelligibility of public life (Foy 2010; Keiser 2010; Prochnik 2010; Sim 2007).

But even as noise has been named as the cause of social and physiological ills from hearing loss to schizophrenia, experiences of technological noise have become integral to contemporary sonic knowledge. Machine operators, for example, must carefully listen to and interpret the noises of machines to assure proper function (Bijsterveld 2008).[6] Far from being regulated itself, mechanical noise is used to regulate and control daily life. Bells, buzzers, and alarms force public senses to attention, while weapons technologies such as the Long Range Acoustic Device (LRAD) can generate a directional field of sound that disorients and disables its victims. In these contexts, noise shifts from being the accidental byproduct of a technological environment to become a deliberate form of coercive violence (Cusick 2008; Goodman 2009).

Social Circulations of Noise

Noise stands for subjectivities of difference that break from normative social contexts. It interpellates marginal subjects into circulation, giving name to their unintelligible discourses even as it holds apart unfamiliar ways of being. In the violence of transatlantic slavery, noise textualized the disorientation of African culture (Cruz 1999; Smith 2001; Radano 2003). Describing the music and speech of slaves as noise allowed European colonists to domesticate an expressive production that was "theoretically understandable [even] as it remained practically inaccessible" (Radano 2003: 93). Once rendered as noise, black music could circulate as authentic cultural material, while continuing to signify its fundamental incommensurability with European civilization. Noise also symbolized class relations throughout early modernity. In Victorian England, noise complaints targeted Italian migrant workers, who were caricatured as street organ grinders; noise echoed the unrest of the brawling, milling crowd, with its rude dialects and unconstrained bodily sounds of work, sex, digestion, and disease (Smith 1999; Picker 2003; Schwartz 2011).

But even as noise retained its status as a marker of difference in postcolonial, multicultural, and cosmopolitan societies, it also became a powerful term of cultural agency. In contemporary projects of resistance, noise is the "voice" of subaltern identity on the margins, where "bringing the noise" is not accidental but an expressive practice and a deliberate act of

subversion (Ridenour et al. 1987; Rose 1994, Reynolds 2007; McCaugan and Balance 2009).

The creative force of noise is not only essential to the politics of cultural identity but also in developing alternatives to capitalism. Jacques Attali influentially described noise as a "prophetic" form of difference, which precedes the disciplining "sacrifice" of musical "channelization." As a revolutionary project of disorder, noise reveals the coercive repetitions of musical commodification: "change is inscribed in noise faster than it transforms society," and because of this, "power has always listened to it with fascination" (Attali 1985: 5, 6). Noise also circulates as a critique of globalization. As a symbol of irreducible cultural difference that persists within a universalist socioeconomic agenda, noise inscribes the incommensurabilities of multicultural liberalism (Povinelli 2001). For example, the noise of different languages makes audible the skeptical, disconnected logics of a radical cosmopolitan subjectivity in Zambian cities, where "signifying actors might have social reasons not to establish a bond of communication, but to rupture it" (Ferguson 1999: 210). Because it emphasizes mutual unintelligibility and crosstalk, noise represents the failure to translate cultural meaning from one context to another in both national and transnational circulations (Clifford 1997; Sakai 1997).

All of these different conceptualizations of noise overlap in contemporary global societies. To illustrate, I will conclude with an example from my own recent research on the politics of sound in Japan, which shows how perceptions of noise help determine which sounds, places, activities, and people exist within the boundaries of everyday life, and how noise is folded into political dialogue in contemporary protest movements.

Layers of Noise in Kamagasaki

Kamagasaki is the colloquial name for a neighborhood of homeless and migrant workers in the Nishinari ward of southern Osaka. In the late 1960s, a *yoseba* (day labor market) was assembled to develop the site of the 1970 World Exposition (Banpaku), whose theme was "Progress and Harmony for Mankind." Young single men arrived from around the country, living in flophouses (*doya*), later converted to cheap hotels (Gill 2001; Mizûchi 2003). When construction work slowed, and eventually dried up, the aging workers of Kamagasaki found themselves unemployable, and by the 1990s

thousands were living as "rough sleepers" (*nojukusha*) in homeless tent cities (Fowler 1997; Hasegawa 2006). In nearby Tennoji Park, unemployed workers gathered every weekend to drink and sing in makeshift karaoke stalls that lined the public walkways, separated by a thick plexiglass wall from pay-to-enter gardens and the city's art museum and zoo. As one walked along the edges of the park, distorted voices overlapped with one another in an off-key cacophony of song, mixed with laughter, arguments, the shouted greetings of the touts at each stall, and the grinding, whirring sounds of their portable gas generators. I often encountered this karaoke party in the early 2000s, but when I returned to Osaka in 2007 to document the scene for a collective soundscape recording project, forced evictions had swept away the stalls and singers in police actions that destroyed tent homes and "quieted" the neighborhood (*shizuka ni saseru*).[7]

In Japan, strong antinoise ordinances have been legislated, but are rarely enforced. If noisiness is typically frowned on as socially unacceptable, noise is also tolerated as a basic feature of Japan's "sound-saturated society" (*oto zuke shakai*; Nakajima 1996; Plourde 2009). Amplified music is piped into the streets, distorted voices are broadcast from "sound trucks" during electoral campaigns, and trains constantly rumble overhead. But Japanese rarely enter litigation over noise complaints and often hesitate to complain directly about noise (Namba 1987; Dolan 2008). However, public noise complaints were high on the list of reasons cited by the Osaka city government to justify the karaoke stall eviction in Tennoji Park. Though few actual noise complaints were provided, Osaka's 2003 investigative commission determined that the music of the karaoke tents interfered with the experiences of zoo visitors, who were described as "customers" (*kyaku*) and "citizens" (*shimin*), in contrast to the disturbing presence of "homeless people" (*futeijûsha*; Sakai and Haraguchi 2004).

The karaoke party, of course, was only one element of the noisy Kamagasaki soundscape, and only one reason why this area has been repeatedly targeted by governmental policy and police enforcements. Over the past decades, as residents have been harassed, tent homes destroyed, occupancy permits canceled, and unemployment insurance revoked, riots have repeatedly brought thousands into the streets to confront police with stones, shouts, and fire. The *yoseba* in Kamagasaki has become a symbol of general precarity in neoliberal Japan, as its founding generation of workers slowly dies off, and the neighborhood grows quieter each day.

But the noise of Kamagasaki has not been entirely eliminated. Public concerts have been organized in the streets, nonprofit arts groups cultivate public spaces for socialization and performance, and the local rapper Nishinari Shingo narrated the struggle with his album *Welcome to Ghetto* (2006). Further layers were added in 2008, when a younger generation of activists joined a riot by day laborers during the G8 Summit in Japan, using the tactics of "sound demos," in which protesters beat drums, play instruments, and dance to loud amplified music blasted out of PA systems on small trucks (Hayashi and McKnight 2005). In 2012, sound demos became a key tactic for antinuclear protesters who occupied sonic space by drumming on empty nuclear waste disposal cans, blaring horns, and chanting slogans in Hibiya Park, near then-Prime Minister Noda Yoshihiko's residence, every Friday. Noda initially dismissed the demonstrations as just "a loud noise": but by the end of July 2012, after crowds built to over one hundred thousand people, he began describing the sounds of the protests as "unheard voices" to which he would "carefully listen" (Noda 2012).[8]

By disturbing the appreciation of nature, the sounds of people became noise; through technological amplification, voices became noise; by being perceived as unaesthetic sound, music became noise. This noise echoed through the city, and then the country; it was heard as a symptom and a public disturbance; and then, as a metaphor for democratic participation, it became a voice and the sound of the people.[9]

The Hub of a Wheel

The concept of noise is like the hub of a wheel: its differences radiate in every direction, and each appears to extend to a separate end point. For its divergent angles to spin together, the central term of "noise" must bear the weight of their separate trajectories. But without attention to its specific manifestations, noise can only reinforce the structuralism of cultural binaries. It becomes the discursive borderline that separates one kind of person, or sound, or place absolutely from another and ultimately reduces all of the "noncultural" elements that cannot be folded into normative systems of meaning. Noise is a powerful antisubject of culture, raising essential questions about the staging of human expression, socialization, individual subjectivity, and political control. But noise does not merely oppose or interfere with the norms of musical and cultural interpretation. Noise *is* culture; noise *is* communication; noise *is* music.

Notes

1. In Greek, Arabic, and Latin, for example, there is no abstract general term for noise, only words that contextualize particular kinds of noisy sound, such as murmurs, cracks, the hubbub of a crowd, animal cries, etc. (Burnett 1991).

2. Although there have been extensive debates as whether or not "Noise" is music, the genre is also referred to as "Noise music" and "Noise-rock" (Novak 2013).

3. Foucault critiqued the cybernetic signal-to-noise analogy in medical surveillance as a diagnostic listening that filters and suppresses the general noises of the body, in order to objectively classify the informational message of a specific physical condition (Foucault 1994).

4. Truax (1984) further describes the stressful effects of noise on human perception within an auditory field. Because the interpretation of a sonic environment simultaneously requires recognition of noise (to notice that it is there) and denial (to subconsciously separate or block its presence in order to receive information), noise constantly demands to be interpreted, even as it interferes with the listener's ability to hear differences of signal.

5. Sound maps and decibel measurements of cities were basic tools in developing proposals for urban planning and noise abatement policy in Schafer's World Soundscape Project (WSP). But Schafer and his students also took a creative approach to the remediation of noise with electroacoustic soundscape compositions and a curriculum for "ear cleaning" that included environmental "soundwalks" and exercises to retrain hearing (Schafer 1994 [1977]; Truax 1984).

6. Recognizing specific qualities of noise is especially crucial in technological soundscapes of warfare, where soldiers and noncombatants learn to distinguish shots and explosions by weapon type and distance (Pieslak 2009; Daughtry 2012).

7. In the case of the Tennoji Park karaoke stalls, the excuse was street cleaning for the World Rose Convention. Operators were given no chance to appeal the decision and were evicted despite relocating to the street entrance to the park, out of earshot of the zoo (Novak 2010; Haraguchi 2011).

8. For "unheard voices" Noda used the term "koe naki koe," literally meaning "voices with no voices." Ironically, this phrase is politically resonant with Japan's 1960s protest culture and for antiwar and antiestablishment demonstrators, among whom it has been used to suggest something like "the silent majority." Noda met with protesters to work toward a nuclear phaseout policy but lost the election to pronuclear candidate Abe Shinzō in December 2012. Organizers are increasingly split on tactics of public interference. Some hope to "speak out" in dialogue with the Japanese government and nuclear energy companies, who, they argue, must eventually "listen"; others argue that protest should make as much noise as possible to disturb daily life, "occupy" public consciousness, and directly interfere in undemocratic governmental actions.

9. Although sound demos were developed around Japanese policies that allow amplified PAs on moving sound trucks typically associated with right-wing neo-nationalist groups (Smith 2014), there are strong connections to global resistance movements, including Occupy Wall Street's "human microphone" technique, which was developed to bypass restrictions on amplified sound in New York City parks (King 2012).

References

Attali, Jacques. 1985. *Noise: The Political Economy of Music*. Trans. Brian Massumi. Minneapolis: University of Minnesota Press.

Atton, Chris. 2011. "Fan Discourse and the Construction of Noise Music as a Genre." *Journal of Popular Music Studies* 23(3): 324–342.

Bailey, Thomas Bey William. 2009. *Micro-Bionic: Radical Electronic Music and Sound Art in the 21st Century*. London: Creation Books.

Berliner, Paul. 1978. *The Soul of Mbira*. Berkeley: University of California Press.

Bijsterveld, Karin. 2008. *Mechanical Sound: Technology, Culture, and Public Problems of Noise in the Twentieth Century*. Cambridge, MA: MIT Press.

Burnett, Charles. 1991. "Sound and Its Perception in the Middle Ages." In *The Second Sense: Studies in Hearing and Musical Judgement from Antiquity to the Seventeenth Century*, ed. Charles Burnett, Michael Fend, and Penelope Gouk, 43–69. London: Warburg Institute.

Cage, John. 1961. *Silence: Lectures and Writings by John Cage*. Middletown: Wesleyan University Press.

Cain, Nick. 2009. "Noise." In *The Wire Primers*, ed. R. Young, 29–36. London: Verso.

Chun, Wendy. 2006. *Control and Freedom: Power and Paranoia in the Age of Fiber Optics*. Cambridge, MA: MIT Press.

Clarke, Bruce. 2010. "Information." In *Critical Terms for Media Studies*, ed. W. J. T. Mitchell and M. B. N. Hansen, 157–171. Chicago: University of Chicago Press.

Clifford, James. 1997. *Routes: Travel and Translation in the Late Twentieth Century*. Cambridge, MA: Harvard University Press.

Cox, Christopher, and Daniel Warner, eds. 2004. *Audio Culture: Readings in Modern Music*. New York: Continuum.

Cruz, Jon. 1999. *Culture on the Margins: The Black Spiritual and the Rise of American Cultural Interpretation*. Princeton: Princeton University Press.

Cusick, Suzanne. 2008. " 'You Are in a Place That Is Out of the World . . .': Music in the Detention Camps of the Global War on Terror." *Journal of the Society for American Music* 2: 1–26.

Daughtry, Martin. 2012. "Belliphonic Sounds and Indoctrinated Ears: The Dynamics of Military Listening in Wartime Iraq." In *Pop and the World Falls Apart: Music in the Shadow of Doubt*, ed. E. Weisbard, 111–145. Durham: Duke University Press.

Demers, Joanna. 2010. *Listening through the Noise: The Aesthetics of Experimental Electronic Music*. New York: Oxford University Press.

Dolan, Daniel. 2008. "Cultural Noise: Amplified Sound, Freedom of Expression and Privacy Rights in Japan." *International Journal of Communication* 2: 662–690.

Evens, Aden. 2005. *Sound Ideas: Music, Machines, and Experience*. Minneapolis: University of Minnesota Press.

Ferguson, James. 1999. *Expectations of Modernity: Myths and Meanings of Urban Life on the Zambian Copperbelt*. Berkeley: University of California Press.

Foucault, Michel. 1994. "Message ou Bruit." In *Dits et Ēcrits*, 557–560. Paris: Gallimard.

Fowler, Edward. 1997. *San'ya Blues: Laboring Life in Contemporary Tokyo*. Ithaca: Cornell University Press.

Foy, George M. 2010. *Zero Decibels: The Quest for Absolute Silence*. New York: Scribner.
Gill, Tom. 2001. *Men of Uncertainty: The Social Organization of Day Laborers in Contemporary Japan*. Albany: State University of New York Press.
Goddard, Michael, Benjamin Halligan, and Nicola Spelman, eds. 2013. *Resonances: Noise and Contemporary Music*. New York: Bloomsbury.
Goodman, Steve. 2009. *Sonic Warfare: Sound, Affect, and the Ecology of Fear*. Cambridge, MA: MIT Press.
Gracyk, Theodore. 1996. *Rhythm and Noise: An Aesthetics of Rock*. Durham: Duke University Press.
Haraguchi, Takeshi. 2011. *Kamagasaki no susume* [Advancing Kamagasaki]. Kyoto: Rakuhoku Shuppan.
Hasegawa, Miki. 2006. *"We Are Not Garbage!" The Homeless Movement in Tokyo, 1994–2002*. New York: Routledge.
Hayashi, Sharon, and Anne McKnight. 2005. "Goodbye Kitty, Hello War: The Tactics of Spectacle and New Youth Movements in Urban Japan." *Positions* 13(1): 87–113.
Hegarty, Paul. 2007. *Noise/Music: A History*. New York: Continuum.
Helmholtz, Hermann von. 1885. *On the Sensations of Tone as a Physiological Basis for the Theory of Music*. 2nd English ed. Trans. Alexander J. Ellis. New York: Longmans, Green.
Kahn, Douglas. 1999. *Noise Water Meat: A History of Sound in the Arts*. Cambridge, MA: MIT Press.
Keizer, Garret. 2010. *The Unwanted Sound of Everything We Want: A Book about Noise*. New York: Perseus.
Kelley, Caleb. 2009. *Cracked Media: The Sound of Malfunction*. Cambridge, MA: MIT Press.
King, Homay. 2012. "Antiphon: Notes on the People's Microphone." *Journal of Popular Music Studies* 24(2): 238–246.
Kittler, Friedrich A. 1996. *Gramophone, Film, Typewriter*. Trans. Geoffrey Winthrop-Young and Michael Wutz. Stanford: Stanford University Press.
Kittler, Friedrich. 1990. *Discourse Networks 1800/1900*. Stanford: Stanford University Press.
Kosko, Bart. 2006. *Noise*. New York: Viking Penguin.
Krapp, Peter. 2011. *Noise Channels: Glitch and Error in Digital Culture*. Minneapolis: University of Minnesota Press.
LaBelle, Brandon. 2006. *Background Noise: Perspectives on Sound Art*. New York: Continuum.
Larkin, Brian. 2008. *Signal and Noise: Media, Infrastructure, and Urban Culture in Nigeria*. Durham: Duke University Press.
Licht, Alan. 2007. *Sound Art: Beyond Music, between Categories*. New York: Rizzoli.
McCaugan, Mac, and Laura Balance. 2009. *Our Noise: The Story of Merge Records, the Indie Label That Got Big and Stayed Small*. Chapel Hill: Algonquin Books.
Meintjes, Louise. 2003. *Sound of Africa!: Making Music Zulu in a South African Recording Studio*. Durham: Duke University Press.
Mills, Mara. 2011. "Deafening: Noise and the Engineering of Communication in the Telephone System." *Grey Room* 43: 118–143.
Mizûchi, Toshio. 2003. "The Historical Transformation of Poverty, Discrimination, and Urban Policy in Japanese Cities: The Case of Osaka." In *Representing Local Places and Raising Voices from Below*, ed. T. Mizûchi, 12–30. Osaka: Osaka City University.

Moorefield, Virgil. 2005. *The Producer as Composer: Shaping the Sounds of Popular Music*. London: MIT Press.
Nakajima, Yoshimichi.1996. *Urusai nihon no watashi* [Myself, of noisy Japan]. Tokyo: Shinchôbunko.
Namba, Seiichiro. 1987. "On the Psychological Measurement of Loudness, Noisiness and Annoyance: A Review." *Journal of the Acoustical Society of Japan* 8(6): 211–222.
Nishinari, Shingo. 2006. *Welcome to Ghetto*. CD. Libra Records.
Noda, Yoshihiko. 2012, July 11. "Listening carefully to a range of views." Available at Noda's website, http://nodasblog.kantei.go.jp/2012/07/120711.html, accessed July 24, 2012.
Novak, David. 2013. *Japanoise: Music at the Edge of Circulation*. Durham. Duke University Press.
Novak, David. 2011. "The Sublime Frequencies of New Old Media." *Public Culture* 23(3): 603–634.
Novak, David. 2010. "Listening to Kamagasaki." *Anthropology News* 51(9): 5.
Picker, John. 2003. *Victorian Soundscapes*. New York: Oxford University Press.
Pieslak, Jonathan. 2009. *Sound Targets: American Soldiers and Music in the Iraq War*. Bloomington: Indiana University Press.
Plourde, Lorraine. 2009. "Difficult Music: An Ethnography of Listening for the Avant-Garde in Tokyo." Ph.D. diss., Columbia University.
Povinelli, Elizabeth. 2001. "Radical Worlds: The Anthropology of Incommensurability and Inconceivability." *Annual Review of Anthropology* 30: 319–334.
Prochnik, George. 2010. *In Pursuit of Silence: Listening for Meaning in a World of Noise*. New York: Doubleday.
Rath, Richard. 2003. *How Early America Sounded*. Ithaca: Cornell University Press.
Radano, Ronald. 2003. *Lying Up a Nation: Race and Black Music*. Chicago: University of Chicago Press.
Reynolds, Simon. 2007. *Bring the Noise*. London: Faber and Faber.
Ridenhour, C., C. Benante, F. Bello, H. Shocklee, S. Rosenfeld, J. Bellardini, D. Spitz, and E. Sadler. 1987. "Bring the Noise." Def Jam Recordings.
Rodgers, Tara. 2010. *Pink Noises: Women on Electronic Music and Sound*. Durham: Duke University Press.
Rose, Tricia. 1994. *Black Noise*. Hanover: Wesleyan University Press and University Press of New England.
Ross, Alex. 2007. *The Rest Is Noise*. New York: Farrar, Straus and Giroux.
Russolo, Luigi. 1986 (1913). *The Art of Noises*. London: Pendragon Press.
Sakai, Naoki. 1997. *Translation and Subjectivity: On Japan and Cultural Nationalism*. Minneapolis: University of Minneapolis Press.
Sakai, Takashi, and Takeshi Haraguchi. 2004. "Forced Removal of Karaoke from Tennoji Park." *Sekai* 726:192–200.
Schafer, R. Murray. 1994 (1977). *The Soundscape: Our Sonic Environment and the Tuning of the World* [original title *The Tuning of the World*]. Rochester, VT: Destiny Books.
Schwartz, Hillel. 2011. *Making Noise: From Babel to the Big Bang and Beyond*. New York: Zone.
Shannon, Claude Elwood, and Warren Weaver. 1949. *The Mathematical Theory of Communication*. Chicago: University of Illinois Press.

Sim, Stuart. 2007. *Manifesto for Silence: Confronting the Politics and Culture of Noise*. Edinburgh: Edinburgh University Press.
Smilor, Raymond W. 1977. "Cacophony at Thirty-Fourth and Sixth: The Noise Problem in America 1900–1930." *American Studies* 18: 23–28.
Smith, B. R. 1999. *The Acoustic World of Early Modern England*. Chicago: University of Chicago Press.
Smith, Michael Mark. 2001. *Listening to Nineteenth-Century America*. Chapel Hill: University of North Carolina Press.
Smith, Nathaniel M. 2014. "Facing the Nation: Sound, Fury, and Public Oratory among Japanese Right-Wing Groups." In *Sound, Space, and Sociality in Modern Japan*, ed. Joseph D. Hankins and Carolyn Stevens, 37–56. New York: Routledge.
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.
Truax, Barry. 1984. *Acoustic Communication*. Norwood: Ablex.
Van Nort, Doug. 2006. "Noise/Music and Representation Systems." *Organised Sound* 11(2): 173–178.
Voegelin, Salome. 2010. *Listening to Noise and Silence: Towards a Philosophy of Sound Art*. New York: Continuum.
Waksman, Steve. 2004. "California Noise: Tinkering with Hardcore and Heavy Metal in Southern California." *Social Studies of Science* 34(5): 675–702.
Zak, Albin. 2001. *The Poetics of Rock: Cutting Tracks, Making Records*. Berkeley: University of California Press.