

ARTICLE

Introduction: New Approaches to Music and Sound

Rebecca Tinio McKenna¹  and David Suisman²

¹University of Notre Dame, South Bend, IN, USA

²University of Delaware, Wilmington, DE, USA

Corresponding authors: Rebecca Tinio McKenna and David Suisman; Emails: rtmckenna@nd.edu; dsuisman@udel.edu

Abstract

This introduction to the *Journal of the Gilded Age and Progressive Era*'s special issue, "New Approaches to Music and Sound," provides a historical sketch of American music and the American soundscape at the turn of the twentieth century. It also offers a discussion of relevant historiography, taking stock of recent work in sound studies and its influence on research on music and sound of the period. Finally, it introduces the four research articles featured in this special issue and marks their contributions to our understandings of listening practices, normative understandings of audition and speech, and the sonic dimensions of politics and capitalism, race and national identity, imaginings of the past and visions for the future in the late nineteenth and early twentieth centuries.

Keywords: music; sound studies; historiography; capitalism; technology

Introduction

*Fierce-throated beauty!
Roll through my chant with all thy lawless music, thy swinging lamps at night,
Thy madly-whistled laughter, echoing, rumbling like an earthquake, rousing all,
Law of thyself complete, thine own track firmly holding,
(No sweetness debonair of tearful harp or glib piano thine,)
Thy trills of shrieks by rocks and hills return'd,
Launch'd o'er the prairies wide, across the lakes,
To the free skies unpent and glad and strong.*

Walt Whitman wrote "To a Locomotive in Winter" in the year of the United States' centennial.¹ He conjured the iron horse as a force of nature yet still a "law of thyself complete," issuing a riotous sound at odds with harp and piano. Nearly twenty-five years later, Henry Adams visited the 1900 Exposition Universelle in Paris, where he marveled at

the quiet power of the “Dynamo” installed in the exposition’s Hall of Electric Machines. He looked upon a “huge wheel,” turning “at some vertiginous speed, and barely murmuring,—scarcely humming an audible warning to stand a hair’s-breadth further for respect of power,—while it would not wake the baby lying close against its frame.”² Here, it was the near-silence of a mechanical revolution that struck Adams’s ear. Roughly a quarter century hence, American composer George Antheil returned to the power of sound, describing his *Ballet Mécanique* (1924) as “All percussive. Like machines. All efficiency. NO LOVE. Written without sympathy. Written cold as an army operates. Revolutionary as nothing has been revolutionary.”³ In word and deed, Antheil closed the gap between industrial machine and musical expression in a way that Whitman, attuned to the poetry in the locomotive’s whistles and roars in 1876, may never have imagined.

Sources like these provide us with a sense of the sonic worlds of the past: how men and women made them and made meaning of them, and how they laid down tracks that have become ours. In this special issue of the *Journal of the Gilded Age and Progressive Era*, we turn our attention to this history and consider what new writing on music and sound reveals about American life at the turn of the twentieth century and what this period meant for listening practices, normative understandings of audition and speech and the sonic dimensions of politics and capitalism, race, and national identity, and imaginings of the past and visions for the future.

We begin with a note on our terms and on sound studies generally, a field that has informed contributions to this issue. *Sound*, as we understand it, denotes “a vibration of a certain frequency in a material medium.”⁴ These vibrations are mediated by patterns of words and ideas—metaphors—which, as ethnomusicologists David Novak and Matt Sakakeeny have noted, “construct perceptual conditions of hearing and shape the territories and boundaries of sound in social life.” “Sound,” they write, “resides in this feedback loop of materiality and metaphor.”⁵ We approach *music* as a subset of sound—as something close to John Blacking’s definition, “humanly organized sound.”⁶ In identifying music within a wider world of sonic phenomena, we follow the lead of sound studies, a field enriched by scholarship in media, film, and disability studies, musicology, history, and other fields, concerned with, in Jonathan Sterne’s words, “both sonic practices and the discourses and institutions that describe them.”⁷ Sound studies thus signifies both a particular object of study as well as a self-reflexive method recognizing the historicity of our tools—both technological and theoretical—for apprehending and analyzing sound.

Since the field took shape some twenty-five years ago, scholars have been problematizing audition, deafness, speech, and the voice; interrogating definitions of noise and silence; exploring the production of acoustical knowledge and the relationship between sound and space; historicizing listening practices and the technologies that have structured them; and excavating the political-economic, racial, and gendered infrastructures that condition the generation, circulation, and reception of sounds. Like visual culture to art history, applying aspects of sound studies to the study of music brings awareness of the auditory practices, the media, and the cultural assumptions and social institutions through which we make and encounter music.⁸ In this regard, rather than wholly displacing issues of form and composition, and biography and performance, sound studies widens the purview of inquiry and sharpens our sense of the contingency of both musical expression and music appreciation.

And, if there is a period when *what* Americans heard and *how* they listened underwent dramatic transformation, it was the turn of the twentieth century when the United States is said to have become “modern,” at the start of what Douglas Kahn has called the

“century of sound.”⁹ Horses’ brays and the clop of hooves, the grunts of hogs and squawks of chickens, sounded through the country and corridors of the city in the 1870s. By 1920, the turning of combustion engines and the “whips of strident steel,” as writer and engineer Hollis Godfrey observed in a 1909 essay on “The City’s Noise,” marked modern life’s “soundscape.”¹⁰ The term “soundscape,” proffered in the late 1970s by R. Murray Schafer to refer to the “acoustic environment,” has been the subject of some critique, but we find it still has analytical purchase.¹¹ Just as the train had burst through the pastoral garden of American writers in the 1870s, the automobile’s “infernal patient snap-ah-ah—a round, flat sound, a shivering cold-morning sound, a sound infuriating and inescapable”—entered American literature in the twentieth century.¹² It tormented characters like Sinclair Lewis’s *Babbitt*, roused from rest on his Zenith sleep porch. And it was not just machine noises that marked the soundscape and caused trouble. Even the “boisterousness of children” could disturb the peace. Julia Barnett Rice, a physician and the founder of the Society for the Suppression of Unnecessary Noise, campaigned for quiet zones around hospitals where rowdy youths were known to distress ailing patients.¹³ She also protested the incessant whistles of tugboats on New York’s East River.¹⁴ The unnerving quality of these sounds prompted noise abatement measures in what Raymond Smilor cites as the “first environmental reform movement.”¹⁵

Elsewhere, the clank of artisans’ hammers was yielding to the “shrieking, hammering, and clatter” of “writhing machinery” at places like Henry Ford’s Highland Park plant.¹⁶ These machine sounds announced that new energy regimes were driving the nation as well as new ways of organizing work, which men and women contested through song like I. G. Blanchard’s anthem “Eight Hours” and most enduringly in the Industrial Workers of the World’s “Solidarity Forever.”¹⁷

Production times shrank as did the work day for some, and telephones quickened communication. In 1876, Alexander Graham Bell called, “Come here, I need you,” to Mr. Watson over wire, heralding the era’s compression of time and space. Within forty years, the telephone joined railroad tracks and the telegraph in connecting coast with coast and the places in between. Telephone service was, sociologist and historian Fischer has written, “transformed from a business tool and a luxury good to a common utility” by the time of the Great War, a conflict that telephony itself helped to accelerate.¹⁸ The information flow through telegraph and telephone lines effected a new tempo of foreign-policy making, one that exceeded the measured conduct of traditional diplomacy.¹⁹ Come the war, telephone wire sped commanders’ orders from rear bases to frontlines. The telephone switchboard operators known as “Hello Girls” made the connections, becoming the first women to serve in the U.S. Army.²⁰

Back on American shores and within a few years of the Armistice, radio was linking homes to distant commercial, cultural, and political centers. Americans encountered the technology as a marvelous, exogenous force that signaled a new era. As Susan Douglas explains, that perception had much to do with the press’s inattention to decisive technical developments in wireless telegraphy in the 1910s. The newfound capacity to transmit and receive the human voice was key to the shift from wireless telegraph and radio telegraphy (communication via dots and dashes) to radiotelephony—or “radio.” Through this time, middle-class men and boys built skills as amateur operators of wireless telegraphs. By 1910, they even had created “a grass-roots radio network.” “Trapped between the legacy of genteel culture and the pull of the new primitivism of mass culture,” Douglas writes, “many boys reclaimed a sense of mastery, indeed masculinity itself, through the control of technology.”²¹

While men tinkered with forms of telegraphy and radio, staffers of switchboards believed that it was women who best operated telephone switchboards. Women, they held, possessed the innate dexterity to knit telephone cords into a quilt of communication, much as radio was invested with hopes of generating cultural unity in the nation. “[A] wondrous fabric of speech is ... woven into the record each day,” wrote an observer of operators’ work.²² This was not the first time that a sonic practice was associated with women. While men had won acclaim as piano virtuosos, iconic images of bourgeois domestic life frequently pictured girls and women at the instrument. They appear in Mary Cassatt’s drawings and in paintings by Frederick Childe Hassam and Theodore Robinson, Van Gogh, Renoir, and Caillebotte. A piano mediates Isabel Archer’s first encounter with Madame Merle in Henry James’s *The Portrait of a Lady* (1881); piano playing hints at gender constraints and means of subverting them in Kate Chopin’s *The Awakening* (1899).²³ Through the better part of the nineteenth century, the instrument had signified elevated status. By the turn of the twentieth century, however, reduced production costs and installment buying plans made the instrument, much like the player piano and the organ, available to people up and down the social hierarchy and across the country.²⁴

While keyboard instruments enjoyed a parlor empire, music in public settings was more diverse, from strings to brass instruments animating the musical soundscape. Violins resonated from gatherings in the country to city dance halls until pianos and wind instruments began to edge them out later in the century.²⁵ The banjo, a staple of minstrel and medicine shows since the 1840s and ’50s, appeared in bourgeois spaces, too. It featured in Cassatt’s tender portrait of a white woman and young girl, “The Banjo Lesson” (1893).²⁶ That same year, African American artist Henry Ossawa Tanner presented his version of “The Banjo Lesson,” depicting an equally intimate scene of a young boy picking strings at the knee of a grandfatherly figure. The Hawaiian steel guitar or kīkā kila, a modification of the Spanish guitar, also crossed boundaries in this period, travelling from colony to the mainland and eventually to Europe and beyond.²⁷ During American bands’ “Golden Age,” brass, school, and military ensembles featured cornetists, trombonists, flutists and more and created rousing, shimmering musical accompaniments to school functions, municipal parades, and civic ceremonies.²⁸ At the start of the Gilded Age, vocal performances, forms of community singing, and these cultures of music-making by amateur and professional musicians on an assortment of instruments flourished with new influences pollinating local traditions.²⁹

The musical soundscape at the turn of the twentieth century was shaped not only by instrument makers but also by the commerce in printed music. Local printers and booksellers issued or stocked sheet music in the geographically diffuse business. Eventually, Boston, New York, and Philadelphia took the lead in printing and retailing sentimental ballads, dance tunes, patriotic and minstrel songs, sacred songs popularized by revivalists like Dwight Moody and Ira Sankey, and non-copyrighted classical music from Europe.³⁰ In the 1890s, just as the United States superseded England and Germany in the volume of pianos it manufactured, New York City emerged as the sheet music capital of the country thanks to Tin Pan Alley, a hive of songwriters and music publishers producing hits of the day.

Many of these compositions were “coon songs” and ragtime music written largely by Black and Jewish immigrant musicians. Coon songs reworked minstrelsy for the age of Jim Crow, and their lyrics and use of Black “dialect” continued the trade in derogatory stereotypes of African American men and women.³¹ Ragtime tunes, meanwhile, derived their elan from syncopated rhythms, which also often set the beat for coon songs. While market expectations discouraged publishers from producing and distributing pieces that

broke with racist tropes, Black artists like Will Marion Cook, George Walker, and Bert Williams tried to evade the most noxious representations and subtly challenged stereotypes by contracting with the first Black-owned music publishing house, the Gotham-Attucks Music Publishing Company, established in 1905, or later, with Pace & Handy.³² Music composed by these men and Tin Pan Alley collaborators, whose whiteness was not yet secure, became the music that legions of Americans played, sang, and danced to. “Ragtime tunes were the memes of their day,” writes historian David Gilbert.³³

For these very reasons, the music triggered a culture war. Ragtime perturbed some listeners, alarmed by the breach of racial boundaries that its playing signaled or enticed. Through the turn of the twentieth century, just as Americans sought to mute those sounds they regarded as “noise,” they tried to contain and harness the power of music, quieting the influence from some quarters and amplifying that of others. In the late nineteenth century, the National League of Musicians, a labor union, had denounced ragtime as degrading the skills of formally trained musicians. In 1901, its successor organization, the American Federation of Musicians, prohibited its members from playing ragtime publicly.³⁴ In the West, meanwhile, the Office of Indian Affairs attempted to sanction social dance and regulate musical practices on Lakota reservation lands, identifying these as threats to the agency’s Indian assimilation efforts.³⁵ Other social reformers engaged in “musical outreach,” Derek Vaillant has written, in their work with immigrants in American cities. At Hull House, Jane Addams and her associates organized a musical education program and hosted concerts featuring vocal, violin, and piano performances of works by composers like Mozart, Schubert, and W. H. Neidlinger. They drew a line at ragtime, while making room for folk songs from immigrants’ native lands. Reformers believed that this sonic milieu, inclusive of elite and more popular music, could educate settlement house visitors, provide respite from the tedium of industrial toil, and help to nurture and incorporate immigrant Chicagoans into a democratic culture. Through this “musical progressivism,” which included the proscription of certain kinds of sounds, reformers like these attempted to cultivate the body politic and use sound to define the terms of national belonging.³⁶

This same turn-of-the-century political culture, which valued some sonic signs of national membership over others, set the grounds for the triumph of oralism in the education of the deaf. Oralists, most prominent among them Alexander Graham Bell, understood speaking and hearing to be fundamental to “normal” human behavior. To oralists, “[t]he value of speech was ... akin to the value of being human. To be human was to speak,” historian Douglas Baynton has written. By teaching lip-reading and speech-training, then, they sought to assimilate the deaf more fully into American society, and they opposed manualists’ promotion of sign language. They contended that “[t]o sign was to step downward in the scale of being.” It was to permit the deaf to exist outside the national community at a time when the foreigner appeared as a problem to be solved.³⁷

New norms of musical performance were emerging at the start of the century, too. Increasingly, everyday music-making in parlors and on the street and front porch was yielding to listening-based consumption of music generated by professionals. Auditoriums like Carnegie Hall (1891), Boston’s Symphony Hall (1900), and Chicago’s Orchestra Hall (1904) aimed to serve the cultural and the social aspirations of an increasingly exclusive bourgeois audience. Attendees paid handsomely to consume *culture*—classical and opera music performed by professional musicians who neither modified nor embellished compositions as had previously been the custom. And the audiences were expected to listen with a quiet reverence. Gone were the “vociferous bellowings” (as the musician and diarist George Templeton Strong put it) of a socioeconomically diverse crowd typical

of earlier in the nineteenth century.³⁸ In 1988, Lawrence Levine termed the process that underwrote this change the “sacralization of culture,” and in his book *Highbrow/Lowbrow*, he lamented the passing of “a public culture less hierarchically organized, less fragmented into relatively rigid adjectival boxes” than what followed.³⁹ Historians would refine (and dispute) his argument in subsequent years, but most tallied gains and losses as a cultural hierarchy developed at the turn of the twentieth century.⁴⁰

They also noted the mixed effects of the proliferation of mechanically reproduced music. While the affluent might attend the opera and symphony, many more people could listen at home to phonograph records or player-piano rolls, and by the 1920s, mechanical devices were providing regular, private access to sounds formerly heard only at appointed times and places.⁴¹ For many, music was becoming something to be consumed. Band-leader and composer John Philip Sousa reflected on this change in a well-known article, writing that “canned music” was eroding older forms of musical practice and weakening the “national throat.”⁴² Democratization, historians thus noted, was seen to come at a price.

By the early twenty-first century, historians had sketched much of this soundscape and musical culture. Some scholars focused on the problems of cultural hegemony and social control raised by books like Levine’s *Highbrow/Lowbrow*. Others studied music as a source of cultural resilience or “agency.”⁴³ Generally, the existing scholarship treated topics like music, the entertainment industry, phonography, and communication as discrete phenomena. This began to change in the early 2000s with new work that conceptualized these as components of a broader, modern sonic culture, following in the footsteps of paradigm-shifting studies of visual culture in the 1990s. In this new work, scholars wedded concerns associated with the Frankfurt School over how capitalism conditioned affective and perceptual changes, with historical studies of the senses, inspired by French historian Lucien Febvre and later Alain Corbin.⁴⁴ Scholars contended that a full accounting of modern life—life in the age of capitalism, industrialization, urbanization, and colonialism—necessitated attention not only to visual regimes, but also to sound, hearing, and listening practices. Particularly important studies that advanced this argument and dwelled on the turn of the twentieth century were historian of technology Emily Thompson’s *The Soundscape of Modernity: Architectural Acoustics and the Culture of Listening in America, 1900–1933* (2002) and communication studies scholar Jonathan Sterne’s *The Audible Past: Cultural Origins of Sound Reproduction* (2003).

“Cubist art, non-Euclidian geometry, and cinematic montage are just a few of the phenomena and artifacts that have been heralded as definitive of the modern,” Emily Thompson wrote. “[M]odern sound should similarly be recognized as a cultural artifact at the cutting edge of change.”⁴⁵ *The Soundscape of Modernity* made a compelling case, taking readers from the rise of acoustical science and engineering to campaigns against excessive urban clamor, exploring how both the expectations of listeners and sound itself changed over time. Thompson described attempts to theorize, measure, and control how sound operated in space—indoors and out. Public policy solutions to curbing unwanted urban, industrial-age cacophony met with limited success, she explained, but engineers excelled in designing and building interior spaces that insulated occupants from sounds deemed undesirable and detrimental to worker efficiency. From the late nineteenth century on, Thompson showed, reverberation became the sonic scourge of auditoriums, sacred spaces, and eventually private homes, recording studios, and film sets. Audiences, especially those keen on consuming culture in that new mode of quiet, reverent listening, wanted to hear the lecturer, the chamber orchestra, and the soprano, not the resonance of

the performance space. These expectations paved the way for a new professional with a new sonic product: the acoustical engineer selling the promise of quiet.

Thompson argued that engineers' research in acoustics, their development of analytical tools, and invention of techniques and sound-absorbing materials initiated a fundamental reworking of the long-standing relationship between sound and space. No longer would architectural form alone dictate acoustics. Engineers could now manipulate spaces to resonate as a client wished. Further, as Americans pushed into the age of electroacoustics—the transformation of sound through transducers like microphones and loudspeakers—a new kind of sound emerged as optimal: one stripped of extraneous “noise.” Instead, sound as “signal”—“clear and focused” and “nonreverberant”—became the sonic signature of the modern age, even as various forms of “noise”—e.g., shouts and hollers, the clatter of streetcars, the cries of machines—entered modern music in compositions by artists like Antheil, Charles Ives, and the Italian Futurists.⁴⁶

Thompson's study crossed disciplinary boundaries, approaching noise and music alike as sonic forms. And she explored not simply the character of these sounds but also the technologies and techniques by which they were made audible and knowable. Jonathan Sterne likewise ranged widely in *The Audible Past*, drawing especially on media, technology, and disability studies, to excavate the social and cultural foundations of sound reproduction. He explained how sound came to be understood in the nineteenth century as an effect that could be made by mimicking the tympanic function of the human ear—an operation that became the basis of sound reproduction technologies. His history of audition and sound reproduction posed a direct challenge to a narrative of technological determinism. “[T]he objectification and abstraction of hearing and sound,” he insisted, were not the outcomes of sound-reproduction technologies.⁴⁷ They were, instead, these technologies' conceptual foundation. Sterne approached the stethoscope, telephone, the phonograph, and radio, then, not as separate devices with self-evident media applications, but as instruments with shared origins in a world of a rising middle class, consumerism, industrial capitalism, and colonialism. These occasioned new practices and goals of listening and hearing.

In their distinct ways, Thompson and Sterne explained how, as Sterne put it, “the history of sound contributes to and develops from the ‘maelstrom’ of modern life.”⁴⁸ And their work, and that of others mentioned above, have opened up the gate for a wide range of scholars to expand and deepen our understanding of the history of sound and music. Inflected by anthropology, art history, literature, musicology, media studies, and other fields, they have demonstrated how questions like who makes and hears sounds, under what circumstances, and to what effects can shed new light on historically consequential issues.⁴⁹ From the political economy of ringtones to the policing of the “sonic color line,” this innovative work has opened up new interpretive ground for thinking about the dynamics of economic, political, and cultural power.⁵⁰

For instance, recent scholarship has built productively on Thompson's and Sterne's efforts to historicize listening practices. Scholars are recognizing a wide range of listening practices and in the process, discerning “normative and unmarked forms of listening privilege.”⁵¹ In his exploration of “encounters between Indigenous song and Western art music (also called classical music or concert music),” Dylan Robinson argues for a form of “hungry listening,” a mode of listening that derives from a settler colonial past.⁵² It approaches Indigenous music as a resource to be tapped and interpolated rather than as an expression of an epistemology and ontology that actually sits uneasily within the conventions of Western art music. A “critical” mode of listening, Robinson suggests, recognizes that form and structure delineate but one technique for approaching music;

another that truly engages with Indigenous ways of knowing and being would attend to “affective feel, timbre, touch, and texture of sound.”⁵³ This form of listening is not a “single-sense activity.”⁵⁴ Robinson’s perspective accords with that of musicologist Nina Sun Eidsheim in a study of contemporary vocal performances including site-specific works.⁵⁵ Recognition of music as vibration, Eidsheim shows, invites an understanding of music as something relational and multisensorial. Irreducible to an object, music is a phenomenon exceeding conventional categories of “pitch, durational schemes, forms, [and] genres.” It engages “tactile, spatial, physical, material, and vibrational sensations,” and not simply aurality, she writes.⁵⁶

Robinson’s and Eidsheim’s scholarship calls into question normative modes of listening and music analysis, and the authors venture beyond the primarily urban, white, middle-class listeners and sound-makers who feature centrally in Thompson’s and Sterne’s studies. Implicitly, Robinson and Eidsheim address the whiteness of the field of sound studies as Gavin Steingo and Jim Sykes do explicitly in *Remapping Sound Studies* (2019).⁵⁷ Steingo and Skyes, editors of this essay collection, ask how leading works in sound studies, not least those that have concentrated on sound reproduction technologies, relate to sonic experiences and practices beyond the West.⁵⁸ Contributors explore how the study of sound in the global South can surface diverse soundscapes and different understandings of sonic modernity.

A “stereomodernism” is the very subject of Tsitsi Ella Jaji’s *Africa in Stereo: Modernism, Music, and Pan-African Solidarity* (2014), which pursues the movement of music across the Black diaspora and between the United States and Ghana, Senegal, and South Africa, especially. Jaji counters work that has emphasized African cultural contexts and producers as sources rather than “active participant[s]” in fashioning meanings of being “modern” from the late nineteenth century forward.⁵⁹ Jessica Schwartz’s recent *Radiation Sounds* (2021) performs related work. She investigates the sounds—and the silences—produced within the context of U.S. imperialism, more specifically, within a culture of nuclear militarism on the Marshall Islands. Nuclear culture generated a culture of silence, which marks the aftermath of a nuclear detonation and the very secrecy around nuclear energy research. But nuclear culture also provoked song and distinct singing practices honed by Marshallese performers.⁶⁰ Studies like hers and the others mentioned here make clear that historical actors’ apprehension and production of sounds encode, express, and can also counter hierarchies of power, particularly those organized around racial difference.

The racialization of sounds and the role of sound in the construction of racial difference are the express concerns of Jennifer Lynn Stoever’s *The Sonic Color Line: Race and the Cultural Politics of Listening* (2016) as well as new work by Eidsheim.⁶¹ In her book, Stoever considers vocal performance and racialized habits of listening—a “listening ear,” as she calls it, trained, in part, through print sources. Stoever adeptly balances attention to the aspirations and cultural politics of Black performers, including the Fisk Jubilee Singers, with the historically contingent ways in which audiences listened and assigned meaning to sounds. Her work complements scholarship that centers on the music industry—on the circulation of shows and performers and on the production and dissemination of recorded music. This work has shown how a boundary-crossing exchange of musical forms hardened into a recording industry bisected by the color line in the first decades of the twentieth century.⁶²

Other recent work in sound studies is developing our understandings of silence, noise, and acoustics with bearing on histories of environmentalism, the law, and war. Alexandra Hui, for example, considers phonographic records that offered ear training to birders and

hunters and 1930s science programming for radio, making the case for a kind of “extinction listening.” She argues that an understanding of species “extinction was not possible until the silence of absent species was heard.”⁶³ Radio broadcasting of recorded field sounds induced the sense that bird sounds belonged to the past. This made possible a crucial “perceptual turn” that paved the way for an awareness of ecological loss and, eventually, the specter of a “silent spring.”⁶⁴ Marina Peterson, meanwhile, turns the ear to “noise.” Peterson’s attention to the sonic environs of Los Angeles International Airport led her toward an understanding of noise as “atmospheric”—“ephemeral and indefinite; falling away as both sound and category.”⁶⁵ Her study raises novel questions about the relationship between sound and space, most especially how sound produces space—an airspace—with territorial and legal dimensions. Other work has examined how sounds can be exploited as weapons to produce “an immersive atmosphere or ambience of fear and dread,” the subject of Steve Goodman’s *Sonic Warfare: Sound, Affect, and the Ecology of Fear* (2012).⁶⁶ These works point to the variety of ways that people have perceived silence and made, heard, and harnessed sounds and their social, political, and environmental consequences.⁶⁷

The history of aurality—a concern of Jonathan Sterne in his account of sound reproduction technologies—is another domain engaged by recent scholarship. New work probes cures for deafness in U.S. history—from medicinal antidotes and surgical operations to speech therapies and acoustical devices. Jaipreet Viridi has explained how each of these supposed fixes has reinforced the idea that the deaf person falls short of “normal” and requires treatment to draw near par.⁶⁸ Viktoria Tkaczyk, Mara Mills, and Alexandra Hui have investigated hearing and testing as mutually constitutive practices. Tools for testing auditory function and the results they have yielded, the authors show, have informed “instrument calibration, human training, architecture, and the creation of new musical sounds.” Reckoning with “modern aurality,” they conclude, necessitates attention to this testing history.⁶⁹

Musical instruments and “radio” have received fresh attention, too, and here, scholars are troubling facile distinctions between art and science, music and communication. Alexandra Hui, for example, argues that the creation of musical instruments and the musical training of figures like Hermann Helmholtz, Ernst Mach, and Carl Stumpf, contributed to their work in psychophysics, a branch of psychology that analyzes the relationship between physical stimuli and the sensations they generate. Music and sonic sensation, were, then, at the beginning of experimental psychology.⁷⁰ Neil Verma, meanwhile, investigates how dramas in the Golden Age of radio worked on the mind, and he tests the presumption that radio’s essential trait is triggering the listener’s imagination.⁷¹ This belief overlooks radio show producers and their deliberate use of “speech, reverb, filter, segue, and other devices,” Verma argues. His work calls attention to the content of radio programming and the conventions of radio dramas before the mid-twentieth century that made radio a “theater in” and even “of” “the mind.”⁷² While Verma focuses on shows that aired in years beyond the bounds of the Progressive Era, it is a noteworthy contribution to radio history. Much of the previous literature has approached the medium principally as a form of technology and pursued histories of listeners and the commercial interests and government regulations that shaped the medium’s trajectory. Verma provides a model for recognizing and reckoning with radio programming’s scripters and its aesthetics.

To theorist and historian Douglas Kahn, “radio” itself can be aesthetic: it can be music. In *Earth Sound Earth Signal* (2013), he takes radio not as a technology charged with an outside source of energy, but as energy itself—as a form of electromagnetic radiation. He

points out that Thomas Watson heard a host of natural sounds that traveled along his telephone wire, some of which he and others regarded as musical. “Radio was heard before it was invented, and radio, before it was heard, was,” Kahn contends. His work encourages consideration of the relationship between non-human nature and communication technologies and the lines that were and are drawn between art and “noise.”⁷³

One final work in sound history is worth mentioning: special issue co-editor David Suisman’s *Selling Sounds: The Commercial Revolution in American Music* (2009).⁷⁴ *Selling Sounds* is especially salient to Gilded Age and Progressive Era history, and several contributions to this issue are in dialogue with it. David brings together cultural history and the history of capitalism to investigate the roots of music as big business at the turn of the twentieth century and the foundation of what would later be called the culture industry. While Thompson delved into the manufacture and marketing of new acoustical products and services in the making of a modern soundscape, David turns to the making of “aural commodities” in music and ultimately, the creation of the “musical soundscape of modernity.” He examines the standardized production of tunes by Tin Pan Alley “song factories,” how the “musicalization of the phonograph” relied on a cultural-capital campaign waged by the Victor Talking Machine Company and its Red Seal label, and the grooming of musical celebrities to sell sounds. He also examines the pivotal moments in copyright law in 1909 and 1917, which recognized the rights of copyright holders—in the period, typically music publishers—to profit from mechanical reproduction and performance of their work for profit. These developments laid the foundation of the modern musical soundscape in which music would sound almost everywhere and even fuel consumerism and refinements in workplace efficiency. This proliferation of musical sounds and a kind of musical democracy, however, grew along with new, powerful conglomerates in the emergent entertainment industry, a new culture of “nonlistening” in which music functioned merely as ambient sound, and a reimagining of music as a product over a creative process. Like Thompson and Sterne, David shows how capitalism conditioned the contours of the American soundscape and dominant listening practices at the dawn of American modernity.

The articles that follow on the Gilded Age and Progressive Era’s music and sonic history build productively on much of this recent scholarship. Our contributors address histories of capitalism and the culture industry, complicating the line drawn between the producers and the consumers of “popular” music. They reveal contests over the aural and linguistic terms of citizenship and national belonging. They explore the permeability and the fixity of the color line in the early recording industry and ideas of racial authenticity that arose in the context of music’s commercialization. They investigate the historical and the future uses of sound recording technologies and discuss innovative methods for engaging with sound sources with digital tools and in new media formats. In this way, the contributors draw attention to neglected forms of historical evidence and point to new fields of inquiry. They also promote consideration of alternative modes of producing and conveying historical knowledge and critical inquiry into the institutional and financial structures that frame sound preservation and the epistemologies that inform the classification of music rendered as digital data.⁷⁵

Samuel Backer’s “‘The Best Songs Came from the Gutters’: Tin Pan Alley and the Birth of Manhattan Mass Culture” takes up Tin Pan Alley and the emergent entertainment industry. Backer builds on David’s *Selling Sounds* to offer a vivid account of one song plugger’s experience of running a tune through the gauntlet of New York City theaters and clubs over the course of a single evening. He shows that Tin Pan Alley publishers’ quest for profit and its rationalization of cultural production did not alone determine the

creation of music. Those who listened to Tin Pan Alley songs in spaces of commercial leisure contributed to the shaping of content: songs and audiences were co-constituted—interdependent, fixed in a continual feedback loop, each deriving energy from and animating the other. And, Backer argues, just as these urban audiences could make tunes into local and even national hits, songs helped to create an industry of commercialized leisure. Backer’s article thus suggests that to appreciate the making of turn-of-the-century popular music, we must look not only to the producers of tunes and the economic and cultural structures in which they operated, but also to music’s consumers and the specific environments in which they encountered songs.

In “Speak the Language of Your Flag: Speech, Music, and Deaf Education during the First World War,” Katherrine Healey draws our attention to the history of audition and speech. She explores what it meant to “sound American” as a coercive wartime culture of 100 percent Americanism took hold. Her article explains how patriotism entailed not only speaking the English language but also attaining a quality of speech denoted by a particular elocution and grammar. For deaf Americans, including returning soldiers whose hearing had become a casualty of wartime service, this meant a regimen of lip-reading and speech training. Healey’s attention to language and speech makes for an original account of how U.S. mobilization and participation in the Great War shaped and narrowed normative conceptions of American identity and national citizenship.

The last two contributions to this special issue focus on sound recordings and historical understandings that we can derive from these sources. Each also dwells on the digital tools that allow for the audibility of these sonic artifacts, and that mediate our use of them in historical scholarship. “Hearing the Americas: Understanding the Early Recording Industry with Digital Tools,” written by Jessica Dauterive, Matthew Karush, and Michael O’Malley, considers how digital technologies and sound sources can be employed to convey historical arguments and make them accessible to wider publics. The authors highlight how *Hearing the Americas*, a pathbreaking public history website funded by the National Endowment for the Humanities, uses audio recordings embedded within interpretive text to convey complex and compelling historical understandings of sound recording technology and the turn-of-the-century music industry. The authors offer a detailed account of the website’s design and functionality and in particular, its application of Soundcite, an open-source tool developed by Northwestern University’s Knight Lab. It permits an author to include an audio clip within a line of text, dramatically simplifying a reader’s access to the referenced sound source.

Dauterive, Karush, and O’Malley then preview the kinds of historical argumentation made possible when new technologies make sonic sources audible within a historical account. One case concerns the opportunities opened and closed to Black performers in the early recording industry; another focuses on the origins of the blues in a complex give-and-take between “commercial parodies and ideas of authenticity.” The third, in drawing on the example of tango, shows how “genre fluidity” and a “multidirectional,” transnational movement of sound in the early recording industry yielded to “a one-way dissemination from core to periphery.” These cases demonstrate the richness of sound sources for grappling with histories of capitalism, culture, and race and racism at the turn of the twentieth century. They also suggest how sound itself could operate as “an agent of historical change.”

In “Speculative Imaginations’: Listening to 1889, Then and Now,” Carlene Stephens offers a meditation on listening to sound recordings in 1889 and in 2019. She explores what people used phonography to record, how they listened to recorded sounds, and what they heard in 1889, and what we hear and *how* we hear the sounds of 1889 today. At the

center of Stephens's account are three wax cylinder recordings dating to 1889, held at the Smithsonian's National Museum of American History where Stephens serves as a curator. She explains the late nineteenth-century origins of these recordings and how curators used twenty-first century digital tools to draw data from the preserved phonographic cylinders and make them audible. She also reflects on how people in 1889 understood and how people today understand sound technologies. Stephens's account provokes rumination on the contemporary sonic artifacts we are choosing to preserve today and what we are neglecting, how we preserve that recent past, and how the future purposes we imagine for these historical records shape the development of preservation technologies.

These articles affirm that attention to sound, accessed through textual, visual, and audio sources, can open new pathways into the history of the late nineteenth and early twentieth centuries. They remind us that new relations of political, economic, social, and imperial power in the period altered not just the visible features of American life but also the invisible vibrations that travelled through the air and were apprehended as noise and music. Sonic cultures and listening practices, in turn, conditioned new relations of power.

Directly or indirectly, our contributors also address the problem of what evidence we preserve of the past and how and why we do it. Dauterive, Karush, and O'Malley point out that *Hearing the Americas* draws on a collection of digitized audio recordings from a number of publicly funded archives, including the Library of Congress, the University of California, and the Internet Archive. Their digital humanities project makes clear just how much historians and the wider public benefit from a widely shared commitment to preservation of the sonic past—from phonograph records and cassette tapes to radio transcription discs and CDs. Yet, as Stephens indicates, the current prospects for the preservation of recorded sound are actually quite “bleak.” The condition of analog recordings is, in too many cases, low and worsening. The costs of preservation and digitization, meanwhile, run high. Limited resources call on preservationists at public and private institutions to make tough calls about what to digitize, decisions with profound implications for the histories we can write. Each contribution to this special issue ultimately reminds us that sound, hearing, and listening and the concepts and tools with which we engage them and the very opportunity to do so, were—and are—contingent.

Acknowledgments. We thank Josh Shepherd and an anonymous reader for the *Journal of the Gilded Age and Progressive Era* for their helpful comments on a draft of this introduction. Rebecca McKenna also thanks University of Notre Dame students in her Fall 2021 undergraduate seminar “Listening to the Gilded Age,” for their insightful and spirited engagement with the history of music and sound.

Notes

- 1 Walt Whitman, “To a Locomotive in Winter” in *The Portable Walt Whitman*, ed. Michael Warner (New York: Penguin Books, 2004).
- 2 Henry Adams, *The Education of Henry Adams* (Boston: Houghton Mifflin Co., 1918), chap. 25; www.bartleby.com/159/ (accessed June 2, 2022).
- 3 Quoted in David Savran, *Highbrow/Lowdown: Theater, Jazz, and the Making of the New Middle Class* (Ann Arbor: University of Michigan Press, 2009), 208. See also George Antheil, *Bad Boy of Music* (Garden City, NY: Doubleday, Doran & Co., 1945).
- 4 Michele Friedner and Stefan Helmreich, “Sound Studies Meets Deaf Studies,” in *Sounding the Limits of Life: Essays in the Anthropology of Biology and Beyond* (Princeton: Princeton University Press, 2016), 169. Besides Friedner and Helmreich and for a survey of interdisciplinary perspectives on sound, from physiology to zoology, see Patricia Kruth and Henry Stobart, eds., *Sound* (Cambridge: Cambridge University Press, 2000). On the relation of sound and listening, see, e.g., Matthew Nudds and Casey O’Callaghan, *Sounds and Perception: New Philosophical Essays* (New York: Oxford University Press, 2009); Casey O’Callaghan, *Sounds*:

A Philosophical Theory (New York: Oxford University Press, 2007); Christoph Cox, “Beyond Representation and Signification: Toward a Sonic Materialism,” *Journal of Visual Culture* 10 (Aug. 1, 2011): 145–61; Brian Kane, “Jean-Luc Nancy and the Listening Subject,” *Contemporary Music Review* 31, no. 5–6 (2012): 439–47; Jean-Luc Nancy, *Listening* (New York: Fordham University Press, 2009).

5 David Novak and Matt Sakakeeny, *Keywords in Sound* (Durham, NC: Duke University Press, 2015), 1.

6 John Blacking, *How Musical Is Man?* (Seattle: University of Washington Press, 1973). See also Bruno Nettl’s entry on “Music” in *Grove Music Online* (2001); <https://www-oxfordmusiconline.com.proxy.library.edu/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000040476> (accessed Nov. 14, 2022).

7 Jonathan Sterne, “Sonic Imaginations” in *The Sound Studies Reader*, ed. Jonathan Sterne (London: Routledge, 2012), 2. For another introduction to sound studies see Trevor Pinch and Karin Bijsterveld, *The Oxford Handbook of Sound Studies* (New York: Oxford University Press, 2013). See also Mark M. Smith, ed., *Hearing History: A Reader* (Athens: University of Georgia Press, 2004).

The last fifteen years have seen a surge of interest in sound studies and new musicology. In one measure: Oxford University Press published its first monograph in its “New Cultural History of Music” series in 2008, and the University of Chicago Press launched its “New Material Histories of Music” in 2018. Academic journals have also devoted special issues to the subject. See Gustavus Stadler, ed., “The Politics of Recorded Sound,” *Social Text* 28, no.102 (2010); Sarah Banet-Weiser, Kara Keeling, and Josh Kun, eds., “Special Issue: Sound Clash: Listening to American Studies,” *American Quarterly* 63, no. 3 (2011); Matthew B. Karush, ed., “Special Section: Music Histories,” *Journal of Social History* 52 (Winter 2018).

8 On the visual culture parallel, see Michael Denning and Gary Tomlinson, “Cantologies,” *Representations* 154, no. 1 (2021): 114. <https://doi.org/10.1525/rep.2021.154.9.113>.

9 Douglas Kahn, “Track Organology,” *October* 55 (Winter 1990): 71.

10 Raymond W. Smilor, “Cacophony at 34th and 6th: The Noise Problem in America, 1900–1930,” *American Studies* 18 (Spring 1977): 25; Hollis Godfrey, “The City’s Noise,” *The Atlantic*, Nov. 1909, 601.

11 R. Murray Schafer, *The Soundscape: Our Sonic Environment and the Tuning of the World* (Rochester, VT: Destiny Books, 1993), 7; Emily Ann Thompson, *The Soundscape of Modernity: Architectural Acoustics and the Culture of Listening in America, 1900–1933* (Cambridge, MA: MIT Press, 2002), 1; J. Martin Daughtry, *Listening to War: Sound, Music, Trauma, and Survival in Wartime Iraq* (New York: Oxford University Press, 2015), 121–25. Critiques of *soundscape* include Tim Ingold, “Against Soundscape,” in *Autumn Leaves: Sound and the Environment in Artistic Practice*, ed. A. Carlyle (Paris: Double Entendre, 2007), 10–13; Stefan Helmreich, “Listening Against Soundscapes,” *Anthropology News* 51 (Dec. 2010): 10; Ari Y. Kelman, “Rethinking the Soundscape: A Critical Genealogy of a Key Term in Sound Studies,” *The Senses and Society* 5, no. 2 (2010): 212–34; Jonathan Sterne, “The Stereophonic Spaces of Soundscape,” in *Living Stereo: Histories and Cultures of Multichannel Sound*, ed. Paul Théberge, Kyle Devine, and Tom Everett (New York: Bloomsbury, 2015), 65–83. See also David W. Samuels et al., “Soundscapes: Toward a Sounded Anthropology,” *Annual Review of Anthropology* 39 (2010): 329–45.

12 Leo Marx, *The Machine in the Garden: Technology and the Pastoral Ideal in America* (1964; New York: Oxford University Press, 1979); Sinclair Lewis, *Babbitt* (1922; New York: Bantam, 2007), 3.

13 Mrs. Isaac L. Rice, “The Children’s Hospital Branch of the Society for the Suppression of Unnecessary Noise,” *The Forum* 39 (Apr.–June 1909): 560.

14 Hillel Schwartz, “Inner and Outer Sancta: Earplugs and Hospitals,” in *The Oxford Handbook of Sound Studies*, ed. Karin Bijsterveld and Trevor Pinch (New York: Oxford University Press, 2012), 282.

15 Smilor, “Cacophony at 34th and 6th,” 36. On “noise” see also Karin Bijsterveld, *Mechanical Sound: Technology, Culture and Public Problems of Noise in the Twentieth Century* (Cambridge, MA: MIT Press, 2008).

16 Journalist Julian Street quoted in Greg Grandin, *Fordlandia: The Rise and Fall of Henry Ford’s Forgotten Jungle City* (New York: Metropolitan Books, 2009), 35. On the industrial and pre-industrial soundscape, see also Schafer, *The Soundscape*.

17 On work and labor songs, see, e.g., Philip S. Foner, *American Labor Songs of the Nineteenth Century* (Urbana: University of Illinois Press, 1975); Clark D. Halker, *For Democracy, Workers, and God: Labor Song-Poems and Labor Protest, 1865–95* (Urbana: University of Illinois Press, 1991); Archie Green, David Roediger, Franklin Rosemont, and Salvatore Salerno, eds., *The Big Red Songbook: 250+ IWW Songs!* (Chicago: Charles H. Kerr Library and PM Press, 2016); Ronald D. Cohen, *Work and Sing: A History of Occupational and Labor Union Songs in the United States* (Crockett, CA: Carquinez Press, 2010). On the relationship between music and work, see, e.g., Ted Gioia, *Work Songs* (Durham, NC: Duke University Press, 2006); Marek Korczynski, “Music

at Work: Towards a Historical Overview," *Folk Music Journal* 8, no. 3 (2003): 314–34; Marek Korczynski, *Songs of the Factory: Pop Music, Culture, and Resistance* (Ithaca: Cornell University Press, 2014); Barbara Garrity-Blake, "Raising Fish with a Song: Technology, Chanteys, and African Americans in the Atlantic Menhaden Fishery," in *Technology and the African American Experience: Needs and Opportunities for Study*, ed. Bruce Sinclair (Cambridge, MA: MIT Press, 2004), 107–18; Alexandra Hui, "Muzak-While-You-Work: Programming Music for Industry, 1919–1948," *Historische Anthropologie* 22, no. 3 (2014): 364–83.

18 Claude S. Fischer, *America Calling: A Social History of the Telephone to 1940* (Berkeley: University of California Press, 1992), 50.

19 Stephen Kern, *The Culture of Time and Space, 1880–1918* (Cambridge, MA: Harvard University Press, 2003), see ch. 10, "Temporality of the July Crisis."

20 Elizabeth Cobbs Hoffman, *The Hello Girls: America's First Women Soldiers* (Cambridge, MA: Harvard University Press, 2017).

21 Susan J. Douglas, *Listening In: Radio and the American Imagination* (Minneapolis: University of Minnesota Press, 1999), 186, xxii–xxiii, 191. On radio, see also Michele Hilmes and Jason Loviglio, *Radio Reader: Essays in the Cultural History of Radio* (London: Routledge, 2002); Hugh Richard Sloten, *Radio's Hidden Voice: The Origins of Public Broadcasting in the United States* (Urbana: University of Illinois Press, 2009).

22 Sylvester Baxter, "The Telephone Girl," *The Outlook*, May 6, 1906, 235.

23 Ruth A. Solie, *Music in Other Words: Victorian Conversations* (Berkeley: University of California Press, 2004), 63; Pennie Pflueger, "The Piano and Female Subjectivity: Kate Chopin's *The Awakening* (1899) and Jane Campion's *The Piano* (1993)," *Women's Studies* 44 (May 2015): 468–98; Jodi Lustig, "The Piano's Progress: The Piano in Play in the Victorian Novel," in *The Idea of Music in Victorian Fiction*, eds. Sophie Fuller and Nicky Losseff (Burlington, VT: Ashgate, 2004); Richard Leppert, *The Sight of Sound: Music, Representation, and the History of the Body* (Berkeley: University of California Press, 1993).

24 On the piano see Craig H. Roell, *The Piano in America, 1890–1940* (Chapel Hill: University of North Carolina Press, 1989); Arthur Loesser, *Men, Women and Pianos: A Social History* (1954; Mineola, NY: Dover Publications, 1990); Cyril Ehrlich, *The Piano: A History, Revised Edition* (Oxford: Clarendon Press, 1990); James Parakilas, et al., *Piano Roles: Three Hundred Years of Life with the Piano* (New Haven: Yale University Press, 1999); Edwin M. Good, *Giraffes, Black Dragons, and Other Pianos: A Technological History from Cristofori to the Modern Concert Grand* (Stanford: Stanford University Press, 2001).

25 Peter Cooke, "The Violin—instrument of four continents" in *The Cambridge Companion to the Violin*, ed. Robin Stowell (Cambridge: Cambridge University Press, 1992), 243.

26 On the banjo, see Philip F. Gura and James F. Bollman, *America's Instrument: The Banjo in the Nineteenth Century* (Chapel Hill: University of North Carolina Press, 1999); Laurent Dubois, *The Banjo: America's African Instrument* (Cambridge, MA: Harvard University Press, 2016).

27 John W. Troutman, *Kikā Kila: How the Hawaiian Guitar Changed the Sound of Modern Music* (Chapel Hill: University of North Carolina Press, 2016).

28 Raoul F. Camus, "Band in the United States." *Grove Music Online*, Oct. 16, 2013; <https://www-oxfordmusiconline-com.proxy.library.nd.edu/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-1002252742> (accessed May 18, 2022).

29 Mark Katz, "Making America More Musical through the Phonograph, 1900–1930," *American Music* 16 (Winter 1998): 448–75; Esther M. Morgan-Ellis, "'Making the Many-Minded One': Community Singing at the Peabody Prep in 1915," *The Musical Quarterly* 102 (Winter 2019): 361–401.

30 Richard Crawford, *America's Musical Life: A History* (New York: W. W. Norton, 2001); Russell Sanjek, *American Popular Music and Its Business, Vol. II From 1790 to 1909* (New York: Oxford University Press, 1988), 36–46, 50, 43.

31 David Gilbert, *The Product of Our Souls: Ragtime, Race, and the Birth of the Manhattan Musical Marketplace* (Chapel Hill: University of North Carolina Press, 2015), 29–31. See also W. Fitzhugh Brundage, ed., *Beyond Blackface: African Americans and the Creation of American Popular Culture, 1890–1930* (Chapel Hill: University of North Carolina Press, 2011); Eric Lott, *Love and Theft: Blackface Minstrelsy and the American Working Class* (New York: Oxford University Press, 1993); W.T. Lhamon Jr., *Raising Cain: Blackface Performance from Jim Crow to Hip Hop* (Cambridge, MA: Harvard University Press, 1998); Ronald Radano, *Lying up a Nation: Race and Black Music* (Chicago: University of Chicago Press, 2003).

32 Karl Hagstrom Miller, *Segregating Sound: Inventing Folk and Pop Music in the Age of Jim Crow* (Chapel Hill: University of North Carolina Press, 2010), 138; David Suisman, *Selling Sounds: The Commercial Revolution in American Music* (Cambridge, MA: Harvard University Press, 2009), 39.

33 Gilbert, *Product of Our Souls*, 22.

34 Lori Brooks, "The Composer versus the 'Peffessor': Writing Race and (Rag)Time," in *New Perspectives on James Weldon Johnson's The Autobiography of an Ex-Colored Man*, ed. Noelle Morrisette (Athens: University of Georgia Press, 2017), 174.

35 See ch. 1 of John W. Troutman, *Indian Blues: American Indians and the Politics of Music, 1879–1934* (Norman: University of Oklahoma Press, 2009).

36 Derek Vaillant, *Sounds of Reform: Progressivism and Music in Chicago, 1873–1935* (Chapel Hill: University of North Carolina Press, 2003). For a sensory history of Chicago in this period, see Adam Mack, *Sensing Chicago: Noisemakers, Strikebreakers, and Muckrakers* (Urbana: University of Illinois, 2015). On sound and diplomatic history in this period, see Jessica C. E. Gienow-Hecht, *Sound Diplomacy: Music and Emotions in Transatlantic Relations, 1850–1920* (Chicago: University of Chicago Press, 2009).

37 Douglas C. Baynton, *Forbidden Signs: American Culture and the Campaign against Sign Language* (Chicago: University of Chicago Press, 1996), 55. See also Susan Burch, *Signs of Resistance: American Deaf Cultural History, 1900 to World War II* (New York: NYU Press, 2002).

38 Lawrence W. Levine, *Highbrow/Lowbrow: The Emergence of Cultural Hierarchy in America* (Cambridge, MA: Harvard University Press, 1990); Levine quoting George Templeton Strong, 86. On culture and social hierarchy, see Raymond Williams, *Culture and Society, 1780–1950* (New York: Columbia University Press, 1958); Terry Eagleton, *The Idea of Culture* (Malden, MA: Wiley-Blackwell, 2000).

39 Levine, *Highbrow/Lowbrow*, 9.

40 See, e.g., Joan Shelley Rubin, "Rethinking the Creation of Cultural Hierarchy in America," *Reception: Texts, Readers, Audiences, History* 6 (2014): 4–18. Joseph Horowitz, "Music and the Gilded Age: Social Control and Sacralization Revisited," *Journal of the Gilded Age and Progressive Era* 3 (July 2004): 227–45.

41 See, e.g., William Howland Kenney, *Recorded Music in American Life: The Phonograph and Popular Memory, 1890–1945* (New York: Oxford University Press, 1999).

42 John Philip Sousa, "The Menace of Mechanical Music," *Appleton's Magazine*, Sept. 1906; Suisman, *Selling Sounds*, 164.

43 James W. Cook and Lawrence B. Glickman, "Twelve Propositions for a History of U.S. Cultural History," *The Cultural Turn in U.S. History: Past, Present, & Future*, ed. James W. Cook, Lawrence B. Glickman, and Michael O'Malley (Chicago: University of Chicago Press, 2009), 25. On cultural history, see also Peter Burke, *What Is Cultural History?*, 3rd ed. (Cambridge: Polity Press, 2019). On the hegemony/agency debate, see, e.g., the 1992 *American Historical Review* debate: Lawrence W. Levine, "The Folklore of Industrial Society: Popular Culture and Its Audiences," *American Historical Review* 97 (Dec. 1992): 1369–99; Robin D. G. Kelley, "Notes on Deconstructing 'The Folk,'" *American Historical Review* 97 (Dec. 1992): 1400–08; T. J. Jackson Lears, "Making Fun of Popular Culture," *American Historical Review* 97 (Dec. 1992): 1417–26. For a discussion of music as expression of cultural resilience see especially the work of George Lipsitz, including George Lipsitz, "Popular Culture: This Ain't No Sideshow," in *Time Passages: Collective Memory and American Popular Culture* (Minneapolis: University of Minnesota Press, 1990), 3–20; Lipsitz, *Rainbow at Midnight: Labor and Culture in the 1940s* (Urbana: University of Illinois Press, 1994); Lipsitz, *Dangerous Crossroads: Popular Music, Postmodernism, and the Poetics of Place* (London: Verso, 1994); Lipsitz, *Footsteps in the Dark: The Hidden Histories of Popular Music* (Minneapolis: University of Minnesota Press, 2007).

44 David Suisman, "Introduction: Thinking Historically About Sound and Sense," in *Sound in the Age of Mechanical Reproduction*, ed. David Suisman and Susan Strasser (Philadelphia: University of Pennsylvania Press, 2010), 3.

45 Emily Ann Thompson, *The Soundscape of Modernity: Architectural Acoustics and the Culture of Listening in America, 1900–1933* (Cambridge, MA: MIT Press, 2002), 172.

46 Thompson, *Soundscape of Modernity*, 233–34, 3.

47 Jonathan Sterne, *Audible Past: The Cultural Origins of Sound Reproduction* (Durham, NC: Duke University Press, 2003), 23.

48 Sterne, *Audible Past*, 9.

49 Some key works will be discussed below; other noteworthy, new scholarship includes Alejandra M. Bronfman, *Isles of Noise: Sonic Media in the Caribbean* (Chapel Hill: University of North Carolina Press, 2016); Dolores Ines Casillas, *Sounds of Belonging: U.S. Spanish-Language Radio and Public Advocacy* (New York: New York University Press, 2014); Christine Ehrick, *Radio and the Gendered Soundscape: Women and Broadcasting in Argentina and Uruguay, 1930–1950* (Cambridge: Cambridge University Press, 2015); Steven Feld, *Sound and Sentiment: Birds, Weeping, Poetics, and Song in Kaluli Expression*

- (Philadelphia: University of Pennsylvania Press, 1982); Steven Feld, *Jazz Cosmopolitanism in Accra: Five Musical Years in Ghana* (Durham, NC: Duke University Press, 2012); David Novak, *Japanese Music at the Edge of Circulation* (Durham, NC: Duke University Press, 2013); Ronald Radano, *Lying up a Nation: Race and Black Music* (Chicago: University of Chicago Press, 2003); Ronald Radano and Tejumola Olaniyan, eds., *Audible Empire: Music, Global Politics, Critique* (Durham, NC: Duke University Press, 2016); Mark M. Smith, *Listening to Nineteenth-Century America* (Chapel Hill: University of North Carolina Press, 2001); Timothy D. Taylor, *Music in the World: Selected Essays* (Chicago: University of Chicago Press, 2017).
- 50 Sumanth Gopinath, *The Ringtone Dialectic: Economy and Cultural Form* (Cambridge, MA: MIT Press, 2013); Jennifer Lynn Stoeber, *The Sonic Color Line: Race and the Cultural Politics of Listening* (New York: NYU Press, 2016); Karl Hagstrom Miller, *Segregating Sound: Inventing Folk and Pop Music in the Age of Jim Crow* (Durham, NC: Duke University Press, 2010).
- 51 Dylan Robinson, *Hungry Listening: Resonant Theory for Indigenous Sound Studies* (Minneapolis: University of Minnesota Press, 2020), 10.
- 52 Robinson, *Hungry Listening*, 1.
- 53 Robinson, *Hungry Listening*, 11, 38.
- 54 Robinson, *Hungry Listening*, 72.
- 55 Nina Sun Eidsheim, *Sensing Sound: Singing and Listening as Vibrational Practice* (Durham, NC: Duke University Press, 2015).
- 56 Eidsheim, *Sensing Sound*, 2, 8.
- 57 Gavin Steingo and Jim Sykes, "Remapping Sound Studies in the Global South," in *Remapping Sound Studies*, ed. Gavin Steingo and Jim Sykes (Durham, NC: Duke University Press, 2019). See also Gus Stadler, "On Whiteness and Sound Studies," *Sounding Out!*; <https://soundstudiesblog.com/2015/07/06/on-whiteness-and-sound-studies/> (accessed Jul. 5, 2023).
- 58 Steingo and Sykes, "Remapping Sound Studies in the Global South," in *Remapping Sound Studies*.
- 59 Tsitsi Ella Jaji, *Africa in Stereo: Modernism, Music, and Pan African Solidarity* (New York: Oxford University Press, 2014), 6.
- 60 Jessica A. Schwartz, *Radiation Sounds: Marshallese Music and Nuclear Silences* (Durham, NC: Duke University Press, 2021).
- 61 Stoeber, *Sonic Color Line*; Nina Sun Eidsheim, *The Race of Sound: Listening, Timbre, and Vocality in African American Music* (Durham, NC: Duke University Press, 2018).
- 62 Miller, *Segregating Sound*.
- 63 Alexandra Hui, "Listening to Extinction: Early Conservation Radio Sounds and the Silences of Species," *American Historical Review* 126 (Dec. 2021): 1373–74.
- 64 Hui, "Listening to Extinction: Early Conservation Radio Sounds and the Silences of Species," 1373. For work at the intersection of environmental studies and musicology, see also scholarship in eco-musicology, e.g., Kyle Devine, *Decomposed: The Political Ecology of Music* (Cambridge, MA: MIT Press, 2019); Alexander Rehding, "Eco-Musicology," *Journal of the Royal Musical Association* 127, no. 2 (2002): 305–20; Alexander Rehding, "Ecomusicology Between Apocalypse and Nostalgia," *Journal of the American Musicological Society* 64 (Summer 2011): 409–14; Aaron S. Allen, "Ecomusicology: Ecocriticism and Musicology," *Journal of the American Musicological Society* 64 (Summer 2011): 391–94; Aaron S. Allen and Kevin Dawe, eds., *Current Directions in Ecomusicology: Music, Culture, Nature* (London: Routledge, 2015).
- 65 Marina Peterson, *Atmospheric Noise: The Indefinite Urbanism of Los Angeles* (Durham, NC: Duke University Press, 2021), 4.
- 66 Steve Goodman, *Sonic Warfare: Sound, Affect, and the Ecology of Fear* (Cambridge, MA: MIT Press, 2012), xiv.
- 67 For a comprehensive, even encyclopedic, account of the making and hearing of "noise" see Hillel Schwartz, *Making Noise: From Babel to the Big Bang & Beyond* (Brooklyn, NY: Zone Books, 2011).
- 68 Jaipreet Virdi, *Hearing Happiness: Deafness Cures in History* (Chicago: University of Chicago Press, 2020). On the history of oralism and deafness cures, see also Katie Booth, *The Invention of Miracles: Language, Power, and Alexander Graham Bell's Quest to End Deafness* (New York: Simon & Schuster, 2021). On speech and deaf education see also Mara Mills, "Deaf Jam: From Inscription to Reproduction to Information," *Social Text* 28 (Mar. 2010): 35–58; Mara Mills, "Hearing Aids and the History of Electronics Miniaturization," *IEEE Annals of the History of Computing* 33, no. 2 (2011): 24–44; Mara Mills, "Deafening: Noise and the Engineering of Communication in the Telephone System," *Grey Room* (Spring 2011): 118–43; https://doi.org/10.1162/GREY_a_00028.

69 Viktoria Tkaczyk, Mara Mills, and Alexandra Hui, *Testing Hearing: The Making of Modern Aurality* (New York: Oxford University Press, 2020), 2.

70 Alexandra Hui, *The Psychophysical Ear: Musical Experiments, Experimental Sounds, 1840–1910* (Cambridge, MA: MIT Press, 2012).

71 Neil Verma, *Theater of the Mind: Imagination, Aesthetics, and American Radio Drama* (Chicago: University of Chicago Press, 2012).

72 Verma, *Theater of the Mind*, 9.

73 Douglas Kahn, *Earth Sound Earth Signal: Energies and Earth Magnitude in the Arts* (Berkeley: University of California Press, 2013), 2, 7.

74 Suisman, *Selling Sounds*.

75 On the last of these concerns, which bears on digital humanities, see Emily Hansell Clark, “A Postcolonial MIR?” *Resonance* 3 (Winter 2022): 412–32 for a discussion of music information retrieval (MIR) and efforts to bridge the methodologies of computer science and the humanities in creating tools to analyze archived sound recordings.

Rebecca Tinio McKenna is associate professor of history at the University of Notre Dame. Her first book *American Imperial Pastoral: The Architecture of US Colonialism in the Philippines* (Chicago, 2017) explored the literal and figurative architecture of the U.S. occupation of the Philippines. She is currently at work on a material and cultural history of the American piano.

David Suisman is associate professor of history at the University of Delaware. His first book, *Selling Sounds: The Commercial Revolution in American Music* (Harvard, 2009), explored the origins of music as big business in the United States at the turn of the twentieth century. He is co-editor of *Sound in the Age of Mechanical Reproduction* (Penn, 2010) and *Capitalism and the Senses* (Penn, 2023). His next book, *Instrument of War: Music and the Making of America’s Soldiers* (Chicago, forthcoming) analyzes how music enabled U.S. war-making from the Civil War to the wars in Afghanistan and Iraq.