SOUND OBJECTS

EDITORS ■ JAMES A. STEINTRAGER ▲ REY CHOW

SOUND OBJECTS

EDITORS | James A. Steintrager and Rey Chow

DUKE UNIVERSITY PRESS

Durham and London

2019

Printed in the United States of America
on acid-free paper ∞
Designed by Matthew Tauch
Typeset in Scala Pro and Scala Sans Pro
by Westchester Publishing Services

Library of Congress Cataloging-in-Publication Data
Names: Steintrager, James A., [date] editor. | Chow, Rey, [date] editor.
Title: Sound objects / James A. Steintrager and Rey Chow, editors.
Description: Durham : Duke University Press, 2018. | Includes bibliographical references and index.
Identifiers: LCCN 2018021935 (print)
LCCN 2018030091 (ebook)
ISBN 9781478002536 (ebook)
ISBN 9781478001096 (hardcover : alk. paper)
ISBN 9781478001454 (pbk. : alk. paper)
Subjects: LCSH: Sound—Social aspects. | Auditory perception. | Sound (Philosophy)
Classification: LCC QC225.7 (ebook) | LCC QC225.7 .S68 2018 (print) | DDC 534.01—dc23
LC record available at https://lccn.loc.gov/2018021935

Cover art: Paul Klee, *Fuge in Rot* [*Fugue in Red*], 1921, 69. Watercolor and pencil on paper on cardboard, 24.4 cm × 31.5 cm. Private collection, Switzerland, on extended loan to the Zentrum Paul Klee, Bern.

Contents

Acknowledgments

This volume is the third installment of an ongoing project and intellectual collaboration that began with a special double issue of *differences: A Journal of Feminist Cultural Studies* that appeared in 2011 and that we titled "The Sense of Sound." We started more with a sense of curiosity and interest than expertise and certainly without realizing that sound studies was rapidly congealing into a field—if, thankfully, not quite a discipline. Several of the contributors to that initial foray return here: Michel Chion, Veit Erlmann, John Mowitt, and Jonathan Sterne. We thank them for sticking with us and continuing in multifarious and creative ways to deepen our explorations of the sonic field. The second installment was James A. Steintrager's translation of and critical introduction to Michel Chion's *Sound: An Acoulogical Treatise*, which appeared in 2016 with Duke University Press. The author's profound engagement with the legacy of Pierre Schaeffer and his notion of the "sound object" helped shape the path we have chosen for this collection.

Along the way, we have benefited enormously from conversations, criticism, and debates, both in and out of academic settings. Special thanks go to Julie Napolin, Dominic Pettman, and Pooja Rangan for organizing and bringing us to the Sonic Shadows symposium at the Eugene Lang College of the New School in the spring of 2015 (JS and RC); to Luis Carcamo-Huechante for the Future of Sound Studies symposium at the National Humanities Center in the spring of 2014 (RC); to Jacqueline Waeber for the Study Day: Voices and Noises workshop at the Franklin Humanities Center, Duke University, held

in the spring of 2015 (RC); to Frances Ferguson for the invitation to deliver the Frederic Ives Carpenter Lectures ("Acousmatic Sound and the Writing Voice in Cinema: A Preliminary Discussion") at the University of Chicago in the fall of 2015 (RC); to Louise Meintjes for the Remapping Sound Studies: A Turn to the Global South symposium at Duke University in the spring of 2016 (RC); to Nina Sun Eidsheim and Annette Schlicter for convening and guiding the Keys to Voice Studies: Terminology, Methodology, and Questions across Disciplines Multicampus Research Group at the University of California from 2012 to 2014 (JS); and to J. D. Connor, Ben Glaser, and Brian Kane for the Techniques of the Listener conference-cum-workshop at the Whitney Humanities Center at Yale University in the spring of 2016 (JS). We also thank individuals whose scholarship and friendship over the years inform these pages: Giorgio Biancorosso and Andy Hamilton (JS); Mladen Dolar, Mark Hansen, Brian Kane, and Alenka Zupančič (RC).

Duke University Press has been with us for the entire trajectory, and our gratitude and debt to Courtney Berger, senior editor and editorial department manager, and to Sandra Korn, editorial associate, only grows. Thanks, as well, to Christopher Catanese, our project editor, and to Susan Deeks, for her thoughtful and thorough copyediting. The comments and criticisms of the generous anonymous reviewers helped make this a better book than it would have been without them. Sophie Smith and Blake Beaver of the Program in Literature at Duke helped coax the manuscript into shape at different stages, and to both we are grateful. To Blake, in particular, we owe the meticulously compiled, indispensable bibliography.

Above all, we thank each and every one of the contributors to this volume for putting in the hard work and putting up with our editorial interventions, and for gamely and profoundly thinking along with us.

— JS AND RC

JAMES A. STEINTRAGER, WITH REY CHOW

Sound Objects

An Introduction

The collective thrust of this volume is to make a multifaceted case for thinking the topic of sound objects theoretically. By "theoretically" we do not intend the establishment or application of a pristine set of methodological assumptions or conceptual givens. On the contrary, whatever the real need for abstraction and high-order conceptualization, we think that theory must always also entail something akin to what Michel Foucault has taught us to call the analysis of a *discourse*. Such analysis requires unpacking the ample historical and institutional baggage that (often silently) accompanies a particular topic, and its task is to situate the topic in question epistemologically and practically through multiple connections that hitherto have failed to be articulated. Let us right away add that "theory" itself is such a discourse and cannot be naïvely summoned or applied. We might begin, then, by schematically evoking the moment that the academic discourse of "theory" emerged in the 1960s in contrast to the then mainstream philosophical currents of existentialism and, more particularly for our purposes, phenomenology and contemplate the place of sound therein.

Although other senses certainly came under discussion, the phenomenological approaches of Edmund Husserl, Martin

Heidegger, and Maurice Merleau-Ponty largely tended to the visual: appearances and images in relation to an intending consciousness *qua* observer. In their collective rebellion against phenomenology, structuralist and poststructuralist thinkers from Roland Barthes to Paul de Man countered with symbolic or semiotic systems and with an insistence on the text: the immediacy of the image became remediated through the (written) word; language and figuration inscribed the heart of the visual. As far as sound was concerned, it was primarily the human voice that attracted interest and here, too, as subject to critique. Thus, for Jacques Derrida the phenomenological voice was like the image: yet another attempt to capture presence that the inherent textuality of language—regardless of medium—always already thwarted.[1] This crucial postwar philosophical encounter between phenomenology and its critics came to define "theory" in the North American academy, where the emphasis on textuality understandably appealed to literary scholars and where the *distinction* of engaging with certain varieties of European philosophy inflated, if only for a while, their cultural capital.[2]

As rapid technological innovations pressed theory to keep up and to incorporate a broader array of media into its machinery, the shift from analog to digital often appeared as a mere extension of the textual: now recast as "code," this digital text was once again shown to underlie, if not undermine, a thoroughly constructed visual realm. Consider, for example, the interest in identity formation in virtual worlds and in the ontological status of computer-generated images that characterized much premillennial theorizing. The most infamous intellectual in this regard certainly indulged in prophetic rhetoric but is not uncharacteristic: Jean Baudrillard, who declared traditional notions such as "aesthetic illusion" and "representation" to be in general "cancelled out by technical perfection." He writes, "As hologram or virtual reality or three-dimensional picture, the image is merely the emanation of the digital code which generates it."[3] The recent return to aesthetics, affects, and the senses has likewise oscillated between image and text, showing scant interest in the topic of sound as such.

Take the work of Jacques Rancière, a vital link to what we might call classical French theory, however critical he may be of it. Rancière has joined investigation into the effects of new technologies with multifarious meditations on aesthetics and has questioned media-deterministic notions that the shift to the digital is responsible for sundering the image from reality.[4] He has argued instead that aesthetic programs in cinema had long since engineered such a change by drawing on operations that were first worked out in the modern novel. Elaborating how "aesthetic experience" trans-

forms "the cartography of the perceptible, the thinkable, and the feasible" by introducing "a multiplicity of folds and gaps in the fabric of common experience," Rancière, with few exceptions, has almost entirely limited his examples to photography and painting, to literature, and to cinema.[5] He tends to conceive cinema, moreover, not so much as an audiovisual medium as a narrative-cum-visual one. This tendency to emphasize the visual and textual is evident even when Rancière is critically following the trail of Gilles Deleuze and Félix Guattari's discussion of art in *What Is Philosophy?,* a work that argues that, as exemplars of "all art," music and painting "similarly extract new harmonies, new plastic or melodic landscapes, and new rhythmic characters that raise them to the height of the earth's song and the cry of humanity" from "colors and sounds."[6] Yet if Rancière's tendency to revert to the visual and textual as default modes gives us pause, so, too, should Deleuze and Guattari's blithe blurring of the visual and aural, which threatens to obliterate particularity.

In sum, both historical and ongoing theoretical inquiry and media studies in anxious, celebratory, or critical mode has generally condensed around visuality, and much less studied has been the position and role of aurality. We might situate this relative neglect as a reverberation of the emergence of aesthetics as a branch of philosophical enquiry in the late eighteenth century and particularly of the ongoing resonance of Kantian philosophy. Indeed, Kant, who set up the paradigm for doing "critique," was deeply revered by the poststructuralists even as they sought to undermine "the subject" he placed at the center of his philosophical project. Take the Kantian sublime, for example, wherein the faculty of the *imagination* is blocked and its powers of representation meet their limit. Is not the *failure of representation* the poststructuralist and particularly deconstructionist theme *par excellence*? As for the beautiful, Kant wed a rather anodyne account of harmony as the essence of sonic beauty to a basic distrust of music. In his hierarchy of artistic modes, Kant placed poetry at the top, painting in the middle, and music at the bottom (along with what he called "material for laughter"). As an example of merely formal purposiveness and not an obvious carrier of representational content, music—even so-called programmatic music—should have seemingly come out on top. Nonetheless, Kant determines that, while arising from a "play with aesthetic ideas or even representations," music is an art by which "in the end nothing is thought" and that provides only a revivifying "movement of the viscera."[7] Certainly, positions such as this also provoked strongly dissenting philosophical reactions. Arthur Schopenhauer elevated music to the highest of arts, and

Friedrich Nietzsche, at least initially, lionized Wagner as the composer who, in melding Apollonian structure to Dionysian ecstasy, achieved the modern apotheosis of the tragic spirit. Yet, as we shall subsequently argue, perhaps such dissent served only to condemn sound to forever playing the role of disruptor of the hegemonic visual within philosophy—to only ever being "noise," some inchoate beyond of representation.

Trompes l'Oreille?—or, The Trouble with Theorizing Sound

Kant's lasting impact notwithstanding, we might also consider the place of visuality in the longue durée of Western philosophy, where the visual frequently enough has been treated as both the sovereign mode of perception *and* a source of illusion and error. We do not need to rehearse Plato's simultaneous distrust of the visual and reliance on visual metaphors in his conception of knowledge. We might recall, however, that "theory" itself is derived from the Greek word for viewing. For instance, while he downplayed the role of spectacle (*opsis*) in tragedy in favor of plot and character, Aristotle drew in his ethical philosophy on the visual figure of *theoria* to define intellectual contemplation as the highest end of human existence.[8] Let us take this derivation as a suggestion. That is, while we are putting forward the need for theory, maybe theory (as seeing) is also what we must disentangle ourselves from if we are to give our subject its due. Thus, while a whole host of questions having to do with truth and deception has traditionally accompanied sight, giving rise to what, in his study of contemporary French philosophy, Martin Jay has called "iconophobia," sound does not seem to operate in the same manner.[9] Needless to say, sounds, too, can be used to deceive. Let us cite Kant again, at a rare moment in which he does consider sound. In this case, he imagines the effect on listeners who, thinking they are enjoying the "bewitchingly beautiful song of the nightingale," discover that the source is a "mischievous lad" hiding in the bushes and imitating the bird with a pipe or reed.[10] According to Kant's logic, the natural sound would fulfill the criterion of disinterested interest necessary for the beautiful: a birdsong serves no end for us, but we find its play pleasing nonetheless—or rather, it grounds the harmonious play of our faculties of imagination and understanding. Once exposed as artificial rather than natural, however, the sound is no longer of interest in and of itself; our attention instead shifts to the landlord's aim to enchant us.

As the listener discovers a (profit) motive behind the source, sonic charm turns into disgust. But let us be clear about something crucial: while the sound sources (nightingale and pipe) are quite different, the sounds, for all practical purposes, are identical. In other words, the deception relates to the sources, not to the sounds in themselves.

If our ears are in a manner tricked (or trickable), Kant's example does not exactly provide the aural equivalent of a trompe l'oeil. And what might be the analogue of the trompe l'oeil, in which two-dimensional images produce an effect of three-dimensionality? Can sounds deceive in a manner analogous to vision at all? Perhaps we should not be so quick, however, to argue that Kant's example is not a *trompe l'oreille*.[11] One way to think about this odd category is precisely in terms of how vastly different sound sources can create sound events that we perceive as similar or even identical, thus thwarting our usual ability to accurately infer causes, as well as location, from sounds in our environment. In his argument that we need a better understanding of "everyday listening" and the ways in which we operate in a sonic ecology, William Gaver notes that we rarely confuse sounds made by "vibrating solids" with those made by water, although there are exceptions, such as "rain sticks," made by inserting rows of pegs within a tube: "When the tube is turned over, small beads and shells run down its length, striking these pegs and producing a sound remarkably like that of running water." Gaver adds that such is "an example of an illusion in everyday listening of the sort exploited by Foley artists creating sound-effects."[12] Along these lines, in his analyses of audiovisuality, Michel Chion has spent considerable time examining the specific ways that sounds in cinema "render" events and objects rather than representing them.[13] In fact, a sound that is not strictly mimetic might be more effective—more effectively deceptive—than the real thing. A snapped stalk of celery may better render a broken bone when matched to an appropriate visual than the sound of actual bone being broken.

If we are to think about trompes l'oreille, therefore, we should focus on their specific differences from illusionary visual effects as well as on interactions between the visual and aural. But we should also ask: What do they matter? Are there critical and ultimately practical implications? To take up ideology, for example, if sounds can be reified and fetishized—as Theodor Adorno certainly claimed for popular music—do they obey the same laws as commodities presented in image form? Marx's notion of commodity fetishism, after all, is based on a visual metaphor: the fetish captures our gaze and asserts its facticity, thereby occulting the actual relations of production.

Why is there so much talk about the society of the spectacle and not that of the . . . sonic what? We seem to lack an equivalent term. Or to shift the topic from Marxism to poststructuralism: Was there any aural analogue of the tellingly named Panopticon, Jeremy Bentham's prison project that Foucault generalized to modern disciplinary regimes, their tactics of surveillance, and the formation of the subject through the internalization of observation? Did or does sound play a role in modern modes of subjectivation? Interestingly, Bentham considered a prisoner's ability to make "noise" as the sole weakness of his system: resistance as sonic externalization rather than visual internalization (although he also thought that the mere threat of a gag would likely be sufficient to enforce silence).[14] These questions and comparisons seem to demand for sound an order of conceptualization that is distinct from the visually oriented, an order that, to be specific, runs counter to the concreteness and the alluring—indeed, *blinding*—obviousness of the visual. Calling for a theory (or, more pluralistically, theories) of the sonic ought to acknowledge the terminological misfit, at least in etymological terms: sound objects are not contemplated at all; they are apprehended in ways other than the visual. This suggests that the very framework and rhetorical resonances of "theory" are potentially misleading and inadequate—and that theory itself must also proceed otherwise, with sound.

Sound Objects: The Problematic

Why sound objects, then? What are they, anyway? We intend and believe it necessary to have these question marks hover over this undertaking. We do not assume that sounds are objects; nor are we providing the catalogue for a cabinet of sonic curiosities. To investigate and interrogate the very existence of such "things" and their interrelations instigated this project and was the directive given to our contributors. To be sure, we began with an awareness that the term "sound objects" has a genealogy. In the middle of the twentieth century, Pierre Schaeffer formulated a research program for what he initially termed *musique concrète*. Based primarily on recordings of noninstrumental sounds—including, famously, the hissing steam engines and metallic wheel clacks of trains—such music would be *concrete* in the sense of a drawing on the material qualities of these captured sounds rather than assuming an abstract (pitch-centered and notational) musical system and working from there. The dichotomy, however, never entirely

held. By the middle of his essay *In Search of a Concrete Music* (*A la recherche d'une musique concrète*; 1952), Schaeffer himself admits that he could have just as easily described his endeavor as a quest for "abstract music."[15] With sufficient technological manipulation the concrete can readily be transformed into its opposite: deracinated sonic matter for composition, at most haunted by its real-world origins. Schaeffer would eventually abandon the label *musique concrète* in favor of the more open-ended *musique expérimentale*. Nonetheless, two key concepts that Schaeffer had developed during his exploratory forays carried over into his subsequent work and would become central to his summa on sonic thinking, the *Treatise on Musical Objects* (*Traité des objets musicaux*; 1966).[16] These concepts were acousmatic listening—that is, listening without visual access to a sound source—and *objets sonores*, or "sound objects."

Kant's hidden warbler who tricks his enraptured listeners is a good example of an acousmatic situation. Of course, there have always been sounds heard without visual accompaniment of their sources: bells in the distance, footsteps in the hallway, cicadas in the trees. Still, Kant's example pinpoints an uncommon occurrence insofar as the boy functions as a sort of human synthesizer who must be deliberately obscured so as not to ruin the effect. By contrast, such obscuring of sonic sources would come increasingly to *define* modern audial environments. In Schaeffer's day, acousmatic listening simply named a situation that had already become generalized through technological media of broadcast and of reproduction: radio transmission, magnetic tape, and phonography. Interestingly, what survived the transition to the new media is the old question of willful deception. We see in Adorno's mid-century excoriations of the culture industry's holding radio listeners in distracted thralldom and R. Murray Schafer's later diagnosis of listeners in the age of sound reproduction as suffering from "schizophonia."[17] Such misgivings notwithstanding, by separating listeners from the sight of the original *sounding objects*, the technologies of broadcast and of reproduction brought about a fundamental conceptual shift to—and promised the material possibility of—what Schaeffer, calling on Husserlian phenomenological terminology and applying the move of *epochē* (phenomenological bracketing), would label reduced listening: attending to sounds in themselves, and analyzing sounds strictly in terms of their formal attributes rather than in relation to cause, context, or semantic information.

For Schaeffer, acousmatic listening and its conceptual derivative, reduced listening, were in many ways means to an end: they underwrote a

research program that aimed to develop a descriptive morphology and typology of sounds regarded as self-standing *sound objects*. Schaeffer, in other words, approached sounds as discrete and multifaceted phenomena rather than as carriers of meaning or as effects bound to sources and causes. For all of the insistence on concreteness in Schaeffer's earlier writings, there is something idealist about this phenomenological approach. This idealism is nicely captured in Brian Kane's characterization of Schaefferian sound objects as phantasmagoric.[18] At the same time, Schaeffer's attempt to provide formal schemata—annexing arbitrary markers such as x′ for sound objects that are impulses with complex pitch and fixed mass, y″ for objects with somewhat variable mass and iterative, and so forth—pushed his program further into abstraction, revealing deep structuralist affinities in his thinking alongside his phenomenological tendencies. There is, as well, a more general scientific trend at work here. Schaeffer's attempts to render sound objects in graphic terms are a telltale example of the turn toward to "structural objectivity" (which focused on invariant structures and eschewed forms of presentation that suggested subjectivity) that, in their magisterial historical study *Objectivity*, Lorraine Daston and Peter Galison locate as emerging in the late nineteenth century and early twentieth century and that is still very much part of scientific discourse today.[19]

That said, we would insist that the genealogy of the "sound object" in Schaeffer's conceptual apparatus is inseparable from the technological media of reproduction at his disposal. The sound object arose, conceptually, from the ability to record and to create loops of magnetic tape and closed grooves on phonograph records. For sound to become object—since it could not be observed like a static visual object—required a chartable consistency enabled only by repetition: something to master or, at least, temper its temporal flux and ephemerality. This was accomplished by fixing and isolating a sound with a looped magnetic tape or a locked groove on a record.[20] This process not only wrenches a sound from its source and context; as the loop or groove repeats a sonic event, the sound *becomes* an object for the listener. The sound object was thus neither found nor captured. It was in part machine-made; in part, a construct of iterative perception. Described in this way, the emergence of the sound object in Schaefferian terms recalls Deleuze's account of *difference and repetition* in the work bearing that name in 1968.[21] According to Deleuze, for identity to arise there must be repetition; repetition always involves difference, and so difference needs to be placed at the heart of identity. Deleuze notwithstanding, we imagine that for anyone who came of academic age when

poststructuralist French thought was a dominant force, our description of the construction of the Schaefferian object will chiefly bring to mind deconstruction. As we briefly noted earlier, Derrida's deconstruction took off from a specifically sonic version of this paradox of identity as difference: the critique, in *Voice and Phenomenon* [*La voix et le phénomène*], of the employment of *voice* as a transparent, self-present medium within Husserl's phenomenology. Derrida's essay was published in 1967 and formed part of a trio of works that he unleashed that year, along with *Of Grammatology* and *Writing and Difference*. In all three works, Derrida set out to show that voice—even the proverbial inner voice—is structured, and that structure itself entails difference and deferral, disrupting Husserl's quest to suspend ontological considerations and to simply describe and analyze phenomena as intentional correlates of consciousness. What Derrida did, in effect, was to weaponize structuralist linguistics in order to dismantle the phenomenological project.

At the same time, Schaeffer's attempt to categorize sound objects in morphological and typological terms recalls another crucial poststructuralist text: Michel Foucault's *The Order of Things* [*Les mots et les choses*], which appeared in 1966, the very same year as *Treatise on Musical Objects*. Although the former by no means concentrates on sound, Foucault does examine how what he called the classical *episteme* of representation and the subsequent epistemic regime of the nineteenth-century period handled the relation between sound and signification. In the classical episteme, "language arose when the noise produced by the mouth or the lips had become a letter," and this letter was linked to objects; language in the classical episteme is fundamentally centered on nouns and the indication of objects.[22] For nineteenth-century philologists, by contrast, language "exists when noise has been articulated and divided into a series of distinct sounds," and these sounds—ephemeral, vibratory—express poetic insights and actions; language has become fundamentally centered on verbs. We will not dwell on Foucault's assertions in this regard, except to say that they provide a fine instance of what we might call the historian's epochē: bracketing whatever constitutes the actual relations between sound and language (as they were used by speakers) to pinpoint a difference in how these relations were construed over time. Indeed, what we do want to underline is that at the very moment Schaeffer was attempting to classify "sound objects"—in a rather structural or schematic way, we might add—Foucault was attempting to historicize the structures underlying classificatory schemata of various sorts, structures that he would describe as the "unthought."

By contrast, others in the poststructuralist fold would call on sound as a figure of resistance to representation and to structure itself. Thus, Deleuze and Guattari would read instances of sound in Kafka's writings as a force of de-territorialization beyond the semantic and formal impositions. In the "warbling" that blurs Gregor's speech, the "cough of the ape," the "whistling of the mouse," and other embodiments of sonic disruption in Kafka's oeuvre, they find a force that draws "a line of abolition" across music and "a line of escape" that slices through language, liberating "a living and expressive material that speaks for itself and has no need of being put into a form."[23] We could locate many other examples of noise treated similarly, as a potentially emancipatory or ultimately constructive disruption of sense and a rent in the phenomenal fabric or texture of constructed reality. Let us mention a few crucial ones.

Conjoining Marxism and poststructuralism with a penchant for the Dionysian strand in Nietzsche's early writings, Jacques Attali celebrated the violent, revolutionary power of "noise" in the "rupture" of networks and "destruction of codes"—a power that simultaneously provided the material for new experiences, novel types of creativity, and emergent modes of communal organization.[24] To make his case, Attali drew further inspiration from Henri Atlan's cybernetic and biological notion of noise not only as entropy but also a source of order.[25] In a comparable fashion, Michel Serres would convert the aural parasites of information theory into powers of creation.[26] An echo of these constructions of noise is found in Friedrich Kittler, who provided the tightest link between poststructuralism and media studies in a McLuhanite vein. Arguing for the sundering of the sensorium and its reorganization by media technologies in the twentieth century, Kittler matched the typewriter to Lacan's Symbolic order; film, to the Imaginary; and phonography, to the Real. In Kittler's account, "The phonograph does not hear as do ears that have been trained to filter voices, words, and sounds out of noise"; rather, it "registers acoustic events as such [and] reproduces the unimaginable real."[27] Noise, then, is sound unmediated, prior but also posterior to language or music, and the phonograph captures what audition winnows and occludes: it is the technical apparatus that confronts us with the acoustic sublime. A more recent effort furthering Kittler's logic, one that places mathematical and machinic interventions at the center of sound capture and preservation, is found in the "media archaeology" work of Wolfgang Ernst.[28] For Ernst, sound—or what he prefers to call sonicity—needs to be liberated altogether from the conventional time domain that is still bound to the human sensorium,

which tends to be partial and erratic. "The human auditory sense does not suffice for a proper archaeology of the acoustic in cultural memory," he writes, because the "real archaeologists in media archaeology are the media themselves—not mass media (the media of representation), but measuring media that are able to not only decipher physically real signals techno-analogically, but also represent those signals in graphic forms alternative to alphabetic writing."[29] Instead of the human ear, Ernst advocates the media-archaeological ear. Instead of acousmatic or reduced listening, he asks us to think of "diagrammatic listening": "if no algorithm is present to enact the transition of sound provenience to permanent storage, the collection remains idiosyncratic and random."[30]

This handful of quite different examples reminds us that, among other tasks and in a variety of ways, poststructuralist theory's signature contribution has been the unraveling of the object. The latter was simultaneously historicized as a construct and ontologically deconstructed. At the margins, the object was the enemy, and noise—the sonic abject—promised access to a deeper reality. There is no doubt that we could trace this unraveling farther back: through Kantian critique, Hegelian dialectics, and Nietzschean perspectivism, and beyond. While this is not the occasion for such an ambitious undertaking, what we intend with this volume is the more modest task of tracing and examining the effects of an interdisciplinary and intermedial encounter that never fully took place some fifty-odd years ago but that we think should have. In brief, we want to recuperate this lost opportunity and to entwine the genealogy of the sound object with the work of poststructuralist and related theory, to bring this encounter up to date, and, crucially, to open up paths of inquiry that both acknowledge and explore the limits of theory itself.

In his foundational account of "speculative realism," Quentin Meillassoux seeks a way out of the "paradoxical nature of correlational exteriority."[31] He concedes that whether "affective or perceptual, the sensible only exists as a *relation*" between "the world and the living creature I am," and yet he tries to find a path back to objects with properties "exempt from constraint of such a relation."[32] Object-oriented ontologists have followed a similar path. We are skeptical that these recent attempts to return us to objects and to realism truly provide routes out of the paradoxes of correlationism in its many guises, among which we would include phenomenology, constructivism, and deconstruction. At the same time, we acknowledge the frustration inherent in and urgency of these projects. To speak of sound without a listener, as object-oriented ontology or computer-centered media

archaeology would suggest, seems to make little sense. Yet so, too, does speaking of sound as a construct that can be reduced to a listening subject. In recent philosophy, Casey O'Callaghan has offered an account of what he labels "sonic realism": sounds, while not objects per se, would be distal events, real occurrences outside of any perception.[33] Notwithstanding, in O'Callaghan's account the listener remains as a residuum, and a surreptitiously crucial one at that—what Derrida would have called a "supplement." On the other hand, Mark Grimshaw and Tom Garner, drawing on Deleuze and cognitive neuroscience, make a philosophical case for what they call "sonic virtuality": the notion that sound is an emergent phenomenon that encompasses both "endosonus" and "exosonus."[34] While Grimshaw and Garner ultimately revert to a conception of the sonic that privileges subjectivity and interiority, their thesis—or so we think—points in the right direction: that you cannot theorize sound without thinking the engagement of interior and exterior, of perceiver and environment. The temptation to avoid complications and paradoxes by explicitly or implicitly opting for one side or the other is great, but what truly calls for a theory of sound objects, we contend, is the ineluctable noncoincidence of emission and reception and the entanglement of subjectivity and objectivity. This noncoincidence and entanglement are what makes sound such an elusive and inexhaustible topic, and one that can be approached in various ways: as history, culture, discipline, fantasy, ideology, and much more.

A Lack within Sound Studies: The Work Ahead

Academic accounts that do focus on sound frequently assert that the subject has been overlooked, especially in relation to vision. Such assertions do not appear specific to any particular discipline and will be found in works of cultural studies, psychology, philosophy, and so forth. William Gaver, for instance, posits that research "on the psychology of everyday listening is valuable in its own right . . . balancing the typical bias towards studying vision in understanding how people perceive and act in the world."[35] Writing in the idiom of Anglo-American philosophy, Robert Pasnau argues that sound should be considered not a quality of a vibrating medium (gaseous, liquid, or solid) or as a perceptual construct (essentially mental) but, rather, as an actual quality of the sounding object. He considers the general tendency among his peers to misunderstand the nature of sound

in large part as a function of neglect: they "have been too preoccupied with colour to give the case of sound much thought."[36] It is quite possible that the rhetoric of bias and neglect—of unfairness to sound—refers to real tendencies, and we have said as much ourselves about phenomenology at the outset. Yet phenomenology is not entirely lacking in considerations of sound, including *Listening and Voice*, Don Ihde's philosophical endeavor dedicated precisely to this topic.[37] As our own examples show, poststructuralist thinkers and media theorists, especially those interested in interactive media, have certainly had things to say about sound, too. Further, over the past decade or so, a loosely constituted, multidisciplinary correlate to visual studies has rapidly arisen: sound studies.[38] It may be useful to recall just how rapid this rise has been. In the introductory chapter to *The Audible Past: Cultural Origins of Sound Reproduction* (2003), Jonathan Sterne remarks that no "parallel construct" to a "conceptualization of *visual cultures*" exists for "*sound culture* or, simply *sound studies*."[39] Sterne's book, one of the key texts that helped bring that parallel construct into existence, is now canonical in the field. Even at the time, Sterne remarked that visual and textual bias at the expense of sound could be overstated: "As there was an Enlightenment, so too was there an 'Ensoniment.' . . . Between about 1750 and 1925, sound itself became an object and a domain of thought and practice."[40] And moving to the period on which he concentrates in *The Audible Past*: "There has always been a heady audacity to the claim that vision is the social chart of modernity. While I do not claim that listening is the social chart of modernity, it certainly charts a significant field of modern practice. There is always more than one map for a territory, and sound provides a particular path through history."[41]

Within sound studies broadly construed, it remains almost de rigueur to remark and often to bemoan that the object of interest has been overlooked. While we grant that sound may indeed have been overlooked, we think that ongoing pronouncements of the sort in sound studies appear increasingly less about balance than about the differentiation of research programs and the laying down of disciplinary boundaries. The same goes for "auditory cultures," the alternative rubric that carves out a space for aural practices within the larger domain of cultural studies. To be clear, then, we are interested not in re-litigating the case in defense of sound but in probing what we see as a lack *within* sound studies: a reluctance to think sound theoretically, and to do so not against history or culture—or without listeners, for that matter—but with them. Yet, as we have indicated, the

work of theorizing sound, sound objects, and sound studies also entails locating and exploring the limits, paradoxes, and contradictions of applying a term anchored in contemplation to audition.

As sound studies has emerged as a discipline, so have origin myths, canonical references, pieties, and orthodoxies. Like much in the wake of Foucault—although certainly not Foucault alone—sound studies as a field has been deeply shaped by a now reflexive historicism. This is especially true of the histories of audio technology and the soundscapes of other eras and places. We cannot naively return to or assume objects after a history of objectivity such as Daston and Galison's. But we can and do want to resist the erasure of sound—as object? as event? as objective event?—that often accompanies such historicism. To be sure, any attempt to describe the discipline will inevitably produce narratives and counter-narratives, highlight certain contributions at the expense of others, and carve out of the multifarious past an all-too-coherent present. Our story is no different, although we would like to claim a degree of self-consciousness. Sound studies holds out as foundational a handful of figures. R. Murray Schafer's work on soundscapes in the 1970s is a frequent point of reference, albeit a point of reference often accompanied by oedipal remarks about Schafer's neo-Luddite dislike of new technologies of recording and transmission. We would note that another canonical work in sound studies—a work that has helped shape the historicist, culturalist, science-and-technology studies bent of a good portion of the field—has a title of openly Schaferian inspiration: Emily Thompson's *The Soundscape of Modernity*. Yet it is likely not Schafer but the oddly synonymic Schaeffer who holds the position of patriarch, not least because of the degree of mystery surrounding his work for non-Francophones, since his chief writings on sound were until recently untranslated. Filtering into academic discourse above all through the writings of Michel Chion, Schaeffer has nonetheless, as we argue, provided key terms and concepts to sound studies: *objets sonores* (sound objects)—the title of our volume, no less—and "acousmatic" listening. Then again, it is not exactly true that Schaeffer invented these notions, and origin stories, as usual, turn out to be complex, ramified, and even contradictory on close examination. With this observation, we can begin the overview of the chapters that constitute this volume.

We have organized *Sound Objects* by grouping essays that speak most clearly with one another, although each essay is heteroglossic, and resonances between and among chapters will be found throughout the volume. We begin with three contributions on "genealogies," and it is fitting that

our opening chapter goes to Michel Chion, who reflects on his personal history with Pierre Schaeffer, puts the formulation "sound objects" and "reduced listening" into historical context, and considers their ongoing theoretical and practical significance. We then turn to John Dack, who, with a cotranslator, Christine North, has been instrumental in making Schaeffer's work available to a wider readership via English translations of *In Search of a Concrete Music* and the monumental *Treatise on Musical Objects*. Dack underscores, contra the emphasis on the acousmatic and attendant disembodiment and dematerialization of sounds, Schaeffer's deep interest in the *facture*, or making, of sounds and in the instrumental transformation of sounds; and Schaeffer's incipient formulation of the distinction between real and virtual sound production. Brian Kane, taking up the term *objets sonores*, considers the history of the term prior to and after Schaeffer and the vagaries of translation: how something that once signified "sounded objects" came to mean "an object's sound," and why attending to this transformation is important. For Kane, ontologies of sound do not so much give us access to or a final account of sound's being as they compel our recognition that sounds are ultimately a "sedimentation of historical and social forces."

Part II picks up this strand and offers what we might call an alternative or parallel history and theorization of sound as object. Focusing not on the Schaefferian genealogy but, rather, on commodification, reification, and fetishism, it opens with James Steintrager's chapter on Theodor Adorno's critique of music as commodity and how this critique rests on Adorno's more general claims about the congelation of objective social forces in sound and the fundamentally nonobjective nature of hearing and listening. Next, Jonathan Sterne returns us to sound sources: technologies, instruments, and other sound-making objects. He considers the trend of reissuing old analog recording hardware and the production of software meant to faithfully replicate the "sound" of such gear. Drawing on his own research on signal processing and on the "new organology"—the broad investigation of the agency and ends of instruments—Sterne sets up a critical engagement with Marxist theories of commodity fetishism, and in particular with Adorno's remarks on the fetishizing of musical instruments, to argue that for musicians, makers, and listeners instruments produce "spectral objectivity": not only timbres and other sonic characteristics that are associated with particular instruments and recording hardware, but also the trace of social and technical relations that are intangible to the senses.[42]

After exploring, unsettling, and offering alternative genealogies of sound as object, we turn in part III to two engagements with the topic

of acousmatic listening, a key concept developed in the writings of both Schaeffer and Chion and, as such, one that has played an important role in the unfolding of sound studies as an emergent discipline. First, Rey Chow posits the mytheme of Pythagoras lecturing behind the curtain as a key addition to the tropes of modernism. She places the acousmatic situation, as told by Schaeffer and repeated in sound studies, alongside oedipal blindness, phenomenological epochē, Heideggerian erasure, and other figures of simultaneous repression and structuration. Given the ubiquity of technologies of sound reproduction and the sheer number of sounds that come to us separated from their original sources and as bits, bytes, and fragments, Chow argues that, much as Derrida contended that the supposed immediacy, interiority, and self-presence of the voice is structured by deferral, exteriority, and difference—what he called "arche-writing"—any approach to sound objects today must approach listening as *acousmatically* structured and trained. For Chow, acousmatic listening remains largely undertheorized despite its pivotal position in sound studies, and transdisciplinary borrowings from literary studies can help rectify this situation. Pooja Rangan takes up the notion of acousmatic listening as it has been applied to cinema to analyze racial discrimination—with an intentional play on words—and the ways in which voices and bodies are variously coupled and uncoupled on-screen and by viewers-cum-listeners. Acousmatic situations in cinema such as the classic documentary technique of voice-over narration become a site of critical engagement for filmmakers such as Mounira Al Solh—a site where the possibilities and limitations of realigning how voices are heard as subjects and objects unfold.

While the acousmatic situation has been imagined at times as ascetically attending to an incorporeal voice, the grouping of essays in part IV insists on the embodiment of sound and listening, and each essay explores in distinctive ways how sound relates to the boundaries of human and nonhuman. In the first, Veit Erlmann takes up Julia Kristeva's notion of "abjection"—the creation of the distinction between subject and object by the expulsion and repression of boundary-troubling *things*—in his analysis of how sound takes on an object status in law. Considering legal cases about free speech and the trial of the pop singer Simon Bikindi at the International Criminal Tribunal for Rwanda for incitement to genocide, Erlmann argues that juridical reason in objectifying sound for the purposes of legal discourse depends on expulsing or "abjecting" sound as "viscerally, vibrationally 'real.'" In the next chapter, Jairo Moreno and Gavin Steingo examine antenatal listening and what they call "vernacular phenomenol-

ogy" in the Colombian Afro-Pacific and the Brazilian Amazon basin. Joining anthropological research to Kristeva's notion of "chora"—the inchoate, prelinguistic stage of human development—Moreno and Steingo ultimately argue against sound as a relation and against the emphasis on the subjective contributions of the listener in favor of autonomous objecthood: sound as alluring, never graspable, and yet unmistakably *there*. Georgina Born then considers how nonhuman sounds—a rainstorm, the tonic buzz of a hospital bed—become entangled in social, affective human relations. In an analysis that is counterintuitively consonant with Moreno and Steingo's rejection of relationality, Born argues against the ontologization of sound and for sound's fundamental relationality. She does so in a moving mediation on her mother's final days that is joined to erudite analyses of the materialist revival, science and technology studies, the thought of Alfred North Whitehead, and recent philosophical approaches to sound in the writings of O'Callaghan, Grimshaw and Garner, and many others.

The final group of chapters, in part V, we have labeled "memory traces." In the first of these, John Mowitt takes up the work of Bernard Stiegler and his extension of the Deleuzian thesis that cinema *thinks*—not that it simply represents thought—to argue that sound should be considered "archecinema": a structuring that precedes the visual. Mowitt thus inverts the commonplace notion that sound is secondary to the medium and subverts the sound studies plaint that sound in cinema simply needs to be given its fair due. More profoundly, though, he speculates on how and why cinema as a sonic-cum-visual medium might serve as a model for memory and the unconscious. Next, Michael Bull considers the rise, demise, and odd afterlife of air-raid sirens. These sounding devices responded to the "structural, political, and technological abolition and transformation of space" with the advent of modern warfare. As an attempt to instrumentalize sound for social purposes, however, the effects of air-raid sirens turned out to be various and unpredictable. Their diminishing but continued use today in a variety of contexts, moreover, haunts the present with psychic and somatic remembrances.

We close the volume with a contribution that might be described as more heretical than heterodox. David Toop has long been an innovative sound maker and an insightful interpreter of sonic experiences and cultures. In the final chapter, Toop takes off from the idea put forward in his *Sinister Resonance* that a painting could perhaps be a musical instrument to artfully blur the boundaries of the visual and the aural. If sound studies has frequently asserted its disciplinary bona fides by denouncing the supposed

hegemony of the visual, Toop, eschewing academic protocols and border patrols, thoughtfully intermingles sight and sound in a series of reminiscences and meditations on—as well as illustrations of—the sounds of drawing, drawing as sounding, and the tenuous existence of what he calls "faint beings": sounds that are not quite objects at all.

Notes

1 See Derrida, *Voice and Phenomenon*.
2 "Distinction," that is, in the sense put forward by Pierre Bourdieu as a marker of accrued cultural capital: see Bourdieu, *Distinction*. For the classic if controversial account of the rise and fall of the capital of "theory" and particularly deconstruction, see Guillory, *Cultural Capital*.
3 Baudrillard, *The Perfect Crime*, 32.
4 See Rancière, "The Future of the Image."
5 Rancière, *The Emancipated Spectator*, 72.
6 Deleuze and Guattari, *What Is Philosophy?*, 76, cited in Rancière, *The Emancipated Spectator*, 55.
7 Kant, *Critique of the Power of Judgment*, 208.
8 On Aristotle's complex position on intellectual contemplation as key to the "good life," see Charles and Scott, "Aristotle on Well-Being and Intellectual Contemplation."
9 See Jay, *Downcast Eyes*.
10 Kant, *Critique of the Power of Judgment*, 182.
11 A coinage that Michel Chion invokes when discussing the rejection by nineteenth-century composers and later by the futurist "noise" musician Luigi Russolo of instruments designed to mimic sound sources: see Chion, *Sound*, 70.
12 Gaver, "What in the World Do We Hear?," 14.
13 See Chion, *Film, a Sound Art*, 237–45; Chion, *Sound*, 158–59.
14 Bentham, *The Panopticon Writings*, 49.
15 Schaeffer, *In Search of a Concrete Music*, 105.
16 See Schaeffer, *Treatise on Musical Objects*.
17 For Adorno's classic critique of popular music and the one to which we allude in our terminological choices, see Adorno, "On the Fetish-Character in Music and the Regression of Listening." On "schizophonia," see Schafer, *The Soundscape*, 90–91.
18 See Kane, *Sound Unseen*, 39–40, passim.
19 Daston and Galison, *Objectivity*, 253–307. Interestingly, while the authors highlight the work of Hermann von Helmholz in their account of the emergence and nature of "structural objectivity," they focus on his work on color sensation and not on his seminal research on sound. That Helmholz's research on sound would easily fit with their overarching thesis, however, is certain.

20 A particularly acute analysis of the "locked groove" in Schaeffer's conceptual apparatus is in Demers, *Listening through the Noise*, 26–31.
21 See Deleuze, *Difference and Repetition*.
22 Foucault, *The Order of Things*, 286.
23 Deleuze and Guattari, *Kafka*, 21. For a Lacanian twist on sound in Kafka, see Dolar, "The Burrow of Sound."
24 See Attali, *Noise*, 36.
25 See Atlan, "Noise as a Principle of Self-Organization (1972/1979)."
26 See Serres, *The Parasite*.
27 Kittler, *Gramophone, Film, Typewriter*, 22–23.
28 See Ernst, *Sonic Time Machines*.
29 Ernst, *Sonic Time Machines*, 114.
30 Ernst, *Sonic Time Machines*, 116.
31 Meillassoux, *After Finitude*, 7.
32 Meillassoux, *After Finitude*, 2–3.
33 See O'Callaghan, *Sounds*.
34 Grimshaw and Garner, *Sonic Virtuality*, 4, passim.
35 Gaver, "What in the World Do We Hear?," 27.
36 Pasnau, "What Is Sound?," 309.
37 See Ihde, *Listening and Voice*.
38 If anthologies and handbooks serve not so much to mark the birth of fields as to confirm them, we should note the following: Bull and Black, *The Auditory Culture Reader*; Pinch and Bijsterveld, *The Oxford Handbook of Sound Studies*; Novak and Sakakeeny, *Keywords in Sound*; Sterne, *The Sound Studies Reader*.
39 Sterne, *The Audible Past*, 3.
40 Sterne, *The Audible Past*, 2.
41 Sterne, *The Audible Past*, 3.
42 See Tresch and Dolan, "Toward a New Organology."