Victorian Soundscapes

JOHN M. PICKER

OXFORD UNIVERSITY PRESS

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CONTENTS

Illustrations xi

Introduction: The Tramp of a Fly's Footstep 3

Hearing Things 3
An Auscultative Age 7
Nuisance and Resonance 11

1

"What the Waves Were Always Saying": Voices, Volumes, *Dombey and Son* 15

Babbage and Dickens: A Library of Air 15
"Away, with a Shriek, and a Roar, and a Rattle" 20
Forever and Forever through Space 34

2

The Soundproof Study: Victorian Professional Identity and Urban Noise 41

Scatterbrain London 41
"Blackguard Savoyards and Herds of German Swine" 45
Writers' Block 52
Embodying Noise: The Leech Case 65
"Great Facts" 77

3

George Eliot's Ear: New Acoustics in *Daniel Deronda* and Beyond 82

On the Other Side of Silence 82
Helmholtz and Eliot: Sympathetic Vibration 84
"On the Verge of a Great Discovery": Talking Cures 100

4

The Recorded Voice from Victorian Aura to Modernist Echo 110

Tennyson's Talking Machine 110
"Send Me Mr. Gladstone's Voice" 113
Sinful Speech 126
Sound Bites 133
Coda: The Victor Dog 142

Appendix:
Dickens's Prospectus for the Cheap Edition (1847) 147

Notes 151

Bibliography 193

Index 211

ILLUSTRATIONS

I.1. Map showing where the explosions of Krakatoa were heard 5
1.1. Vignette title-page of *Dombey and Son* 26
2.1. "Mr. Punch Surrenders the Savoyards" 49
2.2. "F. M. Punch Sympathises with the Poor(!) Italian Organ-Grinder" 50
2.3. "Some Foreign Produce That Mr. Bull Can Very Well Spare" 50–51
2.4. "The Peace Society" 54
2.5. "Three Cheers for Bass and His Barrel of Beer . . ." 64
2.6. Leech's earliest organ-grinding cartoon 68
2.7. "Foreign Enlistment" 69
2.8. "One Good Turn Deserves Another" 70
2.9. "Paterfamilias Tries the Cold Water Cure in a Case of Organ-Grinding" 71
2.10. "Sketch from a Study Window" 72
2.11. "Italian Persecution (A Scene from Real Life)" 74
2.12. Leech cartoons from *Punch's Almanack for 1864* 75
2.13. "Entertainment for an Organ-Grinding Ruffian" 76
2.14. "A Scene in Belgravia—and a Fact, Too" 76
2.15. "A Quiet Sunday in London; or, The Day of Rest" 80
3.1a–b. Bell and Watson on the telephone 102
3.2. Bell demonstrates the telephone to Queen Victoria 103
3.3. Front cover of *The History of Bell's Telephone* 105
4.1. "Little Menlo" 115
4.2. Front page of the *Illustrated London News*, 14 July 1888 118
4.3. "The Possibilities of the Phonograph.—By an Imaginative Artist" 121
4.4. "Listening to the Master's Voice" 124
4.5. "A Suggestion" 130
4.6. The Browning cylinder 136
4.7. The first version of "His Master's Voice" 143
4.8. Barraud with copies of "His Master's Voice" 144

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VICTORIAN SOUNDSCAPES

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INTRODUCTION

The Tramp of a Fly's Footstep

HEARING THINGS

IN AN 1827 article titled "Experiments on Audition," Charles Wheatstone, musical instrument maker, King's College physics professor, and co-signer of the 1837 patent on the electric telegraph, described with little fanfare a rudimentary, nonelectric amplifier of faint sounds that he dubbed a "microphone."[1] Just over a half-century later, in 1878, a Kentucky music professor named David Hughes revived Wheatstone's term for his own invention of the carbon microphone. As W. H. Preece, the electrician for the British Post Office, put it at the time in public lectures, Hughes's device opened up new areas of acoustic inquiry: "The microphone is an instrument which acts towards the ear as the microscope does to the eye. It will render evident to us sounds that are otherwise absolutely inaudible. I have heard myself the tramp of a little fly across a box with a tread almost as loud as that of a horse across a wooden bridge. There was a remarkable sound that accompanied the tramp of Mr. Fly, and a facetious friend of mine told me he thought the noise was occasioned by the neighing of the proboscis of the fly."[2]

Meanwhile, George Eliot, writing in the voice of the cynic Theophrastus Such in her final published work, was more restrained about what she called

the "microphone which detects the cadence of the fly's foot on the ceiling, and may be expected presently to discriminate the noises of our various follies as they soliloquise or converse in our brains."[3] The tread of a fly was just the starting point for a writer in *The Spectator* who anticipated that it now would be possible "to hear the sap rise in the tree; to hear it rushing against small obstacles to its rise, as a brook rushes against the stones in its path; to hear the bee suck honey from the flower; to hear the rush of the blood through the smallest of blood-vessels, and the increase of that rush due to the slightest inflammatory action."[4] Such were the more imaginative uses for new powers of listening that would attend to "the roar on the other side of silence," as Eliot famously had written in *Middlemarch* (1871–1872). Or, as Preece put it in his 1878 lectures, it now could be confirmed that "all in this room, every one's body while I am speaking, is alive with sound."[5]

Five years later, in 1883, in what now is Indonesia but then was the colonial domain of the Dutch East India Company, the eruption on the volcanic island of Krakatoa caused one of the greatest natural disasters to date and created the loudest sounds ever documented. In their official report, members of the Royal Society noted that the noise of the August eruption traveled nearly three thousand miles to Rodriguez Island in the Indian Ocean, where the chief of police recorded that "several times during the night of the 26th–27th reports were heard coming from the eastward, like the distant roars of heavy guns" (see figure I.1).[6] A journalist at the time provided a more immediate analogy: if a resident of Philadelphia "should earnestly insist upon his having heard an explosion in San Francisco, *three thousand miles away*, he would receive a pitying smile, and his listener would silently walk away."[7] With such booming sound effects and the months of dazzling English sunsets that resulted from the debris it scattered, Krakatoa eventually surfaced in the writings of Alfred Tennyson, Gerard Manley Hopkins, A. C. Swinburne, John Ruskin, and even the likes of R. M. Ballantyne, who immortalized the noise and the volcano in his 1889 novel *Blown to Bits*: "It is no figure of speech to say that the *world* heard that crash. Hundreds, ay, thousands of miles did the sound of the mighty upheaval pass over land and sea to startle, more or less, the nations of the earth."[8] It is worth pausing to note the imperial overtones of this event: the empire strikes back here with a violence that is distinctly aural.

From the tramp of a fly's footstep to the roar of a volcanic blast, the Victorian soundscape was so varied and vast as to be too much for one pair of ears to apprehend. The juxtaposition of technological developments and natural forces as wildly different as the microphone and Krakatoa suggests at the outset that this was a period of unprecedented amplification, unheard-of loudness. It was, to use Preece's words, an age "alive with sound": alive with the screech and roar of the railway and the clang of industry, with the babble, bustle, and music of city streets, and with the crackle and squawk of acoustic vibrations on wires and wax—yet alive as well with the performances of the literary figures who struggled to hear and be heard above or through all of this.

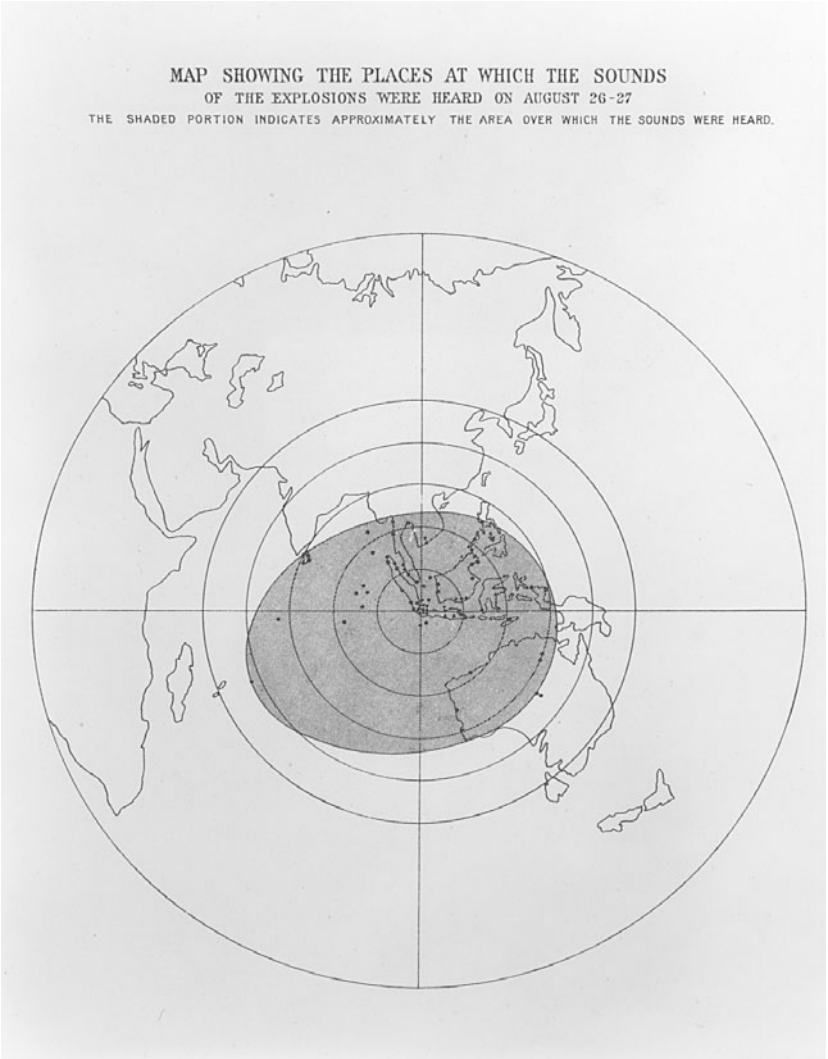

Figure I.1. Visualizing an aural phenomenon: The three-thousand-mile range that sounds from the Krakatoa eruption traveled, as shown in a map prepared for the official report of the Royal Society. Plate 16 from *The Eruption of Krakatoa and Subsequent Phenomena: Report of the Krakatoa Committee of the Royal Society*, ed. G. J. Symons (London: Trübner, 1888), between pp. 88–89.

In doing so, they endowed the acts of sounding, silencing, and hearing with broad physical and symbolic significance. At midcentury, besieged by street noises that interrupted his writing, Thomas Carlyle invested in a plan to construct a soundproof study at the top of his house. But once it was finished, he found it difficult to work there, claiming the shock of stray sounds had become even worse than before. In her fiction, George Eliot invoked the motif of acute hearing to suggest the perceptive capacity a truly sympathetic character might possess. Yet to her central character Theophrastus, the microphone appeared to promise more distraction than edification. Carlyle built a silent room that turned out to be an echo chamber, and Eliot lived long enough to see her literary metaphor of an idealized receptive sensibility become a literal condition of everyday existence. As the growing body of recent scholarship on nineteenth-century photography, optics, and visual culture indicates, the gaze acquired a new degree of importance in this period, but the era also experienced a rise in close listening.[9] In more ways than one, Victorians were hearing things. A serious consequence of this, as Carlyle and Eliot found out, was the recognition of ambient sound as ubiquitous and inescapable and its endowment with new material and figurative meanings. What the avant-garde composer John Cage discovered more than a half century later, Victorians already knew: that "there is no such thing as silence."[10]

To revive a term that they themselves first gave wide currency, theirs was an age of "auscultation," not only in the medical sense initiated by the stethoscope (invented by Laennec in 1816) and perfected by the microphone, of amplifying the sounds of the heart, lungs, and other organs in order to identify illnesses more accurately, but also in the sense of careful listening to a world at large—and in flux.[11] It was during this period that physicians became, in Jonathan Sterne's words, "virtuoso listeners," and "speaking patients with mute bodies gave way to speaking patients with sounding bodies."[12] When Lydgate uses a stethoscope on Casaubon in the late 1820s to early 1830s world of *Middlemarch*, this procedure corresponds with Eliot's stethoscopic intent to amplify the silent roar of others' heartbeats and minds in the years on the other, earlier side of the First Reform Bill and Victoria's reign, even as it stages the belated incursion of modernization into English medicine.[13] If earlier nineteenth-century doctors were the first to diagnose their patients with sophisticated methods of auscultation, then Victorian writers and artists became the first to diagnose their culture with such attentive soundings. Charles Dickens hinted at as much through the words of the stonemason "Stony" Durdles, who describes his unusual hearing abilities to the choirmaster and possible murderer John Jasper in *The Mystery of Edwin Drood*, published in 1870:

> "Now, look'ee here. You pitch your note, don't you, Mr. Jasper?"
> "Yes."
> "So I sound for mine. I take my hammer, and I tap. . . . I tap, tap, tap. Solid! I go on tapping. Solid still! Tap again. Hallao! Hollow! Tap

> again, persevering. Solid in hollow! Tap, tap, tap, to try it better. Solid in hollow; and inside solid, hollow again! There you are! Old 'un crumbled away in stone coffin, in vault!"
>
> "Astonishing!"[14]

Such was the power of nineteenth-century hearing that for Stony Durdles, telegraph-like taps of auscultation led to a corpse: appropriately enough, as it turned out, for this discovery occurred in the story the author died writing. Exhausted from literary production, but especially from his public reading tours, where thousands thronged to hear the voice of the Inimitable, Dickens at the end of his career found himself not only the towering practitioner of Victorian close listening but also the greatest victim of it. A decade before the debut of the phonograph, Dickens had used his lecture circuit to perfect and maintain a technology of oral presence. The tours transformed him into a reproducing speech machine, as his perpetual need to repeat himself fed and appeared to sanction his audiences' incessant desire to hear the same old hits again and again—primarily *A Christmas Carol*, which, in countless renditions on stage, film, radio, television, and not least, sound recordings, still returns each year, to haunt and bless us, every one.

The first chapter of this book opens with a work of natural theology published the year of Victoria's accession to the throne, and the final chapter closes with a painting trademarked in the year of her death. Her reign delineates the chronological reach of this volume because her subjects extended the range and depth of close listening and came to understand it in ways that still resonate with the aural experience of modernity. In four case studies, I investigate the two major roles that hearing played in Victorian culture: as a response to a physical stimulus and as a metaphor for the communication of meaning. I examine the close relationship between Victorian sciences and technologies of sound, on the one hand, and literary and cultural representations of sound, voice, and hearing, on the other. This argument works to turn the approach to the Victorian gaze on its ear, by offering an approach that itself turns to and on the ear.

AN AUSCULTATIVE AGE

BEFORE Victoria was crowned queen, before *The Pickwick Papers* began appearing in monthly parts in 1836, Dickens and his contemporaries found themselves the inheritors of the Romantics' preoccupation with the sublime force of the music and quiet of nature. One only has to think of the frequency of the metaphor of the Aeolian harp in Romantic poetry to recognize the centrality of natural sound to the Lake Poets. In *The Friend*, Samuel Taylor Coleridge wrote that hearing "the thunders and howlings of the breaking ice" on the Lake of Ratzeburg one winter night convinced him that "there are sounds more sublime than any sight *can* be, more absolutely suspending

the power of comparison, and more absolutely absorbing the mind's self-consciousness in its total attention to the object working upon it," while William Wordsworth went on to equate the capabilities of the ear with those of the eye in his long poem from 1828, "On the Power of Sound."[15] The Romantic poets' preference for the rough music of nature over the refined performances of concert halls and salons was echoed by Charles Lamb in his "Chapter on Ears" (1821), later collected in his *Essays of Elia*. "I have no ear," Lamb claimed as Elia, adding that he had "sat through an Italian Opera, till, for sheer pain, and inexplicable anguish," he had "rushed out into the noisiest places of the crowded streets" to console himself with sounds he "was not obliged to follow, and get rid of the distracting torment of endless, fruitless, barren attention!" Only outside on the streets could he take "refuge in the unpretending assemblage of honest, common-life sounds."[16] By his twenty-sixth birthday, Dickens owned not one but two well-thumbed copies of the works of, in his words, "the original, kind-hearted, veritable Elia."[17] It was Lamb's step across the threshold from the opera house into the hubbub of London street life, the bustle that Elia's ear interpreted as a "paradise," that helped set the precedent for Dickens and his fellow urban journalists to attend to and begin to archive the new "common-life" sounds of the Victorian city.

Several publications by scientifically inclined figures in the 1820s and early 1830s sounded the first hints of a larger cultural shift toward close listening. Among his many other investigations, Wheatstone, beginning in 1823, published a series of eclectic aurally centered articles with such titles as "New Experiments on Sound."[18] By that time, William Hyde Wollaston—physicist, chemist, discoverer of palladium and rhodium, and inventor of the *camera lucida*—had made, in an article titled "On Sounds Inaudible by Certain Ears" (1820), the earliest claim for the relative receptivity of ears to high-pitched frequencies. One story has it that Wollaston, attempting to ascertain whether some people could hear high notes that others could not, played on pipes while hiding behind the stacks in Sir Henry Bunbury's library and watched to see which readers jumped or winced at certain pitches.[19] Through such eccentric methods, Wollaston explored "the other side of silence" a half-century before George Eliot invoked the ability of "hearing the grass grow and the squirrel's heart beat" as a metaphor for her doctrine of sympathy and lamented that "the quickest of us walk about well wadded with stupidity" (189). One of Wollaston's most distinguished students, the astronomer-physicist-chemist John Herschel, completed an article on "Sound" for the *Encyclopaedia Metropolitana* in 1830, which synthesized previous studies and influenced, among other works of the early 1830s, the physicist David Brewster's writings on acoustic and musical illusions in his *Letters on Natural Magic Addressed to Sir Walter Scott* (1832) and mathematician Mary Fairfax Somerville's survey of sound in her best-selling *On the Connexion of the Physical Sciences* (1834), which went through ten editions. These writings were widely consulted by readers from all walks of life, not just scientists. (The word "scientist" would be coined in 1840, when William Whewell did so in his *Philosophy of the*

Inductive Sciences.) These writings predate the kind of specialization that came to dominate the professions later in the century and instead were intended for a broad audience eager for self-education. Neither dilettantes nor amateurs in the negative sense, the authors saw no conflict in their work between scientific investigations and humanistic investments: after all, Wheatstone also made musical instruments, Herschel wrote (and published) poetry, and Brewster addressed his letters to Scott, his fellow countryman and favorite novelist. Although the situation would change, the realm of sound was neither an exclusive nor yet a too technical one.[20]

Among the most compassionate of early nineteenth-century expositors of aural experience was William Wright, the self-proclaimed "surgeon aurist extraordinary" to nobility, from Queen Charlotte to the Duke of Wellington, whom he outlived. Wright dedicated an early work to Wellington and, in a pamphlet published after the duke's death in 1852, disclosed that Wellington's hearing in his left ear had first been damaged by gunfire and then completely lost after an earlier doctor's botched treatment.[21] To that noisy stanza from Tennyson's ode (which, in 1890, the laureate himself recorded by shouting into a phonograph), Wright's admission of the duke's hearing loss lends an unintended irony:

> Where shall we lay the man whom we deplore?
> Here, in streaming London's central roar.
> Let the sound of those he wrought for,
> And the feet of those he fought for,
> Echo round his bones forevermore.[22]

This is a eulogistic roar and echo, after all, which the military hero, even had he been alive, would have only half heard. Beginning in 1817 with *An Essay on the Human Ear*, Wright published a number of books on the physiology of hearing and treatments for deafness, but his work is dominated by outrage at those, like Wellington's earlier doctor, who advocated caustics, mercurials, "acoustic drops," and other absurd remedies to "cure" it. The poet Thomas Hood sent up the entire enterprise in "A Tale of a Trumpet" (1841), his comic poem about a peddler's sale of a speaking trumpet (the amplifying predecessor to Hughes's microphone), which happens to be possessed with the power to let users eavesdrop on whispered rumors and hushed-up scandals. Hoping to undo her deafness, an old woman buys it and delights in suddenly hearing all the gossip in the neighborhood. After dutifully spreading everyone else's secrets, she gets her comeuppance when the town condemns her as a witch and drowns her. Then, as now, there was much money and risk to be hazarded in schemes designed to clear the impaired or indifferent ear; as Hood put it, "But think what thousands and thousands of pounds / We pay for nothing but hearing sounds."[23] Surgeon aurist Wright's critiques, however, were more explicit and severe. As late as 1858 (seven years after the Great Exhibition, that defining display of Victorian progress in industry, science, and commerce), in a long digression in his *Fishes and Fishing: Artificial Breeding of Fish, Anatomy*

of Their Senses, Their Loves, Passions, and Intellects, Wright paused once more to castigate "most of the regular professors of aural surgery," whose methods proved "not only perfectly *useless*, but *highly injurious*, and *too often fatal*."[24]

Undeterred by such risks from their desire to listen and hear, Victorians in their scientific and technological discoveries and literary innovations went a long way toward dispelling, or at least redefining, the mysteries of hearing and sound. This book analyzes the stages by which they sought to transform what Romantics had conceived of as a sublime *experience* into a quantifiable and marketable *object* or *thing*, a sonic commodity, in the form of a printed work, a performance, or, ultimately, an audio recording, for that most conspicuous legacy of Victorianism, the modern middle-class consumer. This period gave rise, after all, to the electric telegraph and the microphone, the telephone and the phonograph, technical apparatuses such as Hermann von Helmholtz's vowel resonators and John Tyndall's singing flames, and specialized shorthand systems like Isaac Pitman's phonography and Alexander Melville Bell's Visible Speech, all of these, in one form or another, means to make manifest and manipulate formerly intangible, unruly vibrations.[25] The pivotal figure in the conquest of vibration was the German physiologist Helmholtz, who crafted the bridge between Romantic and Victorian aural sensibilities, between the lyric power of the Aeolian harp and the electric current of the telephone. As the physicist James Clerk Maxwell put it in his 1878 Rede Lecture,

> No man has done more than Helmholtz to open up paths of communication between isolated departments of human knowledge. . . . Helmholtz, by a series of daring strides, has effected a passage for himself over that untrodden wild between acoustics and music—that Serbonian bog where whole armies of scientific men and musical men of science have sunk without filling it up. We may not be able even yet to plant our feet in his tracks and follow him right across.[26]

I examine Helmholtz's cultural affinities with and influence on George Eliot and others in more detail in chapter 3, but for now it is enough to say that his special force lay in his willingness to preserve the romance of sound waves—in one of his favorite images, their elusiveness and mystery evoked those of far-off ocean waves he surveyed from a high cliff—even while he dissected their pitches and harmonics like so many laboratory specimens. Helmholtz fed Victorians' curiosity, and fueled their speculation, about the workings of the ear. "We want to know why certain sounds affect us in certain ways, and the want will no doubt be satisfied," a contributor to one of the journals Dickens had launched and edited wrote. "The human ear is being continually perfected. . . . The growth of aural discrimination will be accelerated as the nervous sensibility of our race advances, and those who follow us will hear sounds, simple and compound, that are imperceptible to us."[27] I argue that although science and technology seemed to lay open the workings of sound, music, and voice right under their ears, Victorian writers found in these new truths a basis for wonder, inspiration, and even romance, and they also found new

questions to ask as they positioned these discoveries in their increasingly decadent, uncanny world.

Consider for a moment the connections between acoustic technology and British poetry, which extend back to the later nineteenth century, that is, over six decades before Dylan Thomas made the first commercial recording for Caedmon in 1952. As England's aged poet laureate, Tennyson seemed a logical subject for voice recording when the "perfected" version of Edison's phonograph arrived in London in 1888. Two years later, one of the inventor's assistants carried a phonograph all the way to the poet's home on the Isle of Wight to capture him reading excerpts from *The Princess* (1847) and "The Charge of the Light Brigade" (1854). Who would have imagined that the eighty-year-old Tennyson would warm to the new technology? But he did, and recordings preserve his thanking the assistant for showing him (in a mock American accent) "Edison's my-*rack*-uhlis invention." He arranged to keep the machine and went on to record about a dozen poems in full or part, periodically replaying them for himself and his guests during the last two years of his life. In my final chapter, I examine Tennyson's motivation to embrace the phonograph. For all that physiologists would do to measure, quantify, or demythologize what it meant to hear, Tennyson's case is one of several I consider that reveal the persistent, deeply personal effects of sound waves on a skilled ear.

NUISANCE AND RESONANCE

THIS BOOK opens with two chapters devoted to sounds as discerned outside professional dwellings—in the streets and public spaces of Victorian London—and follows with two chapters on the place of sound inside, in the drawing rooms and parlors of middle-class homes. It moves from the public sphere to the private to examine the ways in which sound interpenetrated the two, as, for example, in the case of the street noise that interrupted the labors of writers and artists working in their homes. At the same time it moves from the figurative potential of sound to its noisy reality, to show how the terms of aurality penetrated Victorians' thoughts about themselves and their relation to the world, even as that world grew more cacophonous. This book argues that the development of Victorian self-awareness was contingent on awareness of sonic environments, and that, in turn, to understand how Victorians saw themselves, we ought to understand how they heard themselves as well. Aural dimensions of Victorian science, domesticity, and technological innovation register the emergence of this self-awareness and the means by which sound ostensibly was disciplined and made concrete by the end of the century.

In their scope and detail, Dickens's works constitute an important touchstone for Victorian sound. My opening chapter analyzes the soundscape of *Dombey and Son* (1846–1848), the novel that most profoundly reflects the changes brought about by the railway boom of the 1840s. I show how the pe-