Electronic music since 1980 has splintered into numerous genres and subgenres, communities and subcultures. Given the differences separating academic, popular, and avant-garde electronic musicians, how can aesthetic theory account for this variety? And is there even a place for aesthetics in twenty-first-century culture? This book explores genres ranging from techno to electroacoustic music, from glitch to noise, and from dub to drones and maintains that culturally and historically informed aesthetic theory is not only possible but indispensable for understanding electronic music. The abilities of electronic music to use preexisting sounds and to create new sounds are widely known. The book proceeds from this starting point to consider how electronic music is changing the way we listen not only to music but to sound itself. The common trait among all variants of recent experimental electronic music is a concern with whether sound, in itself, bears meaning. The use in recent works of previously undesirable materials such as noise, field recordings, and extremely quiet sounds has contributed to electronic music’s destruction of the “musical frame,” the conventions that used to set music apart from the outside world. Different philosophies for listening have emerged in the wake of the musical frame’s disappearance. Some electronic-music genres insist on the inscrutability and abstraction of sound. Others maintain that sound functions as a sign pointing to concepts or places beyond the work. But all share an approach toward listening that departs fundamentally from the expectations governing music listening in the West for the past five centuries.
Non Legato
Heinrich Schenker

in The Art of Performance
Published in print: 2002 Published Online: May 2008
Item type: chapter

This chapter describes non legato as an articulation whereby each note receives its own pressure and whose sound duration is strictly defined. The physical means of attaining this are described as in the model for the same effect when played by the violin or orchestra. It is argued that non legato is most appropriate in early music: in contrapuntal writing the individual notes had equal function. By contrast, the larger motivic units — a result of the synthesis in later music — require legato playing.

General introduction
Don Ringe

in A History of English: From Proto-Indo-European to Proto-Germanic
Published in print: 2006 Published Online: September 2007
Item type: chapter

This introductory chapter explains the rationale of the book and its intended audience. It indicates briefly the author’s positions on the uniformitarian principle, linguistic descent, the regularity of sound change, linguistic reconstruction, and the comparative method.

Sounds
Casey O'Callaghan

Published in print: 2007 Published Online: January 2008
Item type: book

Vision dominates philosophical thinking about perception, and theorizing about experience in cognitive science traditionally has focused on a visual model. This book presents a systematic treatment of sounds and auditory experience. It demonstrates how thinking about audition and appreciating the relationships among multiple sense modalities enriches our understanding of perception. It articulates the central questions that comprise the philosophy of sound, and proposes a novel theory of
sounds and their perception. Against the widely accepted philosophical view that sounds are among the secondary or sensible qualities, and against the scientific view that sounds are waves that propagate through a medium such as air or water, the book argues that sounds are events in which objects or interacting bodies disturb a surrounding medium. This does not imply that sounds propagate through a medium, such as air or water. Rather, sounds are events that take place in one's environment at or near their sources. This account captures the way in which sounds essentially are creatures of time and situates sounds in the world. Sounds are not ethereal, mysterious entities. It also provides a powerful account of echoes, interference, reverberation, Doppler effects, and perceptual constancies that surpasses the explanatory richness of alternative theories. Investigating sounds and audition demonstrates that considering other sense modalities teaches what we could not otherwise learn from thinking exclusively about the visual. This book concludes by arguing that a surprising class of cross-modal perceptual illusions demonstrates that the perceptual modalities cannot be completely understood in isolation, and that a visuocentric model for theorizing about perception — according to which perceptual modalities are discrete modes of experience and autonomous domains of philosophical and scientific inquiry — ought to be abandoned.

Vowel Prosthesis in Romance
Rodney Sampson

Published in print: 2009 Published Online: February 2010
Publisher: Oxford University Press
DOI: 10.1093/acprof:oso/9780199541157.001.0001
Item type: book

This book presents for the first time an in-depth historical account of vowel prosthesis in the Romance languages. Vowel prosthesis is a change which involves the appearance of a non-etymological vowel at the beginning of a word: a familiar example is the initial e which appears in the development of Latin sperare to Spanish esperar and French espérer ‘to hope’. Despite its widespread incidence in the Romance languages, it has remained poorly studied. In his wide-ranging comparative coverage, Professor Sampson identifies three main categories of vowel prosthesis that have occurred and explores in detail their historical trajectory and the relationship between them. The presentation draws freely throughout on the rich philological materials available from Romance and brings to light various unexpected changes in the productive use of prosthesis through time. For example in French and Italian (which is Tuscan-based), one category of prosthesis became well established in the early Middle Ages only to lose productivity and subsequently become moribund. With its extensive use of empirical data
and findings from theoretical linguistics, the book offers a thorough and revealing account of a fascinating chapter in the phonological history of Romance.

Sounds and Perception
Matthew Nudds and Casey O'Callaghan (eds)

This book comprises original chapters that address the central questions and issues that define the emerging philosophy of sounds and auditory perception. This work focuses upon two sets of interrelated concerns. The first is a constellation of debates concerning the ontology of sounds. What kinds of things are sounds, and what properties do sounds have? For instance, are sounds secondary qualities, physical properties, waves, or some type of event? The second is a set of questions about the contents of auditory experiences and of hearing. How are sounds experienced to be? What sorts of things and properties are experienced in auditory perception? For example, in what sense is auditory experience spatial; do we hear sources in addition to sounds; what is distinctive about musical listening; and what do we hear when we hear speech? An introductory chapter summarises many of the issues discussed, provides a summary of the contributions and shows how they are connected.

Close Listening
Charles Bernstein (ed.)

This book brings together seventeen chapters, commissioned especially for this volume, on the reading of poetry, the sound of poetry, and the visual performance of poetry. While the performance of poetry is as old as poetry itself, critical attention to modern and postmodern poetry performance has been negligible. This collection opens new avenues for the critical discussion of the sound and performance of poetry, and offers a critical base for understanding language in and as performance.
Sound and Structure in the Divine Comedy
David Robey

The importance of sound in poetry is indisputable, yet it is not at all an easy subject to discuss, and is rarely treated systematically by literary scholars. This book uses a variety of computer-based processes to construct a systematic analytical description of the sounds of Dante's Divine Comedy in the sense of their overall distribution within the text. The description is developed through a comparative treatment of the same features in a range of related texts, with a view to defining the distinctive characteristics of Dante's practice; and by a discussion of the function and effect of sounds in the work, with special attention to unusually high incidences of particular features. The book is thus both a contribution to the scholarly debate about Dante's poem, and an illustration and discussion of the ways in which new electronic technology can be used for this kind of purpose.

Sound Studies Meets Deaf Studies
Michele Friedner and Stefan Helmreich

This chapter examines “sound” and “hearing” in relation to silence and deafness. Sound studies and Deaf studies would seem, at first perception, to operate in worlds apart. Sound studies privileges attention to listening and hearing in cultural experience, whereas Deaf studies emphasizes the visual, particularly as a space of communicative practice. The chapter considers four major practices that might prompt scholars in sound studies and Deaf studies into conversation. These practices ask how sound is inferred in deaf and Deaf practice; how reimagining sound in the register of low-frequency vibration can upend deaf-hearing dichotomies; how “deaf futurists” champion cyborg sound; and how signing, non-speech-based communicative practices, and listening might unwind phonocentric models of speech and move analysis away from the simple frame of “speech communities.” The chapter concludes by asking
how to move beyond the ear and eye, rethinking the subjects of sound and Deaf studies.

Sound waves
Stephen J. Blundell and Katherine M. Blundell

in Concepts in Thermal Physics
Published in print: 2009 Published Online: February 2010
Publisher: Oxford University Press
DOI: 10.1093/acprof:oso/9780199562091.003.0031
Item type: chapter

This chapter describes sound waves and shows that these are adiabatic. It derives an expression for the speed of sound in a fluid.

Sounding the Limits of Life
Stefan Helmreich

Published in print: 2015 Published Online: October 2017
Publisher: Princeton University Press
DOI: 10.23943/princeton/9780691164809.001.0001
Item type: book

What is life? What is water? What is sound? This book investigates how contemporary scientists—biologists, oceanographers, and audio engineers—are redefining these crucial concepts. Life, water, and sound are phenomena at once empirical and abstract, material and formal, scientific and social. In the age of synthetic biology, rising sea levels, and new technologies of listening, these phenomena stretch toward their conceptual snapping points, breaching the boundaries between the natural, cultural, and virtual. Through examinations of the computational life sciences, marine biology, astrobiology, acoustics, and more, the book follows scientists to the limits of these categories. Along the way, it offers critical accounts of such other-than-human entities as digital life forms, microbes, coral reefs, whales, seawater, extraterrestrials, tsunamis, seashells, and bionic cochlea. It develops a new notion of “sounding”—as investigating, fathoming, listening—to describe the form of inquiry appropriate for tracking meanings and practices of the biological, aquatic, and sonic in a time of global change and climate crisis. The book shows that life, water, and sound no longer mean what they once did, and that what count as their essential natures are under dynamic revision.
Development, Music, and Social Contact
Jay Schulkin

in Reflections on the Musical Mind: An Evolutionary Perspective

Published in print: 2013 Published Online: Princeton University Press
October 2017 DOI: 10.23943/princeton/9780691157443.003.0007
Item type: chapter

This chapter examines normal neonatal orientation to sounds as well as developmental disorders that affect musical sensibility, including Williams syndrome, a form of hypersocial expression coupled with a liking for music. It first explains how a sense of music begins very early in infancy, noting that the discrimination of pitch and other perceptual capabilities are expressed within the first year of life, events believed to be fundamentally linked to social capabilities. It is the social world, gaining a foothold in the life of others, which makes this knowledge essential. Rhythmic engagement also begins in infancy, generating movement. This musical expression is linked to affective needs and diverse forms of social contact. The chapter proceeds by discussing hypersocial and hyposocial behaviors among individuals with Williams syndrome, along with the evolution of social behavior that underlies musical expression. Finally, it considers epigenetic events and lifelong learning changes in relation to music.

Images of Place in Green Politics: The Cultural Mirror of Indigenous Traditions
Douglas Torgerson

in Living with Nature: Environmental Politics as Cultural Discourse

Published in print: 1999 Published Online: Oxford University Press
November 2003 DOI: 10.1093/019829509X.003.0010
Item type: chapter

Green movements on the Western European model need to be more aware that their predilection for open public debate and transparency of government decision-making can be insensitive to the interests of aboriginal peoples who do not share that predilection. While both environmentalists and aboriginals have a common cause in defending against encroachments by the forces of industrialism, there is an inherent paradox in the Green political concept of ‘defence of place’ arising from the fact that their cultural conceptions, of what is to be preserved and why, may conflict with those of the aboriginal peoples actually living there. An instructive case study of the protests over logging practices in Clayoquot Sound on the west coast of Vancouver
Island in British Columbia is presented. The initial alignment between environmental activists and the Nuu-chah-nulth aboriginals gave way to estrangement when, after hundreds of the former had been arrested, fined, or jailed, the representatives of the latter arrived at a political understanding with the authorities in respect of land claims and forest management practices. The shock experienced by some environmentalists over the independent direction taken by the Nuu-chah-nulth may suggest that environmentalists and aboriginals were, in fact, operating with quite different images of the forest as property. A greater degree of cultural sensitivity is required to prevent such misunderstandings in future. It is also important to recognize how politicization can change culture—a deliberate political campaign to defend a traditional culture can itself change the culture being defended. It is entirely conceivable for a defence of place—through its own political and cultural dynamics—to undermine the very culture that has given the place its unique meaning and value.

**Union Combined Operations in the Civil War**

Craig L. Symonds (ed.)

Despite a wealth of books on the campaigns of the American Civil War, the subject of combined or joint operations has been largely neglected. This revealing book offers ten case studies of combined army-navy operations by Union forces. Presented in chronological order, each chapter illuminates an aspect of combined operations during a time of changing technology and doctrine. The chapters cover the war along the rebel coast, including the operations in the North Carolina Sounds in 1861, the Union thrusts up the York and James rivers during the Peninsular Campaign in 1862 and 1864, and the various Union efforts to seize rebel seaports from the Texas coast to Charleston and Wilmington in 1863–5. Concluding the volume are two chapters that evaluate the impact of Union combined operations on subsequent doctrine in both the United States and England.
Chimeric Sensing
Stefan Helmreich, Sophia Roosth, and Michele Friedner

in Sounding the Limits of Life: Essays in the Anthropology of Biology and Beyond

Published in print: 2015 Published Online: October 2017
Item type: chapter

Publisher: Princeton University Press DOI: 10.23943/princeton/9780691164809.003.0014

This chapter examines auditory chimerism, an experimental technique in which sound recordings are decomposed and then reconstituted otherwise, often with the aim of testing the limits and possibilities of human hearing. Auditory chimeras are sound events realized through a technical practice of sieving one sound through another. The auditory chimera delivers a kind of structured nonsense meant to force listeners to confront their assumptions about how and what they are hearing when they hear. The chapter considers auditory chimerism through the work of the electronic composer Florian Hecker, who has experimented with this technique to produce against-the-grain redescriptions of sound. Its goal is to show how to think of bio-chimerical human hearing next to the technical process of making auditory chimeras, and what happens when chimeric listening meets chimeric composition.

Shock waves
Stephen J. Blundell and Katherine M. Blundell

in Concepts in Thermal Physics

Published in print: 2009 Published Online: February 2010
Item type: chapter

Publisher: Oxford University Press DOI: 10.1093/acprof:oso/9780199562091.003.0032

Shock waves occur when a disturbance is propagating through a medium faster than the sound speed of the medium. This chapter considers the nature of shocks in gases and the thermodynamic properties of the gas on either side of such a shock. It defines the Mach number and derives the Rankine–Hugoniot conditions, which allow the study of changes in density and pressure at a shock front.
Concluding Remarks
JANE STUART-SMITH

in Phonetics and Philology: Sound Change in Italic

This chapter presents some concluding thoughts from the author. It begins with a review of discussions in the preceding chapters. It shows that by comparing systematically obtained phonetic predictions with attested parallel changes, the book offers a reliable and constrained method for evaluating the phonetic plausibility of reconstructed sound changes, which could be applied to other reconstructed sound changes.

Music, Science, and Culture
CROSS IAN

in Imaginative Minds

Music is conceptualized as a product and a process of imagination. It is often assumed that engagement in music initiates the developmental and evolutionary emergence of imagination. This conception of music and its relationship to human powers of imagining is treated differently in science and musicology. For science, music is simply a complex pattern of sound or the experience of structured sound. For musicology and ethnomusicology, music cannot be separated from the cultural contexts in which they are embedded. This chapter proposes a broad operational definition of music which can be acceptable and applicable cross-naturally. This radical redefinition of music may provide ways of understanding music as both a culturally embedded practice and biologically grounded structure. Apart from providing a redefinition of music, the chapter also investigates some of the potential implications and consequences of this radical redefinition of music such as the possibility that the human capacity for culture may have been supported and consolidated by the emergence and presence of musicality.
Features, sounds, complex sounds, and the No Contour Principle
San Duanmu

in Syllable Structure: The Limits of Variation
Published in print: 2008 Published Online: January 2009
Item type: chapter

This chapter reviews feature theory and discusses what speech sounds are and their representation in features and articulators. The focus is on possible and impossible complex sounds, which is determined by the No Contour Principle.

Meaning and its Place in the Language Faculty
Paul Horwich

in Reflections on Meaning
Published in print: 2005 Published Online: September 2006
Item type: chapter

This chapter considers the phenomenon of meaning from the perspective of Chomsky’s ‘I-linguistics’ and his empirical postulation of the ‘language faculty’. After a sketch of that model, the question is raised as to how meaning should be incorporated within it. In accord with the use-theoretic perspective of this book, an answer is developed whereby the association of I-sounds with I-meanings is achieved by virtue of the conceptual roles of those I-sounds, i.e., their basic acceptance-properties. It is shown that this picture compares favourably with various alternatives, including those suggested by Fodor’s mentalese, Davidson’s view of compositionality, naturalizations of the reference relation, and by Chomsky-style explicitly-represented definitions.