



Introduction

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One of the defining aspects of music is that it exists in time. From clapping to dancing, toe-tapping to head-nodding, the responses of musicians and listeners alike capture the immediacy and significance of the musical beat. *The Cambridge Companion to Rhythm* explores the richness of musical time through a variety of perspectives, surveying influential writings on the topic, incorporating the perspectives of listeners, analysts, composers, and performers, and considering the subject across a range of genres and cultures.

The choice of the term *rhythm* – and what we mean by it – requires some explanation. Some authors, especially those focusing on Western art music composed since 1700, proffer a narrow definition of rhythm as the durations of sounds and distinguish it from the recurrent pattern of strong and weak beats known as meter. In other words, these authors understand meter and rhythm as separate concepts and one does not subsume the other. We do not intend rhythm in this narrow sense and instead use it as the best single-word option for referring to “musical time” or “temporal organization of music.” Indeed, in common parlance, English-speaking musicians use rhythm in this way, whereas terms such as *pulse*, *beat*, *meter*, or even *groove* cannot possess this degree of generality. And among English-language scholars, those who write on the music of cultures from around the world often employ *rhythm* as the shorthand term for “musical time” (e.g., African rhythm).

Books on rhythm generally fall into two categories. The first consists of theoretical treatises that explore fundamental concepts and propose methodologies for analysis. The second consists of in-depth studies of the rhythmic language of a particular composer or repertoire. In both categories, the books emphasize specialization rather than a general overview of rhythm. The majority of writings on rhythm appear either in article format or as one chapter in a book that explores a particular composer or repertoire from a variety of musical parameters. *The Cambridge Companion to Rhythm* provides an overview of rhythmic theory and analysis, demonstrates the significance of rhythm in multiple musical traditions, and offers an entry point toward more specialized writings on these topics.

This volume is organized in six parts. Part I, “Overview of Rhythm,” provides an orientation to the topic of rhythm. Ryan McClelland reviews rhythmic concepts that recur in many of the essays in this volume and draws attention to the principal theoretical studies of rhythm in the Western art music tradition. Drawing on a wide range of studies in music psychology, Daniel Cameron and Jessica Grahn explore perceptual, cognitive, and neural aspects of rhythm. Their chapter considers relationships between rhythmic stimuli and beat/meter perception, the role of listener attention, and correspondences between rhythm and movement.

Although rhythm unfolds in time and is only fully experienced through performance, scholarship has – until relatively recently – shown a propensity to privilege the analysis of written texts, namely scores, over aural ones. We have organized this volume to address matters of performance in Part II, “Performing Rhythm.” Drawing principally on research from the past two decades, Alan Dodson surveys innovations in the visualization of rhythm that move beyond traditional score notation. Dodson shows how these new approaches provide a clearer understanding of rhythmic nuances and thereby reveal insights into patterns in expressive timing, relationships of expressive timing to various aspects of musical structure, and dimensions of performance such as pacing and momentum. Musicians are faced with a variety of rhythmic issues in the performance of contemporary music, and the next three chapters, written by two accomplished performers and a conductor who is an advocate for new music, provide insight into the methods they use to solve rhythmic problems in these genres. Steven Schick discusses mental and physical techniques that can be used in performing complex rhythms accurately and musically with examples from the music of Brian Ferneyhough, Josh Levine, Roger Reynolds, Morton Feldman, Karlheinz Stockhausen, Gérard Grisey, Michel Gordon, and others. In minimalist, pulse-based music, musicians must learn to deal with extensive repetition, additive rhythmic phrases, metric and perceptual ambiguity, and other concepts and techniques that are new to Western music performance. Russell Hartenberger describes the performance techniques necessary to perform this music confidently, with special reference to the music of Philip Glass, Steve Reich, Terry Riley, and Frederic Rzewski. In orchestras and chamber ensembles of today, conductors are required to develop techniques that manage new rhythmic issues. David Robertson provides an overview of rhythmic development in orchestral music and discusses the techniques he uses in conveying rhythmic precision while leading mixed ensembles of musicians.

Part III, “Composing with Rhythm,” offers some perspectives on how composers in the Western art music tradition have deployed rhythm for

expressive purposes or to expand their musical language. The first two chapters demonstrate the significance of rhythm to common-practice tonal music (i.e., music composed between c. 1700 and c. 1910) and to post-tonal music (i.e., music composed since c. 1910). Harald Krebs explores expressive uses of rhythm in setting texts in German lieder from the late eighteenth and nineteenth centuries. Drawing on the songs of Joseph Haydn, Franz Schubert, Fanny Hensel, Felix Mendelssohn, Robert Schumann, Clara Schumann, and Hugo Wolf, Krebs elucidates the expressive potential of rhythm at local and larger levels of musical structure, both within the vocal melody and the piano part. Gretchen Horlacher explores the breakdown in periodicity that typifies many works composed in the twentieth century. Through close readings of excerpts from the music of Béla Bartók, Igor Stravinsky, Aaron Copland, and Olivier Messiaen, Horlacher demonstrates how these composers moved the rhythmic languages they inherited, much as they did with their more widely discussed innovations in pitch organization. While the chapters by Krebs and Horlacher are written from the listener-analyst perspective, the following chapter captures the perspectives of several composers in their own words. In a review of writings on rhythm by Henry Cowell, Olivier Messiaen, Béla Bartók, Carlos Chávez, John Cage, Elliott Carter, and Steve Reich, percussionist Adam Sliwinski compares the words of these composers with his own ideas of rhythm and meter.

The significance of rhythm in Western popular music is widely acknowledged; it is often the defining feature of a genre and the subject of lively debates among players, listeners, and especially dancers. Part IV, “Rhythm in Jazz and Popular Music,” opens with Matthew W. Butterfield’s chapter on the central, but elusive, concept of swing in jazz. Exploring the historical origins of the term and the influence of ragtime on early jazz, Butterfield exposes the complexity of swing and suggests how recent research in microtiming offers new insights into it. Trevor de Clercq explores typical rhythmic structures of rock music. Beginning from reflections on the meaning of “the beat” in rock music, de Clercq then explores rhythmic organization at larger levels and also interactions between melody and established drum patterns. In the final chapter of Part IV, Mitchell Ohriner turns to contemporary hip-hop. Through close study of several tracks from Kendrick Lamar’s 2017 album *DAMN.*, Ohriner demonstrates the complexity and irregularity of drum patterns compared with rock music. Ohriner also shows a range of microtiming scenarios for rap syllables with respect to the established underlying grid.

Part V, “Rhythm in Global Musics,” probes the rhythmic techniques and their meanings in a range of cultures. The selection of musical traditions

reflects the greater amount of extant scholarship on rhythm in the music of certain cultures, the heightened role of rhythm in particular traditions, and a view toward representing multiple continents. Rhythm permeates nearly all the musical cultures of Africa and one of the most intriguing of these genres is the West African drumming ensemble music of the Ewe people of Ghana. David Locke describes the musical rhythm of the Agbadza songs in Ewe music and examines the cultural connections that are a part of much African music. The classical music of India, both in the North (Hindustani) and the South (Karnatak) have highly developed rhythmic systems based on tala cycles. James Kippen explores the structure of Indian rhythm and how styles have evolved over the centuries. The cyclic construction of the gamelan orchestras of Indonesia is the foundation for one of the most sophisticated rhythmic systems in the music of the world. In her chapter, Leslie Tilley surveys the rhythmic system of Balinese gamelan and its connections to Western music in the compositions of Colin McPhee, Benjamin Britten, and Steve Reich. With roots in West Africa and Europe, the rhythms of Latin American and Caribbean music permeate popular music in the West. Peter Manuel provides an overview of many of these musical genres, including salsa, Afro-Cuban music, Jamaican reggae, reggaeton, tango, rumba, and mambo. Indigenous cultures in North and South America have a variety of ways of expressing rhythm to enhance their heritages. Drums, rattles, and singing bring to life their ritual ceremonies, while dance embodies rhythm and makes it discernible. In the final chapter of Part V, Kristina F. Nielsen examines the cultural heritage of music and dance in Indigenous American cultures.

Part VI, "Epilogue," consists of a single chapter in which Nick Collins looks at the possible directions for future rhythmic development in music with a discussion of computer time/computer-generated rhythm, artificial intelligence, programmed musical composition, and other innovations.

The eighteen chapters in *The Cambridge Companion to Rhythm* cover many facets of rhythm including analysis, performance, history, perception, and cultural connections. We recognize that we could easily create a second volume on different rhythmic topics with an equivalent number of chapters. Our hope in presenting this volume is that it may provide the reader with a greater understanding of the significance of rhythm in all music, and that the diversity of rhythmic usage in music throughout the world is, in fact, a fascinating common thread among cultures and traditions.