Eighteenth-Century Music 18/2, 295–321 © The Author(s), 2021. Published by Cambridge University Press

REVIEWS

BOOKS

Eighteenth-Century Music © The Author(s), 2021. Published by Cambridge University Press
doi:10.1017/S147857062100018X

PATRIZIO BARBIERI
QUARRELS ON HARMONIC THEORIES IN THE VENETIAN ENLIGHTENMENT
Lucca: LIM, 2020
pp. xiv + 372, ISBN 978 8 855 43022 7

Patrizio Barbieri is well known as a prolific researcher with a large number of publications on acoustics, organology and harmonic theories in seventeenth- and eighteenth-century Italy, as well as on theatrical architecture. His five books and his articles – mostly in Italian – published during the last thirty years form a substantial and often pioneering contribution to these fields. One such domain – tuning and temperaments, and their role in shaping the reconceptualization of harmonic systems and organization of tonal space – still remains *terra incognita* for numerous scholars. Many significant theories and figures involved in this area have either been undervalued or overlooked altogether. In their time, the organization of pitch that eventually led to common-practice tonality occasioned tempestuous pan-European debates, owing particularly to these theories' inevitable collision with the canonized theories of Jean-Philippe Rameau. Barbieri's new monograph is a collection of chapters forming a coherent narrative of the theoretical issues underlying the harmonic theories generated and preached in the capital city and mainland of the Venetian republic.

The intellectual-ideological climate in the Apennines during the eighteenth century was especially patchy and composed of various – sometimes opposing – vectors. *Illuminismo catolico*, a reform movement mediating between the new sciences and the religious dogma associated with the cultural hegemony of Roman Catholicism, achieved maximum support in the Holy See, Papal States and Naples. Concurrently, Newtonianism found resistance in regions and institutions that remained wedded to the Galileian experimental tradition, such as Pisa. Scientific discourse was influenced by local traditions and political differences and was closely interwoven with various theological doctrines ranging from that of the Society of Jesus, for whom Newtonianism became part of their scientific culture, to the *Naturphilosophie* preached by Franciscans. As Nicola Badaloni, Vincenzo Ferrone and Paolo Preto have shown, the Venetian Enlightenment developed new orientations. The models brought together were Libertinism, antagonism to the Roman Counter-Reformation, and the Galilean experimental tradition, with a reserved attitude to the underlying premises of Newton's theories.

The current volume presents Barbieri's previously published texts in a revised and expanded form, in an English translation by Ken Hurry and Hugh Ward-Perkins. It is divided into two parts made up of six and five substantial chapters, and includes a Preface-Conspectus, bibliography, and name and thematic indices. Appendices that present mostly inaccessible sources are attached to the end of each chapter. The chapters are clearly organized and structured identically, each one being preceded by a brief synopsis and concluded by a recapitulation of the main points. All original quotations are given with meticulous parallel translation. This structural clarity and uniformity helps the reader to grasp the main ideas of what is demanding reading, in which discussion of mathematical calculations, geometrical manipulations and physical experiments forms a large part. Although the material of all but one chapter originally appeared in Barbieri's first published monograph (*Acustica, accordatura e temperamento nell'Illuminismo veneto* (Rome: Torre d'Orfeo, 1987)) and in various other volumes, the *Quarrels* makes them approachable for a global audience for the first time.

Part 1 deals with theories of harmony and the taxonomy of chords – fields that best characterize the contribution of several prominent north Italian musicians working in the orbit of the Basilica di Sant'Antonio in Padua. These were primarily: its successive *maestri di cappella* from 1703 to 1809, Francesco Antonio Calegari, Francesco Antonio Vallotti and Luigi Antonio Sabbatini (who mainly popularized Vallotti's theories); its *primo violino e capo di concerto* Giuseppe Tartini; the physicist, architect and amateur musician Count Giordano Riccati (1709–1790); and the humanist and professor of mathematics at the University of Padua Alessandro Barca (1741–1814).

Chapters A and E mainly explore harmonic theories by Calegari and his successor and disciple Vallotti that treat the principle of the fundamental bass and the octave equivalence of chords and their inversions (nicknamed *scuola dei rivolti*). Their theory of the harmonic structure of compound dissonant chords proposed that dissonances that sound together with their consonant resolutions should be understood as two different entities coexisting simultaneously in a given pitch structure. Barbieri aptly illustrates Calegari's main ideas with excerpts from his *Kyrie con stromenti* (1721). He outlines the crucial role of Vallotti in popularizing this idea, in addition to the theory promulgated by Giordano Riccati that the triads expressing the primary harmonic functions lie at the origin of diatonic scales (1735). Similar concepts expounded by Rameau, propagated in print and almost universally privileged north of the Alps, initiated a new era of harmonic thought and have since been unanimously judged to form the pillars of common-practice tonality and functional harmony. Formulated virtually concurrently with (in fact, even slightly prior to) the theories of Rameau, the theories of the Paduan *armonisti* demonstrate a common epistemological urge to reconceptualize the arrangement of pitch phenomena, pursued, however, in different directions.

In chapter E Barbieri places these concepts within the artistic and ideological milieu of a debate between the Paduan coterie and Giovanni Battista Martini, on the one side, and the Italian followers of Rameau, on the other. Drawing on Martini's half-century-long exchange of letters with both Vallotti and Tartini, the author reviews contemporary reactions to Martini's methodologies, which relied on rules deduced from the empirical practice of the old Italian school, in opposition to the views of his Paduan interlocutors, who combined arithmetical calculations in Pythagorean style with physical empiricism. Barbieri's account of the curious correspondence between Martini and Alessandro Zorzi, in addition to dethroning the incontestable pan-European reputation of the former, eloquently demonstrates the spirit of the Enlightenment, in which rational conjectures were considered more reliable than the empirically won knowledge of such a highly esteemed practitioner.

The main protagonist of chapters B–D is Giuseppe Tartini, who out of all the figures in the book has enjoyed the most scholarly interest, especially in the wake of the two hundred and fiftieth anniversary of his death. These chapters happily complement the publication of Tartini's correspondence with Riccati (Luca Del Fra, *Commercio di lettere intorno di Principj dell'Armonia fra il Signor Giuseppe Tartini ed il Co. Giordano Riccati* (Lucca: LIM, 2007)) and the recently released trilingual edition of his letters (Giorgia Malagò, ed., *Giuseppe Tartini, lettere e documenti*, two volumes (Trieste: EUT, 2020)). Since 1750 this celebrated violinist and pedagogue had been obstinately seeking official recognition by the academic world for his theory of the *terzo suono* as a physical foundation of the harmonic system. In chapter B Barbieri dissects Tartini's evolution in representing the *terzo suono* – from a recently discovered 1738 letter from Vallotti to Riccati reporting on Tartini's identification of its vibration frequency (the letter is presented on pages 78–81), through the misleading demonstration in *Trattato di musica* (1754), up to the dissertation *De' principj dell'armonia musicale* (1767), by which time the clash had been resolved. Concurrently, Barbieri emphasizes the fascinating hermeneutic parallelism between the theories of *terzo suono* and the *résonance du corps sonore* – the physical basis of Rameau's system – and the correlation of both with the phenomenon of the fundamental bass.

In the following two chapters Barbieri discusses the unfavourable reception of Tartini's theories among European intellectuals. Giordano Riccati dismantled Tartini's esoteric notion of *cercio armonico* as an incarnation of cosmic harmony and disproved the geometrical manipulations Tartini had employed to establish this construction. Radical objections were raised by Leonhard Euler, who classified the degree

of consonance of a chord using strictly arithmetical considerations based on the frequency ratio of its constituent pitches, and who denied that any physical phenomenon could form a basis of the harmonic system. In a corpus of letters submitted via Martini, another interlocutor, Paolo Battista Balbi – the Jesuit polymath from the University of Bologna – criticized Tartini's arbitrary manipulations by means of arithmetic calculations based on 'demonstrative' confirmation. Additional debate emerged between Tartini and his disciple Michele Stratico, whose theory confronts Tartini's *sestuplo consonante sistema*, expanding it up to the harmonic number 8, which makes possible the inclusion of septimal ratios.

In chapter F – the centrepiece of part 1 and of the entire volume – Barbieri shows Riccati's perceptive application of his theories to the music of his contemporaries as demonstrated in the final chapter of his manuscript *Le leggi del contrappunto* (1773). Barbieri presents Riccati's analytical discussions of affective-rhetorical messages expressed via tonal-harmonic procedures in excerpts from the works of Benedetto Marcello, Agostino Steffani, Alessandro Scarlatti and others, and examines the expressive connotations of the harmonic vocabulary and modulating resources of various keys within the context of the typical 'circulating' temperaments used in the Veneto at that time. These demonstrations – some of the earliest harmonic analyses known – highlight the reciprocity between theories and actual musical practice.

Part 2 tackles the theory of consonance. Here – as the author admits – Barbieri exceeds the boundaries defined in the volume's title both geographically and chronologically, expanding the discourse to south Italian and French-Swiss scholars and discussing as late a figure as Hermann Helmholtz. The first four chapters consider single intervals whose degree of consonance was investigated using a convergence of the Pythagorean tradition and differential calculus on the one hand with physical and psycho-acoustical criteria on the other. Chapter G re-examines the canonical distinction made by Cinquecento contrapuntists between consonance and dissonance on the basis of the theory of the coincidence of vibrations emitted by the tones of any given chord. In the Enlightenment, this principle was retained alongside new concepts based on harmonics, on beats as the origin of the sensation of dissonance and on the physiology of the ear. The views of Giuseppe Pizzati from Vicenza are introduced in chapter H. Barbieri's exegesis of Pizzati's *La scienza de' suoni e dell'armonia* (1782) reveals a synthesis of the Rameauian *résonance du corps sonore* and Tartini's *terzo suono*; Barbieri also compares it to Riccati's system (and includes the original text of the latter's unpublished *Esame* of Pizzati's treatise, 269–280). Chapter I summarizes the theories of Vallotti's friend and scientific adviser Alessandro Barca, which were deployed in a series of dissertations published between 1780 and 1814 under the general title *Nuova teoria di musica*. Barbieri explores various approaches to the crucial consonance–dissonance dichotomy that theorists preached – an approach that implies either discontinuity between consonance and dissonance, as promulgated by Euler and Barca, or a continuity of perception based on differential calculus, as favoured by the Dalmatian polymath Ruggiero Giuseppe Boscovich and Andrea Draghetti from Milan. The volume concludes with a brief synopsis of the historical evolution of the theory of consonance.

Quarrels on Harmonic Theories is an insightful study about the history of ideas, and specifically the history of music theory, with great relevance not just for contemplating but also for performing the music of the period. Dethroning Rameau's seemingly incontestable hegemony in pivotal matters such as the dichotomy between consonance and dissonance, modal polarity, functional hierarchy and chordal syntax, Patrizio Barbieri shows an immeasurably more complex process, grounded in a variety of methodologies and engaging with various scientific traditions. His narrative is mainly based on the large epistolary corpus among the above authors, bringing to life the voices of the protagonists. If anything is lacking, it is a general outline of the Venetian Enlightenment, as not just a territorial but also an epistemological entity: had it been briefly sketched in the Preface, it would have aided comprehension even more. There are some minor slips: for example, a reference to the influential *L'armonico pratico al cimbalo* by Francesco Gasparini, both in the bibliography and throughout the text, is listed in its second edition (Bologna: Silvani, 1713), whereas its first (Venice: Bortoli, 1708) would have more firmly undergirded the cultural-geographical subject matter. This notwithstanding, LIM should be congratulated for publishing the pathbreaking lifelong scholarship of Patrizio Barbieri in

what has now become the *lingua franca* of an academic and general audience, especially to the benefit of historians of ideas and of Italian culture, music theorists and historically informed performers.

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Eighteenth-Century Music © The Author(s), 2021. Published by Cambridge University Press
doi:10.1017/S1478570621000191

GIANMARIO BORIO AND ANGELA CARONE, EDS
MUSICAL IMPROVISATION AND OPEN FORMS IN THE AGE OF BEETHOVEN
Abingdon: Routledge, 2018
pp. x + 243, ISBN 978 0 367 88462 8

In recommending models for a live fantasia in his *Systematische Anleitung zum Fantasieren* of 1829 (Vienna: Diabelli), Carl Czerny lists pieces by Mozart, Clementi, Hummel, Kalkbrenner, Beethoven, Dussek and himself. Is this merely a post-classical pianist-composer-teacher gesturing towards esteemed classics and contemporaries? Does Czerny's list show how his period ears listened to improvisation? What can improvisation tell us about continuity and change from late eighteenth-century norms into the early nineteenth century?

Gianmario Borio and Angela Carone's edited volume explores the final chapter of improvisation as a central feature of European art music prior to the age of recording. This final chapter came just before the decline of improvisatory practices, a process explored in detail in Dana Gooley's seminal recent monograph, *Fantasies of Improvisation: Free Playing in Nineteenth-Century Music* (New York: Oxford University Press, 2018). The present volume demonstrates the usefulness of a synergy of historical research, music analysis and interpretation in speculating on historical improvisation. Though scholars and performance practitioners no longer make naive claims for 'improvising authentically as Beethoven and Hummel would have', the documentary traces of improvisation invite colloquies such as the one under review. As the editors' Introduction states, the boundaries between composition and improvisation were porous in the late eighteenth and early nineteenth centuries: this is supported by performance treatises, historical documents (for instance, performers' written-out embellishments) and compositions in genres including preludes and fantasias. Though improvisatory 'open forms' defy classical principles of form typical of fixed compositions, some notated fantasias, such as those of Hummel or Schubert's 'Wanderer' Fantasy, intermingle conventional forms and improvisatory freedom: they parallel some of the more ambitious improvisations performed in early nineteenth-century concerts.

In 'Formal Elements of Instrumental Improvisation: Evidence from Written Documentation, 1770–1840' Angela Carone surveys such improvisatory practices as preluding, fantasizing, or extemporizing variations and fugues. Carone observes that forms in improvisation became more clearly defined as the make-up of concert audiences shifted from aristocratic to bourgeois: improvisation became a kind of public display, often ending concert programmes. Improvisations that elicited positive critical response developed musical materials as in a sonata or a fugue. (The shifts in concert life and changing audience and critical reactions are explored in detail in Gooley's monograph.) Carone thus introduces several threads for the collection: the difference between 'true' improvising and 'mere' preluding; Beethoven's partial pre-planning of his improvisations based on an outline also found in several of his compositions; and the mutual influences of composed and improvised genres, represented most famously in Beethoven's sonatas.

Jan Philipp Sprick's 'Musical Form in Improvisation Treatises in the Age of Beethoven' opens by revisiting Czerny's famous comments on Beethoven's practice of improvisation. Czerny's description of his teacher's