How useful a research tool is *The Cambridge Handel Encyclopedia*? Each of the entries comes with its own apparatus of relevant source references and suggestions for further reading. The complete works are listed, with details of orchestration; there is a chronology, a family tree and a Handel iconography stretching from Georg Platzer's early miniature, its subject more recognizable from the predominant eyebrows than from any other feature of his thin face, to Louis François Roubiliac's Westminster Abbey monument, last and grandest of his four striking tributes to the master. David Vickers contributes a list of such commercial recordings as 'reliably convey an idea of what Handel's original composition contains' (760) and follows this with an overview of fifty modern performers who have left their mark on the way we nowadays hear the composer's music. Among these is Christopher Hogwood, whose effervescent Introduction to this magnificent compendium hails it as 'the perfect Baedeker' to a Handelian territory once almost without maps, but now being intensively explored (xvi).

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DANUTA MIRKA

METRIC MANIPULATIONS IN HAYDN AND MOZART: CHAMBER MUSIC FOR STRINGS, 1787–1791

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The *Philosophical Lexicon*, an online collection of mock philosophical terms, most of which are puns based on the names of philosophers, contains the following entry:

bennettiction, n. Praise for a philosopher for solving a problem that was not invented until several hundred years after his death. 'His study of Kant concludes with a bennettiction of Kant for solving the problem of a private language.' (Daniel Dennett and Asbjørn Steglich-Petersen, eds, *The Philosophical Lexicon* (2008 edition) <www.philosophicallexicon.com> (14 February 2011))

The Bennett in question here is Jonathan F. Bennett, who has often found earlier philosophers (well, mostly Kant) ingeniously solving various problems of modern philosophy; in consequence, his colleagues honoured him with this entry in the *Lexicon*. In *Metric Manipulations in Haydn and Mozart* Danuta Mirka gives similar benettictions to Johann Philipp Kirnberger, Joseph Riepel and Heinrich Christoph Koch, not only because they were sensitive to many of the same problems of rhythmic perception and cognition studied by twentieth- and twenty-first-century music psychologists, but also because they came up with quite similar solutions. Together with her thorough exegesis of the eighteenth-century German literature on *Rhythmus*, *Takt, Taktordnung, Metrum* and *Rhythmopoeia*, Mirka considers nearly all of the current music-theoretic literature concerning rhythm and metre, as well as much recent work in rhythmic perception and cognition. Along the way she clarifies terminology (both historical and modern), critiques analyses (both historical and modern) and offers polite but firm correctives to her fellow music theorists (both historical and modern, including the author of this review; at least I am in good company). Likewise, in her many analytical examples Mirka illustrates how eighteenth-century musical rhetoric and musical decorum are grounded by rhythms that are placed 'just so', with 'just so' measured by the musical metre. Mirka's analyses show just how rich and complex our metrical experience of this music is, or can be.

But wait: there is more. For Mirka also develops her own theory of metre and metric perception, drawing on both eighteenth- and twentieth-century sources. From Ray Jackendoff ('Musical Parsing and Musical Affect', *Music Perception* 9/2 (1991), 199–230) she takes a 'parallel multiple analysis model' for our perceptual

processing of rhythmic events (17). Such a model evaluates (in real time) the possible ways a passage might be metrically construed as we listen, maintaining concurrent parallel analyses until the emergence of a single one with the best overall fit. Other competing metres are then pruned away, especially at cadence points. From Christopher Hasty (*Meter as Rhythm* (New York: Oxford University Press, 1997)) Mirka takes the notion of metre as a form of *projection*, an active anticipation of several layers of future rhythmic activity, as opposed to a more passive 'wait and measure' approach to temporal interval perception. The result is Mirka's 'metric processor model', which (like Hasty) posits patterns of projection, including more than one pattern at the same time when called for (like Jackendoff, but unlike Hasty). And like her eighteenth-century forebears, for Mirka the crucial level of metrical projection is the beat, or *Taktteil*.

A bar (*Takt*) is formed from an ordering of beats (*Taktteile*). *Taktteile* is used in a very precise way: it indicates the level of metrical activity that is heard as the pulse of the music and is most directly associated with its pace and motion. Though the etymology suggests that these beats are divisions of the bar, Mirka makes clear that they are the very foundation of metre, for these *Teile* cohere into a higher-level unit through our perception and cognition of their cyclical organization. Thus when Koch says that metrical organization stems from the '*Ruhepunkte der Vorstellung*', resting-points that arise when we listen to a series of pulses as the result of the 'nature of our senses and our powers of imagination' (6), he is referring precisely to what nineteenth- and early twentieth-century music psychologists called 'subjective rhythmization' (William James, *The Principles of Psychology* (New York: Holt, 1890; reprinted New York: Dover, 1950), 611–615; Knight Dunlap, 'Reaction to Rhythmic Stimuli with Attempt to Synchronize', *Psychological Review* 17/6 (1910), 399–416). Though the music may give us many cues as to the duration of a beat, the number of beats in a bar and the placement of metrical accent, Koch and his contemporaries recognized that metre is a perceptually emergent property of music, something that is in our heads and not in the sounds we hear. The first step in any eighteenth-century metric analysis, then, is the determination of the *Taktteile* (8–12).

After surveying historical terms and concepts and laying out her own theory in the first two chapters, in the next four chapters Mirka explores the various types of metric manipulations that occur in eighteenthcentury music. Each chapter addresses a particular kind of metric shenanigans. Chapter 3 ('Sustaining Meter - Challenging Meter') begins with a discussion of the term Metrum and its relationship to Takt: the former is an aspect of grouping (iamb versus trochee, anapaest versus dactyl, and so on), the latter of metre (see Justin London, 'Rhythm', in The New Grove Dictionary of Music and Musicians, second edition, ed. Stanley Sadie and John Tyrrell (London: Macmillan, 2001), volume 21, 277-309). Mirka then gives a detailed discussion of three principal strategies for 'metric development' once the Takt and Metrum of a piece have been established: changing the period of the Takt (chapter 4); a changing of phase, which involves changing the Metrum–Takt relationship (chapter 5); and the more subtle alteration of the metric level of the Taktteile (chapter 6). The final two chapters of the book form an extended peroration for Mirka's theory of metre and a survey of metric manipulations in Haydn's and Mozart's chamber music. Chapter 7 relates metric manipulations to various rhetorical devices and strategies (249). Emphatic caesuras, imbroglio, imitatio per thesin et arsin – all would have been heard as musical topoi, as would invocations of various dance genres, the 'exalted march' (after Wye Jamison Allanbrook, Rhythmic Gesture in Mozart (Chicago: University of Chicago Press, 1983)), the brilliant style, Empfindsamkeit, alla zoppa, the comic, the learned, the rustic and church music (250-253). The final chapter, 'Wit, Comedy, and Metric Manipulation', addresses something that surely will have been lurking in the mind of most readers by this point: most of the metric manipulations Mirka discusses are humorous. Or rather, they are witty: to the enculturated listener, they are intentional violations of musical manners and deportment, inserted for comic effect (most especially by Haydn).

Over the course of her book Mirka also makes several important historical and analytical claims. First she argues that a sea-change in musical-temporal sensibilities occurred over the course of the eighteenth century, a shift from a divisive approach in which musical time is understood in terms of divisions of a bar (a holdover from previous mensural practice), to a tactus-based approach whereby a bar is understood as a series of beats. Moreover, Mirka claims that appreciation of this change involved a conscious cultivation of metric sensibilities in the performer and listeners, first and foremost in terms of a heightened awareness of the primary

beat or *Taktteil*: 'In contrast to other [low-level] metric manipulations, which were accessible to all attentive listeners of the eighteenth century, including less competent ones (*Liebhaber*), changes of *Taktteile* could be appreciated only by listeners equipped with adequate theoretical knowledge (*Kenner*)' (xi).

Second, Mirka demonstrates how particular metric manipulations can be related to musical form and rhetoric – in short, she advances a theory of metre as a developmental resource. Different kinds of metric manipulations are associated with different permutations of metrical type (duple versus triple), tempo (allegro versus adagio) and formal scope (sonata allegro and rondo movements versus minuets and ABA forms). Mirka's discussion of imbroglio, also known as Verwirrung, serves as an example (135-147). An imbroglio is a temporary shift in the organization of beats, from twos to threes or vice versa. Yet, as she observes, why do almost all cases of imbroglio involve a shift from 3/4 to 2/4? And why do they occur before a structural cadence? She gives good answers to these questions on morphological, syntactic and stylistic grounds. On the most local level it is better to have the shift occur before than after the expected downbeat (in other words, to shorten an existing bar), since otherwise our ongoing sense of metre will give a sense of accent which would then have to be suppressed. The early entrance of the head of a motive (instances of imbroglio are usually marked by melodic parallels) is also more disruptive than a late one, as its effect is immediate. Syntactically, imbroglio often occurs before a cadence, since the deployment of a stock cadential figure, with its conventional metric alignments, is a good way to end the confusion. And stylistically, imbroglio is likely to occur in a minuet movement (conveniently in 3/4), as the wit and slapstick of the imbroglio are appropriate for the light-hearted tone of the minuet.

While most of the rhetorical potential of metre is local, confined to a phrase or period, at times it can have broader import. In Haydn's C major Quartet Op. 50 No. 2, discussed in chapter 7, a metric shift latent in the opening theme and flirted with throughout the movement comes crashing to the foreground in the recapitulation, weaving together the learned style of the opening theme and development and the graceful *Ländler* of the second theme into a rollicking peasant stomp. In her extended analyses Mirka also notes how *Taktteile* and time signature (especially 6/4 versus 6/8) were related to genre, *Affekt* and style (church versus chamber, high versus low). The need in the later eighteenth century for multiple *Affekts* in the same composition, especially in sonata allegro form, led to the use of time signatures that could encompass the kind of metric changes Mirka describes in chapter 6. This was one of the factors that led to the dissociation of tempo and time-signature: 'As a result of this process [the dissolution of *tempo giusto*], observed with disapproval by some theorists, with sympathy by others, toward the end of that century, meter emerged as an independent dimension of musical compositions, orthogonal to tempo and expression' (227–228).

Lastly, Mirka considers the broader theoretical implications of her taxonomy and its analytical illustrations. Harald Krebs, among others, has referred to *imbroglio*-like manipulations as 'indirect metrical dissonances', implying that they are less disruptive than 'direct' metrical dissonances (in hemiola proper, for example; see Krebs, *Fantasy Pieces: Metrical Dissonance in the Music of Robert Schumann* (New York: Oxford University Press, 2003), 45–46). Mirka argues that the eighteenth-century view, which holds the reverse, is in fact the correct one, for an *imbroglio* involves a real and surprising change of metre, which is far more disruptive than a direct metrical dissonance that chafes against but does not abandon the existing/ongoing metre. She also makes the obvious (but rarely mentioned) observation that a metric change is more disruptive to the continuity of a piece than a tonal modulation. Finally, Mirka also notes that there is a difference in disruption between metrical dissonances on the level of beat subdivisions (*Taktglieder*) and those involving different groupings of beats (*Taktteile*). These have different perceptual aspects and hence different gestural and rhetorical import.

A book as wide-ranging and thoughtful as Mirka's provides many opportunities for scholarly engagement; given the scope of this review, I will limit myself to just two. In chapter 6 Mirka tackles the most obscure form of metric manipulation, changing the metric level of *Taktteile*. 'Because the metrical hierarchy does not change', she states, 'no effect of metrical dissonance arises' (209). Here I would disagree, for while the *rhythmic* hierarchy does not change, and while there is no dissonance per se, our sense of the tactus certainly shifts, and hence so does the relation of the *Taktteile* to higher and lower levels of metrical structure.



As a result the *metric* hierarchy does indeed change. One example of this shift can be found in the opening bars of the Adagio from Haydn's Quartet in B flat major Op. 50 No. 1 (Mirka's example 6.4, page 214). The movement starts in simple (mixed) 6/8 metre – that is, with the dotted crotchet as the *Taktteil*. In bar 5 the *Taktteil* shifts to the level of the quaver. This is all well and good, and Mirka's account of the shift is convincing. But it is not as if the quavers were previously absent, or the dotted-crotchet level disappears in that bar. Rather, what changes is our sense of the pacing of events, which gives rise to a shift in the salience of one metric level (dotted crotchets) versus another (quavers) in the context of an otherwise continuous hierarchy of durations.

My second observation is that in surveying eighteenth-century theory and developing her own, Mirka cannot avoid the problem of innate versus learned aspects of music perception and understanding. Nature gives us our innate temporal processing capacities and their universal expression in rhythmic behaviours, while nurture gives us our knowledge of how rhythm works in particular musical styles and genres. This is captured in Mirka's distinction between perceptual and theoretical rules (77). She further notes that while the former apply to all levels of the metrical hierarchy, the latter apply only to higher levels. This is precisely in line with recent empirical studies of metric construal and accent perception (see Bruno Repp and Peter Keller, 'Adaptation to Tempo Changes in Sensorimotor Synchronization: Effects of Intention, Attention, and Awareness', The Quarterly Journal of Experimental Psychology A: Human Experimental Psychology 57A/3 (2004), 499-521). But does a grasp of theoretical rules really require a knowledge of theory? What of the detailed knowledge of a repertoire, of the kind a dedicated amateur musician might have (a dedicated Liebhaber if not a Kenner)? This would seem to be especially pertinent to our sense of Taktteile, as many studies of beat perception have shown (see Bruno Repp, 'Sensorimotor Synchronization: A Review of the Tapping Literature', Psychonomic Bulletin & Review 12/6 (2005), 969-992). It is one thing to note that musically enculturated insiders will grasp some things that outsiders will not, but it is another altogether to claim that theory-laden hearing is necessary for syntactic apprehension of music (on this problem see Mark DeBellis, Music and Conceptualization (Cambridge: Cambridge University Press, 1995), 117–131).

Mirka finishes her book with an 'inconclusive conclusion' (308–309) that notes the limited range of pieces she has considered, in terms of composers, dates, and genres; she also notes that much more work remains to be done on metric theory, especially in terms of hypermetre and phrase rhythm. Mirka's apologies are too modest – perhaps because she has absorbed an eighteenth-century sense of courtly propriety – and wholly unnecessary. For *Metric Manipulations in Haydn and Mozart* is a signal achievement in music history, theory and analysis. By focusing on Haydn's and Mozart's chamber music of 1787–1791 and embedding that music into its contemporaneous discursive context, Mirka has opened a window not only onto our understanding of eighteenth-century music, but also onto broader issues in rhythmic theory, music perception and cognition, musical rhetoric and form, and musical styles and genres. For all these things, we should give Danuta Mirka many benedictions of her own.

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ALBERTO JOSÉ VIEIRA PACHECO

CASTRATI E OUTROS VIRTUOSES: A PRÁTICA VOCAL CARIOCA SOB A INFLUÊNCIA DA CORTE DE D. JOÃO VI

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The study of singers' careers and voices in connection with the music that was written specifically for them, hardly more than a promising field three decades ago, is now a well-established area of musicological