

Review of Danuta Mirka, *Hypermetric Manipulations in Mozart and Haydn*

By Jason Yust, published in *Music Analysis Online* Dec. 2024

Danuta Mirka's new book, *Hypermetric Manipulations in Mozart and Haydn* (hereafter HMHM) is one which I imagine many people, like myself, anticipated with high expectations. Mirka's previous book, *Metric Manipulations in Haydn and Mozart* (MMHM), was a revelation, but it preempted any extension of its theory and analyses into the realm of hypermetre with a promise to address the matter in the subsequent volume. The success of MMHM was, I believe, largely the result of a potent mixture of philosophical, cognitive and historical approaches to metre. The cognitive theory, drawn from the work of Ray Jackendoff (1991) and the philosophical theories of Christopher Hasty (1997), gives her analyses a temporal, experiential element which can get lost in more traditional, static score-based approaches. Her research focuses primarily on the evolution of metrical narratives over time, analysing possible metrical interpretations at each moment and how subsequent musical events work to confirm or deny them. The result might be compared to Janet Schmalfeldt's (2011) influential ideas about formal process. The question 'what metre is this phrase in?' (similar to 'what is the formal function of this section?') may not be an entirely well-formed question, because often the total metrical effect can be one of reinterpretation. The phrase implies a certain metre when it begins, but later events call that metrical interpretation into question and, ultimately, the cadence leads us to revise it. Asked to identify the metre of the phrase, we may be most inclined to take the end-state solution, the metre implied by the cadence. But this misrepresents almost everything about the experience of the phrase, which is better described processually, as one metre becoming another.

Perhaps the most valuable contribution of MMHM, however, came from Mirka's use of eighteenth-century theoretical treatises to model musical metres. These differ from modern textbook theory of metre in two crucial respects. First is the recognition of compound metres, not in the modern sense of triple subdivisions, but in the eighteenth-century sense of notated bars, each containing two real bars, that is two functional downbeats. Once one learns to recognise compound metres, the metrical language of eighteenth-century composers suddenly becomes much clearer. Recognition of this phenomenon had already found its way into widespread consciousness in the English-speaking music theory world through William Caplin's (1998) ' $R = \frac{1}{2}N$ ' terminology. Caplin's notation, however, is entirely steady state. A passage, and almost always an entire piece, is either ' $R = \frac{1}{2}N$ ' or not (in which case it is ' $R = N$ ' or ' $R = 2N$ '). Mirka, in MMHM, focuses on ambiguity and reinterpretation of metric states corresponding to regular, compound or double bars ($R = 2N$).

The other important contribution of the eighteenth-century model of metre is the recognition of how fundamentally important the relation of a metrical level is to the absolute reference points of Takt (heard – as opposed to notated – bar) and Takteile (beat). The identity and effect of metrical grouping dissonances, for example, depends fundamentally on where they sit in the metrical hierarchy relative to these levels. Below the level of Takteile, they are relatively unremarkable. If they are above the Takteile and redefine the Takt, they have the notable effect known in the eighteenth century as imbroglia. More disruptive still are those which cross the Takteile, redefining the beat. Another crucial feature of eighteenth-century metrical language, the most important force in Mirka's analyses, is the orientation of the cadence with respect to the Takt, with the sense of genuine cadential resolution essentially tied to downbeat placement of the harmonic resolution.

In the new book, *Hypermetrical Manipulations in Haydn and Mozart* (HMHM), Mirka, as promised, extends much of this successful formula to the question of hypermetre. She focuses on the same repertoire of Haydn's and Mozart's chamber music for strings and gives pride of place to thorough exegeses of Heinrich Christoph Koch (1782) and other eighteenth-century German-language theoretical treatises, adopting a suite of concepts, terms and analytical methods from them. HMHM does not review modern cognitive and philosophical perspectives on hypermetre the way MMHM does. Mirka, instead, continues to use the notation and generally phenomenological approach developed there. Because there is little new theoretical ground to cover in the areas of cognition and phenomenology, commentary on eighteenth-century theoretical treatises assumes a more prominent role in HMHM. Large portions of the theoretical narrative are given over to blow-by-blow commentary on chapters from Koch's (1782) *Kunst der reinen Satz in der Musik* and other contemporaneous treatises on phrases and form. Mirka introduces every topic by giving the first word to eighteenth-century authors, seemingly almost by habit, so that, at times, the entire book can come across as a gloss on Koch, although it is much more than that. Also ever-present is William Rothstein's (1989) *Phrase Rhythm in Music*. Because Rothstein's approach is heavily indebted to these same eighteenth-century theorists, along with Schenker, it does not introduce the same kind of alternative perspective as Jackendoff and Hasty do in MMHM.

Does this amount to a replication of the successful formula of MMHM? What exactly it is about that formula which made it so successful? Seeing the new insights which recouping eighteenth-century theory has produced, one could easily draw the conclusion that ceding the narrative to contemporaneous theorists is simply a good idea across the board. The approach has also yielded valuable results in understanding form and harmony for Leonard Ratner (1980), Robert Gjerdingen (2007) and Poundie Burstein (2020), to name a few notable examples. Dmitri Tymoczko (2023), on the other hand, has made persuasive arguments against taking this approach too far. Koch and other eighteenth-century authors are useful sources for helping us understand how contemporaneous composers may have thought, but there are also benefits to historical perspective and access to ideas and modes of inquiry which have emerged in the past two-and-a-half centuries. Among these are the scientific and phenomenological modes central to MMHM. Much of the value of eighteenth-century theory in MMHM can be attributed to defamiliarisation of modern habits of thought about metre, which have been strongly characterised by level-invariance. Richard Cohn (2023) continues to argue persuasively in favour of this perspective, but MMHM demonstrated many of its limitations. A grouping dissonance label following Krebs (1999), such as 'G(2,3)', tells us only that some metrical layer conflicts with some other by grouping the timespans of the next-lower layer in 2s instead of 3s. Mirka shows us how much the meaning and effect of that dissonance depend on the status of those layers vis-à-vis the reference points of Takteile and Takt. It is by leading us to question one of our basic theoretical habits, the automatic generalisation of metric phenomena away from specific timescales and their metrical functions, which gives us access to, and the possibility of renewed fluency in, the musical language of Haydn and Mozart.

The defamiliarisation effect is less pronounced in HMHM. Most of Koch's (1782) approach to analysing phrases has remained common music-theoretic currency, thanks in no small part to Rothstein. One aspect of eighteenth-century theory, which is especially valuable for leading us to question our ingrained assumptions, is the classification of cadences and their role in standard forms. This plays a major role in HMHM and is also the basis of Burstein's (2020) trenchant critique of recent approaches to sonata form. However, eighteenth-century theory is less helpful when it comes to hypermetre. Although these writers reflected a rich understanding of metre in their theories, they had only vague and groping awareness of hypermetre. Mirka does an impressive job exhuming concepts of hypermetre buried in the notion of a four-bar norm of phrase length and, at

one point, impressively, from Friedrich Marpurg's (1758) discussion of passing chords (p. 264). Mostly, however, structuring an investigation of hypermetre on eighteenth-century discussions of phrase construction serves less to elucidate than to obfuscate hypermetre by muddling it with a distinct phenomenon of melodic grouping structure. Modern critical modes of thought and two-and-a-half centuries of theoretical development are indispensable for disentangling the harmonic, melodic and metrical forces which structure music at the multi-bar level. Eighteenth-century theorists laboured through the messy and confounding notion of phrase to explain musical organisation at this level. Although it is not entirely clear what the proper basis for defining 'phrase' is, it is at least clear that it is not entirely metrical, and therefore we cannot simply substitute 'hypermeasure' for 'phrase' and get a theory of hypermetre.

Mirka's first chapter is clearly the strongest in this respect. Here, she examines theories from eighteenth- and nineteenth-century German sources along with the development of concepts of hypermetre over the past half century and is careful about defining hypermetre and distinguishing it from phrase structure. This chapter provides an excellent seminar reading on its own. She provides valuable discussions of Gottfried Weber's (1824) theory of hypermetre and the differences between eighteenth-century authors' approaches to compound metre and their possible involvement in the development of a theory of hypermetre, offering important correctives to Rothstein's (2008) theory of national metric types. She also offers a revealing discussion of Mozart's rebaring of 'Bei Männern welche Liebe fühlen'. Although she observes that the theory of hypermetre begins properly with Weber, she also claims that the concept has its origin in an analogy between bars and phrases found in the earlier treatises of Johann Kirnberger and Johann Schulz, making the interesting point that this was not the result of projecting metrical theory upwards to higher levels of organisation (as in modern hypermetrical theory) but the opposite, formulating a new theory of metre by subsuming it under a single concept of Rhythmus with older practices of bar counting (p. 23). She does fault these authors for conflating phrase structure with hypermetre on the grounds that 'measures are groups of beats while phrases arise from grouping chunks of musical material' (p. 28). Exactly what 'chunks of musical material', repeated almost verbatim from p. 22, means could be made more precise, but it is clear that the distinction is between something abstract, durationless and conceptually prior to the musical content – beats – and more concrete musical material such as melodic motives. However, this conception of metre conflicts with Hasty's (1997) theory of metre as an emergent property of rhythm, which remains an important part of the foundation of Mirka's own approach.

Also especially valuable in Ch. 1 is Mirka's tracing of the sources of Schenker's hypermetrical theory in Riemann (1903) and Wiehmayer (1917; §1.3). Schenker's reliance on Wiehmayer in particular has gone largely unnoticed until now, including by theorists such as Schachter (1976) and Rothstein (1989), who base their accounts of hypermetre on Schenker's. Recognition of this allows Mirka to trace an unbroken line – one of whose links had been obscured – from modern hypermetrical theory to the eighteenth-century German theorists upon which subsequent chapters of HMHM heavily rely. The historical narrative demonstrates how we got to the present situation where bar counting notation, originally introduced to indicate positions in a phrase, is now often confusingly used by authors such as Eric McKee (2004) and Samuel Ng (2012; discussed by Mirka on pp. 155–9) to express hypermetrical analyses, a task for which it is much less well suited.

The cognitive theory of metre covered in Ch. 1 of HMHM is much less well developed than Mirka's parallel efforts in MMHM, but it does address the crucial issue facing any theory of hypermetre, the varying of cognitive mechanisms across different timescales. Her primary sources for this are Candice Brower's (1993), a dated but still valuable application of cognitive theories of time to music, and London (2012). In doing so, however, Mirka makes the questionable claim that

her concept of projection, taken from Hasty (1997), ‘is equivalent to entrainment’ (p. 43). Although there are certainly relationships between the two ideas worth exploring, Hasty’s theory is based on a phenomenological account of listening, not on cognitive science. London, following most cognitive scientists, favours a neural model of entrainment in which an external stimulus drives neural oscillations (Large 2010, Jones 2019). One could imagine an analytical approach based on the kind of dynamic systems model of entrainment proposed by Edward Large (2010), but it would look very different from Mirka’s projection-based analyses, and it is unclear how much and in what respects their results would differ. Mirka is also puzzled by London’s assertion that there is no fundamental difference between metre and hypermetre, because, like Brower and Mirka, he theorises differences in the nature of musical organisation at different timescales based on psychological differences between timescales. This critique misses the point that London equates metre with entrainment and therefore does not extend the concept of metre beyond the observed upper bound of entrainment behaviour at 2–6 seconds. Mirka’s implicit proposal is that the concept of metre involves more than just the observed psychological phenomena of entrainment. This is certainly true if one considers all the ways in which the term metre is used, and even more so if one considers the history of the term into which the concept of entrainment is a relatively recent incursion. Whether it is wise or tenable to reduce the concept of metre to entrainment remains an open question, but I think it is likely that the answer is no: the better music theorists begin to understand what entrainment is, the less likely they are to accept that it fully captures the rich and messy musical concept of metre. Therefore, there is certainly still room for a concept of hypermetre, like the one advanced in HMHM, that falls outside the temporal bounds of metric entrainment, even if new forms of entrainment, which extend that window, are never discovered.

Chapter 2 of HMHM contains a valuable historical sketch of eighteenth-century German-language theory of form, demonstrating how cadence classification and models of binary and sonata forms grow out of the extended music-as-language metaphor pioneered by Mattheson (1739) and coalesces in Koch’s (1782) work. Like Burstein (2020), Mirka advocates a reintroduction of much of the terminology of these authors, untranslated, such as *Einschnitte*, *Absatz* and *Kadenz* (significantly different in meaning from ‘cadence’). The extent to which it bears on hypermetre is open to question. The musical gestures associated with caesuras are typically determinative of hypermetrical boundaries as well as formal ones, and those which can ‘reopen’ phrases, as Mirka demonstrates in later chapters (pp. 220–231), often constitute hypermetrical reinterpretations. Still, if a caesura is an element of form, it is in principle independent of hypermetre and simply assuming that phrase structure determines hypermetre will cause us to miss how composers can define caesuras and formal boundaries in ways that conflict with hypermetre, thereby perhaps overlooking some of the most impressive moments in this music. For instance, the theme of Mozart’s K. 458/ii (p. 104) invites interpretation as a conflict between the phrase grouping and hypermetre, a hypermetrical syncopation, but Mirka does not entertain this possibility. Similarly, the B section of the minuet in Haydn’s Op. 50 No. 6 (pp. 183–4) could be profitably understood as a disjunction between form and hypermetre, with no hypermetric disruptions at all.

Chapters 3–5 settle into a formula organised by methods of phrase expansion, first presenting Koch’s (1782) and other eighteenth-century treatments of the topic, followed by Rothstein’s (1989), and then some analysis. The pattern is modelled on a centuries-old tradition born in composition pedagogy. The result highlights the old idea of phrase structure, as opposed to the topic where Mirka has more to contribute, hypermetre as an independent dimension of rhythmic experience. Ch. 3, for example, provides a good argument, based largely on Hasty (1997), against the possible experience of five-bar hypermetre. Mirka places this argument under the heading of ‘Irregular Phrases’, which is logical insofar as one would be unlikely to search for five-bar

hypermetre except in places where a composer strings together two five-bar phrases. The danger, however, is the implication that phrase structure determines hypermetre and, possibly, that hypermetre only exists in the context of phrases (although in Ch. 7 Mirka demonstrates that the latter is not the case). Her section on subdivisions of phrases (§3.2) indicates no implications for hypermetre at all but gets entangled in a scholastic debate between Koch and Rothstein about the status of prefixes. Later sections (§§4.3–4.4, 5.2–5.3) are valuable in demonstrating how Mirka’s phenomenological notation for hypermetre improves upon the bar-numbering notation used by previous authors, which encourages confusion between phrase structure and hypermetre, as hinted above. See especially pp. 191–7.

Although Ch. 6 is titled ‘Further Means of Phrase Expansion’, it is not really about phrase expansion generally so much as it is about the specific phenomenon of cadential deferral. To my mind, this heading undersells the importance of this set of techniques in music of the mid- to later eighteenth century. Phrase expansion is also perhaps not the best frame for this topic because cadential deferral is one of the clearest ways through which music stretches the language-derived concept of phrase past the breaking point. Most of Mirka’s examples (which, in the first two sections, all come from Mirka 2010, with hypermetrical analyses added) are main themes or first parts of minuets. However, they are sufficient to reveal the inadequacy of the concept of phrase expansion. For example, the minuet in Haydn’s Op. 64 No. 1 has a theme with a self-evident eight-bar period structure, but with the first phrase ending with an interrupted (deceptive) cadence instead of an imperfect (half) cadence (p. 245). If we demand proper cadences to end phrases, the theme is one long (‘expanded’) eight-bar phrase, although it very clearly projects the 4 + 4 phrase structure of the standard period. If this is a ‘trick’, it is not unique to Haydn’s wit or late eighteenth-century style; we find it also in music of the Baroque, such as Bach’s ‘Seufzer, Tränen, Kummer, Not’ or the Passetied in his G major Keyboard Partita (see Yust 2018, pp. 67–8, 147).

Caplin’s (1998, pp. 101–11) expansion of Schmalfeldt’s (1992) typology of cadential deferral is the most comprehensive system to date. Mirka’s categories could add to this typology in valuable ways, but because she does not refer to prior advances on this topic after Koch (1782) and Rothstein (1989), we are left to our own devices in reconciling them. Her discussion of Schmalfeldt (1992) occurs in §4.2 and is therefore disconnected from the cadence typology she presents in Ch. 6. Her ‘overridden’ and ‘twisted caesuras’ add a significant element, not considered by Schmalfeldt or Caplin, that the goal of the cadence may be changed (or simply abandoned) after the deflection. She also shows that such techniques can be applied to imperfect (half) cadences, as well as weak perfect (authentic) cadences (*Grundabsätze*), not only the major section-ending *Kadenz* (PAC). Her ‘twisted caesuras’ otherwise resemble Caplin’s deceptive or abandoned cadences, whereas ‘overridden caesuras’ can resemble evaded cadences or Caplin’s ‘repetition after a PAC’ category, although ‘overridden’ is perhaps a better term because the technique is not limited to PACs. Mirka’s discussion is also valuable in highlighting the importance of schemas for making many of these techniques possible (a feature also abundantly evident in Caplin’s examples) with reference to Gjerdingen’s (2007) classification of cadential schemas, a distinct improvement on overbroad textbook terms such as ‘half [imperfect] cadence’. Mirka’s term ‘loop’, used to cover examples of deferral similar to those discussed by others, where the promised goal is eventually obtained, is unfortunate given the common use of this term for repeating harmonic progressions in popular music, and Hepokoski and Darcy’s (2006) ‘Mozartean loop’ (which in fact has a long history before Mozart – see Yust 2018, pp. 153–4). Her term ‘stretch’ is essentially equivalent to Caplin’s ‘expansion’. Although her example of stretch, the A part in Haydn’s Op. 64 No. 3 minuet (pp. 253–4), has an impressive four-bar predominant, it is dwarfed by examples from subordinate themes, such as Caplin’s (1998, pp. 105, 110, 120), where such expansions can be taken to great lengths.

The topic of closure and cadential rhetoric rivals hypermetre as a central concern of the book, a fact obscured by an organisational strategy instead based largely on the idea of phrase expansion. The material on caesuras is fragmented between different chapters and fits under vaguely related topic headings that address the lengths of the phrases. There is perhaps a missed opportunity here in that the book suggests significant advancements in our understanding of eighteenth-century closural rhetoric and arranging this material to centre that narrative could have consolidated Mirka's findings on the topic. Mirka frames her important discussion of the succession of caesuras in §3.3 as involving long, undivided phrases. This is one of the topics where framing the narrative around Koch's teachings, compared with examples of Haydn and Mozart in action, adds distinct value. Juxtaposing these analyses with the examples of overridden caesuras in §6.1 would have added significantly to the conclusions we could draw about the role of closural rhetoric in this repertoire. She continues to refer to this typology in Ch. 4, where she also discusses Schmalfeldt's (1992) concepts of evaded and elided cadences. She revisits cadential expansion in Ch. 7 in the form of 'augmented cadences' (pp. 280–298), a section which belongs with the other discussions of cadential extension in Ch. 6, especially since the Haydn Op. 64 No. 3 example in Ch. 6 includes a hypermetrically accented cadential 6–4. Section 7.3 further contributes to Mirka's account of the importance of cadential schemata in arguing that the metrical profiles of these schemata can be transferred to hypermetre. The same can be said of the discussion of rhetorical figures in Ch. 8, which also deals primarily with cadential deferral.

Perhaps the most significant contribution made by Mirka's discussion of cadential deferral in Ch. 6 is that her analyses focus constantly on hypermetre, an essential factor largely ignored in much of the theorising of these techniques. Mirka shows that hypermetre, in addition to being affected by techniques such as overridden caesuras, is also essential in setting up the schematic expectations for resolution to occur at a particular moment. This is demonstrated especially well by the one counterexample in Ch. 6, the second half of the minuet in Haydn's Op. 55 No. 2 (229–30), where the expanding half cadence suggested by the counterpoint is very hard to hear as a cadence because of its hypermetric placement. (A similar point could be made about the supposed Grundabsatz in bar 14 of Haydn's Op. 54 No. 2 minuet [pp. 316–19]). The rest of her examples, in which the cadence is always expected in the fourth bar of a hypermetric group, are excellent illustrations of my hypermetric rule of closure (Yust 2018, 145–176) and a comparison and an integration of our approaches would be a fruitful avenue for further investigation.

Perhaps the key missing to these discussions of cadential deferral is the more explicit recognition of their source in the operatic aria, where techniques of cadential evasion develop through very clear dramatic and text-setting motivations, a point made by Schmalfeldt (1992) but not addressed in subsequent treatments of the topic. Operatic examples can provide a better perspective on the language-derived analogy of phrase because the analogy becomes concrete in the presence of a text. Cadential evasions in that repertoire can motivate long melismas, where the idea of 'expansion' may make sense; however, more often they lead to the repetition of an important piece of text, where, linguistically, it does not. The presence of text adds urgency to metrical and hypermetrical analysis and may further explain the role of hypermetre in the extreme rhetoric of cadential deferral which emerges in later eighteenth-century instrumental music.

Mirka's text is rich with analytical examples, analysed often with a painstaking moment-by-moment account of a hypothetical listener's evolving hypermetrical models. As in MMHM, she restricts herself to a relatively small repertoire of string quartets and quintets by Mozart and Haydn, deviating from this practice only when borrowing examples from eighteenth-century authors or commenting on well-known examples in Ch. 1. The repertoire, written for the appreciation of

connoisseurs and therefore dense with clever and erudite music, is appropriate. Nevertheless, insofar as both books aim at addressing the stylistic universe of the eighteenth century more generally, excluding some of the central genres of the period, such as opera and symphony, leaves significant gaps. To the extent that many techniques Mirka discusses derive from opera, for example, we are left largely in the dark about the role of drama and text setting in their development. Similar points could be made about the exclusion of composers other than Haydn and Mozart, points which have already been well articulated by authors such as Gjerdingen (2007). If the point were to give exhaustive accounts of features this repertoire – Haydn’s string quartets 36–53 (Opp. 50, 54, 55, 64), Mozart’s string quartets 17–23 and quintets 3–6 – then the limitation would make sense, but Mirka’s method is to mine the repertoire for examples and only very occasionally makes generalising statements about it, and never of a precise or statistical nature.

Examples in HMHM are also heavily skewed towards formal contexts where tight-knit construction is the norm, main themes and small binary forms, largely because of the attachment to the phrase as an organising concept. Of 39 examples from Chs. 3–6, nineteen (49%) are from minuets or trios, eight (21%) from main themes and seven (18%) from themes of variations movements. Chapter 7 breaks this pattern, drawing most of its examples from development sections and subordinate themes, and Ch. 9 offers two extended analyses of complete pieces (the first movements of Haydn’s Op. 50 No. 3 and Op. 64 No. 1).

In summary, Mirka offers us much of value in HMHM. Highlights include the most complete historical treatment of hypermetre to date in Ch. 1, an amply illustrated phenomenological approach to analysing hypermetric disruptions, a detailed treatment of Koch’s rules of succession for caesuras with sophisticated analytical applications and, throughout, detailed analyses of themes and movements from Haydn’s and Mozart’s music for strings that combine application of the theoretical principle of hypermetre and cadential rhetoric to a multifaceted account of a hypothetical contemporaneous listening experience which freely mixes these theoretical topics with musically and historically sensitive observations about contrapuntal schemas, dance topics and other aspects. Another potential virtue of HMHM is how it will guide readers to the essential next steps in understanding the language of eighteenth-century music. At least, it has pointed this reader in that direction: revealing, for example, the need for an account of the experience of eighteenth-century metrical and hypermetrical manipulations based on the neuroscientific theories of Large (2010) and Jones (2019), a historical investigation of the rise of techniques of cadential deferral in instrumental music, further inquiry into text setting and drama in eighteenth-century opera as sources for hypermetric, formal and rhetorical techniques found in chamber music and orchestral music. HMHM is an important milestone and essential reading for anyone interested in later eighteenth-century musical style.

Bibliography

- Brower, Candice, 1993: ‘Memory and the Perception of Rhythm’, *Music Theory Spectrum*, 15/i, pp. 19–35.
- Burstein, L. Poundie, 2020: *Journeys through Galant Expositions* (New York: Oxford University Press).
- Caplin, William, 1998: *Classical Form: a Theory of Formal Functions for the Instrumental Music of Haydn, Mozart, and Beethoven* (New York: Oxford University Press).

- Cohn, Richard, 2023: 'Graphing Deep Hypermeter in the Scherzo Movement of Beethoven's Ninth Symphony', *Music Theory Spectrum*, 45/ii, pp. 199–217.
- Cone, Edward T., 1968: *Musical Form and Musical Performance* (New York: Norton).
- Gjerdingen, Robert, 2007: *Music in the Galant Style* (New York: Oxford University Press).
- Hasty, Christopher, 1997: *Meter as Rhythm* (Oxford: Oxford University Press).
- Hepokoski, James and Warren Darcy, 2006: *Elements of Sonata Theory: Norms, Types, and Deformations in the Late Eighteenth Century Sonata* (New York: Oxford University Press).
- Jackendoff, Ray, 1991: 'Musical Parsing and Musical Affect', *Music Perception* 9/ii, pp. 199–230.
- Jones, Mari Riess, 2019: *Time Will Tell: A Dynamic Theory of Attending* (New York: Oxford University Press).
- Kirnberger, Johann Philipp, 1774: *Die Kunst des reinen Satzes in der Musik* (Berlin and Königsberg: Decker and Hartung).
- Koch, Heinrich Christoph, 1782: *Versuch einer Anleitung zur Composition* (Leipzig: Böhme).
- Krebs, Harald, 1999: *Fantasy Pieces: Metrical Dissonance in the Music of Robert Schumann* (New York: Oxford University Press).
- Large, Edward, 2010: 'Neurodynamics of Music', in M. R. Jones, R. R. Fay and A. N. Popper (eds), *Music Perception* (New York: Springer), pp. 201–231.
- Lerdahl, Fred and Ray Jackendoff, 1983: *Generative Theory of Tonal Music* (Cambridge, MA: MIT Press).
- London, Justin, 2012: *Hearing in Time: Psychological Aspects of Musical Meter*, 2nd ed. (Oxford: Oxford University Press).
- Marpurg, Friedrich Wilhelm, 1758: *Handbuch bey dem Generalbasse und der Composition* (Berlin: Lange).
- Mattheson, Johann, 1739: *Der Vollkommene Capellmeister* (Hamburg: Herold).
- McKee, Eric, 2004: 'Extended Anacrusis in Mozart's Instrumental Music', *Theory and Practice* 29, pp. 1–37.
- Mirka, Danuta, 2009: *Metric Manipulations in Haydn and Mozart* (New York: Oxford University Press).
- Mirka, Danuta, 2010: 'Punctuation and Sense in Late Eighteenth-Century Music', *Journal of Music Theory*, 54/ii, pp. 235–282.
- Mirka, Danuta, 2015: 'The Mystery of the Cadential Six-Four', in Markus Neuwirth and Pieter Bergé (eds), *What is a Cadence? Theoretical and Analytical Perspectives on Cadences in the Classical Repertoire*, (Leuven: Leuven University Press), pp. 157–184.
- Ng, Samuel, 2012: 'Phrase Rhythm as Form in Classical Instrumental Music', *Music Theory Spectrum*, 34/i, pp. 51–77.
- Ratner, Leonard, 1980: *Classical Music: Expression, Form, and Style* (New York: Schirmer).
- Riemann, Hugo, 1903: *System der musicalischen Rhythmik und Metrik* (Leipzig: Breitkopf und Härtel).
- Rothstein, William, 1989: *Phrase Rhythm in Tonal Music* (New York: Schirmer).

- Rothstein, William, 2008: 'National Metric Types in Music of the Eighteenth and Early Nineteenth Centuries', in Danuta Mirka and Kofi Agawu (eds), *Communication in Eighteenth Century Music* (Cambridge: Cambridge University Press), pp. 112–159.
- Schachter, Carl, 1976: 'Rhythm and Linear Analysis: A Preliminary Study', in Felix Salzer and Carl Schachter (eds), *The Music Forum*, vol. 4 (New York: Columbia University Press), pp. 281–334.
- Schmalfeldt, Janet, 1992: 'Cadential Processes: The Evaded Cadence and the "One More Time" Technique', *Journal of Musicological Research*, 12/i–ii, pp. 1–52.
- Schmalfeldt, Janet, 2011: *In the Process of Becoming: Analytical and Philosophical Perspectives on Form in Early Nineteenth Century Music* (New York: Oxford University Press).
- Tymoczko, Dmitri, 2023: *Tonality: An Owner's Manual* (New York: Oxford University Press).
- Weber, Gottfried, 1824: *Versuch einer geordneten Theorie der Tonsetzkunst zum Selbstunterricht* (Mainz: Schott).
- Wiehmayer, Theodor, 1917: *Musikalische Rhythmik und Metrik* (Magdeburg: Heinrichshofen).
- Yust, Jason, 2018: *Organized Time: Rhythm, Tonality, and Form* (New York: Oxford University Press).