The Art of Recomposition: Creativity, Aesthetics, and Music Theory

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The Art of Recomposition: Creativity, Aesthetics, and Music Theory

A dissertation presented

by

William Evan O’Hara

to

the Department of Music

in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

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The Art of Recomposition: Creativity, Aesthetics, and Music Theory

Abstract

Theoretical recomposition—the act of re-writing an existing piece of music in the service of a technical, aesthetic, or critical argument—is encountered frequently in critical and analytical writings on music. These recompositions, however, have rarely been commented upon. Not only are they mostly absent from secondary literature, but those who employ them rarely reflect on the creative and analytical processes involved, leaving their diagrams to speak for themselves. Through a study of theoretical treatises, pedagogical manuals, and academic and popular criticism, I demonstrate how recomposition often serves both conservative and progressive musical impulses simultaneously, and I analyze and critique its use in theoretical and pedagogical writings, exposing recomposition’s liminal aesthetic status: hovering between vibrant, audible music and inert diagram.

The first half of the study argues that recomposition has been as essential tool in music theory’s development since the eighteenth century, and it continues to be common in contemporary textbooks. By using theoretical recompositions to recast the history of music theory as a continual process of (re)negotiation among a variety of cultural forces—rather than an endless succession of monuments—I hope to open new lines of communication between theory and analysis, and musicology more generally. The second half of the study
examines the ways in which theoretical recomposition reflects upon the act of listening itself. Various contemporary theories of listening—which approach music from such diverse perspectives as phenomenology, cognitive science, and reader-response theory—each attempt to generalize the same recompositional impulse that bubbles under the surface of my earlier historical and philosophical case studies: a desire, as Peter Szendy puts it, “to make my listening, listened to.” This realization demonstrates recomposition’s relevance not only for formal analysis, but also for the study of informal, “everyday” listening. It thus engages with, reinforces, and historicizes recent efforts by musicologists and sound scholars to explore the ways in which listening (musical or otherwise) involves not only passive processes of reception, but also active, and even creative, work on the part of the listener.
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And, to Emaline: thanks for learning “Dada” first.

Cambridge, Mass.
May 12, 2017
for Kathleen and Emaline,

who fill my life with joy, love, and bacon sandwiches
Introduction: A♭ or G♯?

Figure 0.1: W.A. Mozart, String Quartet in C Major, K. 465, I, mm. 1-4. Reproduced from Gottfried Weber, Versuch einer geordneten Theorie der Tonsetzkunst... (Mainz: B. Schott’s Söhnen, 1830-1832), 204.

Figure 0.1 depicts the first four measures of the *Adagio* introduction to Mozart’s String Quartet in C Major, K. 465 (1785). The passage’s striking dissonances attracted criticism from all corners, beginning shortly after the quartet’s publication in 1785 and continuing well into the 1830s. As chronicled by Julie Ann Vertrees, the quartet’s turbulent reception included incredulous reactions (one critic, for example, quipped that the quartet was “too highly seasoned” for Viennese palates) and popular rumors that the original instrumental parts were so riddled with errors that they had to be torn up.¹ These assessments spawned a cottage

¹ Vertrees summarizes the entire reception history in her “History of a Controversy,” *Current Musicology* 17 (1974). The highlights include a negative letter to the editor of *Magazin der Musik* in April 1787; the anecdote about the parts being torn up, recounted in a September 1799 edition of *Allgemeine musikalische Zeitung*; the critical comments of Giuseppe Sarti [which exist only in a fragment dated between 1785 and 1802]; the 1829-31 debate between François-Joseph Fétis and the pseudonymous A.C. Leduc (whom Fétis believed was Raphael Georg Kiesewetter, and whom Vertrees herself believes to have been Peter Lichtenthal); Gottfried
industry of diagnostic and corrective writings in musical periodicals across France and Germany, which continued to litigate the controversy more than 40 years after Mozart’s death. Having surveyed the assessments of Francois-Joseph Fétis and his pseudonymous rival A.C. Leduc, the German theorist and critic Gottfried Weber positioned his 1832 analysis as the final word in the debate.\(^2\) Weber wrote,

> All that remains for me ... is to discharge the duty that I gave myself at the end of §225 (Vol. II, p. 186) of undertaking an analysis [Analyse] of the intricate web of passing notes [Geflecht der Durchgänge], and at the same time of the tonal scheme [modulatorischer Gang] and other unusual features of the introduction to the String Quartet in C by Mozart, with which fault has been found over the past few years in many periodicals.\(^3\)

Weber’s analysis is a careful, note-by-note parsing of the controversial passage, tracking listener’s expectations (as filtered through his concept of Mehrdeutigkeit, or “multiple meaning”) with each new sonority, and drawing the disparate contrapuntal lines and ambiguous harmonies together into a gradually narrowing picture of tonality.\(^4\) He first

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Weber’s 1832 analysis; and a series of unsigned essays on cross relations that addressed the controversy in Allgemeine musikalische Zeitung in 1833.

\(^2\) Weber’s “day job” was a Supreme Court judgeship in Darmstadt, and August Sheehy has argued that Weber brought his legal background to bear in his response to the controversy: having surveyed the evidence from the prosecution and the defense, his account of the piece would serve as more of a verdict than a simple analysis. See “I Know What I Love in My Mozart: Gottfried Weber and the Problem of Judgement,” paper presented to the 2014 meeting of the American Musicological Society and the Society for Music Theory, Milwaukee, Wis., Nov. 9, 2014.


considers the cello’s opening C, in isolation: assuming it is the tonic, does this pitch point us towards C major or C minor? As each new voice enters, Weber weighs its harmonic possibilities. With the addition of A♭ in m. 1.3, for example, he wonders if the C-A♭ dyad is part of an A♭ major triad, or an F minor triad, while the entrance of E♭ on the downbeat of m. 2 leads him to conclude that the sonority is a complete A♭ major triad, in 6/3 position.  

Weber’s analysis of the Dissonance quartet has attracted nearly as much commentary as the quartet itself. Brian Hyer remarks on the quality of the analysis, but also gently rebukes its aims; in his view, “Weber takes an adversarial stance towards the music ... he complains that when first hearing a piece of music the ear wanders ‘to and fro,’ unable to appreciate its ‘strange’ and ‘obscure’ harmonies (which are all Weber ever listens for in music).” For Jairo Moreno, Weber exemplifies music theory’s version of Michel Foucault’s “modern” episteme: his analysis “reflect[s] a major shift in musical thought” in which the active, probing interpretation of the musical subject runs headlong into a sprawling Linnaean taxonomy of musical possibilities. And Kevin Korsyn reads Weber’s analysis as an important antecedent to

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David Lewin’s famous “Phenomenology” essay, casting it as an expression of Romantic irony, exemplified in the listener’s movement through “a dizzying variety of subject positions.”

Most of this modern reception of Weber’s analysis focuses on his note-by-note parsing of the opening measures. Right at the outset of the analysis, however, is a brief but remarkable moment that sets up many of the issues at stake in this dissertation. When he reaches the second note of the passage, Weber momentarily expands his inquiry, pausing his temporal progression and instead raising a hypothetical point. He wonders not only which harmony might be implied on the third beat of measure 1, but questions the very identity of the viola’s pitch, and the effect this might have on our hearing. Weber writes,

On the last quarter note of m. 1, the note a♭ enters against this c. This leaves the ear with a new element of uncertainty: is this latter note to be heard as g♯ or a♭? ... It would be notated as g♯ if, for example, the passage were to continue along the following lines:

![Figure 0.2: Weber’s Initial Recomposition of Mozart, K. 465, I, mm. 1–3, showing hypothetical continuation after the viola’s G♯ (Weber, Versuch, 204)](image)

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Figure 0.2 presents the recomposition that immediately follows the quoted passage. In it, Weber has changed A♭ in m. 1.3 to G♯ in order to underscore his argument: he implies that without access to the score, the listener has no way of knowing the true identity of the viola’s pitch.¹⁰ In the absence of notational evidence, Weber’s listener must make a binary choice based on the musical tendency implied by the possible accidentals. Calling the note A♭ implies that it will move down (which it does, in Mozart’s original, in m. 2.2), while G♯ implies that the note will move up.¹¹ Figure 0.2 illustrates the latter, unrealized potentiality: G♯ in m. 1.3 moves up to A on the downbeat of m. 2.

After this enharmonic thought experiment, Weber moves on quickly, taking the notational argument in Figure 0.2 as self-evident as he turns to his famous tables to analyze the Mehrdeutigkeit of the C–A♭ dyad.¹² The figure, however, goes much further than a simple

¹⁰ For this discussion, we will bracket off any consideration of intonation, and indulge Weber’s argument about the undecidability of the note being discussed. Many string players would actually perform G♯ at a slightly higher pitch than they would A♭, creating (at least for a highly attuned listener) a perceptible difference between the two possibilities, and leaving only the A♭ that Mozart actually wrote as a viable possibility.

¹¹ Here, Weber makes an argument that follows directly from centuries of theorizing about musica ficta and the gamut, and from various theories of tuning, scale construction, and enharmonicism. Alexander Rehding has demonstrated how Jean-Jacques Rousseau argued that enharmonicism in Gluck’s Orfeo linked the music to the expressive qualities of ancient Greek music; see “Rousseau, Rameau, and Enharmonic Furies in the French Enlightenment,” Journal of Music Theory 49/1 (Spring 2005): 141–180. In the early nineteenth century, ambiguity between C♯ and D♭ appears, for example, in debates over the famous seventh measure of Beethoven’s Eroica symphony (partially chronicled in Hyer’s “Second Immediacies in the Eroica”). In contemporary theory, it is also connected to enharmonic paradoxes of the kind discussed by David Lewin in “Amfortas’s Prayer to Titurel and the Role of D in Parsifal: The Tonal Spaces of the Drama and the Enharmonic C♭/B,” 19th-Century Music 7/3 (1984): 336-349.

¹² Weber, Versuch, 204-205.
notational argument about a single pitch, and it deserves further investigation. The written musical example does not stop after showing the resolution of G♯ to A on the downbeat of m. 2; rather, it continues for two full measures. This new music was composed by Weber himself, and bears no resemblance to what Mozart wrote. The 32nd-note decoration in the first violin in m. 2.1, for example, has no precedent or consequent in either the Adagio introduction or the Allegro proper. The same can be said of the parallel sixths between the cello and viola in the latter half of measure 2. And, perhaps because it reduces the texture from string quartet to keyboard, Weber’s recomposition abandons the entrance of the first violin as the fourth contrapuntal voice (which in the original [Figure 0.1] enters on A♮ in measure 2.2, high above the rest of the ensemble). Finally, Weber completely changes the harmony: the cello’s droning C and the viola’s A are joined by F in measure 2, replacing Mozart’s controversial C - A♭ - E♭ - A♮ sonority with a fairly conventional IV₆/₄. And measure 3 abandons Mozart’s non-chord-tone-laden V⁶ in favor of a cadential figure that wraps the passage up with a sunny 3-2-1 descent to the tonic.

These differences do not only represent the far-reaching effects of altering a single note. Rather, they show us a theorist adding a dash of his own creativity to an already-extant piece of music. In short, Figure 0.2 represents Weber going significantly above and beyond the brief recomposition required by his argument; to make his point about G♯ and A♭, he could have stopped with the resolution of the viola (in either direction) in m. 2.1. Weber never acknowledges the surplus in this example—his sudden burst of creativity—and indeed never again refers to the events of Figure 0.2’s hypothetical mm. 2 and 3.
What are we to make of such a music-theoretical tangent? Weber’s unusual gesture illustrates several of the issues that cluster around the practice of recomposition. First, from a theoretical standpoint, his recomposition of the first beat of m. 2 is eminently clear and concise, demonstrating the enharmonic ambiguity far more clearly than could prose alone. It is immediately apparent that a G♯ would resolve upward to A, yielding F major harmony over the cello’s C pedal. The straightforwardness of this hypothetical move dramatizes the confounding effect of the original music’s layering of A♭, E♭, and eventually A♮. This demonstrates the rhetorical power of casting an argument in musical notation.

Yet, recomposing the passage raises numerous questions as well, beginning with the ambiguous causality in Weber’s counterfactual version: does the G♯ in m. 1.3 of Figure 0.2, and its upward resolution to A, cause his imagined continuation (even perhaps changing the entire course of the introduction), or does his proposed move to IV force us to retroactively reinterpret the pitch in m. 1.3 as G♯? Put another way, who (or what) has agency in the imagined world of Figure 0.2? Is it the ear (“das Gehör,” for Weber)—that organ which Jairo Moreno calls “the bearer of linguistic predicates,” and which is thus presumably responsible for the initial decision between G♯/A♭? Is it the music itself, by which the tonal system’s inherent enharmonic ambiguity leads us down the garden path? Or is it Mozart, slyly employing contradictory tonal implications and densely layering passing tones in order to deceive the listener?

Or, perhaps counter-intuitively, does Weber hold the power and agency in Figure 0.2? While the resolution to A in m. 2.1 follows logically from the accidental, the rest of the example comes solely from Weber himself, who exercises his own creativity in imagining what might have happened “if ... the passage were to continue” along different lines. Taking the potential enharmonicism as the starting point for a recomposition, Weber builds a completely new phrase of his own, one that exuberantly overflows both the foundation laid by Mozart, and the straightforward “what if” question in his prose description. Thus, Weber does not only use notation to clarify how the piece of music might have gone, had Mozart decided to change one note; rather, he gives us a glimpse of his own image of the music. Weber, however briefly, steps out of the role of theorist, critic, and pedagogue to occupy the role of a composer or artist, allowing his analytical aim to be supplemented, even supplanted, by a creative impulse.

**Defining Recomposition**

This dissertation is concerned with moments like Weber’s enharmonic thought experiment, and the notational digression that follows: *theoretical* recompositions, in which a theorist or a critic re-writes a piece of existing music in the service of an argument. Recompositions can happen for a variety of reasons. They can serve as hypothetical or counterfactual arguments; they can relate pieces of music to normative models, or proposed musical structures; they can make meta-musical, analytical statements; and they can make arguments about how we listen. This study is concerned not only with collecting and analyzing
recompositions, but also with uncovering the habits of thought that make recomposition possible, or desirable, and with dissecting the aesthetic commitments they reveal. At various places in this study, I will argue that a recomposition like Weber’s gives us insight into how the theorist themselves might have written a passage, or conversely, how a recomposition can reveal something about how that passage can be heard, either by the recomposing theorist, some imagined “ideal listener,” or even ourselves, as unique subjects with individual tastes and experiences. We will question whether a recomposition shows how an idealized version of a piece of music would or should go, according to one theory or another; or whether the reverse is true, and that idealized piece is being used to propose or reinforce a theory. And we will ask what the very act of recomposition has to tell us about music, and about the many discourses and cultural contexts that surround it.

As we will see, recompositions are relatively common in music theory, yet they often seem to fade into the woodwork. In most cases, they pass as an objective analytical technique, but they are actually deeply subjective and contingent. Keeping this in mind, my study asks questions such as: what conditions (both musical and cultural) need to be in place for recomposition to emerge, or to become useful and attractive? What are the assumptions that underlie it? What do recompositional analyses accomplish that cannot be performed by other modes of analysis? What do we gain by reading recompositions as pieces of music, or alternately, by treating them purely as discursive constructs? In short: what do recompositions reveal about the fundamental ways in which music theorists and musicologists think about music, from the eighteenth century to today?
Studying recompositions brings us into close proximity with a variety of other methodological issues in music theory. Gottfried Weber’s A♭/G♯ thought experiment addresses what is first and foremost an issue of translation, of mediating between one format and another. Such a movement is never neutral; it is always transformational, inevitably resulting in something being added, lost, or altered along the way. These refractions are both necessary and illuminating—I harbor no inkling that they could be eliminated, nor would I want them to be. Musical translations happen almost constantly: from notation into sound, from sound back into notation, and from either medium into mental representations, into various forms of symbolic or verbal description in the form of analysis or ekphrasis (transcription from one medium to another). And sounding music is translated by the body, the ear, and the brain, into various kinds of representation and knowledge, which can then be translated back, *ad infinitum*. Weber’s hypothetical recomposition gives us a glimpse of the power of notation: with hardly a description of the music beyond the counterfactual that sets up Figure 0.2 (“[the pitch] would be notated as g♯ if the passage were to continue along the following lines...”), he makes a vivid and clear argument. By charging the G♯ with tonal intentionality (in Steven Rings’ sense),14 Weber makes a move not unlike many other forms of analysis, from Rameau’s *basse fondamentale* to Schenker’s analytical sketches: he turns musical notation back on itself in order to convey concisely a series of arguments. By using notation to convey the idea that the music could easily go differently, and that a change would have

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both an immediate effect on the music, as well as perhaps a longer-lasting one, Weber cuts straight to the core of modern music analysis. Yet, by inserting so much of himself into the diagram (in the form of all the notes beyond the downbeat of m. 2), he also shows how flexible and subjective recomposition can be. It is for both of these reasons that recomposition is both a useful tool, and one in need of more critical attention and understanding.

Along with its relevance for our understanding of musical metalanguage and analytical diagrams, recomposition sheds light on other difficult questions. The case studies in this dissertation probe the relationship between theorists, the music they analyze, and those who composed it. They explore how the techniques we associate with advanced music analysis have analogues in the practices undertaken by all listeners. They force us to re-evaluate the ways in which we talk about the musical canon, musical creativity, and the practices of listening. Studying recomposition also directly addresses issues that arise in the process of editing music for critical, performing, or Urtext editions, and the act of building a historical context for recomposition mirrors the study of the history of musical editing.

But precisely because of recomposition’s conceptual proximity to other aspects of music theory, it is necessary at the outset to define the scope of this study carefully. Despite the desire and the need to connect theoretical recomposition to other aspects of the discipline, there are limits. The genre of theoretical recomposition with which this study is concerned has at least three specific characteristics. These characteristics are not hard and fast rules, but general guidelines; in nearly all of the examples I consider in this study, at least two of them will be followed, if not all three. First of all, recompositions as I conceive them are undertaken, on
their surface, for critical or aesthetic reasons, never artistic ones. That is, the recompositions we are considering generally do not result in new, standalone pieces of music designed with performance in mind; rather, they reflect back directly on the original. Thus, for example, Charles Gounod’s addition of a vocal line to the C Major Prelude from J.S. Bach’s *Well-Tempered Clavier* is not a recomposition; nor is a theme and variation set, an arrangement or transcription of an existing piece, or some other artistic intervention, such as Leif Inge’s *9 Beet Stretch* (2004), which stretches a recording of Beethoven’s Ninth Symphony out to a full 24 hours. Works such as these raise fascinating questions, and they (and the literature that surrounds them) will frequently be relevant to our discussion of recomposition. They are not in themselves, however, the focus of this study. And while I will argue that recompositions can productively be viewed on the same terms as concert works, their natural homes are within the pages of textbooks and journals, or on the chalkboards of our classrooms and seminars.

The second requirement I impose is that, in addition to the refractions inherent in any sort of musical translation, a recomposition must make a substantive and intentional change to the music: some alteration that goes beyond representation or reduction. Gottfried Weber’s piano reduction of Mozart’s “Dissonance” quartet (Figure 0.1), then, is not a recomposition, nor are his diagrams that partition the music into separate vertical slices; both of these

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15 This is not to say, of course, that scholarly work cannot be artistic, and especially is not meant to imply that art cannot engage in critique or the production of knowledge or theory.

16 Thanks to Alexander Rehding for bringing this piece to my attention. More information about it can be found at http://www.læyf.com/
examples are merely selective representations of the music, and any changes they make (as in a piano reduction) are incidental. Figure 0.2, however, is a recomposition, because it makes an intentional change to Mozart’s music, representing in notation how the passage might have gone had its second note been G♯ instead of A♭. In general, I would also not consider schematic sketches (such as those often employed by David Lewin) to be recompositions, because they set out not to alter the music under consideration, but to give a simpler and more direct picture of how the music goes.17

Perhaps the most useful boundary case for a definition of theoretical recomposition is found in the theory and analytical method of Heinrich Schenker, which transcribes excerpts or entire pieces of music into a specialized analytical notation that omits (or perhaps more accurately, chooses not to represent) many musical details. Other details, in turn, are given special emphasis by means of stems, flags, and various kinds of slurs. Whether one considers a Schenkerian graph to be a recomposition or not depends partly upon whether or not one is a true believer in the theory. Are Urlinien and Baßbrechungen truly present in pieces of tonal music in some way, or are they imagined theoretical devices? If the latter is true, then a Schenkerian analysis is not a recomposition, but merely a representation: it employs reductive

and descriptive notation to highlight aspects of the music as it is (or at least, as it is according to the theory). Recompositions, on the other hand, function by describing music as it is not.\(^{18}\)

A theorist who denies the efficacy of Schenkerian theory, of course, will cast such analyses as misguided or misrepresentative recompositions, along the lines of Arnold Schoenberg’s alleged response to Schenker’s graph of the *Eroica* symphony: “Where are all my favorite notes? Oh yes, there—those little ones.”\(^{19}\) Yet, even Schenker’s adherents might react differently to the question of recomposition in Schenkerian analysis, based on their consideration of the method’s creativity. Scholars like Steve Larson and Matthew Brown, for instance, who present Schenkerian analysis as a highly regimented and systematic process, are unlikely to view Schenkerian analysis as recompositional.\(^{20}\) Joseph Dubiel, on the other hand, argues that Schenker resists systematizing the details of his theory too much, in order to allow room for the “masters” he studies to use tonal materials in unanticipated ways. Dubiel argues that

\(^{18}\) The exception to my rule might be the phenomenon of “implied tones” in Schenkerian analysis, which represent idealized musical objects that the theory dictates ought to be present, such as structural tones of the *Urlinie*. Any orthodox Schenkerian, however, would argue that such tones are indeed a part of the music, in a meaningful way. On this topic, see William Rothstein, “On Implied Tones,” *Music Analysis* 10/2 (1991): 289–328.

\(^{19}\) The origins, and authenticity, of this oft-repeated comment are murky, though its outlook is clear. Kristof Boucquet traces it to an anecdote retold by Carl Schachter. See Boucquet, “Schenker and Schoenberg Revisited,” *Revue belge de Musicologie / Belgisch Tijdschrift voor Muziekwetenschap* 59 (2005): 199.

Schenker instead views his analytical method as a way of producing “fantasy recompositions of the ‘masterworks.’”  

There are certainly aspects of Schenkerian theory that function recompositionally, however. One of these is the phenomenon of “implied” tones. As William Rothstein writes, implied tones are “tones that, while literally absent, are present in some sense because their existence is indicated by surrounding events.”  

According to Allen Forte and Steven Gilbert, implied tones (which are generally notated in parentheses) are often used to indicate “the completion of a voice-leading connection, the continuation of a linear intervallic pattern, or by the completion of a component of a compound melodic structure (as a special case of a voice-leading connection).” They are, then, notes that are not actually written in the original score, but that the analyst believes are strongly implied, or that the theory dictates must be present. In a sense, then, implied tones are the border between representation and recomposition on which Schenkerian analyses tread: sometimes individual diagrams fall on one side of the line or the other, and a broad study of recomposition can help to shed light on the relationship of these diagrams to the music under consideration. In general, however, Schenkerian analysis will not be a primary concern of this study.

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Much of the interesting work to be done, however, falls within in gray areas such as these. While they are generally not recompositions, Schenkerian graphs exemplify the recompositional tendencies inherent in many of music theory’s core methods and discourses. A better understanding of how recompositions work in context will thus reflect back upon more mainstream aspects of music theory—including not only Schenkerian theory, but Neo-Riemannian theory, Formenlehre, and semiotic and narrative analysis—informing and enriching them accordingly. Indeed, as I will argue throughout this study, many aspects of musical experience, writ large, are in some way bound up with a strong recompositional impulse: the desire to take a given piece of music and alter it as a result of listening, analysis, or other forms of musical translation. As Peter Szendy puts it, listening is often coupled with a desire is “to make [one’s] listening listened to.”

Third and finally, a recomposition should generally be executed in musical notation. This may seem like a trivial requirement, but it is actually critical. The verbal descriptions that surround recompositions will be of great interest to this study (they are treated in great detail in Chapter 3), but they remain just that—descriptions. This third rule is in place for several reasons. First, the explicit use of actual notation is one of recomposition’s greatest strengths: it requires theorists and critics to articulate their arguments in precise detail. By focusing and concretizing verbal arguments about music, recomposition either eliminates vagueness, or usefully highlights it. So, while commenting a given piece “might have had a medial caesura” is

an example of the kind of counterfactual statement that often accompanies a recomposition, merely saying so does not count as a recomposition on its own; the statement must be accompanied with a realization in notation—where, precisely, would that medial caesura go? Would it be a half cadence, or a full cadence? Would it land on V, or V/V, and what chromaticism would be necessary to bring such a cadence about? This requires an engagement with the various facets of music that make a medial caesura possible: harmonic rhythm, texture, modulation, and so forth, not only at the moment of the presumed caesura itself, but also—crucially—in the measures that precede it and follow it. In order to reinforce a verbal argument with notation, the theorist must make decisions among the various possibilities that present themselves. Recomposition is thus a kind of double-edged sword: it makes for highly concentrated musical arguments, but also tends to leave the door open for deeper investigation: recompositions can lay bare the flaws in an argument, exposing both the strengths and the liabilities of a given analytical system, or at best, simply emphasizing the multifarious complexity of tonal music. In their propensity to set off inadvertent chain reactions, recompositions reveal the ideological and aesthetic commitments inherent in any mode of musical discourse, and highlight the deep interconnections between melody, motive, harmony, counterpoint, rhythm, meter, and form.

Recomposition Today

Returning to Weber: how are we to read moments like his recomposition of Mozart’s “Dissonance” quartet (Figure 0.2 above) when they arise in musicological writings? As this
initial example shows us, theoretical recompositions represent complex knots of musical agency: sites where the actions, intentions, and desires of the composer, performer, listener, critic, and scholar collide. The musical text as written by Mozart comes into contact with an alternate version of itself when Weber’s proposal for how we might hear an ambiguous pitch—A♭ or G♯?—grows into a hypothetical re-writing of measure 2.1, showing how the score would look had the viola’s entrance turned out to be G♯ rather than A♭. This recomposition, in turn, yields a brief passage that is newly composed by Weber, in a style completely unrelated to the starting point that he takes from Mozart. This elision of technical analysis, into a hypothetical (“what if?”) alternative, into a brief outburst of creativity, is one of the hallmarks of recomposition as I conceive of it in this study.

Recompositions have remained almost invisible in critical discourse on music. Many scholars have looked at instances of composers “re-composing” one another in various ways and for various reasons, but apart from a handful of recent treatments, theoretical recomposition is noticeably absent from the literature. In a brief passage in his Teaching


26 This is the basis, for example, of much of Joseph Straus’ book, *Remaking the Past: Musical Modernism and the Influence of the Tonal Tradition* (Cambridge, Mass.: Harvard University Press, 1990), which even includes a chapter called “Recompositions.”

Approaches in Music Theory, Michael Rogers makes one of the few explicit calls for it, prior to the past several years. He writes,

The notion of recomposition is extremely valuable in analysis since it often clarifies [the] composer’s choices and the understanding of “what might have been”—in its shadowy existence, a frequently overlooked aspect of aesthetic experience.²⁸

This passage occurs in the context of a sample assignment on Chopin’s Prelude in E Minor, Op. 28, No. 4 (the lightly annotated score of which is pictured in Figure 0.3a). Among other questions, Rogers asks about the deceptive resolution to VI found in m. 21. “How could this measure be recomposed to make it the end of the piece?” he asks. The answer Rogers seeks, presumably, is depicted in Figure 0.3b: the harmony in m. 21 could be re-written as E Minor—the tonic—rather than C Major (VI).

This sample question, however, is the sole recompositional example that Rogers gives; his attention in this chapter (“Musical Analysis”) is otherwise occupied with notions of contrast, stasis vs. movement, with the interpretation of ambiguous harmonic sequences. Apart from pointing out that the piece could potentially have ended four measures earlier than it does, Rogers gives no further hints on how we might probe “what might have been.” But while he does not explore it himself, the notion is found elsewhere—perhaps because of its intuitive appeal—as an undercurrent in the work of other scholars. Writing a few years later, for example, Leonard B. Meyer echoes Rogers’ idea:

Figure 0.3a: Michael Rogers’ Analysis of Chopin, Prelude in E Minor, Op. 28, No. 4 (Rogers 1984, 95)

Figure 0.3b: Recomposition of E Minor Prelude, mm. 19–“21”
[T]o appreciate fully what something is—to comprehend its significance—is to have some notion (however informal or unformulated) about what it might have been. ... The road actually taken is invariably understood partly in terms of those not taken. And so it is with works of art. We understand and appreciate a work not only in terms of the possibilities and probabilities actually realized, but in terms of our sense of what might have occurred in a specific compositional context: that is, in terms of the work’s implied structure.  

Meyer follows this passage by citing the deceptive cadence as well, perhaps cementing it as the locus classicus of “what might have been.” “A cadence,” he writes, “is called deceptive precisely because the competent listener is aware of what might have been (indeed, of what was probable): namely, that the progression might have closed on the tonic.”

The “shadowy existence” of an “aesthetic experience” concerned with “what might have been” is an alluring, powerful idea: it promises a kind of arcane, intimate knowledge of a piece of music. There is, in one sense, nothing secretive about it; as Meyer points out, any “competent listener” can easily detect “what might have been” when they hear a deceptive cadence. Expressing this competency and making its results legible to oneself and others, however, opens the door to much greater complexity. The simplest way to express the idea that a listener can imagine what might have happened if V had gone to I would be to answer Rogers’ question in prose, simply asserting that the measure could be recomposed to make it the end of the piece by writing a I chord in place of the VI that Chopin wrote. This, however, would not be a recomposition in itself; it is merely a verbal statement about music.

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Actually recomposing the music quickly shows us why it is so important that recompositional arguments be realized in actual notation, because even this simplest of cases presents at least two options. The first option (shown in Figure 0.3b, and reprinted below for reference, as Figure 0.4a) involves chopping off the music after measure 20 and appending a tonic chord.\footnote{Here, the reader will notice that, while I have attempted to follow Chopin’s voicings as closely as possible, I have omitted the low bass notes when necessary to preserve registral continuity between measure 20 and the various endings.} Figure 0.4b, on the other hand, depicts an option that borrows a bit of Chopin’s musical rhetoric; it shows a slightly altered version of the cadential 6/4 from the original measure 24, which then moves through V, to the tonic. This does not have the effect of “chopping off” the end, but instead omits the digression to VI and the measures that follow. Going directly from V7 in the latter half of m. 20 to the cadential 6/4 in m. 24, however, is not very effective, nor is it syntactically satisfying. Figure 0.4c, therefore, alters this gesture slightly as well, changing the cadential 6/4 into a tonic chord, and by extension the V-I that follows into a mere echo. There are arguments to be made for at least two of our alternate endings (omitting the unsatisfactory Fig 1.4b). Fig. 1.4a ends the piece on a hypermetric downbeat, roughly preserving the pattern presented throughout the rest of the piece, and even the hypermetric pattern used in the original ending. Fig. 1.4c, on the other hand, is a more distinctive ending, one which echoes what Chopin himself wrote. It also allows for a longer, more drawn out ending, which one might argue is better suited to disperse the “energy” built up during the piece. A counter argument, however, might claim that mm. 19 and 20 handle...
that task adequately, and that writing a cadential 6/4 chord displaces the final sonority to a hypermetrically weak position.

**Figure 0.4a:** Recomposition of Chopin, E Minor Prelude (Op. 28, No. 4), mm. 19–“21”

**Figure 0.4b:** Recomposition of Chopin, E Minor Prelude (Op. 28, No. 4), mm. 19–“22,” showing dissonant cadential 6/4 chord

**Figure 0.4c:** Recomposition of Chopin, E Minor Prelude (Op. 28, No. 4), mm. 19–“22,” turning cadential 6/4 into I – V – I
The decisions faced in even this simple recomposition are a microcosm of the decisions made by music analysts in many aspects of their work, not only because of the technical dilemma but because of the conflicting theoretical impulses embodied therein. On one hand, there is the desire to adhere closely to what Chopin wrote, since the exercise is explicitly conceived as a way to gain insight into his music. On the other hand, there is an appeal to how the music sounds to us, and whether a simple tonic chord on measure “21” would be satisfying. Furthermore, there is the open question of whether the recomposition does or does not satisfy some aspect of tonal theory; in this case, the conventions of hypermeter. And beyond all of these, there is the issue of whether a student (the presumed audience for Rogers’ sample question) might take the recomposition in a different direction. Is it wrong, for example, if they choose a different solution than turning the deceptive cadence into a full cadence? And if they do so, must they make some gesture towards what Chopin has written, or can they invent new material, as Gottfried Weber did in our introduction? And how would we, as professional music analysts, answer those questions in relation to our own work, or when evaluating the work of a colleague?

Questions like these have often been posed, debated, and (at least provisionally) answered in relation to most established systems of music theory and analysis. Approaches like roman numeral analysis, Schenkerian analysis, and Neo-Riemannian theory are all generally understood as systems capable of generating great musical insight, but that nonetheless are
subject to the judgment and preferences of the analyst, various historical forces, and so forth.\textsuperscript{32} But as this brief treatment of Chopin’s E Minor Prelude shows us, recomposition is subject to these forces as well; it is not a neutral tool for analysis, but rather requires a substantive engagement with the same issues raised by any analytical method. The present study asks these questions and more, analyzing how in recompositional analyses, the desire to be loyal to the composer’s intentions and the Urtext of a given piece often runs directly into the desires and values that we hold as music theorists, analysts and listeners.

\textsuperscript{32} Arguably, the process of evaluating, critiquing, and historicizing theoretical systems lies at the core of music-theoretical research. The bibliography is thus overwhelming, but the point is hopefully clear.
Chapter One: Towards a Theory of Recomposition

I. The Invisibility of Recomposition

Throughout his book *Phrase Rhythm in Tonal Music*, William Rothstein defines his analytical terms and techniques carefully. In the book’s introductory chapters, Rothstein describes his voice-leading sketches and his particular technique of “foreground reduction,” heading off potential criticisms of his sometimes unorthodox Schenkerian technique. Schenker’s method, Rothstein argues, has demonstrated to music theorists that “one graphic representation often does the work of many paragraphs (and sometimes many pages).”\(^1\) Rothstein first demonstrates his pseudo-Schenkerian style of “foreground reduction” warning his readers that his preliminary graphic analyses are “very crude ... hardly a ‘Schenkerian analysis’ at all.”\(^2\) And he meticulously quantifies the rhythmic ratios involved in producing durational reductions. As seen in Figures 1.1 and 1.2, Rothstein gives a detailed sample analysis of Johann Strauss’ *Blue Danube Waltz* in order to demonstrate how both techniques work. He relies, first of all, on a pseudo-Schenkerian style of “foreground reduction,” first seen in the graph reproduced in Figure 1.1. In it, repeated notes and some passing tones are left out of the texture, and some notes are “held” (by omission) through several measures, in the style of a Schenkerian *Urlinie-Tafel*.\(^3\) The numbers between staves indicate each measure’s position within the 4/4 hypermeter.

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\(^3\) It seems likely that Rothstein is so careful about qualifying his analytical techniques precisely because of its proximity to the then-hegemonic methods of Schenkerian analysis. Perhaps he feared reprisals staged from the Schenkerian “bunker” which he had playfully
Figure 1.1: William Rothstein’s Foreground Reduction of Strauss, “Blue Danube” Waltz (Rothstein 1989, 6)

The second graphing technique is “durational reduction,” as demonstrated in Figure 1.2. Here, Rothstein “reduces the rhythmic values (durations) of a piece or passage by some constant factor, in this case 3:1. Durational reduction,” he argues, “helps to show the metrical organization of pieces or passages when that organization is not completely reflected in the composer’s notation.”

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imagined to be hidden somewhere below the Upper West Side a few years earlier, in the introduction to his “The Americanization of Heinrich Schenker,” In Theory Only 9/1 (1986): 5.

⁴ Rothstein, Phrase Rhythm in Tonal Music, 8.
Rothstein uses these two analytical techniques in the service of his opening argument: a detailed examination of the word and concept of a phrase in music, in contrast to similar terms such as Edward T. Cone’s notion of a hypermeasure. He later uses variations of both techniques throughout the first chapter, and into the second, including both a more orthodox Schenkerian background sketch of the “Blue Danube” Waltz, and an even lower-level durational reduction. In the second chapter, he also introduces the third analytical technique to his repertoire: recomposition. This third technique, however, receives none of the descriptive attention or justification given to voice-leading and durational reductions. While Rothstein is careful to define precisely what he is doing in his reductive analyses (even demonstrating the mechanistic rigor of durational reduction by describing it through numerical ratios), he gives no such descriptions of recomposition.

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6 See Rothstein, Phrase Rhythm in Tonal Music, pages 9 and 10, respectively.
Recomposition first arises as part of Rothstein’s description of the characteristic acceleration of harmonic rhythm at the end of a phrase: what he calls the “drive to the cadence.” He uses the opening antecedent-consequent period of Mozart’s Piano Sonata in A Major, K. 331; Figure 1.3 presents a lightly annotated score. Starting with measure 6, the harmonic rhythm begins to speed up: the harmony changes on every new note, rather than every half measure, as is the case with the corresponding music in m. 3. In harmonic-functional terms (which Rothstein does not use), the acceleration of harmonic rhythm is necessary in the consequent, so that the phrase can cycle through both pre-dominant and dominant functions, in order to arrive at a full cadence where the antecedent reached only a half cadence. This leads to what Rothstein calls “the most prominent textural event ... the abandonment of the parallel tenths between melody and bass with which each phrase begins.” As shown in Figure 1.3, this abandonment happens on the third eighth-note beat of m. 4 in the antecedent, and the final eighth-note beat of m. 7 in the consequent; in other words, it happens three eighth notes earlier in the consequent.

Rothstein turns to recomposition in order to demonstrate the striking similarities between the antecedent and the consequent. “Up to their points of cadence,” he writes, “the two phrases are very much alike—so much alike, in fact, that with just a little tampering we could make the resemblance complete.” Pointing to his recomposition of the antecedent phrase, which I have reproduced in Figure 1.4, Rothstein continues:

If [Fig. 1.4] is substituted for the consequent phrase in [Figure 1.3], it will be seen that the change of texture now occurs at precisely the same point in each phrase, instead of

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7 Rothstein, Phrase Rhythm in Tonal Music, 22.
8 Rothstein, Phrase Rhythm in Tonal Music, 23.
appearing half a measure earlier in the consequent than in the antecedent. The cadential 6/4 chord also appears at the same point in each phrase, in the middle of the fourth bar. But now the consequent no longer fits into a four-measure unit, as the antecedent did. Since it contains one extra chord—the final tonic—the consequent phrase shown in [Figure 1.4] occupies at least one extra beat’s worth of time.9

Figure 1.3: Rothstein’s Lightly Annotated Score of Mozart, Piano Sonata in A Major, K. 331 (Rothstein 1989, 23)

Figure 1.4: Rothstein’s Recomposition of Mozart, K. 331, mm. 5-8, showing a five-measure version of the consequent phrase, without phrase acceleration.10

10 Rothstein, Phrase Rhythm in Tonal Music, 24. It is perhaps unfair, but also revealing, to note that in Rothstein’s book, the recomposition of the consequent phrase actually contains a notational typo, which I have corrected in Figure 1.4: in “measure 8.4,” the bass should move up to E, forming the first half of the cadential six-four chord that ends the phrase.
By shifting the consequent’s full cadence to the downbeat of a hypothetical ninth measure, Rothstein preserves the parallel tenths all the way up to the fourth measure of the antecedent, mirroring the consequent and allowing the tonic-prolongational, pre-dominant, and dominant zones of the phrase the same amount of time to unfold in both halves of the phrase. In placing the tonic on a hypermetrically accented beat, he creates what might be a nice ending for an entire variation—but perhaps not a strong ending for its opening phrase.\footnote{Since Mozart intended this parallel period to be a discrete section, with repeat signs ... the extra length of the consequent is awkward,” Rothstein admits.\footnote{Rothstein, \textit{Phrase Rhythm in Tonal Music}, 24.}}

“Since Mozart intended this parallel period to be a discrete section, with repeat signs ... the extra length of the consequent is awkward,” Rothstein admits.\footnote{Rothstein, \textit{Phrase Rhythm in Tonal Music}, 24.} The ending of this first solution is unbalanced, necessitating either a momentary change to 3/8, some additional music to fill the time until the next section can begin in m. 10, or a phrase overlap to elide the cadence into the next phrase.

Rothstein first attempts to fill the time, writing the (rather convincing) left hand figuration shown in Figure 1.5. Rothstein’s other solution to the hypermetrical problem raised by a nine-measure opening period is perhaps more conventional for the opening of a piece, theme and variations or none—the recomposition in Figure 1.4 proposes a phrase overlap.

Instead, however, it remains on D. While I will not argue that this shows that the recomposition is unimportant—since I believe that even though Rothstein does not spend much text describing it, the act itself is very significant for him—but rather that the recomposition is entirely intuitive. Told that it is an expansion of the written consequent that leaves just as much time for each part of the harmonic rhythm, we are able to mentally fill in precisely how the phrase will unfold, almost intuitively—precisely as the copyeditor did when he or she missed this note.

\footnote{Though Mozart does not in fact end the opening variation this way; instead, he repeats the last two measures of the antecedent phrase, and brings the variation to a close on the final bar of an expanded (6>4) hypermeasure.}
However this solution is fanciful as well, a flight of compositional (or perhaps variational) indulgence akin to the one that we saw in the Introduction, following Weber’s G#. In the third measure of Figure 1.6, the phrase cadences on the tonic on the downbeat of a hypothetical measure 9, in much the same way as Figures 1.4 and 1.5 did. Here, however, instead of filling that measure out with generic figuration, Rothstein begins a new phrase—one that’s rather different from Mozart’s own continuation. Figure 1.6 gives us the bass line from Mozart’s actual m. 9, but creates a new part for the right hand—something akin to the texture and shape found in Variation III (later on in the first movement of K. 331), but presenting new melodic material. Here, just as Weber did with his fanciful post-G♯ completion, Rothstein momentarily breaks out of sober theorizing to propose a new variation—perhaps granting a bit of surreptitious insight into his own experience of the piece. “Why not try combining these two figurations?” we can almost imagine him thinking while (re)composing this brief example.

![Figure 1.5: Recomposition of K. 331, I, showing a full measure of post-cadential fill in “m. 9” (Rothstein 1989, 24)](image)

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13 See the “Introduction” to this study.
Rothstein continues to rely upon recomposition throughout the rest of the second chapter ("Techniques of Phrase Rhythm") and the complementary third chapter ("Phrase Expansion"), as well as throughout the second half of the book, which is concerned with analytical case studies from Haydn, Mendelssohn, Chopin, and Wagner. Indeed, recomposition becomes an integral part of the working method that Rothstein develops throughout the book: a cycle of musical example/voice-leading reduction/recomposition develops, by which Rothstein predictably works his way through his major examples in intervals of 8 to 12 pages.

After the A Major Sonata, Rothstein recomposes 26 more pieces of music in the course of six chapters. And although he occasionally stops to consider what he is doing (as he did with the Mozart K. 331 analysis) his recompositions often go without commentary. No matter the intention, the omission of methodological reflection makes it seem as if recompositions are to be considered self-evident and obvious. Rothstein’s omission of any explanation seems to suggest that any educated musician would come to the same conclusion. While this notion of musical self-evidence is precisely the argument of any recomposition presented without narration, Rothstein occasionally makes this ideology explicit. For example, a particularly
opaque recomposition of Haydn’s Piano Sonata in A♭ (the original score of which is shown in Figure 1.7a, with Rothstein’s recomposition in Figure 1.7b), draws only the remark that “[c]learly, the final cadence wants to complete itself as in [Figure 1.7b].”\textsuperscript{14} Contextual clues and a review of the music show us that the cadence depicted in the “wish-fulfilling” recomposition in Figure 1.7b has been withheld through several evasions: in m. 22 (not pictured), m. 24, m. 31, and debatably, m. 28. This is not to say that Rothstein neglects to explain the music; he does so in great detail, through an analysis of the middleground motives traced by the music’s repeated attempts to cadence. But the recomposition—which very clearly depicts the cadence that we expect to hear after m. 27—seems to be almost an afterthought. In such cases, one has the impression that the processes that go into recomposition are an afterthought, or even an object of shame—“pay no attention to that theorist behind the curtain!” Even though recomposition seems to be extremely important Rothstein (as we will see further in Chapter Two), there is never a genealogy given for the technique, (as there is with his pseudo-Schenkerian reductions), nor any defense of the method itself; its logical connections to the tonal theories which make it possible are left unstated.

This should not be taken as a wholesale critique of Rothstein or his methods; indeed, I find recomposition to be an essential component in the music theorist’s toolbox, important enough that I am devoting this entire study to it, and I hope to do so in a way that is as positive and productive as it is critical. And as we will see in Chapter Two, Rothstein makes effective

\textsuperscript{14} Rothstein, \textit{Phrase Rhythm in Tonal Music}, 140.
and convincing use of recomposition throughout his book. Yet, the lack of methodological reflection and commentary given to Phrase Rhythm in Tonal Music’s recompositions is far too

**Figure 1.7a**: Haydn, Piano Sonata in A♭ Major, Hob. XVI-46, I, mm. 22.3-38 (Rothstein 1989, 134–135)
common in the discipline of music theory writ large. Rothstein is by no means the only theorist who seems to deploy the device without making their motivations and intentions explicit to the reader.

For example, in a discussion of the “sentence” theme-type, William E. Caplin recomposes the anomalous, fourteen-measure phrase the opens the minuet of Mozart’s 40th Symphony (see Figure 1.8a) in order to show how its basic idea can be reduced to a more normative and symmetrical presentation subphrase (Fig. 1.8b). Mirroring Rothstein’s brevity, Caplin writes only that his recomposition “reconstructs a normative version of the basic idea, showing how its essential motivic content could have been easily accommodated to the normal two-measure
length.” Here, once again, the omission of any discussion implies that the results are transparent, and that anyone might arrive at the same “solution.” But not only does recomposing the minuet significantly alter the music—eliminating the hemiola that animates the passage and unbalancing later sections that presumably rely on the opening motivic content—it requires far more creativity than is immediately obvious. Note values are changed, and with them, proportional relationships: for example, Caplin compresses Mozart’s mm. 1–2 and 4–5 into single measures, while leaving mm. 3 and 6 mostly intact. There is thus quite a bit of Caplin in Figure 1.8b, right alongside the work of Mozart.

There is also the small matter of the passage’s completion. Caplin’s recomposition of the basic idea into something more typical of a musical sentence stops with the presentation subphrase, likely because it is actually quite difficult to reduce Mozart’s 14-measure utterance into an eight-measure prototype. Not only is the basic idea “too long,” it seems to repeat one too many times. While Caplin indicates that the continuation subphrase—the second half of the sentence—begins with the pickup to m. 7, the repeat sign above the corresponding bracket indicates that mm. 7–8 are actually a third repetition of the basic idea. Because of this repetition, the orthodox fragmentation is delayed until m. 9. Mozart writes four fragmentations, before concluding the phrase with a relatively orthodox two-measure cadential gesture.

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Figure 1.8a: William E. Caplin’s Analysis of Mozart, Symphony No. 40, I, mm. 1-14

Figure 1.8b: Caplin’s Recomposition of Mozart, Symphony No. 40, revealing underlying duple model

Figure 1.8c shows my own best attempt at carrying the logic of Caplin’s recomposition (from Fig. 1.8b) through to the end of the phrase. The third basic idea matches the first, an octave higher, while the fragmentations are compressed according to Caplin’s formula. I chose to turn Mozart’s cascading quarter notes (mm. 11-13 in the original, Fig. 1.8a) into eighth notes (mm. 7-8 in Fig. 1.8c), in order to bring the phrase to an end as quickly as possible. The final leading tone (C♯) remains a quarter note so that the PAC may land in a position of metric strength, albeit a different one than the Schoenbergian-Caplinian ideal would indicate—the phrase ends on the downbeat of m. 9 instead of m. 8. It would thus appear that Caplin’s
laconic description of his (half)recomposition does not only hide the decision-making process inherent in excavating a standard presentation subphrase from the minuet’s first six measures; it also conceals the challenges raised by the extra repetition of the basic idea—which poses other problems for Caplin’s theory\textsuperscript{16}—and the long descending figure needed to bring about a PAC in the secondary key.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure}
\caption{My own attempt to complete Caplin’s recomposition of Mozart’s minuet}
\end{figure}

Another common way in which recomposition is quietly applied to canonical works is in the service of a negative aesthetic argument, as when Hans Keller re-wrote the opening of Mozart’s C Major Piano Concerto, K. 503 in a 1956 essay on the methodology of analysis. Using the snippet of the theme shown in Figure 1.9\textsuperscript{a} as his prototype, Keller argues that Figure 1.9\textsuperscript{b} shows us “how a mediocre eighteenth-century composer would have constructed the

\textsuperscript{16} In his treatment of hybrid themes, which combine aspects of sentences and periods, Caplin insists that one possible combination—grafting a sentence’s presentation phrase onto a period’s consequent phrase—would produce an unacceptable chimera. “Such an arrangement of phrases brings a threefold statement of the basic idea,” he writes. “The resulting redundancy of material within an excessive tonic prolongation likely explains why this potential type of hybrid seldom appears in the repertory.” See Caplin, Classical Form, 63.
opening passage rhythmically."\textsuperscript{17} Figure 1.9c shows what Mozart actually did: he wrote a fanfare that contrasts with, rather than exactly follows, the theme. Ventriloquizing Mozart in a curiously British locution, Keller argues that this subtlety is the source of his genius: "[Figure 1.9b] goes without saying; therefore don’t let’s say it, but vary it immediately."\textsuperscript{18} In contrast to the harmonic and formal experiments seen in the examples from Rothstein and Caplin, recompositions such as Keller’s exist only as musical strawman arguments: disdainful demonstrations of how a talentless Kleinmeister might have written a passage. They serve primarily to affirm the genius of the master composer, who achieves greatness by breaking the template—a template which exists primarily as an invention by the recomposing critic.

\textbf{Figure 1.9a}: Example of “thematic rhythm” from Mozart, Piano Concerto in C, K. 503, I: winds, mm. 7-8

\textbf{Figure 1.9b}: Keller’s recomposition of mm. 1-3, showing “how a mediocre eighteenth-century composer would have constructed the passage.”

\textbf{Figure 1.9c}: K. 503, Violin I, mm. 1-3, as written by Mozart


\textsuperscript{18} Hans Keller, “K. 503: The Unity of Contrasting Themes,” 51.
While recomposition is undoubtedly a valuable tool, its under-theorization runs the risk of letting it be nothing but a tool, of becoming mere “equipment” [Zeug], which is in Martin Heidegger’s sense “ready-to-hand” (zuhanden). In Heidegger’s famous analysis of tools as “useful things,” he argues that a tradesman—for example, a carpenter with a hammer—takes no notice of his tools. “Ready-to-handness,” he writes, “is not grasped theoretically at all, nor is it itself initially a theme for circumspection. What is peculiar to what is at hand is that it withdraws, so to speak, in order to be really useful.”

The hammer is a transparent extension of the carpenter’s working process, and cannot truly be noticed in itself, much less known intimately or analyzed; that is, until it breaks or otherwise intervenes in the task at hand. “When we discover its unusability,” writes Heidegger,

> the thing becomes conspicuous …. What is unhandy can be encountered not only in the sense of something unusable or completely missing, but as something unhandy which is not missing at all and not unusable, but “gets in the way” of taking care of things. ... Unhandy things are disturbing and make evident the obstinacy of what is initially to be taken care of before anything else.

In other words, for Heidegger, a useful tool is effectively invisible until it becomes conspicuously un-useful [vorhanden]. This failure of the tool is what makes it legible to us as an object (a “thing” or Ding, in contrast to a Zeug) that can be analyzed, and whose operation can be understood or critiqued.

Many of music theory’s tools have been acknowledged as precisely that, and have been analyzed accordingly: approaches such as Schenkerian analysis, pitch-class set theory, Ne-
Riemannian theory, and Formenlehre have generated not only voluminous analyses of individual works, but also stacks of introspective methodological essays too numerous to cite here. Most of these begin with the realization that some aspect of a theoretical tool “breaks” when faced with some aspect of the music to which it is being applied. (We might think, for example, of the many problems of segmentation that arise in post-tonal analysis, or of Neo-Riemannian theory’s numerous attempts to deal with seventh-chords and negotiate transformations of chordal cardinality.) But as the examples of Rothstein, Caplin, and Keller show, the act of recomposing an exceptional passage to show how it might have gone is too often in danger of being missed or ignored, a hammer that too smoothly seems to extend the reach of one who wields it. This study will explore the rhetoric that allows recomposition to disappear so easily into the woodwork, attempting to “break” this ever-receding tool and in so doing expose the conceptual machinery behind it. As with any seemingly naturalized theoretical device, recomposition has both a checkered past, and an often-unexamined set of assumptions at its core.


Before moving on to the more technical aspects of recomposition, though, I should note that recomposition is not restricted to analyses of common-practice music. For example, David Temperley employs recomposition in an essay on “The Cadential IV in Rock.” During an account of different ways that IV is used in initiate cadences in rock music, Temperley briefly examines The Who’s “Bargain” (1971, from the album *Who’s Next*). As shown in Figure 1.10a, “Bargain” features a prominent IV chord near the end of its “verse-chorus unit” (VCU). This emphatic IV, Temperley argues, could easily have been I. “The schematic expectation for I at the end of the VCU is strong—and the VCU could have ended at this point, as the recomposition in [Figure 1.10b] shows.”

![Figure 1.10a: The Who, “Bargain,” end of verse-chorus unit, showing prolonged cadential IV (Temperley 2011, Example 16)](image)

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24 Temperley writes, “With regard to form [in rock songs], while there is considerable variety, the vast majority of rock songs feature some kind of large repeating section; I will call this the verse-chorus unit or VCU. The VCU normally consists of a verse (with different lyrics on each occurrence) and chorus (with unchanging lyrics). See “The Cadential IV in Rock,” [1.4].

This exception is crucial; it demonstrates that recomposition is not a technique that is restricted to the Classical style, nor does it depend upon particular harmonic or rhythmic configurations. As we see from Temperley’s argument, recomposition can happen any time there is a strong schematic expectation. Defending his recomposition, Temperley writes,

The preceding bVI-bVII harmonies support this expectation [for I] as well; I is often approached from bVI-bVII in rock, as seen in songs such as Derek and the Dominos’ ‘Layla’ and Blue Öyster Cult’s ‘Don’t Fear the Reaper.’ In addition, the melody of the second full measure of the chorus, hovering between 2 (C) and b7 (A♭) leads us to expect 1 and (therefore) the tonic harmony that most often accompanies it.

Here, although the details are different, Temperley describes some of the same mechanisms that underlie our generic expectations in the Classical style—both the broad expectation constructed by the prevalence of this structure within the repertoire, and the specific tendencies of the melodic tones. The existence of such strong expectations, by extension, also makes many theoretical recompositions possible, both by pointing towards the existence of

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26 In her study of recomposition as a pedagogical tool (which will be considered later in this chapter), Melissa Hoag mentions The Beatles’ “Octopus’ Garden” as another example of a deceptive resolution ripe for recomposition; see “Hearing ‘What Might Have Been,’” *Journal of Music Theory Pedagogy* 27 (2013): 66.

27 Temperley, “The Cadential IV in Rock,” [7.2].
prototypical models, and by contributing to the production of specific musical predictions. Some expectations, such as those carried by particular melodic, might be broadly applicable, while others (particular harmonic configurations) are far more contextual and style-specific.

On one hand, this is another strong argument in favor of considering the intentions behind a recomposition, rather than the particular techniques involved. Doing so facilitates a cross-stylistic analysis of the ways in which recomposition is used, yielding deeper insight into the broader discursive patterns that emerge when we describe and analyze music. It situates The Who alongside a Mozart Piano Sonata in a way that does not emphasize how we might hear them differently; instead, it wonders about what the experiences of hearing each might have in common, and what these commonalities might reveal about generic compositional strategies, such as the manipulation of phrase rhythm or normative harmonic expectations.

However, the broad applicability of theoretical recompositions, and their frequent appeals to the intuition of the listener, show us precisely why the lack of accompanying methodological reflection can also be troubling. Rothstein and others rarely define the theoretical force of their recompositions; that is, they are not always clear about the aspect(s) of tonal theory with which they engage, nor the ways in which they do so. Instead, they rely on the reader/listener’s perceptions. “It sounds better like this, doesn’t it?” goes the presumed question. Or perhaps more cynically, “this sounds dull, right? Aren’t you glad Mozart didn’t actually write this?” As

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Although, I should qualify, certainly not all expectations. But in this example, I am thinking less about particular scale degrees (through which Temperley unavoidably suggests the operation of a Western-style tonal system, however modified it has been by the conventions of pop) and more along the lines of the gestalt principles employed by theorists like Leonard Meyer, Robert O. Gjerdingen, and particularly Fred Lerdahl and Ray Jackendoff, in their Generative Theory of Tonal Music (Cambridge, Mass.: MIT Press, 1983).
rhetorical devices, recompositions possess great power to explain and clarify; yet, with such power comes the responsibility to be explicit about the theory being engaged, and how this appeal to the ear is being used. Anything less risks circularity: the theory goes a certain way because the music sounds right; yet it sounds right to us only because our listening has already been conditioned by theory, or by exposure to a great deal of music that has been structured by theory. In the earlier example of Rothstein’s K. 331 analysis, for instance, it should be pointed out that Mozart’s version actually is what we expect from an opening theme; the recomposition presented back in Figure 1.6 (which shows how the model would unfold, unaltered) is actually unexpected, and would be unusual. Recompositions that focus on symmetry, or on extending a compositional device to its logical conclusion, all too frequently fail to question the force and frequency of the models with which they engage. And more complicated recompositions, such as Caplin’s dissection of Mozart’s 40th (Figure 1.8), or Rothstein’s elision of multiple evaded cadences into a single recomposition (Figure 1.7) actually do a disservice to the reader, by combining several steps of an argument or analysis into a single heuristic summary, which sounds (literally) rhetorically convincing, yet neglects to explain its own reasoning. In failing to describe or define the relationship between the hearing subject and the object of analysis—that is, in failing to disclose all of their music-theoretical premises—they run the risk of “begging the question.” By appealing directly to what the reader hears as the validation for a theory or an analysis, they fail to answer the essential question of

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29 I am grateful to William E. Caplin for pointing this out to me at the 2014 AMS/SMT Conference in Milwaukee.
whether we hear a certain way because the theory is valid, or whether the theory is valid because we hear a recomposed passage in a certain way.

This reliance on the rhetoric of hearing opens up the question of whether recomposition is, for lack of a better term, an “insider’s game,” aimed at experienced musicians and musicologists, or whether it is employed for the benefit of less-experienced listeners. The recompositions addressed in this section are found in research monographs and articles, and are aimed at skilled theorists with a grasp of repertoire and vocabulary. Rothstein and others accordingly assume that their readers will bring that knowledge to bear in coming to the same conclusion as they do, and they sometimes leave their arguments disappointingly sparse. Perhaps the most glaring example of this comes at the end of Rothstein’s chapter on Chopin: despite the fact that his recomposition of the B Major Nocturne, Op. 62, No. 1, is “very tentative,” Rothstein declines to rehearse his argument in words. He writes, “[i]t would require too much additional space to explain fully the derivation of [Figure 1.11], but the reader can test this hypothesis against his own intuitions.” He mentions one or two technical factors—the meter and the repetition of F♯ in Chopin’s original—but closes the chapter hastily by musing that “beyond these lie several mysteries … [which] lie very close to the heart of Chopin’s late style.”

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30 Rothstein, *Phrase Rhythm in Tonal Music*, 247-248. Rothstein’s recomposition seems to operate by extracting a consistent melodic pattern (highly visible in the right hand of Figure 1.11, mm. 2–4 and 6–7), simplifying the texture and omitting certain measures and half-measures that do not support the pattern.
Figure 1.11: Rothstein’s recomposition of Chopin, Nocturne in B Major, Op. 62, No. 1 (Rothstein 1989, 248)

It may very well be safe to make such assumptions in many cases, both thanks to the skill of the reader, and the amount of information that truly is conveyed by a diagram—recall, as Rothstein argues early on, that “one graphic representation is often worth many paragraphs.” However, since recompositions are a metalanguage that blends directly into the object language, often lacking any analytical annotations (and thus, hiding the traces of the theorist’s work), we must be careful not to let them slip by, uninterrogated. This tendency is one of the chief objections that Robert Morgan raises in his review of Phrase Rhythm in Tonal Music. Morgan writes,

Despite my great admiration for Rothstein’s study, it contains scarcely an analysis that does not pose for me some problem or question. This results partly from what would seem to be one of its basic assumptions: that there is, or ought to be, one “correct” way to understand a particular passage in terms of phrase rhythm (an assumption underscored

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31 Rothstein, Phrase Rhythm in Tonal Music, 6.
by Rothstein’s habit—encountered everywhere in the book—of rewriting complex passages to reveal simpler underlying structures). My own feeling is that interesting, complex music always reveals ambiguity with regard to grouping and metrical accentuation. Though Rothstein seems more open to alternative readings than many, he ultimately stresses the superiority of one particular view.\textsuperscript{32}

Here, Morgan seems to be objecting to the sheer rhetorical force that is often taken on by a recomposition. More than an annotated score or a Schenkerian reduction, recompositions seem to armor themselves against critique or dissent by removing ambiguous elements of the music, rather than merely highlighting or interpreting them. They are, in this sense, a double-edged sword: useful for conveying nuanced information quickly, but interpreted by some as an aggressive move to suppress further discourse. That Morgan feels the need to register this complaint despite Rothstein’s admission, in a section subtitled “How Can You Tell When a Rhythmic Analysis is ‘Right?’” that authoritative answers to questions of phrase rhythm will most likely never be found.\textsuperscript{33}

This chapter addresses some of these concerns by proposing and exploring a five-part typology of recomposition, which can be used in exploring recompositions wherever they occur in music theory. Along the way, we will rehearse and apply some labels devised by Leonard Meyer, which will allow for more precise description of both the levels at which our models and guidelines are defined—that is, whether they are global, or apply only in certain circumstances—and the force with which they regulate or inform both composition and listening. Meyer’s model is also an opening gesture towards addressing the concerns of the last


\textsuperscript{33} Rothstein, Phrase Rhythm in Tonal Music, 100-101.
paragraph—resolving how recompositions might be perceived by different listeners, even as they often purport to make universal statements about listening.

II. Leonard Meyer’s Laws, Rules, and Strategies: Prelude to a Theory of Recomposition

In his *Style and Music: Theory, History, and Ideology*, Leonard Meyer proposes a useful way to negotiate the many issues of correctness, appropriateness, and intentionality that are at play in a discussion of recomposition. Meyer’s “hierarchy of constraints” posits that music is subject to three different levels of guidance: laws, rules, and strategies. Laws, for Meyer, are “transcultural constraints—universals, if you will.” They can be physical or physiological, but are most frequently described as psychological (particularly as filtered through Meyer’s gestalt-oriented view of music cognition). Musical laws describe general, lower-level phenomena such as the tendency for proximate events to be grouped together, or disjunct ones to be considered separately. They also include basic aesthetic postulates such as the argument that regular patterns are more comprehensible than irregular ones. Because of their generality and their appeal to psychological principles, Meyer considers laws to apply universally, across all styles of music.

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36 Meyer’s laws occupy some middle ground between the “well-formedness rules” and “preference rules” proposed by Fred Lerdahl and Ray Jackendoff. Meyer’s laws are more specific than the most basic formal WFRs, such as “a piece constitutes a group,” yet far more general than the orientation of tonality specific preference rules, which are designed to convey “experienced listeners’ hearings of any given piece.” See A *Generative Theory of Tonal Music* (Cambridge, Mass.: MIT Press, 1983), 9, 37-53, and *passim*. 
Meyer places rules below laws. Although rules are not universal, Meyer describes them as “the highest, most encompassing level of stylistic constraints.” Rules govern large stylistic periods (such as “Renaissance polyphony” or “the Classical style”) by dictating “the permissible material means of a musical style,” such as harmony, counterpoint, rhythm, and the available gamut of pitches. Meyer describes several kinds of rules that may govern individual parameters of music: dependency rules, which are epiphenomena of the rules of other parameters (such as the occurrence of harmony as a by-product of organum’s rules for melody and voice-leading); contextual rules (such as the tendency for cadences to occur at certain points in Renaissance polyphony); and syntactic rules (the primary, fully fleshed-out rules that are capable of entering into hierarchical relationships).

Below rules, finally, are strategies: individual compositional choices made within the framework of a rule-governed musical style. The antecedent-consequent period, for example, is a strategy made possible by the rules of tonal harmony, as are certain characteristic rhythmic gestures found in the Classical period. Such strategies are subject to what Meyer calls contextual probabilities: a process by which certain features of music will become well-worn and predictable, thus accruing strong associations, and entering into characteristic relationships with other strategies—the kinds of relationships formalized by Meyer’s student Eugene Narmour in his “Implication-Realization (IR) Model.”

37 Meyer, Style and Music, 17.
38 ibid.
39 ibid., 17-19.
The notion of contextual probabilities leads us to the aspect of Meyer’s hierarchy that is most useful for the present study: his account of strategic play. Strategic play describes any sort of tactic which subverts the “stylistic norms” of a given idiom by employing unexpected elements, or by rendering generic elements unexpected by subverting the listener’s expectations. This is a well-worn trope in both critical and analytical writings on music: a composer sets up a pattern (or takes advantage of a schematic expectation), then subverts it, creating a moment that we often describe as “surprising.” One classic example (among many) of such subversion can be seen in the opening measures of Haydn’s String Quartet in B♭ Major, Op. 71, No. 1. Heard in isolation, the two measures pictured in Figure 1.12 might be expected as an ending; in Meyer’s language, this is the overwhelming contextual probability for this cadential gesture. In reality, however, the two measures in question come right at the beginning of the piece.

![Figure 1.12: Haydn, String Quartet in B♭ Major, Op. 71, No. 1, I, mm. 1-2](image)

Meyer’s model is simple and intuitively appealing, and its basic principles are found throughout music theory in various guises; not only in older forms of criticism—including Weber’s account of the “Dissonance” Quartet and the myriad critical responses to the C♯ in the seventh measure of Beethoven’s Eroica Symphony—but also in lots of recent work in music theory.41 David Huron, for example, develops his ITPRA model to quantify and analyze the psychological phenomenon of being surprised by music, while James Hepokoski and Warren Darcy describe their monumental Sonata Theory as a starting point for hermeneutic interpretations of instrumental music, as filtered through a set of generic “norms” negotiated by both composers and listeners.42

There are thus many vocabularies with which to talk about the phenomena of contextual probability and strategic play. I have settled upon Meyer’s formulation for several reasons. First of all, his schema allows us to conceptualize the various levels at which music is subject to guidelines: from laws, to rules, to strategies, and so forth, in descending order of flexibility.


42 ITPRA stands for “Imagination, Tension, Prediction, Reaction, Appraisal,” and describes a temporal process of listening and evaluation. See David Huron, Sweet Anticipation: Music and the Psychology of Expectation (Cambridge, Mass.: MIT Press, 2006); and James Hepokoski and Warren Darcy, Elements of Sonata Theory: Norms, Types, and Deformations in the Late-Eighteenth-Century Sonata (Oxford and New York: Oxford University Press, 2006). Other examples of this general model (conceived in more or less technical terms, and placing greater or lesser emphasis on the listener or on “the music itself”) include the critical work of Edward T. Cone (see, for example, his “Three Ways of Reading a Detective Story—Or a Brahms Intermezzo,” Georgia Review 31/3 [1977]: 554-574), and William E. Caplin’s use of Idealtypen in his Classical Form: A Theory of Formal Functions for the Instrumental Music of Haydn, Mozart, and Beethoven (Oxford and New York: Oxford University Press, 1998).
This, crucially, gives us a language with which to speak about corrective recompositions. Second, Meyer’s schema cuts a middleground, for now, between cognitive accounts like those of David Temperley and David Huron, which are both based upon statistical learning, and humanistic theories that describe listening as a complex engagement with repertoire, social norms, and historical circumstances. Third, and finally, Meyer’s approach gives us ways to speak productively about the role of the composer’s intention, which, as we will see, is a supremely difficult question faced by the study of recomposition.

The topic of the composer’s intention (or more broadly, the author’s intention, in literary criticism) has been controversial since the early twentieth century, when the “New Critics” such as I.A. Richards and T.S. Eliot sought to interpret texts as autonomous objects, regardless of what their authors intended. In the wake of polemic essays like W.K. Wimsatt and M.C. Beardsley’s “The Intentional Fallacy,” which reached across disciplinary boundaries, and in light of the general tendency in post-war music theory to speak of “the music itself,” discussions of the composer’s intentions are fraught, treacherous terrain. Even in the wake of Joseph Kerman’s Contemplating Music, which issued a renewed call for criticism over structural music analysis, and the New Musicology, which opened up new ways of speaking about cultural context and the subjectivity of composers and listeners, intention remains a sensitive subject within music theory.

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For Leonard Meyer, the composer’s intentions are best considered as a set of goals, which are “implicit in the constraints of the style and are largely set by the ideology of the culture.”

Meyer thus takes a step back from attributing individual intentions (which, as he notes, are difficult to ascertain not least because “even accomplished composers are often at a loss to explain what they did”), and instead explains intention as an abstract attempt to use specific compositional strategies to attain the goals set by musical laws (determined by psychology and biology) and rules (as determined by culture). Meyer’s tripartite schema thus allows us to more productively read the inevitable discussions of composerly intentions that will arise in the course of our investigation of recomposition.

III. Reasons to Recompose

We will begin by attempting to analyze the goals of recomposition: the reasons why theorists undertake it. This initial typology of motivations, shown in Table 1.1, stands against its alternative, which might theorize recomposition by looking directly at the techniques employed. Such an approach, for example, might proceed by examining the recomposition of harmonies, then of melodies, of rhythms, etc. This would be a worthwhile investigation—aspects of this strategy certainly inform this study—and would yield an interesting division of the field. But until we have some grasp of why theorists of different time periods have turned

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45 Meyer, Style and Music, 36.
46 Meyer, Style and Music, 100.
47 The thick line between “theory-building” and “analytical” recompositions is intentional, and will be explained at the end of the chapter: it indicates a difference in kind between the first three categories, and the last two.
to recomposition to make their arguments, there is little point in examining the mechanisms themselves in detail.

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Table 1.1: A Basic Typology of Theoretical Recompositions

IIIa. Corrective Recomposition

The first common use of theoretical recomposition is corrective. When criticizing a passage of music, a critic will often assert the simple wrongness of a passage by proposing a more “correct” way that the music should have gone. Weber’s account of Mozart’s “Dissonance” quartet (mentioned above and discussed in greater detail in Chapter Three) falls mostly into this category, as do responses by contemporaries of his such as François-Joseph Fétis. Corrective recompositions are interesting not only because of their potential to reveal the assumptions and tastes (whether explicit or implicit) of listeners at a given time and place, but also because they raise fascinating questions about the nature of music theory and the place
of the music theorist. Corrections often take on an almost ethical force, whether in advocacy for the composer (as in Fétis’ contribution to the debate, which pairs a recomposition with the insistence that the passage must have been garbled by a copyist, since Mozart could not possibly have intended the music to go as it does), or for the structures of tonal music itself—recomposition as a bulwark against the ever-expanding boundaries of taste and acceptability.

Mozart was not the only composer to be accused of producing error-ridden string quartet parts. Beethoven’s String Quartet in E♭ Major, Op. 127, famously earned an incredulous letter from the composer’s patron, Prince Nicholas Galitzin of St. Petersburg. The letter itself has unfortunately been lost, but the response to it gives some hint about its contents. The prince, apparently, wonders whether a certain note in the quartet’s second movement should be D♭, as the score says, or E♭, as he believes it should be. The note in question, as depicted in Figure 1.13, is a fleeting 32nd note in the viola part, in the third beat of m. 51. Prince Galitzin also notes that his friend, the musician Karl Zeuner, disagrees with him, and stands on the side of D♭.

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49 Oscar Sonneck speculates that Galitzin wrote to Beethoven about the disputed quartet in the middle of June, 1825. See *Beethoven Letters in America: Fac-similes with Commentary* (New York: The Beethoven Society, 1927), 48.
50 Heinrich Schenker reports that scholars initially had trouble identifying the passage in question. Perhaps because the original letter from Prince Galitzin has been lost, Alfred Kalisher misinterprets the letter in his commentary to his edition of Beethoven’s collected letters (*Beethovens samtliche Briebe*, Vol. 5 [Berlin & Leipzig: Schuster and Loeffler, 1906-1908], 156), writing “It is difficult to decide which of the late quartets the above-cited music example refers to. Looking through the last quartets, it appears to me as though the motive given above may belong to the Quartet in C♯ minor (Op. 131), on account of its rhythm. A passage from the Adagio ma non troppo ... might be refer [sic] to the original example in the letter. Schenker, however, correctly locates the passage in Op. 127, “in bar 10 of the second variation..."
In his letter, Beethoven sides with Zeuner—the written D♭ is correct. He does not actually address the Prince's purported interpretation, however; there is no mention of the possibility of E♭. Instead, Beethoven continues his letter by addressing the possibility of writing C instead of D♭, and why he chose not to do so. D♭ is the correct pitch, Beethoven writes,

\[ \text{On account of the melody, which merits always to be preferred to everything else. Furthermore this passage is based on the 6/4 chord above A♭ in spite of the [G♭] in the first violin, which is nothing but a Nachschlag or anticipation, which every good singer will make ... If, however, I had written [C], the melody would have been disrupted, and why? Because in place of the 6/4 chord which occurs in this passage and has the fundamental chord [D♭], the chord of the 6th [above A♭], which has the F minor chord as fundamental, would have arisen, and this would have been foreign and contrary to the whole course of the melody and harmony.}\]  


Beethoven, “Letter to Prince Nicholas Galitzin” (~1825), quoted in Oswald Jonas, “A Lesson With Beethoven by Correspondence,” Musical Quarterly 38/2 (1952): 217-218. Beethoven’s original letter, pictured in Figure 1.17, includes actual notation amid the paragraphs; here, I have replaced the notation with simple note names in brackets.
Beethoven asserts that D♭ is indeed the correct note, because it is the melodic tone, and as such it supersedes considerations of harmony. It is not as conceptually dissonant as it appears, either, since the first violin’s G♭ is merely an ornamentation; the true harmony is a D♭ Major in 6/4 position, rendering the viola’s controversial D♭ correct. For the same reasons, the alternatives which might have fit into the passage are unacceptable. C, Beethoven writes, would turn that harmony into an F minor, which would be unacceptable when considered against the course of the music. He does not discuss the Prince’s suggestion of E♭, but it would presumably be dissonant against the D♭ 6/4, and thus equally unacceptable.⁵²

![Figure 1.14](image.png)

Figure 1.14: An excerpt from Beethoven’s letter to Prince Galitzin, showing his notation inserted directly into the prose (Sonneck 1927, pullout after p. 40).

Not only does Galitzin’s letter to Beethoven propose a recomposition—“isn’t E♭ what you meant?”—but Beethoven’s response does as well. The two propositions, however, are different

⁵² In all of this, no one mentions the second violin’s high E♭, which would presumably strengthen the Prince’s argument.
in kind, demonstrating two of the primary modes of theoretical recomposition. Galitzin’s recomposition (which exists, we assume, only in prose) is purely corrective, proposing that a given note is wrong and that, for various reasons, Beethoven actually meant to write an E♭.\textsuperscript{53} Beethoven himself, however, insists upon the correctness of D♭ by exploring how the music might have gone if he had written a C; that is, he executes a speculative, creative analysis of the passage in question, in order to demonstrate the inevitability of the D♭ that he wrote.

Prince Galitzin’s letter, and Beethoven’s response to it, dramatize two very different reasons to recompose a piece of music: the former is a correction of a passage that the prince considered “wrong,” while the latter is an exploration of how the passage might have gone, according to the Prince’s understanding of the conventions of tonal music. These two motivations are separate, but it is crucial to note that they are not necessarily opposites: in cases of musical composition, right is not the direct opposite of wrong. The two parties have different criteria in their arguments: for Prince Galitzin, the D♭ is wrong because it is dissonant; for Beethoven, its dissonance is irrelevant; it is correct because of its context, because it arises in relation to larger processes. He attempts to demonstrate this interpretation by showing how the passage could not have gone differently. Beethoven thus places the controversial note a step or two lower in Meyer’s typology than does the Prince. Galitzin implies that the D♭ breaks a perceptual law, by its dissonance, or that at the very least it breaks the rules of the prevailing style.\textsuperscript{54} Beethoven, however, asserts that it is his compositional strategy

\textsuperscript{53} Galitzin seems to be reacting either to the 4th between the viola’s D♭ and the cello’s A♭, or dissonant 9th between the written D♭ and the second violin’s E♭.

\textsuperscript{54} As Daniel Chua puts it, “[The Prince] found the quartets difficult, even disappointing, since he and the musical circle of St. Petersburg had expected something along
that matters: a strategy that places melodic figuration ahead of vertical consonance, and so explains the controversial passage.

IIIb. Model Recomposition

Another use of recomposition is to clarify phrase-structural and formal aspects of music. I call this model recomposition: recomposing a piece of music so that it will conform more closely to a specific model.55 Phrase-rhythmic recompositions are found frequently in contemporary applications of Formenlehre, as in the example from William Caplin’s Classical Form (Figure 1.8), discussed above. In that example, Caplin relates a fourteen-measure phrase of Mozart’s to the eight-measure theme type which it most closely resembles—and from which, as Caplin implies, Mozart might have derived it. As William Rothstein’s recomposition of Mozart’s A Major Piano Sonata demonstrated, recomposition may also be used to demonstrate how such a model works. The acceleration of harmonic rhythm dramatized by his too-long, nine-measure version is an essential feature of the musical period structure, brought intentionally into more vivid relief by his overly literal recomposition.

Model recomposition need not refer to short, conventional theme types such as the period and the sentence. As we will see in Chapter Four, model recomposition can serve to illustrate the lines of Beethoven’s earliest quartets. They ‘were anything but that,’ wrote the Prince.” See The Galizin Quartets of Beethoven (Princeton: Princeton University Press, 1995), 3.

55 The resemblance of this label to the name of a common pedagogical technique, model composition, is intentional. While model composition will typically begin from prototypical structures (such as a 24- or 32-measure minuet) that have been analytically extrapolated from the work of famous Renaissance, Baroque or Classical composers, model recomposition is a process of bringing finished pieces of music back in line with prototypical structures, as an argument about their genesis.
larger structures, such as the presence or absence of a medial caesura within a sonata-form movement. And leaving aside any conventional form at all, model recomposition may be used to argue for the structure from which a piece is derived.

In his book *Fantasy Pieces*, Harald Krebs proposes a theory of metric dissonance in Robert Schumann’s music that is based on the notion of displacement: that different strata in the music are intentionally offset from one another, to various degrees. Writing as Clara Schumann (one of many personas he dons throughout his whimsical book) in the following passage, Krebs instructs readers to re-compose difficult rhythmic passages by re-aligning them for the purposes of analysis and practice:

> When conflicts result from equivalent but nonaligned layers ... it is helpful to reshape the conflicted passage by aligning the layers. Play the passage in the revised form, and observe how its sound and its effect are altered. For example, at the opening of the finale of the Sonata op. 14 (Example 7.1), increase the duration of the notes marked sforzando to eighth notes and place them on the beats. Similarly, at the opening of *Kreisleriana* move the bass octaves and chords back one eighth-note pulse. After playing your revised version, play the actual passage again. This procedure will bring the character of the passage as Robert wrote it into focus for you.

Here, Krebs-Clara asserts that *performing* recomposed materials can help to shed light on the way in which complicated pieces of music are put together. Once they have been mastered, through practice, returning to the original score (as written, so in the case of these Schumann examples *non-aligned*) thus helps to “bring the character of the passage as Robert wrote it into focus,” presumably against the backdrop of the less interesting recomposed version.

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57 Krebs, *Fantasy Pieces*, 179.
IIIc. Theory-Building Recomposition

In the third set of examples, recomposition is used in the service of building up a theory. In François-Joseph Fétis’ treatment of Mozart’s “Dissonance” quartet, for example, the topic of Mozart’s contrapuntal entrances becomes an opportunity to advertise the merits of Fétis’ own counterpoint treatise, which offers a rule for the spacing of imitative entrances.\(^{58}\) If Mozart had only followed Fétis’ rules for contrapuntal entrances, the argument goes, perhaps the “Dissonance” quartet might not have been so dissonant.\(^{59}\) In a way, then, Fétis’ corrections to Mozart are not simply designed to save the famous composer from himself; they also argue for the usefulness of his own writings on music theory. Indeed, the entire controversy over the “Dissonance” Quartet may be interpreted in this manner: a series of attempts by each theorist to better the interpretations of his rivals.

As we will see in Chapter Two, there are many examples in which existing pieces of music were modified for use in building or justifying a theorist’s ideas about music. For example, in his *Nouveau système de musique théorique* (1726), Jean-Phillipe Rameau corrected “errors” in the bass figures of Jean-Baptiste Lully’s *Armide* and Arcangelo Corelli’s Violin Sonatas, Op. 5.\(^{60}\) Rameau’s invocation of these earlier composers—some of his first examples of written analysis, since his first treatise, *Traité de harmonie* (1722) was devoid of the music of others—takes the

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\(^{58}\) In brief, Fétis recommends that more time should elapse between the second and third entrances of a subject than between the first and second; see Fétis, *Traite de contrepoint et de la fugue* (Paris: Chez Janet et Cotelle, 1826), 75.


form of what Harold Bloom calls a *tessera*. A *tessera* is “completion and antithesis …. A poet antithetically ‘completes’ his precursor, by so reading the parent-poem as to retain its terms but to mean them in another sense, as though the precursor had failed to go far enough.”\(^{61}\) In Rameau’s account, it becomes clear that while Corelli’s musical lines for violin and *basso continue* are masterful, his grasp of harmony is suspect—his theoretical knowledge does not “go far enough,” as Rameau’s corrections assert. Rameau writes, “Corelli, when he figured the Chords that this bass must carry, was guided much less by knowledge than by the intervals that his ear made him use between the violin and the bass.”\(^{62}\) Rameau takes it upon himself to compensate for Corelli’s mistakes, by supplying new figures as dictated by his theory of the fundamental bass. Many of his alterations are subtle. For example, he changes many of Corelli’s triads (i.e., unfigured bass notes) into seventh chords, in order to reflect more accurately his theory’s insistence that dissonances drive the music forward. He also adds seventh chords in order to avoid the inappropriate moments of repose, or unintended *modulations*, that we might perceive in an unadorned triad. As Bloom writes, “In the *tessera*, the later poet provides what his imagination tells him would complete the otherwise ‘truncated’ precursor poem and poet, a “completion” that is as much misprision [Bloom’s term for a productive misreading] as a revolutionary swerve is.”\(^{63}\)

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63 Bloom, *Anxiety of Influence*, 66. This description of the *tessera* immediately precedes Bloom’s famous declaration that “the meaning of a poem can only be a poem, but another poem—a poem not itself” (70, emphasis in original). The mention of a “revolutionary swerve” refers to Bloom’s notion of *clinamen*, the first mode of revision discussed in *Anxiety of Influence*,...
Other examples are even more egregious for Rameau: in reference to Figure 1.15, he exclaims, “one can judge that Corelli’s figuring is worthless [here], and that he absolutely did not understand what his Ear made him apply successfully in the passage.” In Figure 1.15, there are several points of contention, chief among them the treatment of the E♭ in the violin line in m. 60 (the second measure of the example). In order to deal with the dissonant note—which he hears resolving to D later in the measure—Rameau first adds a root in the *basse continue* on the downbeat, filling the continuo’s silence and establishing that E♭ is a chord seventh above F. Corelli’s bass line, in which F (figured as a 6/3 chord) enters as an eighth note after a rest, completely fails to account for the dissonance. Rameau then moves the Corelli’s next note from an unadorned D to B♭, and adds a seventh. A theoretically sound chain of fundamentals is thus created, falling by fifth from F, to B♭, to E♭, and the violin’s dissonant E♭ is resolved properly—not just as a chromatic decoration, but as an essential component of harmonic progression.

There are many other examples, some of which will be dealt with in the next chapter. Heinrich Christoph Koch, for instance, frequently recomposes examples he has already used in his *Versuch*, in order to show the various possibilities that his theory offers. Anton Reicha

66 See Heinrich Christoph Koch, *Versuch einer Einleitung zur Composition* (Rudolstadt and Leipzig: Adam Friedrich Bohme, 1782-93). Perhaps the most prominent example is the
adds a series of hypothetical development sections to the Overture to Mozart’s *Le nozze di Figaro* in order to demonstrate the mechanics of his theory of sonata form, while Carl Czerny recommends that his readers teach themselves to write sonatas by recasting works of Mozart measure by measure, hanging new melodies and figurations on the harmonic framework conceived by the master himself. Finally, and perhaps most famously, Hugo Riemann develops his theories of meter and rhythm by recomposing (sometimes lightly, sometimes more dramatically) canonical works (mostly Beethoven) in order to show their dependence upon his notion of *Achttaktigkeit*—an orientation around eight-measure phrases.

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Rameau’s revision of Corelli’s bass figures helps to expose a number of insecurities that tend to circle around music theory’s relationship to the repertoire. Music theory, it is often said, lags behind practice, and theory-building recompositions by their very nature trail a certain distance from the cutting edge. Furthermore, it is easy to characterize music theorists (or scholars in general) as less creative than composers (or poets, or painters, etc.) and to characterize their relationship as a stark imbalance of power and agency, leading to anxiety and derision on one or both sides. The act of recomposing a canonical piece of music for music theoretical purposes thus carries anxiety with it. For Rameau, this takes the form of praise for Corelli, and absolution for his theoretical errors. “When we compose Music,” writes Rameau,

that is not the time to recall the rules that could enslave our genius. In composing, we must only have recourse to the rules when genius and the ear seem to deny us what we seek. But when we wish to make known to others the source of Harmony that exists there, and to do that through the Basso Continuo Figures, that is the time when we must recall these Rules. ... In condemning some figures by Corelli, we do not claim to thereby condemn his works. On the contrary, we have chosen them from all Works that are among the best in the matter of Harmony in order to make known that reason and Ear do not always agree among Musicians.

In this passage, Rameau—an accomplished composer in his own right, who established himself as a composer before turning to music theory, and who is often lauded for the musicality of

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Patrick McCreless presents a nuanced take on this state of affairs in “Ownership in Music and Music Theory,” Music Theory Online 17/1 (2011).

Lester, Compositional Theory in the Eighteenth Century, 318.
his insights on figured bass, even if his epistemological groundings are often suspect—
is careful to explain that his recompositions are not meant to cast aspersions on Czerny’s work.
The other man is a genius, Rameau’s deflections seem to say: we shouldn’t expect him to concern himself with the machinations of harmonic theory, but rather to let the music flow through his pen, guided only by his ear.

In the work of contemporary theorists, the anxiety of recomposition is manifested in the self-deprecating comments that often run alongside a recomposition. Matt BaileyShea, for example, describes his composite recomposition of several settings of Goethe’s text “Nur wer die Sehnsucht kennt” (to be considered later in this chapter) as “rather bizarre,” and by the end of his essay derides it as “a musical Frankenstein” that “hardly stands up to the genius of the individual songs from which it was made … the extraordinary creations of Schubert, Schumann, and Wolf.” And after altering a few chords in Chopin’s Mazurka in A Minor (Op. 17, No. 4) to show how it could be heard in relation to an earlier piece, Janet Schmalfeldt quickly excuses herself and assures the reader that she will not recompose the piece any more, so as to avoid “further destroying some readers’ favorite Mazurka, as it is mine.” Such comments express discomfort in interfering with the course of canonical works, even for the purpose of making aesthetic or theoretical observations. As Bloom observes, “self-

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appropriation involves the immense anxieties of indebtedness”—even, it seems, when that appropriation is made in the service of theory-building. The ideal of Werktreue, of devotion to the musical text as received from composers, has become so deeply ingrained in musicological discourse that the very idea of interfering directly with that text leads recomposition’s practitioners to sheepishly and pre-emptively deflect the hail of criticism that they feel must surely be headed their way.

IIIId. Analytical Recomposition

The fourth mode of theoretical recomposition is in the service of analysis. This happens both in the music theory classroom, and in scholarly writings. As we have seen, Michael Rogers advocates recomposition as a way of accessing what he terms “the aesthetic of what might have been.” As one of the few explicit descriptions of recomposition in the academic literature (albeit one with few concrete examples, as we saw at the beginning of this chapter), this locution has been taken very seriously in recent pedagogical essays by Shersten Johnson and Melissa Hoag, both of whom recommend that undergraduate music students use recomposition in the pursuit of Rogers’ ideal. In their classrooms, both Johnson and Hoag

75 Bloom, Anxiety of Influence, 5.
77 Michael Rogers, Teaching Approaches in Music Theory, 97.
ask students to re-write pieces or passages in order to gain insight into the compositional process by dramatizing the choices that a composer made, or did not make. On the analytical side, Matt BaileyShea has argued (in an analysis explored later in this chapter) that recomposition can be a way to make strong arguments in musical form; that is, using music as a strong metalanguage, to comment on other music, in lieu of a detailed verbal description.\textsuperscript{79} By making their arguments directly in the form of notation, and demanding that their recipients approach them—at least on some level—as music, which is to say in the very same way one would approach a full piece, analytical recompositions cut to the core of what makes recomposition theoretically significant. In their concision and vivid illustrative potential, they also demonstrate its power.

In many recompositional analyses, the analyst’s explicit goals are concision and musical directness. Hans Keller, for example, couches his system of “Functional Analysis”—in which he composes analytical scores that surround, excerpt, and supplement the music under consideration—in an explicit polemic against the idea of using words to describe music.\textsuperscript{80}


According to Keller, “All conceptual thought about music is a detour, from music, via words, to music, whereas functional analysis proceeds direct [sic] from music via music.”

Keller pairs this anti-conceptual orientation with an aesthetic priority on unity, which operates in a manner similar to—though not identical with—Schoenberg’s notion of a Grundgestalt (basic idea). Keller’s analyses strive to illuminate the motivic and thematic connections between the themes and movements purely through notation, and especially through sound (since many of his analyses were first broadcast on the radio). We will explore Keller’s work in more detail in Chapter 5.

While Keller’s functional analyses are fixated on musical connections between the movements of single works, they never stray outside the confines of a single work. Analytical recomposition, however, can also be a way of approaching intertextuality. Matt BaileyShea does just that in a 2007 essay, juxtaposing several settings of the text “Nur wer die Sehnsucht kennt” by Franz Schubert, Robert Schumann, and Hugo Wolf, into a single composite song. BaileyShea’s recomposition compares common features that are found in several of the many settings of the text, such as a series of descending thirds at the beginning, shown in Figure 1.16. His analytical process mirrors the processes of influence and intertextuality that unfold between composers. “What I am interested in,” writes BaileyShea, “is the constant return, the circling back—the way each composer writes over and recomposes his or her predecessors.”

His recomposition strives to place the relevant details of each piece directly in contact with

one another, metaphorically placing the songs “on a single gallery wall” rather than viewing each individually, while also bridging the divide between analytical and creative activity.\textsuperscript{83} 

\textbf{Figure 1.16:} Descending thirds in “Nur wer die Sehnsucht kennt” settings by Wolf and Schubert (BaileyShea 2007, Example 1) 

BaileyShea diagnoses the same recompositional impulse mentioned earlier, finding it present in many forms of musical analysis. His approach to recomposition further demonstrates the potential of this impulse, expressed as a creative form of critical activity.\textsuperscript{84} BaileyShea’s piece, like Keller’s, can be experienced just like a traditional piece of music, allowing listeners to bring to bear their well-honed musical instincts, even if they are not trained comprehensively in the technical terminology of music analysis. The act of creating such a setting, as BaileyShea points out, can also benefit the recomposer, by allowing her to draw together theoretical knowledge, compositional creativity, performance, and critique.\textsuperscript{85} The potential for such

\textsuperscript{83} BaileyShea, “Fileted Mignon,” [4].

\textsuperscript{84} BaileyShea dubs his approach “creative recomposition,” a term which I would contest.

\textsuperscript{85} BaileyShea, “Fileted Mignon,” [23].
creative activity, and the way that analytical recompositions can help to teach us how to listen, will be explored further in Chapter Five.

IIIe. Recomposition, Listening, and Expectation

Finally, recomposition is frequently occasionally employed in cognitive, phenomenological, or otherwise perceptually oriented writings on music. In these applications, recompositions express what we might hear, giving a visual representation to an ephemeral impression, or tracing out the discrete steps within a cognitive process.

David Temperley’s study *The Cognition of Basic Musical Structures* develops a series of algorithms that model our perceptions of basic musical elements: metrical structure, phrase structure, pitch-class identification, harmonic structure, and key finding. In his discussion of progressive key finding—carried out via an algorithm that continually revises its assessment of a piece of music’s key as it unfolds—Temperley toys with the idea that recomposition may be a way to resolve or ambiguity. Figure 1.17a reproduces the score of Chopin’s Mazurka Op. 67, No. 2, while Figure 1.17b shows the output from Temperley’s key analysis program. The piece is nominally in G minor, but as the running analysis on the right-hand side of the figure indicates, the algorithm changes its mind several times as the piece unfolds. The model’s indecision demonstrates the close affinity between G minor and B♭, its relative major key, and as Temperley asserts, “is true to our experience of [the piece].” The model takes into account the entire piece up to the current timepoint, as demonstrated by the horizontal lines of key

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identifications that it outputs as it changes its “mind” (in measures 4, 8, 12, and 14). The computer program eventually decides the Mazurka is in G minor, though it holds the opposite assessment as late as two measures from the end of the piece. Temperley argues that the algorithm might be tricked into producing a different output, if the Mazurka were recomposed so that it ended in B♭. Figure 1.1c shows Temperley’s recomposition, which rewrites the ending of the Mazurka’s A section so that it cadences in B♭. To accomplish this, Temperley delays and inverts the C minor chord on the third beat of m. 14, instead allowing it to serve as a predominant ii⁶ in m. 15. This leads directly to a perfect authentic cadence in B♭ in m. 16. He mostly manages to preserve the contour of the piano’s right hand, altering it slightly so that it outlines an F dominant seventh chord on the last two beats of m. 15, and lands on B♭ in m. 16 instead of continuing down to G. He even uses F♯ as a lower neighbor note to G in m. 15—one of the features throughout the Mazurka which Temperley believes pushes the algorithm towards a G minor reading—and thus preserves the algorithmic ambiguity until the last possible moment.
Figure 1.17a: Chopin, Mazurka Op. 67, No. 2, mm. 1-17

Figure 1.17b: Output from Temperley’s key-finding algorithm (Temperley 2001, p. 217)
At the end of the same book, Temperley uses a series of recompositions of the third movement of Beethoven’s Piano Sonata Op. 10, No. 3 as a kind of laboratory to test various perceptual axioms that he has proposed throughout the text. \(^{87}\) “It is something of a cliché,” writes Temperley,

to say that, with a piece of music (particularly with a great piece of music), every detail matters and to alter or remove a single note would be to significantly change (usually to harm) the overall effect. The preference rule approach allows us to bring some empirical rigor to this matter, by showing us the way that the details of a piece affect the infrastructural representations that are formed, and hence the higher-level representations as well. One way to examine this is though “recomposition”—selectively altering certain details of a piece, to see what kind of changes result in structure and affect. \(^{88}\)

Temperley’s series of recompositions will be examined further in Chapter 3, in connection with Gottfried Weber’s famous—and superficially similar, though differently motivated—recompositions of Mozart’s “Dissonance” Quartet. For the time being, however, it is sufficient to note that the recompositions of the Beethoven sonata address the kinds of rules that

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\(^{87}\) See Temperley, Cognition of Basic Musical Structures, 347-351.

\(^{88}\) Temperley, Cognition of Basic Musical Structures, 349.
Temperley has explored throughout the book: the way in which we experience structure at basic levels of tonal music, and the way in which we represent those structures mentally.

Just as recompositions can draw our attention to cognitive processes by highlighting the specific features of music that we hear in particularly vivid or theoretically significant ways, so too can they draw attention to things that we do not hear. David Huron, for instance, has highlighted an interesting comedic recomposition by P.D.Q. Bach (the comedic alias of composer Peter Schickele). Huron’s lab at Ohio State conducted an in-depth survey among moments that Schickele’s audiences found humorous on his live recordings, by analyzing the moments that provoked audible laughter. He identifies a series of broad categories such as incongruous noises (like duck calls and slide whistles, or unusual combinations of instruments), genre mixing, intentional mistakes, and coming timing effects such as excessive repetition or implausibly long pauses. Most of these jokes rely on what Huron classifies elsewhere as schematic expectations: our basic expectations that certain musical genres behave in certain ways, and that certain patterns of sounds or tones will most likely be followed by similar, or at least predictable, sounds. We expect that a string quartet will not be interrupted by a duck call, nor will a piece of music of nearly any genre end on a $V^7$ chord, and so forth.

However, Huron’s lab identified a single example—out of hundreds of laugh-provoking moments—that takes advantage of the listener’s veridical expectations instead; that is, our

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knowledge and memory of how specific pieces of music go. At the end of his *Quodlibet for Small Orchestra*, P.D.Q. Bach quotes the beginning of the *Andante* second movement of Beethoven’s Fifth Symphony (Op. 67, 1808). While the theme in its original form (Figure 1.18a) famously delays cadential resolution several times, the PDQ Bach version is comically concise (Figure 1.18b). As Huron demonstrates, Schickele’s truncated version actually brings Beethoven’s original into alignment with schematic expectations: the movement from scale degree 2 on the final note of m. 3, to scale degree 1 on the downbeat of m. 4, is extremely common, and the most likely possible conclusion of the phrase. Beethoven’s original, on the other hand, uses a highly unlikely ♯5 on the downbeat of m. 4. Schickele’s recomposition thus makes its joke based on the listener’s knowledge of Beethoven’s famous theme: the audience’s laughter is provoked not by the reaction “that’s not what happens in music” (as are most of the jokes in PDQ Bach, as detailed above), but instead “that’s not what happens in this piece.”

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91 Huron measures veridical expectations by testing how quickly subjects can identify familiar tunes, and their changing levels of confidence as the opening notes of a given tune unfold; see *Sweet Anticipation*, 221 – 224.

92 See Huron, “Music-Engendered Laughter,” 702. The probability of 2 passing to 1 is 0.33 (roughly one-third of the time), while the probability of 2 going to ♯5 is only 0.0007 (fewer than one in one thousand times).

Recomposition is used in non-cognitive studies of music perception as well. The middle section of David Lewin’s famous essay “Music Theory, Phenomenology, and Modes of Perception” is centered around successive hypothetical recompositions (even, one might argue, de-compositions), which strive to represent a listener’s changing musical intuitions (filtered through the Husserlian concepts of protension and retention) as a passage unfolds.⁹⁴ The notation used in the “Phenomenology” essay is drawn from the early chapters of his Generalized Musical Intervals and Transformations (frequently nicknamed GMIT), Lewin develops a system of notation in which diamond-shaped noteheads represent musical expectations, or in Husserl’s terms, protension: the present experience of an event that we project will happen in the future.⁹⁵

In Figure 1.19, taken from Lewin’s GMIT, Lewin sketches a simple tonal context. The two filled noteheads, C and F♯, are heard in isolation. Lewin describes the figure as follows:

When we hear or imagine the succession C4 – F♯4 in its own context and try to intuit a harmonic sensation, we intuit a tonic followed by the leading tone of its dominant. And we intuit the secondary leading tone harmonically as the third of a harmony whose root is the dominant of the dominant.  

![Figure 1.19: Imagined tonal context for C-F♯ succession. a) protended resolution of F♯ to G; b) order of intuited operations, showing C projecting its own dominant forward, and the dominant projecting its own dominant backwards, beneath the notated F♯.](image)

Continuing on from here, Lewin uses notation to construct the intuited tonal context surrounding the C4–F♯4 succession. As he describes in the passage cited, we imagine D3 as the root beneath F♯. Perceiving that F♯ as the leading tone of the dominant leads us to pretend its resolution upwards to G, and the corresponding root movement from D to G.

In Figure 1.19b, Lewin depicts “the path in harmonic space which [he] believe[s] we actually intuit.” Here, although he does not mention it (since he is still building up to larger harmonic representations), Lewin seems to have something like the Neo-Riemannian Tonnetz (or “Table of Tonal Relations”) in mind. C, he says, is projected forward to its more closely
related dominant, G. From there, we are able to move to the more distantly related D major (V/V), above which is projected F#, as its leading tone.

This notation comes into its own in “Music Theory, Phenomenology, and Modes of Perception,” and is employed in a series of recompositions. Figure 1.20 is drawn from Lewin’s analysis of Schubert’s “Morgengruss.” As with Figure 1.19, the diamond noteheads indicate pitches that are predicted by Lewin’s hypothetical listener, based on the tonal Context established in various larger or smaller spans of music surrounding the passage in question. In Lewin’s Figure 8.5, these diamonds “portray contextual elements we construct protensively upon hearing the Events of measures 9–13.” Broadly, the figure interprets C♯ over A in m. 13 as an applied dominant that tonicizes ii within a larger Context of C major; the first set of diamonds (where m. 14 would be) indicates the imagined resolution, while the second set (“m. 15”) shows how we might expect that ii chord to proceed to the dominant.

![Figure 1.20](image)

**Figure 1.20:** Two brief, reduced recompositions of Schubert’s “Morgengruss,” showing perceptual projections

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98 The typography here reflects Lewin’s own usage whenever he spells out one of his abbreviations: CXT stands for Context, EV stands for Event, ST for Statement, and language L for the language (symbolic, musical, or informal) used to make Statements.

Lewin’s Figure 8.6 (the second part of Fig. 1.20 here) positions mm. 12–13 in a different context. C♯ over A is again identified as V of D, but this time the succession is interpreted within a larger D minor ContExt, the beginning of which is not shown in the figure. The conventional noteheads in m. 13 – 14 represent the music that Schubert actually wrote, while the diamonds in the soprano and tenor voices depict the listener’s attempt to hang on to the D minor tonality in the face of the dissonant A♭ in m. 14.

Lewin’s various treatments unfold in the context (no longer speaking in terms of the “p-model”) of a methodological argument, as he establishes the rigorous formalism with which a listener’s every intuition—every fleeting impression that a passage might be about to do x—can be teased out and inspected. The two brief figures shown here sit among many, each of which is also paired with a set of STatements in formal language. By my definition, each is a brief recomposition, in that each figure is a thought experiment about how a piece of music might go, carried out in the form of music notation. But taken together, the rapidly proliferating figures also make the argument that we create a multitude of tiny mental recompositions—projections or protensions—as we listen. Many projections or protensions are constitutive of the listening experience. Lewin’s p-model is concerned less with analyzing a particular work of music (“Morgengruss” is just convenient fodder) and more with establishing the way in which dozens of diamond-shaped noteheads—few of which ever come to pass, but all of which nonetheless structure our experience—reflect the myriad ways in which we predict the different garden paths down which a piece of music may be taking us. For Lewin’s phenomenological model, the experience of hearing a given passage (such as his Figure 8.5, the first part of my
Figure 1.20 includes these protensions forward, along with a number of backward-facing retentions, creating an ever-shifting context for our listening. Rather than speculating about decisions that a composer might have made differently (as do model and corrective recompositions, and to some degree theory-building recompositions), Lewin’s recompositions attempt to capture the way we represent musical possibilities as we listen.

Lewin’s revelation is another, broader application of BaileyShea’s recompositional impulse—the desire to process a piece of music by somehow altering it or putting our own stamp on it. For Lewin, this impulse is present whether the changes are actually carried out via recomposition (theoretical, artistic, or otherwise), or merely protended as we listen. The recompositional impulse, then, not only structures a huge swath of music-analytical thought (from Schenkerian analysis to Formenlehre and beyond); it is also an integral part of the way we listen to music. Studying recomposition thus cuts to the core of both how we experience music, and how we conceptualize, analyze, and describe those experiences.

IV. Interactions Among Categories

The categories proposed here are not firm, nor are they meant to be anything resembling a final judgment or pronouncement about any of the case studies in this dissertation. In fact, much of the interesting work ahead of us comes not in dividing recomposition from other forms of music theory, or from drawing subdivisions within our subject matter, but rather from blurring the boundaries, smudging the lines between the various parts of our topic. This is reflected in the form of the dissertation itself, which chooses not to mirror this typology.
precisely, but rather to cut across it and investigate some of the larger issues of interest to this study.

For example, the degree to which the final category (recompositions to demonstrate listening or perception) reflects the other four is vast and inescapable. From the enharmonicism-as-tonal intentionality found in our initial example from Gottfried Weber, to the intertextual arguments of Matt BaileyShea, to the foregrounding of the listener through appeals to reader-response theory (Hepokoski & Darcy), phenomenology (Lewin), and cognitive psychology (Temperley and Huron), a recomposition nearly always reflects an act of listening. Choosing to use recomposition rather than another analytical method is an assertion that the reader needs to hear the passage or piece under consideration in a certain way, that exposure to some aspect of how a piece does not go (be it rhythmic, harmonic, etc.) will shed unique light on the way it does go. In much the same way, recomposing a passage is also a way of materializing one’s own intuitions, as they arise in the very act of hearing a piece—not only the real-time mental processes modelled by Meyer, Lewin, David Huron, and others, but also the influence of past experiences (musical or otherwise), and of theoretical and analytical knowledge. Every theoretical recomposition thus reflects a way in which someone not only can hear a piece, but a way in which they have heard it, and even some aspect of how they do hear it, in the present tense.

The first three categories of recomposition that I have described, for example, overlap in many ways—this is the reason why I have drawn a thick line separating them from the other two in Table 1.1, and the reason why they are well-suited to their own treatment in this
chapter. The first three categories of recomposition share a broad, common goal: each one uses similar means to arrive at a distinct end. In a corrective recomposition, the aim is some rehabilitation of the piece (as in the case of the Dissonance quartet, arguably the category’s most famous exemplar). Theorists like Fétis and Weber act in a critical (one might argue, almost medical or rehabilitative) role, re-writing the piece because it does not exemplify “what [they] love in their Mozart,” to borrow the latter’s famous locution.① A corrective recomposition strives to take on the force of an *erratum*, to displace the original passage, or at least be accepted as an authoritative and more desirable version. A model recomposition is very similar in technique—the music at hand is altered in order to fit more closely a theoretical archetype—but the aim is less severe than that of a correction. A model recomposition is not an assertion that the music actually *should* go a certain way, or that it is wrong because it does not conform; rather, it is an argument that the music is related to, or in some sense derived from, a certain model. Finally, in theory-building recompositions, the order of operations is reversed. The “music theorist” (rather than analyst) cap is planted firmly on the recomposer’s head, as he or she alters the music at hand in order to create a phrase that can be more easily theorized. That model, however, is being created anew; these recompositions are performed in the service of building up a theory to account for some phenomenon that the passage under consideration at least partially expresses. In such cases, the theorist helps the piece along by reshaping it into a more easily theorizable specimen. In other words, both model

① On the translation of this aphorism (which Ian Bent renders as “what I like in my Mozart”), see the first chapter of August Sheehy, “Music Analysis as a Practice of the Self, from Weber to Schoenberg” (Ph.D. diss., University of Chicago, 2016).
recomposition and theory-building recomposition attempt to relate an individual piece or
passage of music to a larger abstract structure; but while the former seeks to understand a
passage by matching it to an existing type, the latter seeks to create such a type, and in so doing
will sometimes tamper with examples in order to render them more readily admissible as
evidence.

In the chapters that follow, we will survey recomposition from several angles, often
combining and cutting across the fivefold division laid out in this chapter. Chapter Two
presents a series of “episodes” in the history of recomposition, surveying significant
recompositions by Rameau, Jérôme-Joseph de Momigny, Anton Reicha, and William
Rothstein. Chapter Three examines recompositions and the prose descriptions that surround
them as examples of counterfactual conditionals—that is, statements of the form “If [composer] had
done this, then x would be the result.” Such constructions are the often-shaky foundation
upon which model and corrective recompositions are built, and pursuing them reveals just
how deeply the recompositional impulse can be traced into musical ontology. Chapter Four
asks how music theorists listen, taking the Formenlehren of William E. Caplin and James

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101 This Saussurean distinction between an individual utterance (parole) and the
linguistic system which governs and makes possible that utterance (langue) will be a frequent
touchstone for this study. Alexander Rehding explores it in connection with the music theory
of Hugo Riemann (seeking to answer the question of whether tonality resides in individual
pieces or in an over-arching system) in his essay “Tonality Between Rule and Repertory; Or,
Riemann’s Functions—Beethoven’s Functions,” Music Theory Spectrum 33/2 (Fall 2011): 109-
123. For a more general introduction to the application of structural linguistics to other
discourses, see Jonathan Culler, Structuralist Poetics: Structuralism, Linguistics, and the Study of
aspect of Saussure’s thought in “Syntagmatics and Paradigmatics: Some Implications for the
Hepokoski & Warren Darcy as the starting point for an investigation of formal archetypes, expectation, and intertextuality. Finally, Chapter Five turns towards creative forms of analytical recomposition, exemplified by the Wordless Functional Analyses produced by BBC radio critic Hans Keller from the 1950s through the 1980s.
Chapter Two

Episodes in the History of Recomposition

In one of the more useful exercises of my graduate studies in music theory, a group of colleagues and I were asked how we would structure a music theory treatise from the ground up. Would we start with acoustics, structuring our treatise around something resembling Rameau’s *corps sonore*, and explaining intervals in terms of their position within the overtone series, perhaps couching the entire system in an origin myth such as Pythagoras’ fateful evening stroll past the blacksmith’s shop?¹ Such a grounding forces one to choose an arbitrary cut-off point above which the partials of the overtone series become dissonant, opening a theory to the haunting specters of both the minor triad (an aesthetic equal for the major that nonetheless cannot be derived as its acoustic equal) and the dissonant intervals that must be carved out in order to leave the favored consonances standing in sharp relief.² We could sidestep the appeal to nature that sidelined so many historical treatises, but claiming that the pitches and intervals of tonal music are always already given (having been handed down to us by centuries of western musical culture) merely opens up more questions. Would chords be

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¹ On the *corps sonore*, see Jean-Philippe Rameau, *Nouveau système de musique théorique*... (Paris: Jean-Baptiste Christophe Ballard, 1726).

the fundamental materials of tonality, or scales? And assuming that we chose to write many of
our basic examples in C Major (as most eighteenth- and nineteenth-century treatise writers
did), how would we explain the minor mode? Would it be some derivative of the major (thus
pushing us toward examples in A minor), or would it be an equal partner (implying that we
should use C minor as its prototype). And would we raise the minor scale’s seventh degree by
default (as Gottfried Weber does, for example), or treat the leading tone as a deviation from
the natural minor?\(^3\)

The point of this exercise was not actually to write a treatise (though that might itself be a
worthwhile exercise for a graduate seminar), nor to settle upon a single correct answer to these
difficult questions via 20/20 hindsight. The goal, rather, was to become sensitized to the many
decisions that must be made when crafting a concise and consistent explanation of tonal
theory. Every decision made about the basis of a tonal system comes with certain costs and
commitments, as first principles dictate the growth of entire systems.

Another significant decision to be made when planning a treatise is whether to use
excerpts from existing music for examples, or to write original examples. This decision need
not be binary, although in some cases it very nearly is; as we will see, many treatises quote not
a single bar of existing music, while others turn to the repertoire to illustrate even the shortest
and simplest of examples. A cursory glance at nearly any current textbook or theory journal

\(^3\) Suzannah Clark posed these questions to my fellow students and I on the first day of
her “Quirks in Tonality” seminar at Harvard University in the Fall of 2012. On the
consequences of Weber’s treatment of scale degree 7 in minor, see her essay “Weber’s Rest”
(unpublished manuscript).
demonstrates that the current fashion is for pre-existing examples, presented most frequently in brief excerpts.⁴ But it was not always so. While Renaissance treatises by theorists like Heinrich Glarean, Pietro Aron, and Joachim Burmeister were filled with musical examples—both printed examples, and as external references—the need to refer to the music of external authorities was not yet a settled question in the 1720s, as we shall see.⁵ This chapter surveys three interesting historical cases of recomposition interacting with the use of musical examples—in treatises by Jean-Philippe Rameau (1726), Jerome-Joseph de Momigny (1803–06), and Anton Reicha (1824–26)—before taking a closer look at the recompositions of William Rothstein, as introduced in the previous chapter. This chapter is by no means an exhaustive history: it is not a comprehensive accounting of recomposition throughout the history of music theory. Rather, it presents a series of episodes as a way of gathering evidence, of collating several case studies that will provide fodder for the rest of this dissertation, and implicitly making the argument that recomposition has been an unseen constant in modern music theory since its inception.

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⁴ More detail about current texts, however, will have to wait until Chapter Four.
⁵ See Heinrich Glarean, Dodecachordon (Basel: Heinrich Petri, 1547); translated as Dodecachordon (1547). Translation, Transcription and Commentary by Clement A. Miller. (N.p.: American Institute of Musicology, 1965); Pietro Aron, Trattato della natura et cognizione di tutti gli tuoni di canto figurato (Venice: 1525); and Joachim Burmeister, Musica poetica (Rostock: Stephanus Myliander, 1606).
I. Rameau’s Figured Bass and the Metalanguage of Dissonance

Like Schenkerian analysis, Jean-Philippe Rameau’s notion of the *basse fondamentale*—which changed the face of music theory and effectively ushered in its current and continuing *episteme*—hovers perilously close to recomposition in its conception. The fundamental bass is a hypothetical bass line, inscribed below the actual, written bass of a piece of music, as shown in Figure 2.1. It indicates the root of a given triad—which may not appear in the written bass line—and controls the movement of triadic roots, which for Rameau is constrained to thirds and fifths (and their inversions), following the intervals present in the *corps sonore.* As Allan Keiler has shown, Rameau’s use of conventional music notation in his fundamental bass is significant. By turning the musical language of figured bass notation—both its written notes and its system of intervallic shorthand—into an analytic language of figured bass, Rameau turned music into its own *metalanguage*—that is, a language used to make statements about language. This move has far-reaching consequences. Fundamental bass theory’s power and

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flexibility comes from the fact that any fundamental bass line is already, in itself, a syntactic musical utterance, which can be shown to underlie various possible *basso continuo* lines by being the simplest (for Keiler, the “most explicit”) and most prototypical example of each.

**Figure 2.1:** An example of fundamental bass notation below conventional notation, featuring an interpolated fundamental bass tone in m. 2 (Keiler 1981, 94)

Rameau’s theory uses several techniques, such as *double emploi* and the interpolation of additional fundamental bass notes, to mediate between actual pieces of music (in which, for example, chords might be inverted or the fundamental might move by step) and the demands of the *corps sonore*. As Keiler chronicles, both the fundamental bass in general, and interpolation in particular, were controversial for some readers of Rameau such as Friedrich Wilhelm Marpurg. It is in the case of these latter devices that Rameau’s theory sometimes seems to stray into the territory of recomposition. For some early commentators, examples like

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Figure 2.1 would stray into the realm of “unwarranted recompositions,” as Keiler calls them, “distorting or conflicting with the musical surface.”\textsuperscript{10} This ambiguity is compounded, for Keiler, by Rameau’s vagueness in some early descriptions in the Traité. “The true basso continuo ought to be the fundamental,” writes Rameau in Book III. “It is customary, however, to distinguish from the fundamental that part that is dictated by good taste and which makes allowances for the progressions of the other parts written above it, by calling this part the continuo.”\textsuperscript{11}

According to the model developed in the Introduction to this study, however, Figure 2.1 is not truly a recomposition. Although Rameau’s fundamental bass line makes three substantive “changes” to the written continuo line—it places both of the two chords in the second measure into root position, and interpolates an additional bass note (A) below C, in order to avoid having to pass from C to D by step—these changes are not intended for performance. They are an analytic representation, or in Keiler’s terms, a “paraphrase” that serves to make the music’s syntactical structure “more explicit.”\textsuperscript{12} Most of Rameau’s fundamental basses remain analytical, and offer no conflict with the musical surface—they are relevant only for theoretical and analytical pursuits. But Rameau’s recompositions are not restricted to the hypothetical domain of the fundamental bass. In some of his early writings,

\textsuperscript{10} Keiler, “Music as Metalanguage,” 100.
\textsuperscript{12} See Keiler, “Music as Metalanguage,” 89–92.
he made changes to written music in ways that cross the line into actual recomposition, by proposing fundamental basses that have implications for performance.

Rameau’s first major work, *Traité de l’harmonie* (1722) is well-known for its relative lack of musical examples; Rameau’s speculative theorizing is supported almost entirely by simple, abstract illustrations, such as pitches and chords in isolation.\(^{13}\) His second treatise, however, *Nouveau système de musique théorique* (1726), contains two extended analyses. The first examines the monologue “Enfin, il est en ma puissance,” from Jean-Baptiste Lully’s *Armide* (1686).\(^{14}\) This analysis is primarily a proof of concept, identifying several key harmonic moments such as the movement from E Minor to G Major (mm. 2–3) and from there to A minor, via its dominant (mm. 4–5).\(^{15}\) These moments support Rameau’s argument that the monologue is a perfect example of his theory of “modulation”—by which Rameau simply means the movement of chords within a diatonic key.\(^{16}\)

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\(^{15}\) Rameau, *Nouveau système*, 89; Chandler, “Rameau’s Nouveau Système,” 383.

\(^{16}\) For more on Rameau’s analysis of Lully, see Thomas Christensen, *Rameau and Musical Thought in the Enlightenment* (Cambridge and New York: Cambridge University Press, 1994), 120–122; and Cynthia Verba, “The Development of Rameau’s Thoughts on
The second analysis in *Nouveau systéme*, and the one with which we will be concerned, explored Arcangelo Corelli’s Sonatas for Violin, Op. 5 (1700). Here, Rameau’s aim is somewhat different. The chapter itself is entitled “Examples of Errors Found in the Figures of Corelli’s Op. 5.” In it, Rameau used his theory to make corrections to these erroneous figures, aiming to expose “the true chords which must be found there as a consequence of the Connection [Liason] that the fundamental progression of a Fifth must support most naturally within each harmonic motion [Modulation].” That is, Rameau did not simply propose the fundamental bass as an analytical shorthand in Corelli’s sonatas; he altered the actual figures in accordance with his theory.

Rameau made several kinds of recompositional interventions in his treatment of Corelli’s sonatas. Some are very minor details. As shown in Figure 2.2a, for example, Rameau often changed triads into seventh chords in order to make the bass figures more accurately reflect his theory’s insistence that dissonances drive the music forward. In Figure 2.2, the top two lines represent two excerpts from Corelli’s score, including the figures for the basso continuo (B-C.) The bottom line shows Rameau’s proposed fundamental bass (B-F.); I have added annotations to show the names of the chords Rameau analyzes. In his text, Rameau writes that the figures for note A are correct; the 6/5 figure indicates the dissonant seventh chord that

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18 Lester, *Compositional Theory*, 305.
the theory demands, as does the 4/2 figure beneath note D. Notes B and C, however, are incorrect. At B, Rameau indicates in the fundamental bass that the A Major triad must actually be a dominant 7th chord, in order to avoid the possibility that a consonant A Major triad might be taken as a moment of repose. The same is true at Note C: Rameau proposes the figure 6/5 instead of 6, arguing that this moment is analogous to m. 5 (Note A), and should be figured in the same way. Changing the bass figure on Note C to 6/5 also allows the motion from Note C to Note D both to imitate the movement of a perfect cadence (cadence parfait), and to deny the possibility of repose or a temporary tonic on either chord.

Figure 2.2b shows a possible figured bass realization as Corelli wrote, and Figure 2.2c shows the realization implied by Rameau’s recomposition. The differences are relatively minor, as the chord roots on notes B and C (from Fig. 2.2a) remain the same; only sevenths are added, which have slight consequences for the continuo player’s voice-leading.

**Figure 2.2a:** Corelli, Violin Sonatas Op. 5, No. 1, m. 5 and mm. 9–10. Annotations by Rameau, *Nouveau système*, p. 95.
In other cases, Rameau is keen not only to prevent the music from coming to rest in an improper key, but also to ensure that the fundamental bass proceeds properly. As shown in Figure 2.3, Rameau changes Corelli’s figuring from a 6/4 chord, to a 4/2. This changes the underlying harmony from a G Major triad, to an E dominant seventh. Not only does this prevent any possibility of tonicizing G Major (as Rameau fears a triad without dissonance is wont to do), but it also allows the fundamental bass to approach the next chord, A Major, by descending fifth rather than by ascending second (from G, as indicated by the custos in Fig. 2.3a).
Figure 2.3a: Corelli, Violin Sonatas, Op. 5, No. 1, mm 1–2 (with fundamental bass and figures by Rameau)

Figure 2.3b: Possible figured bass realization, based on Corelli's figures

Figure 2.3c: Possible figured bass realization, based on Rameau's fundamental bass and figures
In order to correctly regard Rameau’s interventions as recompositions, we must distinguish carefully between the fundamental bass and its associated figures, and the basso continuo and its figures. Figure 2.4a shows a potential realization of the bass figures as they were written by Corelli: they produce $IV^{6/4}$ moving to $V^{6/5}$. Figure 2.4b shows the continuo required by the rules of Rameau’s fundamental bass: in order for the fundamental bass to move by an acceptable interval—from E up to A instead of G up to A—the continuo’s D must be figured as a $4/2$ chord rather than a $6/4$. This yields a $ii^7$ chord rather than IV. The difference is admittedly slight: both harmonies express pre-dominant function, and IV is actually a subset of $ii^7$. The question remains, however: why did Rameau choose to re-write the figures themselves, rather than simply add an interpolated bass note in the fundamental bass, as he frequently did elsewhere in his writings? As shown in Figure 2.4, a fundamental bass line moving from D to G to E to A would be quite common according to his theory: each movement of the fundamental bass is by a fourth or a third.

![Figure 2.4: A more syntactic fundamental bass line for Figure 2.3a](image)

Rameau’s recompositions are grounded in his own theory, and they come with a strong prescriptive force: Corelli’s bass figures, for Rameau, are flat-out wrong in many cases, and they must be corrected in order for the music to be performed correctly. Rameau couches his critique in gentle language—there is nothing wrong with Corelli’s melody and continuo line,
he insists, only with the figures that indicate how the continuo player(s) should fill in the harmonies. Rameau’s recompositions, then, are not merely speculations about how the pieces might have gone, nor do they attempt to reveal what Corelli might have been thinking when composing the sonatas; indeed, if anything, they demonstrate what he did not have in mind—Rameau’s theory.

As briefly noted in Chapter One, Rameau’s analytical corrections of Corelli what Harold Bloom calls a tessera: a “completion and antithesis .... A poet antithetically ‘completes’ his precursor, by so reading the parent-poem as to retain its terms but to mean them in another sense, as though the precursor had failed to go far enough.”19 In Rameau’s account, it becomes clear that while Corelli’s musical lines for violin and basse continue are masterful, his grasp of harmony is suspect—his theoretical knowledge does not “go far enough,” as Rameau’s corrections assert. Rameau writes, “Corelli, when he figured the Chords that this bass must carry, was guided much less by knowledge than by the intervals that his ear made him use between the violin and the bass.”20 Rameau takes it upon himself to compensate for Corelli’s mistakes, by supplying new figures as dictated by his own theory of the fundamental bass. As Bloom writes, “In the tessera, the later poet provides what his imagination tells him would complete the otherwise ‘truncated’ precursor poem and poet, a ‘completion’ that is as much

misprision [Bloom’s term for a productive misreading] as a revolutionary swerve is.”\footnote{Bloom, Anxiety of Influence, 66. This description of the tessera immediately precedes Bloom’s famous declaration that “the meaning of a poem can only be a poem, but another poem—a poem not itself” (70). The mention of a “revolutionary swerve” refers to Bloom’s notion of clinamen, the first mode of revision discussed in Anxiety of Influence, and one that sees poets using their predecessor’s work as a place of creative departure, rather than as fodder for completion, as in a tessera.} In the case of Rameau’s account of Corelli, these truncations are found in the incomplete or incorrect bass figures: for Rameau, a preponderance of seventh chords, and bass motion by thirds and fifths, are what is necessary to properly complete Corelli’s “unfinished” work.

The title of Bloom’s most famous work describes anxiety: the anxiety of working under the shadow of an imposing precursor. Chapter One explored the anxiety of recomposition, which is often expressed by self-deprecating comments by the recomposer. Rameau’s commentary manifests no such anxiety or self-deprecation; if anything, he is careful not to criticize Corelli’s bass figures too harshly as he corrects them. “In condemning some figures by Corelli,” Rameau pleads, “we do not claim to thereby condemn his works. On the contrary, we have chosen them from all works that are among the best in the matter of harmony in order to make known that reason and ear do not always agree among musicians.”\footnote{Lester, Compositional Theory, 318.}

Rameau is not always so gentle in his critique, however: in reference to Figure 2.5, he exclaims, “one can judge that Corelli’s figuring is worthless [here], and that he absolutely did not understand what his Ear made him apply successfully in the passage.”\footnote{Lester, Compositional Theory in the Eighteenth Century, 315.} In Figure 2.5, there are several points of contention, chief among them the treatment of the E♭ in the violin line
in m. 60 (the second measure of the example). In order to deal with the dissonant note—which he hears resolving to D later in the measure—Rameau first adds a root in the basse continue on the downbeat, filling the continuo’s silence and establishing that E♭ is a chord seventh above F. Corelli’s bass line, in which F (figured as a 6/3 chord) enters as an eighth note after a rest, completely fails to account for the dissonance. Rameau then moves the Corelli’s next note from an unadorned D to B♭, and adds a seventh. A theoretically sound chain of fundamentals is thus created, falling by fifth from F, to B♭, to E♭, and the violin’s dissonant E♭ is resolved properly—not just as a chromatic decoration, but as an essential component of harmonic progression.  

Figure 2.5: Corelli, Sonata Op. 5, first Allegro, mm. 59–62, with fundamental bass analysis (Rameau 1726, 103)

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24 For more on the place of seventh chords in Rameau’s harmonic theories, see Lester, Compositional Theory in the Eighteenth Century, 106 – 114; and Thomas Christensen, Rameau and Musical Thought in the Enlightenment (Cambridge and New York: Cambridge University Press, 1993), 129–132.
Rameau’s recompositions of Corelli are but the first example of a trend that will become apparent through this study: that the presence of recomposition itself often indicates an aspect within a particular music theory, or a moment in that theory’s development, that is imbued with great importance by its author. That importance may not be anxiety, precisely, but it certainly carries a heavy psychological weight. As shown in the introduction, for example, music theorists of the early nineteenth century used recomposition to claim their theoretical territory on the battleground of Mozart’s “Dissonance” quartet, against a backdrop of the early stages of canon formation and musical hagiography. And in the Sonata Theory of James Hepokoski and Warren Darcy, as we will see in Chapter Four, the point of tension that provokes recomposition the medial caesura, one of that theory’s most original contributions, and one with far-reaching effects on formal interpretation.

The presence of recomposition in Rameau’s *Nouveau système* thus points toward several tensions in Rameau’s theories. First of all, it brings into sharp relief the fraught relationship between the fundamental bass as a purely theoretical phenomenon (“fictitious” or “analytic,” in the words of Allan Keiler), and its expression in music notation and Arabic numerals in a manner virtually indistinguishable from the music which it analyzes. In linguistic terms, musical notation serves as both object language (that is, the language under observation) and metalanguage (the language used to make statements about features of the object language).

\[\text{25 See Keiler, “Music as Metalanguage,” 84.}\]
Their similarity creates both theoretical and practical challenges to interpretation. As Keiler chronicles, the two kinds of notation looked similar enough to confuse Rameau’s early readers. In the case of Rameau’s corrections of Corelli, the situation is particularly confusing. The notes of the fundamental bassline are not to be played, yet their figures are meant to be taken seriously, as errata for the realization of the basso continuo—errata that must be re-reckoned above that written bass line in order to be performed.

Thomas Christensen describes this problem, though he does not fully pursue it. “One cannot deny that Rameau’s is a most inelegant figuring,” he complains, “producing a clumsy and thick realization utterly inappropriate for Corelli’s delicate music.” Here, Christensen refers to Rameau’s tendency to turn triads into seventh chords as often as possible, so as to avoid the possibility of repose. There is thus a conflict between the demands of Rameau’s

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26 Kurt Gödel’s famous first incompleteness theorem states that within a given formal (i.e. mathematical or axiomatized in terms of numbers and formal statements), there will be certain statements that can neither be proven nor disproven within that formal system alone. This necessitates an external metalanguage that contains the original object language, along with the ability to make additional metalinguistic statements about it. See Gödel, “On formally undecidable propositions of Principia Mathematica and related systems I,” in From Frege to Gödel: A Sourcebook in Mathematical Logic, edited and translated by Jean van Heijenoort (Cambridge, Mass.: Harvard University Press, 1969), 596–616. Relevant commentaries include Raymond Smullyan, Gödel’s Incompleteness Theorems (Oxford: Oxford University Press, 1991) and Peter Smith, An Introduction to Gödel’s Theorems (Cambridge and New York: Cambridge University Press, 2007). Alfred Tarski applied a similar idea to the definition of true statements, demonstrating that an object language L requires a metalanguage M; see Tarski, “The Concept of Truth in Formalized Languages,” in Logic, Semantics, Metamathematics: Papers from 1923 to 1938, ed. John Corcoran (Indianapolis: Hackett Publishing, 1983), 152–278. For commentary, see Roman Jakobson, “Metalanguage as a linguistic problem,” in The Framework of Language (Ann Arbor: Michigan Studies in the Humanities, 1980): 81–92.

27 Christensen, Rameau and Musical Thought in the Enlightenment, 130.
theory, and the demands of taste. Shortly after this passage, however, Christensen makes it clear that he does not believe that Rameau intended for his re-written continuo to be realized in performance:

I believe that Rameau no more expected the basso continuo to be realized in practice following his “corrections” any more than he would expect to be sounded the many “interpolated” fundamental basses he reads between the basso continuo in order to reveal an idealized motion of fifth progressions ... The point he was making, if put a bit too unsubtly, was that since sevenths are necessary mechanistic agents for impelling and directing chordal motion towards a tonic, every non-tonic harmony must therefore be a seventh, even if the seventh be suppressed in notation or performance.”

It could be the case that Rameau would have preferred a thinner accompaniment: after all, as Christensen points out, Rameau’s own bass figures were frequently sparse. However, as the final sentence of the above quote betrays, the desire for a certain texture could be accommodated by performance practice, even if the bass figures were primarily fully voiced seventh chords.

Christensen’s analysis seems to ignore both the title of Rameau’s chapter—“Examples of Errors Found in the Figures of Corelli’s Op. 5—and the way in which those errors are corrected. Rameau uses the fundamental bass as a guide in order to correct the figures, mirroring a hypothetical process sketched out by Keiler:

Rameau’s discussion of the relationship between basso continuo and fundamental bass in these chapters is not very different from any present-day pedagogical practice that instructs the student to work out a bass line for a piece (or example) that is limited to harmonies in root progression, so as to [e]nsure the syntactical correctness of the choice of harmonies; he may then alter his first attempt (which is, in fact, Rameau’s fundamental

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28 Christensen, Rameau, 131.
29 Christensen, Rameau, 131. Christensen cites Rameau’s cantata Le Berger fidele (1728) as a representative composition written not too long after Nouveau systeme.
bass) by choosing chord inversions in order to achieve a bass line with more conjunct motion, more direction, and less repetition of fifth relationships. In the process, the original bass line is clearly understood as a possible musical part (indeed, it plays that role for a time) and therefore assumes the role of a simple precompositional plan with respect to the final bass line. Once the process is completed, the original bass line can be thought of as an analytic representation in the sense that it generalizes: any number of different basso continuo parts can be seen as possible derivations of the same sequence of harmonic relationships represented by the fundamental bass.

In his analysis of Corelli’s violin sonatas, Rameau performs the inverse of this action: starting from the written continuo line, he derives the syntactical fundamental bass that underlies the passage. And it is clear from passages like the following that his fundamental bass is not a suggestion; it is a correction:

We shall see by placing the Fundamental Bass beneath Corelli’s Basso Continuo the true chords which must be found there as a consequence of the Connection [Liaison] that the fundamental progression of a Fifth must support most naturally within each harmonic Motion [Modulation].

In this passage, we see Rameau using the notes of the fundamental bass as a tool: a measuring device which reveals the “true chords” of a given passage. The fundamental bass is not to be played aloud, but it does dictate the proper harmonization of a passage. When the figures accompanying his fundamental bass contradict those given by Corelli, then, Rameau means for the new figures to be realized in performance.

In making this argument, Rameau strikes a delicate balance. The chapter is meant, at least in part, as a proof of concept: using it as a rubric for corrections shows its value as a tool for practical musicians and composers. At the same time, however, Rameau’s example gains its

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30 Keiler, “Music as Metalanguage,” 85–86.
31 Lester, Compositional Theory, 305.
authority and validity from the stature of the composer being cited. It is important, therefore, that Corelli’s music be presented as reliably exemplary, yet still in need of Rameau’s interventions. As he describes his corrections, then, Rameau carefully distinguishes between Corelli’s compositions themselves (the melodic lines actually written for the violin soloist and the basso continuo, which Rameau regards as the product of Corelli’s ear, and thus his genius) and the bass figures that suggest accompaniment, which Rameau considers the domain of learned theory, a potential weak point in the work of many composers.\textsuperscript{32} This allows Rameau to shield Corelli’s—presumably irreproachable—musical prowess from critique. He writes,

“Corelli, when he figured the Chords that this bass must carry, was guided much less by knowledge than by the intervals that his ear made him use between the violin and the bass ...

When we compose music, that is not the time to recall the rules that could enslave our genius. In composing, we must only have recourse to the rules when genius and the ear seem to deny us what we seek. But when we wish to make known to others the source of harmony that exists there, and to do that through the basso continuo figures, that is the time when we must recall these rules. If these rules were worthless, our ear would hardly protect us from errors to which they subjected us. In this case, all reason prohibits judging by ear; and for most musicians, to prohibit judging by ear is to deprive them of all their knowledge.”

Rameau thus makes space for his own theory, as a means for helping composers and performers to “recall the rules” of harmony and accompaniment, in a way that complements both creativity and taste. Rameau’s recompositions help to demonstrate how his theory—which in the above passage embodies “reason”—is an essential tool even for a “genius” composer.

\textsuperscript{32} While Corelli’s sonatas are the topic at hand, and Rameau frequently imagines what Corelli heard or thought during his compositional process, he also notes that many of the “mistakes” made by Corelli are widespread.

\textsuperscript{33} Lester, \textit{Compositional Theory}, 306 and 318.
II. Momigny’s Mozart: Language, Metaphor, and Formal Process in an Early Analysis of the String Quartet in D Minor, K. 421

Depending upon whom you ask, Figure 2.6 depicts a string quartet, an aria, both, or neither. It is a plate from Jérôme-Joseph de Momigny’s analysis of the first movement of Mozart’s String Quartet in D Minor, K. 421, and one of the centerpieces of his Cours complet d’harmonie et de composition (1803–06). The top four lines depict the quartet itself, as written by Mozart. The next staves (cadences mélodiques and harmoniques) present Momigny’s analysis of the antecedent-consequent gestures in the quartet’s melody (on a single staff) and in the accompaniment (on the grand staff below). The next grand staff features Momigny’s transcription of the quartet for voice and piano, which adds text to the melody (taken from the first violin part), and leaves a reduced accompaniment in the left hand. Finally, the bottom staff presents a fundamental bass analysis drawn from the theories of Rameau.

Momigny’s texted analysis of K. 421 is the first and most extensive of three such analyses in the Cours complet. The other two deal with the first movement of Haydn’s Symphony No. 103 (“Drumroll”), and the F-sharp Minor Fugue from Handel’s Sixth Keyboard Suite. Each


35 The musical example falls across the volume break in the set of plates that accompanies the Cours complet. The second half of the transcription abandons both the pretext of the aria and the additional analytical staves, laying the text simply under the first violin part.

36 See Momigny, Cours complet, 586–606 and 535–543, respectively. Ian Bent has translated these analyses as “Analysis of Haydn’s Symphony,” in Music Analysis in the Nineteenth
Figure 2.6. The first page of Momigny’s analysis of W. A. Mozart, String Quartet in D Minor, K. 421, I (Momigny 1803-06, Plate 30A)

of the three analyses adds words, in some form, to instrumental music in order to convey its meaning. Momigny himself calls this technique a “picturesque and poetic” analysis, though others have given it different names. Ian Bent has referred to the method as “affective analysis” and “analytical transformation,” while Byron Almén uses “expressive analysis,” and Malcolm Cole calls it “programmatic analysis.”

While texted analysis is one of the most distinctive features of Momigny’s work, it has received a mixed reception from modern music theorists, who greet it with skepticism and bemusement, or treat it as a primary source that reveals historical attitudes, but offers little of use to contemporary analysts. For Roger Parker, Momigny’s method is characterized by “a directness and lack of self-consciousness that is thoroughly alien to us today.” As a result, he writes, Momigny presents us with two options. We may simply dismiss Momigny’s explanatory situation as quaint, irrelevant, merely silly. But we can also use the strangeness as a point of entry, a chance to measure the distance between others’ aesthetic attitudes and our own. ... We can, in this case, pose Momigny as an extreme point of reference from which to test our unspoken assumptions about the vexed question of how words and music work together in a dramatic context.

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37 Ian Bent traces Momigny’s approach to earlier experiments in adding text to existing instrumental music, such as Wilhelm von Gerstenberg’s addition of two different texts—one an adaptation of Hamlet’s “to be or not to be” speech, the other an imagined monologue from Socrates as he prepared to take the hemlock. See Bent, *Music Analysis in the Nineteenth Century*, vol. 1, 27.


Those “unspoken assumptions” comprise a deeply ingrained Wagnerian aesthetic, which holds that text and music should be unified—along with visual elements—into the Gesamtkunstwerk. Yet this need for unification arises, Parker argues, precisely because text and music are actually separated by a wide gulf. Because of our modern internalization of Wagner’s aesthetic, music and text—and thus, music and representation—are as separate as can be. Unifying them, and thus endowing music with the power to signify, is epistemologically fraught, and requires herculean creativity. For Momigny and his contemporaries, on the other hand, music and text were intimately intertwined—natural partners, or perhaps two sides of the same coin. Moving between them was as simple as translating between two languages; challenges may arise and nuance might be lost, but the two media are essentially the same.\textsuperscript{40}

Some commentators have criticized Momigny’s narrativization of otherwise non-programmatic instrumental music. Byron Almén exemplifies contemporary skepticism toward Momigny in his critique of the Handel fugue analysis. Momigny describes the fugue as a three-voiced argument between a daughter (whose pleadings constitute the subject) and her mother and father (whose remonstrations form the countersubject). While Almén takes Momigny’s attempts at narrative seriously, he argues that the mappings between musical elements and proposed characters, events, and relationships are sometimes unclear.\textsuperscript{41} Furthermore, there is


no evidence to support any given narrative for the piece, yet Momigny speculates about the
composer’s intention in a way that would be rare today. He writes, “This, or something like it,
is the range of feeling that we believe Handel might have experienced, or the image that he
might have had in mind, as he composed this fugue.”

Others have read Momigny’s texted analyses with respect to the social functions and
implications of musical genres. In a chapter on the symphony, Momigny writes that it is a
genre “destined for a large gathering of persons,” and thus “must have at once both grandeur
and popularity. The composer should choose his subject from scenes of nature, or from scenes
of society that are most capable of moving and engaging the multitude.” Mark Evan Bonds
reads this statement against Momigny’s proposed narrative for Haydn’s “Drumroll”
Symphony, highlighting how Momigny’s symphonic interpretation appropriately turns toward
a narrative involving a large community. In his account of the symphony’s first movement,
Momigny interprets the opening timpani roll as the distant rumble of thunder. “The scene
takes place in the countryside,” he writes. “We must imagine that a fearful storm has been
raging for so long that the inhabitants of the village have betaken themselves to the temple of
god. After the clap of thunder, conveyed by the timpani, we hear the prayer begin.”

43 This translation comes from Mark Evan Bonds’s Music as Thought: Listening to the
Symphony in the Age of Beethoven (Princeton: Princeton University Press, 2006), 65. For the
original passage, see Momigny, Cours complet, 584.
Edward Klorman, in his recent study of sociality in Mozart’s chamber music, has examined the K. 421 analysis in great detail. Klorman highlights Momigny’s surprising choice to render the string quartet not as some form of conversation—as string quartets were consistently described at the time—but instead as an aria, featuring the first violin as soloist, and relegating the rest of the ensemble to an accompanimental role. While he too takes Momigny’s work seriously, he chronicles several moments when the metaphor of the aria breaks down, demonstrating that Momigny is forced to gloss over several imitative passages in the development section in order to retain the focus on “Dido” as a soloist.

I propose, however, that instead of accepting Momigny’s texted analyses as attempts to describe musical narratives or to give performance directives, we may also gain insights into Mozart’s use of harmony and form by taking a more abstract view, and interpreting Momigny’s attempt to unify music and language as a proxy for other analytical concerns. By examining Momigny’s retrospective text setting in the context of formal processes, we can learn several interesting lessons about how he heard Mozart’s music.

Momigny introduces his analysis of K. 421’s first movement as follows:

The style of this Allegro moderato is noble and pathetic. I decided that the best way to have my readers recognize its true expression was to add words to it. But since these verses, if one can call them that, were improvised ... they ought not to be judged in any other regard than that of their agreement with the sense of the music.

I thought I perceived that the feelings expressed by the composer were those of a lover who is on the point of being abandoned by the hero she adores: Dido, who had had a similar misfortune to complain of, came immediately to mind. Her noble rank, the

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intensity of her love, the renown of her misfortune—all this convinced me to make her the heroine of this piece.\textsuperscript{46}

Momigny’s very specific description refers to Dido, the Queen of Carthage, best known for her role in a tragic episode from Book 4 of Virgil’s \textit{Aeneid}, and numerous operatic tragedies. The Trojan Aeneas arrives in Carthage and falls in love with the queen. The two are subject to the machinations of the rival goddesses Venus and Juno, however, and Aeneas is convinced to leave Carthage by Mercury (the messenger of the gods) in order to continue his quest to build a new city for the Trojans in Italy. Heartbroken, Dido commits suicide. In Mozart’s “noble and pathetic” opening movement, Momigny hears elements of Dido’s persona and story: her noble status, her intense love for Aeneas, and her grave misfortune. In response, he casts her as the heroine of the quartet, composing an entire text in French, based on her pivotal confrontation with Aeneas. Momigny’s text underlay accounts for nearly every note played by the first violin, along with a brief cello passage attributed to Aeneas, a single note assigned to her handmaid, and a lamenting chorus at the end. The analytical prose that accompanies the score parses through much of the quartet measure by measure, and sprawls across more than ninety pages.

Momigny begins his analysis from the premise that the added text reflects his own impression of the music—his own association of the “noble and pathetic” character of the quartet’s first movement, with the tragedy of Dido and Aeneas. The quality of the text itself,

\textsuperscript{46} Momigny, “Analysis of a Quartet by Mozart,” 827.
he quickly deflects, is not at issue ("these verses ... ought not to be judged"). The text is a device for analysis ("the best way to help my readers recognize [the music’s] expression"), not a piece of art itself. Throughout the beginning of his analysis, Momigny frequently seems insecure about his own text. He proceeds in an apologetic tone, noting the moments when his poetry aligns with the music, but especially dwelling on the difficulties of fitting the text and the rhyme scheme to the music. Regarding the opening lines, he writes, "‘Displeasure’ [déplaisir] is a weak word, and is used only because I have not yet found a rhyme for ‘ir’ that could adequately replace it. The true meaning of the verse is rather: ‘Ah! when you cause me grief [désole.’"

Here, Momigny draws attention to the structure of his own text: a series of rhyming infinitives (attendrir, rougir, retenir, mourir) dominate the exposition and dictate the end of each line. Even this added text, then, composed for the task of explicating the music, introduces distortions of his intended meaning. The aesthetic desire for a rhyming text seems to get in the way of analysis, by forcing him to choose a weaker word. Continuing in the same manner, Momigny remarks upon other notable moments, such as the awkwardness of placing the French pronoun me on what he considers a strong beat (a downbeat rather than an upbeat, presumably) in measure 9 (shown in Fig. 2.7a). He also has more than the occasional success. He rejoices, for example, in the rhetorical strength of emphatic text-music matches like "Quoi!" at the beginning of measure 9, and "Fuis!" in measure 14 (Fig. 2.7b).  

47 Momigny, Cours complet, 372.  
48 Momigny, Cours complet, 375.
a. mm. 9–10

b. mm. 13–14

c. mm. 52–54

Figure 2.7: Notable Moments in Momigny’s Text Setting
As Momigny’s anxiety over his text setting subsides, the presumed authorship of the text becomes cloudy. Momigny begins to speak as if he were not the author of these exegetical lyrics. Lines of text become signposts for musical events, as when Momigny writes of measure 51, “With the words voilà le prix de tant d’amour! Mozart resumes the free style exclusively until the fifth verse.” Here, Momigny’s poetry is closely aligned with—even conflated with—Mozart’s musical form. Furthermore, Momigny sometimes implies that Mozart has taken care to set Dido’s words to music intentionally, paradoxically crafting the music to express the emotional states suggested by a text composed many years after the fact. Momigny describes the passage beginning at measure 51 (Fig. 2.7c) as follows:

How the anger of the queen of Carthage bursts out in the music of the third musical verse! And how the last syllable of the word amour is felicitously placed on the B-flat, in order to express the grief that Dido feels at having rashly abandoned herself to this passion for a perjurer! The second time she repeats this word she cannot finish it, because she is choked by the grief that overwhelms her. It is here that the viola part, which represents her sister, confidante, or maid, takes up the word to address to the Trojan the reproaches that Dido no longer has the strength to make herself.

In this remarkable paragraph, Momigny seems to ventriloquize Mozart, reversing the order of the compositional decisions that produced this piece. He seems to get caught up in analyzing the aria that he has created, rather than focusing on the quartet itself. Even notable features like the first violin trailing off and passing its melody to the viola for completion are given hermeneutic justifications within the text. The viola is momentarily personified, giving voice

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49 Momigny, “Analysis of a Quartet by Mozart,” 830.
50 Momigny, “Analysis of a Quartet by Mozart,” 830.
to another character (a “sister, confidant, or maid”) in the scene, and signaling Momigny’s willingness to rely not only on text setting, but also stage direction.\textsuperscript{51}

The permeable boundary between Mozart’s music and Momigny’s text is also evident in Momigny’s flexible formal labels. As shown in Table 2.1, Momigny’s \textit{Cours complet} develops a system of labels for the components of phrase rhythm that is hierarchical (as are most analyses of musical phrases), but, crucially, \textit{not completely symmetrical}.\textsuperscript{52} That is, while two notes are needed to form the most basic unit, a \textit{proposition} or a \textit{cadence} (the antecedent-consequent units analyzed in the center of Fig. 2.6),\textsuperscript{53} the rest of his formal units have no fixed size—a \textit{phrase} is simply a container for one or more cadences, while a \textit{verse} contains one or more phrases, a \textit{period} one or more verses, and so on. The close relationship between music and text thus allows Momigny to craft a highly flexible theory of phrase rhythm, which describes not only the simple, mostly symmetrical pairings of subject and verb, but also more paratactic constructions that include several clauses. His model can thus accommodate not only the regimented symmetries of well-established “theme types” like the period and the sentence, which tend to

\begin{itemize}
\item \textsuperscript{51} For more on this highly charged moment, see Klorman, \textit{Mozart’s Music of Friends}, 66–69.
\item \textsuperscript{52} For a fuller account of Momigny’s theory of form and phrase construction, including the various species of periods, see \textit{Cours complet}, 397–398 and 435–438.
\item \textsuperscript{53} Momigny uses the term “proposition” to describe pairs of notes or chords, which together form the basic unit for his musical “discourse.” Emphasis is placed on the second member of the proposition, echoing the consonance of the second member of a Rameauvian cadence (see Jean-Philippe Rameau, \textit{Treatise on Harmony} [1722], trans. Phillip Gossett [New York: Dover, 1971], 59–91), and anticipating Hugo Riemann’s argument that metric units occur across barlines, moving from weak beats to strong (see Riemann, “Neue Beiträge zu einer Lehre von den Tonvorstellungen,” \textit{Jahrbuch der Musikbibliothek Peters} 23 [1916]: 1-21). Momigny’s most succinct explanation of this is in \textit{Cours complet}, pp. 435–440.
\end{itemize}
be found at the beginnings of movements, but also the looser *Fortspinnung* of Baroque musical rhetoric, or the irregular constructions found in transitions, developments (here, recall Klorman’s critique), and other loose-knit formal areas.54

| (larger)       | Movement/Piece (*morceau*), consisting of one or more parts |
|               | Part (*partie*), consisting of one or more periods          |
|               | Period (*periode*), consisting of one or more verses        |
|               | Verse (*vers*), consisting of one or more phrases           |
|               | Phrase, consisting of one or more cadences/propositions     |
| (smaller)     | Cadence/Proposition, consisting of two notes/chords         |
|               | Note/Chord (*membre*)                                      |

**Table 2.1.** Momigny’s Anatomy of Musical Form, after *Cours complet*, pp. 397–398

The fluidity of the word *verse* lets it refer to both musical and textual units at different times, or even simultaneously. While the separation between musical and textual “verses” is clear at the beginning of each theme group, ambiguities arise as the pace of the phrase rhythm increases. For example, as shown in Figure 2.8, many short phrases receive their own “verse” labels. Here, these verses indicate both complete lines of Momigny’s text, and discrete harmonic units. The tenth verse, for example, marks the arrival in the first movement’s secondary key (F major), and moves from tonic to dominant in that key. The eleventh verse marks a turn with which Momigny evades a clearly approaching cadence (discussed in greater

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detail below), instead prolonging V with a pair of chromatic chords. Verses 13 and 14 are each complete (tonic – pre-dominant – dominant – tonic) progressions (the second more emphatic than the first). Momigny’s text is written to mirror these divisions, suggesting that the linguistic choices Momigny makes reflect aspects of the musical structure. The two “Je t’enprie” outbursts, for example, are each complete progressions, while the virtually identical “verses” in measures 9–10 and 11–12 receive the same text, and each prolong the same harmony. The ninth verse’s wandering chromaticism and modulation (mm. 14–16), however, sees its text fragmented, with some parts repeated several times. The corresponding transition music in the recapitulation (mm. 85–89) is recomposed so as to avoid modulating again to the secondary key. The result stretches out the section by two additional measures, and Momigny’s text repeats itself even more. The addition of the words “arrête! arrête!” connect Dido’s increasing desperation with a moment of intense tonal drama, just before the arrival of the second theme.

Momigny also uses his text setting to reflect formal considerations. Aeneas’s interjections in measures 18–21 (shown in Figure 2.8) are the most prominent example of how Momigny uses his dramatic narrative to analyze the music. Having already begun to modulate to the relative major, measures 17 and 18 seem to be heading for a strong cadence in F, to usher in the second theme. But the pickup to measure 19 derails this path, prolonging the dominant

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55 On such “precrux alterations,” which are often necessary to bring about the second theme in the tonic key, see James Hepokoski and Warren Darcy, *Elements of Sonata Theory: Norms, Types, and Deformations in the Late-Eighteenth Century Sonata* (New York: Oxford University Press, 2006), 239–242.
Figure 2.8: Momigny’s Analysis, mm. 17–24
with a pair of chromatic chords (an applied dominant in measure 19 and an augmented sixth in measure 20) and forcing the cadential momentum to collect itself and “start over” again in measure 21. Momigny’s momentary addition of a new character dramatizes just how external this momentary digression around C is. Momigny’s text also returns to the idea from the interrupted cadence several measures before, repeating “je vais mourir” (“I shall die”) again in measure 24 when the cadence is finally accomplished. If we again look ahead to the recapitulation (mm. 89–90, shown in Fig. 2.9), we find that Momigny does not give this moment a text underlay. Perhaps, by this point, Aeneas has left, and Dido is singing only to herself. But perhaps Momigny is also reacting to the metric reversal that Mozart has carried out. Because of the musical expansion of measures 87–88, the “Aeneas” music is displaced to the weak part of the measure, landing on beat three in measure 89, instead of beat one. A cadence here is far less likely, and so the digression carries much weaker interruptive force. It is easily assimilated into the accompaniment rather than attributed to an external agent. Dido’s pleas, it would seem, fall on deaf ears as the previously optimistic second theme is heard again in a dire D Minor.

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56 The effects of this metric displacement are not fully worked out until measure 103, when the secondary theme—now in the tonic—lands on a downbeat, at what Hepokoski and Darcy would call the “Essential Structural Closure”; see Elements of Sonata Theory, 16–20.
Figure 2.9: Momigny’s Analysis, mm. 85–95
Taken together, these brief vignettes illustrate not only the attention to detail that Momigny employed when composing his proposed “libretto” for Mozart’s music, but also the ways in which he carefully used techniques like repetition in his text setting in order to reinforce the metaphorical connections between music and language that underscore his theory of phrase rhythm and form. Choices that initially seem to be motivated for dramatic or emotive reasons—such as Aeneas’s interruption—can also be tied more deeply into harmonic and formal structures. Momigny’s texts, then, can be read—or heard—not only as an attempt to explicate the “true expression” of the pieces he analyzed, but also as contributions to more contemporary theoretical and analytical concerns—allowing us to experience Mozart’s quartet, and Momigny’s dramatic rendition of it, with new immediacy.

III. Anton Reicha Presents: The Marriage of Figaro

One of the most famous contributions of Anton Reicha’s monumental *Traité de haute composition* (1824-26) is the diagram reproduced in Figure 2.10: the grand coupe binaire, considered to be one of the first visual depictions of the notion of musical form. Several pages before he unveiled this famous diagram in the final book of his treatise, however, Reicha first introduced his readers to sonata form by focusing on musical ideas as the core of musical creativity, and their repetition and development as the core processes of musical form. And in order to develop the notion of a musical idea, and demonstrate how ideas can be developed

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into full pieces of music, he created a surprising recomposition of the Overture to Mozart’s *The Marriage of Figaro*.


Reicha’s use of the word *idea* (*idée*), rather than theme, motive/motif, *melodie*, or any of the other basic terms available to him, suggests a kind of raw material that a composer translates into music. Parsing out precisely what Reicha means by “musical idea” is challenging because he never fully defines it. In the first section (“On Musical Ideas”) of the sixth book of
the *Traité de haute composition*, Reicha indicates that a skilled composer simply knows an idea when he or she hears it, writing:

> A professional composer, educated and knowing the nature of his art, does not need an explanation of “musical ideas”: he can clearly imagine them. He is able to distinguish them by their merit, to the point where he can show his students how to go about looking for them, creating them, developing them, and chaining them together. But what must seem inexplicable, incomprehensible to anyone not schooled in this mysterious art, is that this same composer will be at great pains to give a correct and precise definition of a “musical idea,” and to demonstrate its nature clearly.⁵⁸

What Reicha describes here is a familiar sensation for most pedagogues, one which he probably felt for himself: frustration at the task of attempting to describe a deeply-held intuition in simple terms. However, in a genre often filled with high-minded proclamations of genius, Reicha’s account of the situation seems refreshingly pragmatic: his argument seems not to be that one must be a genius to grasp what a musical idea is, but rather that one must experience it for oneself. While a clear definition relating the musical idea to any other recognizable feature of music (a motive, a theme, etc.) is nowhere to be found, Reicha does give a few descriptions. A musical idea, he writes, can be harmonic, melodic, or both at once; whatever “fixes the attention of the listener”; A musical idea is pleasant; it “speaks to the sentiment”; and it is easily recalled.⁵⁹ Those details aside, Reicha leaves much to be decided. He comments, for example, that a musical idea could span anywhere from two measures to twenty-four: a massive range that could encompass a tiny melodic fragment, or an entire, fully-developed symphonic theme.

Reicha also presents a brief taxonomy of the various types of musical ideas, which I have reproduced in Table 2.2, along with the labels used by Carl Czerny in his parallel German translation of Reicha’s *Traité*. The taxonomy seems to operate on at least two levels: the first several phrases are described based on their importance and temporal primacy, while the last three are described based on their unique emphasis on harmony, melody, or both.

<table>
<thead>
<tr>
<th>English translation (mine)</th>
<th>Original French (Reicha)</th>
<th>German translation (Czerny)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal ideas</td>
<td>Idées mères</td>
<td>Grundideen/ Hauptideen</td>
<td>“The most extensive, most complete, and most important ... such as the beginning of a symphony or an overture”</td>
</tr>
<tr>
<td>Accessory ideas</td>
<td>Idées accessoires</td>
<td>Nebenideen</td>
<td>Short, often incomplete. Standing between idées mères, serving as a liaison.</td>
</tr>
<tr>
<td>Phrases</td>
<td>Phrases</td>
<td>Phrasen</td>
<td>A member of a period, and often also of an idée accessoire.</td>
</tr>
<tr>
<td>Periods</td>
<td>Periods</td>
<td>Perioden</td>
<td>A musical “sense” (sens) ending in a perfect cadence</td>
</tr>
<tr>
<td>Ideas whose interest is uniquely melodic</td>
<td>Idées dont l’interet est uniquement melodique</td>
<td>Ideen von rein melodischen interesse</td>
<td>Can be either an idée mère, or an idée accessoire</td>
</tr>
<tr>
<td>Ideas whose interest is purely harmonic</td>
<td>Idées dont l’interet est purement harmonique</td>
<td>Ideen von rein harmonische interesse</td>
<td>Can only be an idée accessoire, never an idée mère</td>
</tr>
<tr>
<td>Ideas which take their interest in the reunion of harmony with melody</td>
<td>Idées qui tirent l’interet de la réunion de l’harmonie avec la melodie</td>
<td>Ideen deren interesse in der Vereinigung der harmonie mit der melodie besteht</td>
<td>Can be either an idée mère, or an idée accessoire</td>
</tr>
</tbody>
</table>

At the top of the schema is the *idée mere*: a “mother idea,” or to follow Carl Czerny’s rendering (*Grundidee* or *Hauptidee*), a “principal idea.” The *idée mère* overlaps at least partially with our modern conception of a first theme: a principal idea, for Reicha, serves not only as “the beginning of a symphony, an overture, etc.,” but is also “the most extensive, the most complete, and the most important” theme of the piece. From its label—a *mother* idea—we can infer that a principal idea also serves as a source of musical material, begetting the rest of the piece. This is followed by the *idée accessoire*, which is intuitive enough: a supporting idea (though not, in contemporary parlance, equivalent to a subordinate or secondary theme). These are followed by two very poorly defined terms, the *phrase* and the *period*, which belong to the taxonomy, but are never used in the analyses that follow.

Reicha also names a form of musical idea that can be classified not by its temporal or rhetorical primacy, nor by its length or cadential content. Rather, these phrases take their interest (*l’interet*) either purely from melody, or purely from harmony. Notably, only “uniquely melodic” ideas may serve as principal ideas; harmonic ideas may only be accessory ideas, or

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61 It is very possible that, even though Reicha presents all of these ideas in a list, they do not exist on equal levels. There could be a hierarchy, since it would seem that an idée mere could take the form of a period, or of a “purely melodic idea,” and so forth. It could be that Reicha is really presenting three different systems of classifying musical ideas, which happen to overlap in certain ways.
something lesser. Ideas which reunite the two may also serve as either principal or accessory ideas, presumably because they include melody.

Reicha follows this list of the types of musical ideas with an almost folk-psychological account of musical creativity, the task of which is both to invent ideas, and to develop them. “The faculty of producing or creating is given by nature,” he begins. “It is more or less active in some people than it is in others; sometimes, it is so low as to seem like almost nothing.” He continues in this vein, dispensing advice about how to invigorate the creative faculty (spend time in nature, engage in non-musical pursuits during periods of rest from composition), and warning the prospective composer of the deleterious effects of a cold climate and a dreary day job, both of which “adversely affect the creative faculty.” But if we look past his folksy wisdom, a clear model for musical thought emerges. The creative faculty is responsible for both generating ideas, and developing them. The ideas generated by the creative faculty are most often, Reicha warns, “like rough diamonds, which must then be polished.” Here, he seems to mean both that revision is often necessary (he speaks of “taming” the creative faculty so that it will eventually generate more usable ideas, rather than wild ones), and also that (as Peter Hoyt has pointed out), musical ideas are constantly developing, whenever they are heard of elaborated. As we consider this often-neglected buildup to Reicha’s famous outline of

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65 See Peter Hoyt, “The concept of Développement,” in Music Theory in the Age of Romanticism, ed. Ian Bent (Cambridge and New York: Cambridge University Press, 1996), 149. Hoyt chronicles the tension in Reicha’s conception of sonata form, between the two part
sonata form, we must stop to consider the process of elision that occurs as Reicha begins to ascribe functions to the individual parts of the sonata.

Reicha writes that musical ideas must be exposed before they can be developed. These two activities happen, conveniently enough, in the sections of a composition that have become named for them. As shown in Reicha’s grand coupe binaire, reproduced in Figure 2.10, the first part of the composition is labeled “exposition,” and the first part of the second, développement.

For Mark Evan Bonds, as noted earlier, this spatial representation of musical form is a crucial move away from the metaphor of rhetoric, and towards a static, spatial conception of form. Bonds writes, “Reicha’s concept of form … rests on the concept of the coupe, which in the literal sense denotes a receptacle or a container, in this case for musical thoughts.” In terms of Bonds’ now-famous distinction between generative and conformational form, the diagram marks an inversion Reicha’s musical thought, and even western musical thought in general.

exposition and développement pair of classical drama, and the three-part division that would become commonplace later, between exposition, development, and recapitulation. Years later, Arnold Schoenberg, who also writes of “musical ideas,” would make a similar argument, that “There is development everywhere in a piece of music.” Schoenberg’s development is of a different sort, however—it is the growth of themes out of exceedingly brief basic ideas. See Schoenberg, Structural Functions of Harmony (New York: W.W. Norton, 1969), 145.

The only reference to Reicha’s account of the Figaro overture is found in Scott Burnham, “Form,” in The Cambridge History of Western Music Theory, 884-885. Burnham devotes a few sentences to the passage, in which he calls it “a kind of interactive analysis.”

Reicha, Traité, Vol. II, 236.
Bonds, Wordless Rhetoric, 148.
See Bonds, Wordless Rhetoric, 13-16. “Conformational” form is the view that groups works by “lowest common denominators,” measuring them against abstract types like sonata form, ABA, rondo, etc. “Generative” views of form “consider how each work grows from within,” making no distinction between form and content.
I would like to gently push against the notion that Reicha’s account of musical form is a static one, one focused on placing musical ideas into receptacles. This is perhaps true of the première partie, the “exposition of ideas”: the four boxes (motif, pont, seconde idée mere, idées accessoires) are all labeled with different kinds of musical ideas (the precise taxonomy of which will be explored momentarily). In other words, each is to be filled with a different idea. However, the spatial metaphor proposed by Bonds seems to be a clumsy description of the “development,” or as it is labeled by Reicha, the “first section of the second part.” The proportion between “développement principal” and “arrêt,” first of all, is deceptive: the two are the same size, but the second box refers only to the retaking of the “original dominant”: the moment of re-transition that turns V from a tonicized key area back into an active dominant. It should take, at most, a couple of measures. That leaves a single box to contain all the developments through which the composer puts his or her musical ideas. The process of development is left mostly vague; in fact, Reicha writes that “ten composers will create ten different developments with the same ideas, each according to his ability, his taste, and his genius.”

Here, there is a tension between motion and stasis. After the relatively orderly exposition of several ideas in the first part, the development is wide open. Reicha’s conception of it casts it as the area of greatest freedom, motion and creativity—a stark contrast to the static image that Bonds presents of his theory. We can thus read a productive tension between the orderliness of the exposition, and the uncertainty of Reicha’s developments. Furthermore, the

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development is the portion of the composition that, for Reicha, requires the greatest attention from the audience, who must be expected to follow each twist and turn, each flash of a musical idea as it races by. This is why developments are reserved only for the concert hall, never the operatic overture; as Reicha argues, there is no point in developing the ideas in an overture, because the rowdy parterre wouldn’t actually be paying attention.\(^{71}\)

The uncertainty and fluidity of développement is vividly emphasized as Reicha turns to analysis, choosing to demonstrate his concepts in music notation rather than explain them further: a demonstration that proves to be the source of a stunning recomposition. Throughout his treatise (and especially in past works, such as the 1814 Traité de melodie), Reicha often composed new pieces of music in order to explain himself. But rather than composing an example of a development section from scratch here, Reicha reaches instead for the Overture to Mozart’s Le nozze di Figaro. In a brief analysis of the overture, he labels several themes according to his taxonomy. He then identifies nine distinct musical ideas, within the Figaro overture, shown in Figure 2.11. He writes:

If, instead of an overture, Mozart had wanted to write a symphonic piece for grand orchestra, he would not fail to develop these ideas within it, as he has done so many times, and so skillfully, in his instrumental works. Supposing that the ideas of this overture had been meant for a symphonic movement [i.e. a sonata form], it would be instructive to see how we could take advantage of their exposition. Because Mozart is no longer alive, he cannot satisfy our curiosity and give us a new lesson in this regard, so we will try to provide two examples of this work.\(^{72}\)

\(^{71}\) Reicha, Traité, Vol. II, 240 (my translation).
Reicha is relatively thorough in his tabulation of musical ideas in the Figaro overture, although his list is by no means complete. Idea No. 1, for example, reproduces the opening seven
measures, verbatim. However, the table completely omits the quasi-sentential theme that stretches from m. 8 to m. 17, shown in Figure 2.12, admitting only its (relatively unremarkable) final two measures as Idea No. 2. And nowhere does he include the simple countermelody heard against Idea No. 1’s immediate repetition in the original overture, although that countermelody is marked in Reicha’s analysis, and appears prominently in both of his proposed developments. Reicha is also inconsistent in his treatment of sequential moments. Idea No. 3, for example, presents only one “tier” of the pseudo-sequential idea that unfolds in Mozart’s mm. 35-36. Idea No. 7, however, presents three full iterations of a two-measure cell, spanning from mm. 75 to 79 in the original. This leads directly into Idea No. 8, another short, repeated cell.

Figure 2.12: Mozart, *Le Nozze di Figaro*, Overture (piano reduction), mm. 7-18

In one sense, the table itself is an analytical device, presenting a kind of formal reading of the overture. By its selection of motives, the table mirrors the shape of the exposition: a tonally
complete (albeit more rhetorically introductory than thematic) phrase in D major—Idea No. 1—opens the table, while a highly symmetrical antecedent-consequent period in A major finishes it, acting as the exposition’s closing theme. In between, the somewhat random selection of fragments mirrors the tonal instability of an exposition-in-progress. Idea No. 3 kicks off the transition, but is reproduced only partially in the table. Most theorists would call Idea No. 6 the secondary theme, although Reicha’s reproduction does not allow it to end; it merely trails off. Finally, Idea No. 9 is a complete phrase presented in full, the “exposition’s” closing theme, which confirms the modulation to V.

Using his table as a guide, Reicha gives two examples of possible developments, to be inserted in the middle of the piece. The first of these uses “musical ideas” 1, 3, and 4, while the second uses all nine. In doing so, along with the label-based analysis of the original overture and the “table of musical ideas,” Reicha tacitly puts forth a template for symphonic developments. As shown in Tables 2.3 and 2.4, the two possible developments are closely related: both begin in A (the dominant), with sequences based on Idea No. 3 (an “accessory idea,” which a contemporary theorist might consider the transition), and both heavily feature Idea No. 1 (which, while not explicitly labelled as such, is a “mother idea” in Reicha’s terms). Finally, both end with material from Idea No. 4, which in the original overture brings the first

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73 Perhaps the unspoken implication is that the omitted measures are drawn from an idea we’ve heard already, as some variation of the end of Idea No. 1, or Idea No. 3.

74 The two developments are given first in reduced form (reproduced as an Appendix to this chapter), and then again in fully orchestrated form. For the orchestrated versions, see Reicha, *Traité de haute composition*, Vol. II, 249–261.
theme area to an end on the dominant. In both overtures, this idea is used to bring about a “retransition” to an active V, albeit one much less emphatic than the long dominant-lock found in Mozart’s approach to the medial caesura.

<table>
<thead>
<tr>
<th>Measures</th>
<th>Idea #</th>
<th>Key area(s)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 8</td>
<td>3</td>
<td>A major (V)</td>
<td>ascending sequence</td>
</tr>
<tr>
<td>9 - 39</td>
<td>1</td>
<td>B minor (vi), G major (IV), C major (♭VII)</td>
<td></td>
</tr>
<tr>
<td>38 - 46</td>
<td>1</td>
<td>C major (♭VII) -&gt; E minor (ii)</td>
<td>ascending sequence</td>
</tr>
<tr>
<td>47 - 54</td>
<td>3</td>
<td>F# major, B major, E major, A major</td>
<td>circle of fifths sequence</td>
</tr>
<tr>
<td>55 - end</td>
<td>4</td>
<td>D major (I) -&gt; A major (as V_A)</td>
<td>retransition</td>
</tr>
</tbody>
</table>

Table 2.3: Reicha’s Proposed “Development No. 1” (Reicha 1824-26, Vol. II, pp. 242–244)

<table>
<thead>
<tr>
<th>Measures</th>
<th>Idea #</th>
<th>Key area(s)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 10</td>
<td>3</td>
<td>A major (V)</td>
<td>mm. 1-6 same as above</td>
</tr>
<tr>
<td>11-17</td>
<td>1</td>
<td>B minor (vi)</td>
<td></td>
</tr>
<tr>
<td>18-25</td>
<td>9</td>
<td>G major (IV)</td>
<td></td>
</tr>
<tr>
<td>26-32</td>
<td>1</td>
<td>E minor (ii)</td>
<td></td>
</tr>
<tr>
<td>33-46</td>
<td>9</td>
<td>C major (♭VII)</td>
<td>breaks off into imitative fragments</td>
</tr>
<tr>
<td>47-52</td>
<td>8</td>
<td>G major (IV)</td>
<td></td>
</tr>
<tr>
<td>53-62</td>
<td>7 &gt; 2</td>
<td>E♯ major</td>
<td>Key signature change to E♯ major</td>
</tr>
<tr>
<td>63-68</td>
<td>9</td>
<td>E♯ major</td>
<td></td>
</tr>
<tr>
<td>69-78</td>
<td>7 &gt; 2</td>
<td>B major</td>
<td>Key signature change to B major</td>
</tr>
<tr>
<td>79-91</td>
<td>9</td>
<td>B major</td>
<td></td>
</tr>
<tr>
<td>92-95</td>
<td>6</td>
<td>F♯ major</td>
<td></td>
</tr>
<tr>
<td>96-105</td>
<td>6</td>
<td>D major</td>
<td>Key signature change to D major</td>
</tr>
<tr>
<td>106-115</td>
<td>4/5</td>
<td>D major (I) -&gt; A major (as V_A)</td>
<td>retransition</td>
</tr>
</tbody>
</table>

Table 2.4: Reicha’s Proposed “Development No. 2” (Reicha 1824-26, Vol. II, pp. 245–248)
After these similarities, however, the two developments diverge sharply: the first is much shorter, and includes only three musical ideas, while the second includes all nine, and is thus much longer. “The two developments are necessarily different,” writes Reicha, because of the number of themes involved. Granted, he admits, “it is possible that the same number of ideas will grant different developments.” This is the context in which the motto quoted earlier appears: “Ten composers will create ten different developments with the same ideas, each according to his ability, his taste, and his genius.”

Reicha’s emphasis on musical ideas and their development turns the focus toward melodic invention and variation, and away from harmonic concerns: while he demonstrates that development involves primarily accessory ideas, and he shows those ideas moving through several different key areas, he does not impose much harmonic or formal organization on the development section, beyond the need to re-attain the “dominant primitive,” as his famous diagram notes.

Taken together with his method in this chapter—composing a development section in order to turn Mozart’s Le nozze di Figaro overture into a sonata form—Reicha seems unwilling to deeply analyze development sections from existing works. He advocates that his readers should do so on their own, noting that “in the twelve last symphonies of Haydn, one may find grand developments of ideas.” His unwillingness is certainly not due to a lack of ability—he labels the ideas of Mozart’s “exposition,” and deploys them plausibly. Instead, Reicha’s sonata-less account of sonata development paints it as a process—not a distinct section of a musical

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work. This process, for him, is a truly individual matter, subject to the desires of the individual composer, and less appropriate for an over-arching theory.

IV. Recomposition in Rothstein’s *Phrase Rhythm in Tonal Music*

The use of recomposition is central to William Rothstein’s theory of phrase rhythm. Rothstein explicitly positions himself (and his chief influence, Heinrich Schenker) as part of a theoretical tradition of phrase rhythm that stretches from Joseph Riepel, through Kirnberger, Koch, and Reicha, up to Hugo Riemann and Ebenezer Prout in the late 19th and early 20th century. This tradition strongly emphasizes the centrality of symmetrical, duple construction in music, to the point of arguing that, in most cases, “phrases of non-duple length ... can best be understood as variations of ‘normal’ phrases of duple length.” Taking this tradition seriously, Rothstein focuses his account of phrase rhythm on the handling of exceptions: he often chooses his examples not because feature 4-bar hypermeter, perfect duple construction, and so forth, but because they do not. His frequent use of recomposition is thus perfectly suited to this theoretical orientation—the ideal underscoring for his idea that even the most complex passages of tonal music are controlled by an underlying phrase structure made up of a series of basic phrases. While Rothstein’s recompositions briefly attracted the notice of reviewers

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when the book appeared, they have not been the subject of a detailed study. The remaining portion of this chapter seeks to provide that attention.

Moving beyond his initial recomposition of Mozart’s A Major Piano Sonata (K. 331), William Rothstein’s *Phrase Rhythm in Tonal Music* provides a useful compendium of recompositions, particularly in its first half. Table 2.5 presents the section headings from Chapters Two and Three of *Phrase Rhythm in Tonal Music*, and helps to highlight the sections which use recomposition.

<table>
<thead>
<tr>
<th>Section Heading/Technique</th>
<th>Recomposition(s) used to illustrate</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter Two: Techniques of Phrase Rhythm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Periods, Phrases, and Subphrases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phrase Pairing: The Period</td>
<td>Mozart, Piano Sonata in A Major, K. 331, I, mm. 1-8 (four times)</td>
<td>23-24</td>
</tr>
<tr>
<td>Accelerations Within Phrases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal Structure of the Phrase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subphrases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regularity and Irregularity in Phrase Construction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duple vs. Non-Duple Construction</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2.5: Techniques of Phrase Rhythm discussed in Rothstein, *Phrase Rhythm in Tonal Music*, Chapters Two and Three, and the recompositions used to illustrate each.

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Roger Graybill writes that “One of [Rothstein’s] favorite and most effective tactics is to take a passage of music that exhibits apparent hypermetric irregularities, and recompose it in order to reveal an underlying regularity.” See his review in *Notes* 48/2 (1991), 503. In his own review, Robert P. Morgan ties this tendency explicitly to the influence of Schenker, writing: “Rothstein invokes the Schenkerian notion of structural levels, arguing that simple underlying phrases can be transformed through more surface elaborations, the latter analytically reducible to the former. As a consequence, he is inclined to view phrases—and therefore phrase rhythm—as reducible to a limited number of metrically regular prototypes which can be extended or otherwise altered without being compromised.” See Morgan, “Review of *Phrase Rhythm in Tonal Music*,” 76.
<table>
<thead>
<tr>
<th>Non-Duple Hypermeter</th>
<th>The Manipulation of Hypermeter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Techniques of Phrase Linkage</td>
<td></td>
</tr>
<tr>
<td>Phrase Overlap and Subphrase Overlap</td>
<td>Beethoven, Op. 2, No. 3, mm. 9-13</td>
</tr>
<tr>
<td>Chopin, Op. 6, No. 1, mm. 7-10</td>
<td>47</td>
</tr>
<tr>
<td>The Lead-In</td>
<td></td>
</tr>
<tr>
<td>Metrical Reinterpretation</td>
<td>Beethoven, Op. 2., No. 2, mm. 29-34</td>
</tr>
<tr>
<td>Elongated Upbeats</td>
<td></td>
</tr>
<tr>
<td>Successive Downbeats</td>
<td>Beethoven, Op. 49, No. 1, mm. 13-15</td>
</tr>
<tr>
<td>Beethoven, Op. 14, No. 2, mm. 43 - end of exposition</td>
<td>62</td>
</tr>
</tbody>
</table>

**Chapter Three: Phrase Expansion**

| External Expansions | |
|---------------------| |
| The Prefix | |
| The Suffix | Mozart, K. 310, mm. 13-22 | 73 |

| Internal Expansions | |
|---------------------| |
| Expansion by Repetition Within the Phrase | Haydn, Symphony No. 42, ii, mm. 83-92 | 77 |
| Expansion by Composed-out Deceleration or Fermata | Beethoven, Piano Sonata in A Major, Op. 101 (recomposition “after Riemann”) | 82 |
| Expansion by Parenthetical Insertion | |
| Implied (Middleground) Prototypes | |

**Some Issues Raised by Phrase Expansion**

- Cadence-Altering Expansions
- Phrase Expansion and Hypermeter
- “Theme” vs. “Non-Theme” (Transitions and Developments)
- How Can You Tell When a Rhythmic Analysis is “Right?”

**Chapter Five: Haydn: Sonata, Quartet, and Symphony**

| From Baroque to Classic | |
|-------------------------| |
| Haydn, Piano Sonata in A, Major, Hob. XVI: 46, I (twice) | 138, 141 |

| The Storm and Dreng Years | |
|---------------------------| |
| Haydn, String Quartet in E, Major, Op. 20, No. 1, iii | 144 |

| The 1770s: Opera and Singspiel | |
|-------------------------------| |
| Haydn, String Quartet in D, Minor, Op. 42, I | 154 |

| The 1780s | |
|----------| |

| The Late Instrumental Style | |
|----------------------------| |
| Symphony No. 101, i | 179 |

(Table 2.5 continued)
In Chapters Two and Three (which make up the bulk of the book’s first half, captioned “Introduction to Phrase Rhythm”), Rothstein tends to use recompositions to demonstrate how phrases might have gone in the absence of compositional techniques like phrase expansion, overlap, and so forth. For example, Figure 2.13a shows Rothstein’s argument about metrical reinterpretation in the first movement of Beethoven’s Piano Sonata in A Major, Op. 2, No. 2. In order to demonstrate how the “transitional measure” takes on two metrical functions simultaneously, Rothstein recomposes the passage so as to separate these functions into two separate measures, as shown in Figure 2.13b. The initial phrase ends with a clear cadence in

(Table 2.5 continued)
m. 32, an “upbeat” measure (marked as “2” in Rothstein’s hypermetrical analysis). The “transition” is no longer an elision, but rather receives a full “downbeat” (1) measure all its own.

Figure 2.13a: Beethoven, Piano Sonata in A Major, Op. 2, No. 2, I, mm. 21-37
Figure 2.13b: Rothstein’s Recomposition of Beethoven’s Piano Sonata in A Major, I, mm. 29-34, separating the phrase elision and eliminating the metrical reinterpretation (Rothstein 1989, 54)

We might consider a recomposition like this one to be simple, existing perhaps on the musical surface. It engages with musical models only at the most basic level, expressing the ideal that a phrase, by default, will have a clear ending before the next phrase begins. Rothstein accomplishes this argument by hardly changing a note: all he has to do is shift the music around by a beat or two, creating a clearer space between events. And while it seems trivial, it is worth reiterating that Rothstein does not use recompositions when talking about the composition and harmonization of themes. He is far more likely to use recomposition to analyze, and dramatize, the ways in which two themes connect to one another than he is to explore alternate ways in which the themes themselves might have been constructed.⁸⁰

⁸⁰ For example, he never turns a duple theme into a non-duple, or vice versa. And when it comes to phenomena such as prefixes and suffixes, the general lack of recompositional analyses may well be part of the argument. Rothstein says of both that they essentially happen
There are more complicated examples as well, which require more interpretation. His treatment of Beethoven’s Piano Sonata in G Minor, Op. 49, No. 1, for example, couches a simple argument in a complex recomposition. As shown in Figure 2.14a, the fourth hypermeasure of the sonata omits its fourth bar, contracting the consequent subphrase of the second period. Figure 2.14b shows Rothstein’s recomposition, which restores the subphrase to its prototypical four-measure length. However, this recomposition bears little resemblance to the music it “corrects”: not only is the left hand’s chromatic passing tone (E♮ in the original m. 14) removed, but the right hand’s figuration bears little resemblance to what Beethoven wrote. Like Weber in our introductory analysis, Rothstein has made one clear theoretical point (about the hypermetrical contraction, best expressed by the left hand), while also, tacitly, implying a different argument about the music. His recomposition of mm. 13–15 mirrors the right hand of mm. 5–8, only transposed into the key of the dominant as necessary.

outside of the main body of the phrase; any recomposition would therefore be the simple act of chopping them off, rather than altering relationships within the phrase itself.
Reading Rothstein’s examples themselves can give us deeper insight into both recomposition, and his theory of phrase rhythm. His treatment of the third movement of
Haydn’s String Quartet in E♭ Major, Op. 20, No. 1 (the beginning of which is pictured in Figure 2.15a), is exemplary; in fact, it is one of the few recompositions when Rothstein grants us some insight into his process. This insight is welcome, too, since it is the most comprehensive recomposition yet considered. Rothstein begins with a broad stylistic analysis. The quartet’s slow movement, he argues, “is a kind of slow-tempo *perpetuum mobile* in that a steady eighth-note rhythm is maintained almost unbroken throughout.” This perpetual motion, he argues, leads Haydn into a “quasi-Baroque” compositional strategy of disguising cadences through continuous surface movement.\(^{81}\) Rothstein proposes a recomposition (Figure 2.15b) to highlight the presence of “extra” measures within the phrase structure. However, instead of letting this recomposition stand for itself, Rothstein explains the steps that he went through in creating it. He writes:

> [Figure 2.15b] presents the first three phrases without their “extra” measures. There are two clues to the presence of “extra” measures in these three phrases. First is the static quality of certain pairs of measures—specifically mm. 1-2, 6-7, and 8-9 [in Haydn’s original] ... The inner-voice motion in these measures has motivic significance...but harmonically and melodically they are at rest. The second clue is that the active parts of each phrase correspond exactly in shape; these are the parts shown in [Figure 1.21b].\(^{82}\)

The case of the E♭ Quartet is an interesting one, for Rothstein’s recomposition of its opening phrases is simultaneously revealing and obscure. In fact, it is notable that Rothstein chose to recompose at all in this instance, because so many aspects of his argument might have been carried out in the form of an annotated score or a table. He could have given more annotations

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\(^{82}\) Rothstein, *Phrase Rhythm in Tonal Music*, 142.
on Haydn’s score than he did; as it is, he has merely marked the ends of each of those active phrases that “correspond exactly in shape.” To go a step further, rather than recomposing, he might have simply extracted the active portions of the phrases and placed them in alignment with one another, as I have done in Figure 2.15c. This would make for a more compelling visual argument; the “shape” of each phrase is shown against its counterparts, their matching lengths and almost perfectly congruent contours laid out for the reader to see.

Figure 2.15a: Haydn, String Quartet in E♭ Major, Op. 20, No. 1, iii, mm. 1-31
We might conclude from this, without making too large a leap, that Rothstein is not interested in making such a visual argument; rather, it is important for him that his arguments be audible. Rothstein argues that listening to his recompositions is the best way to evaluate them, and by extension his theory itself. If a basic phrase is supposed to underlie a longer (presumably expanded) phrase,” he writes,

That basic phrase must make sense (1) when played alone and (2) when substituted for the actual phrase in the composition. The basic phrase must sound complete as a phrase by itself, and, when played in context, it must fulfill approximately the same functions as the actual, longer phrase ... Furthermore, the basic phrase must resemble the expanded phrase closely enough so that the latter can be understood as an elaboration of the former
... As a final text, it should be possible to convince other sensitive listeners that one’s analysis is correct.\textsuperscript{83}

Thus the auditory parameter, for Rothstein, is essential. Recomposition is a way for his arguments to be heard and evaluated as pieces of music. It allows them, under ideal circumstances, to be placed in a richer context than the average analytical diagram. This is an ideal which many analytical systems strive for—think, for example, of the history of Schenkerian analysts performing their diagrams on the piano. Couched in Rothstein’s rejection of the methods of music psychology (which, due to its reliance on readily available freshman music students or non-musicians, “will probably not give us any answers worth having”), this description casts the music theorist’s hear explicitly as its own analytical tool, endowed with the ability to evaluate and pass judgment over written theory and analysis.\textsuperscript{84}

In this stance, Rothstein echoes the polemic point made by Edward T. Cone in his essay “Beyond Analysis.” Cone begins by presenting inversions of three Schoenberg excerpts. He prints them upside down, and challenges the reader to examine them. Cone argues that analytical approaches to atonal music are too beholden to Schoenberg’s own assertion that twelve-tone music exists without direction; that is, a row presented backwards is fundamentally equal to and interchangeable with the same row presented forwards, and in inversion, and so forth. Cone asserts that atonal theory as practiced then (by Babbitt, Forte, Lewin, and others) has no mechanism to reliably make a distinction between Schoenberg’s original compositions,

\textsuperscript{84} Rothstein, \textit{Phrase Rhythm in Tonal Music}, 100.
and their mirror images. If these score-based analyses cannot emulate even the most basic impressions of the ear, he argues, they must be sorely lacking indeed. Rothstein is not so extreme; in fact, he makes very few explicit statements about his recompositional intentions, save for the paragraph quoted above. But it is worth keeping in mind, as this study progresses, the importance of hearing for recomposition, and how Rothstein’s many different kinds of recomposition reflect that hearing in myriad ways.

There are a number of more general statements we might extrapolate from Rothstein’s use of recomposition as well. We begin, for example, to see a pattern emerging in when theorists choose to employ recomposition. Earlier in the chapter, we saw how William E. Caplin used recomposition to clarify the formal functions operating in the minuet from Mozart’s 40th symphony—formal functions and their elaboration from ideal types being, of course, the core of his argument in *Classical Form*. David Temperley’s recomposition of The Who’s “Bargain” was perceptually focused, drawing attention to the most important aspect of his argument: our schematic expectation, based on melody, harmony, and our experience with the formal structures in rock music, that a cadence on the tonic will arrive at a specific moment. And in Chapter Four of this study, we will see James Hepokoski use recomposition to dramatize the lack of a medial caesura—surely one of the technical centerpieces of Sonata Theory. As I

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argued at the beginning of this section, Rothstein’s frequent recompositions serve to reinforce
his view that tonal music is structured by a series of prototypical underlying basic phrases.
Conversely, the lack of any recompositions in Rothstein’s relatively quick and cursory fourth
chapter (on form) might thus be taken to indicate that the topic is of secondary importance
compared to his focus on the phrase-level analysis of harmony and hypermeter. At the very
least, we learn that Rothstein’s bottom-up theory of form—in which larger forms are
constructed in a strictly hierarchical manner, built up from smaller units—and hints that
these larger forms might not be suited to the same analytical tools that he wields when working
on individual phrases.

Along with the tendency for Rothstein’s recompositions to amplify his basic theoretical
outlook—that tonal music is structured by the elaboration of basic models—his work also
engages substantially with the tension between the composer’s intentions, and the affordances
and restrictions of tonality. While many of his examples focus explain phenomena like
symmetry (or the lack thereof) in purely theoretical terms, just as many of them deal in the
language of intention, directly attributing any irregularities found to the composer behind the

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87 The fourth chapter is by far the shortest chapter of the book, aside from the short
introduction featuring the Blue Danube Waltz; it deals with two- and three-part forms, and
sonata form. In brief, Rothstein writes: “Musical form is a phenomenon of phrase structure
and of phrase rhythm. Not only do phrases and periods group together, they often balance
each other symmetrically; they also move from one tonal landmark to another in an onward
progression, aiming toward a final goal. The principal basis of phrase structure is tonal motion;
thus the basis of musical form, seen from the standpoint of phrase structure, is also largely
tonal.” See Phrase Rhythm in Tonal Music, 102. This outlook leads Robert P. Morgan to
diagnose Rothstein with a Schenkerian bias in his review; see 19th-Century Music 15/1 (1991),
76.
music. There are examples from the early chapters, such as when Rothstein writes that “Beethoven wanted the two periods [of the Op. 2, No. 3 Piano Sonata] to overlap,” as shown by the asterisk in Figure 2.16. The extensive chapter on Haydn, however, gives us the clearest and most frequent examples: it is filled with the language of secrets, mysteries, and games. The A♭ Piano Sonata, for example (shown back in Figure 1.9) is “a game of evaded cadences.” And even when playful metaphors are not used, references to intentional metric tricks abound across the symphonies and string quartets addressed in the second half of the chapter.⁸⁸

Though his descriptions of tonal phrase rhythm often take on a neutral, almost clinical air, Rothstein is not above making comments on the quality or suitability of a phrase—often in tandem with reinforcing the “genius” of one composer at the expense of another, in something akin to the Kleinmeister strawman arguments we saw employed by Hans Keller in Chapter One. These strawmen combine with the frequent language of secrets and games to give the impression that the use of recomposition is, for some theorists at least, almost inextricably linked with the language of the composer’s intention. For example, Rothstein asserts that a recomposition showing an unadorned version of Chopin’s famous Nocturne in

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E♭ Major, Op. 9, No. 2 (see Figure 2.17) is “uninspired,” “pedestrian,” and “considerably closer to the style of [John] Field,” an early-nineteenth-century Irish composer whose uniqueness—or lack thereof—he had already derided in the chapter on Mendelssohn. And the similar recomposition a few pages later of the B Major Nocturne, Op. 32, No. 1, produces “even more

Figure 2.16: Beethoven, Piano Sonata in C Major, Op. 2, No. 3, I, mm. 1-13 (Rothstein 1989. 44)

lack thereof”

89 Rothstein, Phrase Rhythm in Tonal Music, 216. The earlier treatment of Field is on pp. 183-185. It is worth noting that this recomposition shows Rothstein’s Schenkerian orientation clearly. The Nocturne itself is structured around predictable four-bar phrases, so Rothstein’s recomposition is not attempting to clarify an issue of phrase rhythm; rather, it is
dreadful results” than did the treatment of the E♭ Nocturne.\textsuperscript{90} Later, in his treatment of Wagner, he accepts a challenge of Dahlhaus’ and attempts to recompose a leitmotivic passage from \textit{Die Walküre} into a typical Schoenbergian sentence.\textsuperscript{91} Wagner’s original is shown in Figure 2.18a; Rothstein’s recomposition is Figure 2.18b. In the original phrase, the Sieglinde motive (m. 745) is transformed into the “Love” motive (m. 750); Rothstein’s reconfiguration preserves Sieglinde’s motive. The result, he writes, does not quite fall into “triviality” (as Dahlhaus warns), yet is still unworthy of Wagner: it is “something rather less exalted” than the original, something which, backhandedly, “would do nicely as a phrase, say, in a Strauss waltz.”\textsuperscript{92}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure217a.png}
\caption{Chopin, Nocturne in E♭ Major, Op. 9, No. 2, mm. 1-4}
\end{figure}

\textsuperscript{90} Rothstein, \textit{Phrase Rhythm in Tonal Music}, 227.


\textsuperscript{92} Rothstein, \textit{Phrase Rhythm in Tonal Music}, 281.
Figure 2.17b: Rothstein’s “Pedestrian” Recomposition of Chopin’s Nocturne in E♭ Major, mm. 1-4 (Rothstein 1989, 216)

Figure 2.18a: Wagner, Die Walkure, Act I, mm. 736-755

Figure 2.18b: Rothstein’s Recomposition of Die Walkure, Act I, mm. 745-754 (Rothstein 1989, 283)
Rothstein’s *Phrase Rhythm in Tonal Music* provides a virtual compendium of recompositional techniques. He demonstrates how musical complexity arises from underlying phrase models, across musical styles from Bach to Wagner, and demonstrates how directly recomposition can be tied into the core of a music-theoretical argument. As he freely admits, Rothstein is merely the latest addition to a theoretical tradition that dates back to the seventeenth century. While there are certainly more lengths in the continuous chain of recompositions from Rameau to the present, this chapter has begun to sketch that history, and will provide a touchstone for reference throughout the rest of this study.
Chapter Three

Possible Mozarts: Recomposition and Counterfactual Logic

In all fictions, each time a man meets diverse alternatives, he chooses one and eliminates the others; in the work of the virtually impossible to disentangle Ts’ui Pen, the character chooses—simultaneously—all of them. He creates, thereby, several futures, several times, which themselves proliferate and fork ... The Garden of Forking Paths is an incomplete, but not false, picture of the universe as conceived by Ts’ui Pen. Unlike Newton and Schopenhauer, [he] did not believe in a uniform and absolute time; he believed in an infinite series of times, a growing, dizzying web of diverging, converging, and parallel times. That fabric of times that approach one another, fork, are snipped off, or are simply unknown for centuries, contains all possibilities. In most of those times, we do not exist; in some, you exist but I do not, while in others I do, and you do not, and in yet others both of us exist. In this one, in which chance has favored me, you have come to my gate.

Jorge Luis Borges, “The Garden of Forking Paths” (1941)

In Jorge Luis Borges’ short story “The Garden of Forking Paths,” the eponymous labyrinth turns out not to be a physical place at all; it is a fantastic manuscript, “a contradictory jumble of irresolute drafts.”1 The first-person narrator describes the novel’s plot as frustratingly non-linear: “in the third chapter the hero dies, yet in the fourth chapter, he is alive again.”2 But for his interlocutor, the archaeologist who possesses the manuscript, the text is a revelation: it is a philosophical tract that serves as a window into another view of the universe, in which the events of the present resonate in sympathy with an infinite series of possible pasts, and open

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2 Ibid.
out onto an infinite series of parallel futures “which proliferate and fork.” Not only is Ts’ui Pen’s endlessly branching novel one of the finest examples of the arcane, magical documents that so often drive Borges’ writings, but it speaks directly to a human fixation on what might have been, and to widely-held fantasies of somehow fully visualizing, grasping, and even preserving the different paths one might take when presented with a choice. This fixation is manifested in our propensity to speak—sometimes wistfully or ruefully, sometimes with great relief—of what might have been, of how events might have transpired differently if one little choice, or chance, had gone the other way.

This proclivity towards speculating about “what might have been” is also found in musical discourse. One significant example of “what if” speculation is embodied in the analytical gesture of recomposition: the act of re-writing some aspect of a piece of music—sometimes marginally, sometimes drastically—in order to reveal something about it. Recomposition is often a hidden practice: it is ubiquitous in both teaching and writing, yet rarely acknowledged or studied as a distinct practice. The few existing studies of recomposition all focus on its ability to reveal “what might have been” in a piece of music.3 And indeed, analytical

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recompositions in the scholarly literature are nearly always accompanied by a characteristic statement: “If [the composer] had chosen to do this, then the piece would have gone like this.” These statements, however, rarely tell the whole story; indeed, they often elide an entire series of musical decisions, causes, and effects on the part of both the composer and the recomposer. The scant verbal narratives that accompany recompositions rarely acknowledge how easy or how difficult the act of changing the music has been; nor do they adequately explain the thought process underlying the changes. In this vagueness, there is an opportunity: to explore not only how recompositions fit into their theories, but to fill in the gaps of the process of recomposition, and in so doing reveal what they tell us about the properties of tonal music.

Adequately describing these theoretical statements, and the musical insights they generate for their authors, requires not only careful musical analysis but also a diversion into the contemporary and sometimes controversial field of philosophical logic. Taken as counterfactual conditionals, musical recompositions and the statements that accompany them can be analyzed using “possible world semantics,” a method pioneered in the 1960s by philosophers such as Saul Kripke and David Lewis. After a brief introduction to the philosophical background of

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counterfactual conditionals, I will examine several notable recompositions (some well-trodden by scholars, others relatively unknown), and develop a notational system based on aspects of Lewis’ analyses of possible worlds. Applying Lewis’ formal (i.e. symbolic) and informal logics, I will examine how these recompositions function in several theoretical studies (and in the discipline of music theory writ large), and analyze the insights into the nature of tonal music which they generate.

I. Counterfactual Conditionals and Possible World Semantics

Theoretical recompositions are almost always accompanied by some form of the statement: “If [the composer] had chosen to do this, then the piece would have gone like this.” This construction is known as a counterfactual conditional. Like any conditional statement, we can reduce it to the structure shown in Figure 3.1. Here, $A$ represents the conditional, or protasis clause, and $B$ represents the consequent, or apodosis clause. A simple, indicative conditional fills these spaces with information that makes the entire statement unequivocally

true, or at least extremely likely. For example, “If this water is heated to 212° F, it will boil,” or, “If it rains tomorrow, the Red Sox game will be cancelled.”

Figure 3.1: Basic Structure of a Conditional Statement

“In A, then B”

Protasis (condition) Apodosis (consequent)

In a counterfactual conditional, however, the protasis is false, and the apodosis becomes subjunctive: “If it had rained yesterday, the Red Sox game would have been cancelled.” It did not rain, however, and the game went on as scheduled. When evaluating counterfactual conditionals, we want to know two pieces of information: the status of A, and the conditions under which B will be true or false. It is easy enough to deal with the absurdities and sophistries that the form invites, such as “If I snap my fingers, kangaroos will fall from the ceiling.” The more difficult cases, however, involve counterfactuals whose causality is complex or unclear; that is, cases when B does not necessarily follow logically from A. To take an example from the 2014 World Cup soccer tournament, we might say (as many commentators did) that “If the United States had scored more goals, they would have beaten Belgium” in the first knockout round, and thus would have advanced to the next round of the World Cup. As it was, the game ended 2 to 1, Belgium. This counterfactual, and the earlier indicative conditional about boiling water, may initially seem to be cut from the same cloth: they both
deal with numbers. But while one deals with the laws of physics, the soccer question describes a much more complex and uncertain sequence of events. While it may have led to them winning the match, the U.S. scoring more goals might have altered events in other, unforeseen ways – ways that might still have allowed Belgium to also score more goals, and to win or draw nonetheless. Especially fraught is every sports commentator’s favorite game, of singling out pivotal moments that would have changed the course of the competition. If we indulge ourselves, we can propose lots of other speculations about any number of other causal factors that might have affected the outcome: tactics used or ignored, players injured or left off the team, whether the goalkeeper had eaten his Wheaties or not, and so forth. In short, there is much more bubbling below the surface than a simple game of numbers.

The athletic examples proposed here are original to this chapter, though I have mirrored as closely as possible the kinds of examples actually discussed by twentieth-century modal logicians. No doubt as a result of their social and political contexts, many of the philosophical works under consideration here have a distinct fixation on Cold War-related metaphors and counterfactuals. In Counterfactuals, for example, David Lewis includes a series of examples that propose counterfactual takes on whether Hitler’s rise to power drove the development of nuclear weapons, the potential U.S. invasion of Laos at the tail end of the Vietnam War, the nuclear détente between Russia and the United States, and what might happen if Nixon “pressed the button,” what might have happened if the U.S. had dropped the A-Bomb during the Korean War, and who the perpetrator of JFK’s assassination might have been.\footnote{See David Lewis, Counterfactuals, 4, 10, 66, and 71.}
Stalnaker proposes a chain of counterfactuals about whether China would enter the Vietnam War, and whether such a chain of events would cause the U.S. to use nuclear weapons, and (rather gleefully) imagines a possible world in which J. Edgar Hoover is exposed as a communist, a Russian, and a spy. Finally, Ernst W. Adams proposes a series of counterfactuals also speculating about who shot Kennedy, and quipping that the reader’s belief in his logical system will depend upon “whether or not he or she is a Warrenite.” If W.V.O. Quine and Rudolf Carnap (and perhaps by extension, music theorists like Milton Babbitt and Godfrey Winham) represent a philosophy rooted in post-war certainty and optimism, Lewis, Stalnaker, and Adams show us an uncertain, post-Vietnam philosophy darkened by the shadow of mutually assured destruction.

Causality in a piece of tonal music is something akin to this athletic metaphor: a complex dynamic system that cannot always be captured with a straightforward conditional statement. Rather, pieces of music change over time; they unfold according to a delicate interplay of factors like harmony, counterpoint, style, and a healthy dose of the composer’s intention. To better express this, we will take another quick detour through some philosophical accounts of truth and causality before circling back to music.

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“If A, then B”

\[ A \supset B \]

Figure 3.2: Operation of the conditional sign (\( \supset \)) in formal logic

Figure 3.2 represents the basic conditional framework laid out earlier—if A then B—in the language of formal logic. The symbol for a conditional (\( \supset \)) replaces the linguistic frame, encompassing both the “if” and the “then.” This structure is an example of classical logic, which we trace back to Aristotle and continue to teach today. It deals well with mathematics, categories, grammatical structures, the laws of physics, and so forth. But in the 20th century, various analytic philosophers began to explore new ways of describing objects and relationships that were not simply static or atemporal, creating several modes of thinking that are generally grouped together under the label “philosophical logics.” Epistemic logic, for example, seeks to reason about what individual agents know and don’t know, while temporal logic examines relationships and objects that change over time. Of greatest interest to this study is modal logic, which studies the ways in which propositions—counterfactual conditionals in particular, but not exclusively—are true and false. Is something necessarily true, and could not possibly have been false? Or is it only possibly so?

As John Divers puts it:

Philosophers typically recognize four central and interrelated cases of modality: possibility (can, might, may, could); impossibility (cannot, could not, must not); necessity (must, has
to be, could not be otherwise); and contingency (maybe and maybe not, might have been and might not have been, could have been otherwise). 8

In a kind of epistemological rock-paper-scissors game, these four modes alternately reinforce and negate each other. *Impossibility* stands alone, ruling out all other states of affairs. *Possibility* indicates either contingency or necessity, and disallows impossibility. Finally, both contingency and necessity (separately) encompass possibility, but rule out both impossibility and one another. 9 The water boiling example, from earlier in this essay, is one of necessity: the laws of physics dictate the boiling point of H$_2$O in any logically possible world. 10 Our soccer question, however, is more complicated, and needs some modal nuance: any of its outcomes are only *possibly* true. The United States lost, but we can easily imagine circumstances in which things went differently.

Formally, modal logics are mostly concerned with the two symbols that they add to the Classical vocabulary of formal logic: $\Box$, indicating necessity, and $\Diamond$, indicating possibility. Thus, in addition to Classical statements like $\alpha$ and $\neg \alpha$ (“$\alpha$” and “not $\alpha$,” respectively) modal logic can say $\Box \alpha$ (“it is necessary that $\alpha$”) and $\Diamond \alpha$ (“it is possible that $\alpha$”), and their inverses $\neg \Box \alpha$ and $\neg \Diamond \alpha$. 11 The distinction between these modal operators, particularly $\Box$, and a simple

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8 John Divers, *Possible Worlds*, 3.
10 Technically speaking, we must make other stipulations as well: 212 degrees Fahrenheit will boil pure water (i.e. free of salt or other substances that might change its boiling point), at a pressure of 1 atmosphere, at a given range of altitudes above sea level, etc.
11 Additionally, the modal operators are definable in terms of one another: If $\alpha$ is necessarily true, then it is not possible for $\alpha$ to be false. This is formalized as $\Box \alpha = \neg \Diamond (\neg \alpha)$. Conversely, if $\alpha$ is possible (and could go either way), then it is not necessary for $\alpha$ to be false; thus, $\Diamond \alpha = \neg \Box (\neg \alpha)$.
declaration of truth is subtle; as Max Cresswell explains, modal logic allows the logician to make a distinction between true propositions that could not possibly have been false (hence, □ for necessity) and true propositions that might easily have been false.12 While writing α simply asserts that a proposition is true, □α asserts that a given proposition is true, and could not possibly have been false. Put another way, modally re-formalizing a statement clarifies precisely how the formal “then” works. If we change our earlier example about the boiling water to α ⊃ □β, we can read it aloud as “If the water is heated to 212° F, it is necessary that it will boil.” It should be noted here that, despite the addition of a modal operator, the statement remains in the indicative mood, not the subjunctive (counterfactual). Because of its grounding in the laws of physics, we can safely presume that the statement is actually true, whether or not we have qualified it with a modal operator.

In his 1973 book Counterfactuals, philosopher David Lewis proposed a way to streamline the modal operators through a simple adaptation of some existing logical symbols. Combining the modal symbols □ and ◊ with the conditional operator ⊃, he proposes □► and ◊►.13 Lewis’ notation is more economical, removing the need for a separate symbol of conjunction by combining the syntactic “if...then” function with the modal operator for either necessity or possibility. Because it involves modal operators, this notation is always counterfactual in nature: α □► β should be read, Lewis says, as “If it were the case that α, then it would be the

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13 David Lewis, Counterfactuals, 1–2.
case that \( \beta \) is to be read, “If it were the case that \( \alpha \), then it might be the case that \( \beta \).”\(^{14}\) In these plain English readings of the proposition, the word “would” replaces “necessary/necessarily,” and “might” replaces “possible/possibly”; accordingly, Lewis calls these “would counterfactuals” and “might counterfactuals,” for short. This nomenclature will be used for the remainder of this chapter.

II. Representing Possible Worlds

In the 1960s and 70s, several philosophers further advanced the study of counterfactual conditionals by turning away from formal logic, and towards an approach that came to be known as possible world semantics. While the roots of this approach can be traced to the writings of Ludwig Wittgenstein and Rudolf Carnap,\(^ {15}\) their current incarnation is generally attributed to Saul Kripke.\(^ {16}\) Kripke’s contributions to modal logic—a way of describing possible worlds

\(^{14}\) Ibid.


that has become known as Kripke semantics—unfolded in a series of essays in the early 1960s. In brief, Kripke semantics are a way of dealing with modal propositions (involving □, ◊, and so forth). He proposed that all the possible worlds which would fulfill a modal proposition might be thought of in a set, and that our particular world (in which that proposition may or may not be true) would be marked as the “real world.” Comparisons would then be made between the worlds. Kripke’s innovation had far reaching effects in philosophical logic, allowing logicians to describe in greater detail the conditions (or rather, many sets of conditions) under which modal propositions would or would not be true.

But, faced with many possible worlds in which a given proposition is true, how do we evaluate which worlds are more true, or are the most likely, or are the most closely related to our own? In a 1979 essay, David Lewis lays out a set of criteria by which to measure the similarity of related worlds. His four rules are:

1. It is of the first importance to avoid big, widespread, diverse violations of law.

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17 See “A completeness theorem in modal logic.” Journal of Symbolic Logic 24 (1959): 1–14; “Semantical Considerations on Modal Logic.” Acta Philosophica Fennica 16 (1963): 83–94; “Semantical Modal Analysis of Modal Logic I: Normal Modal Propositional Calculi.” Journal of Mathematical Logic 9 (1963): 67–96; and Naming and Necessity. Cambridge, Mass.: Harvard University Press, 1980). Reviewing Kripke’s work is a good occasion to remind the reader that, as Heinrich Scholz warns in his Concise History of Logic, there is not simply one monolithic modal logic, but many. These different logics differ by the number of axioms they employ—that is, the number of rules they take as initial givens. As Kripke shows in Semantical Modal Analysis of Modal Logic I (pp. 66–67), most of these logics share the first two axioms (which simply declare the meanings of □ and ◊) in common, and then differ in their acceptance of additional rules. Some prominent modal logics examined by Kripke include (from the simpler and more permissive, to the more complex): M, S4, S5 (one of the most famous and widely-accepted modal logics, developed by C.I. Lewis in the early twentieth century), and Kripke’s own “Brouwersche” system.
2. It is of the second importance to maximize the spatiotemporal region throughout which perfect match of particular fact prevails.

3. It is of the third importance to avoid even small, localized, simple violations of law.

4. It is of little or no importance to secure approximate similarity of particular fact, even in matters that concern us greatly.\textsuperscript{18}

Lewis’ guidelines require some parsing in order to convert them from a broad set of guidelines about \textit{forming} counterfactual arguments, into a pseudo-algorithmic process for \textit{evaluating} counterfactuals, musical or otherwise.

First, and most broadly, we will assume that the most closely related worlds are the ones that follow all four criteria as closely as possible. That is, they attempt to avoid both “big, widespread, diverse” and “small, localized, simple” violations of law, as demanded by Criteria 1 and 3, and they hold as many facts as possible in common, as required by Criterion 2. Criterion 4 is somewhat nebulous, but in my reading, I interpret it as leaving open individual details for variation. These (along with progressively larger violations of Criteria 1 and 3) are what make counterfactual arguments possible.

Second, we must assume that the definition of a “law” in Criterion 1 is somewhat flexible and can vary according to the context at hand. There are situations in which Criterion 1 refers to a physical law, such as the boiling point of water, the laws of motion, the speed of light, and so forth. But there are also many instances when “law” will be applied more flexibly to indicate

a strong guideline that serves as a constraining term on the situation at hand, or perhaps as a part of the argument itself. This latter meaning is true, for example, in the example that Lewis uses to illustrate the operation of his guidelines. He argues that, in evaluating the counterfactual “if Nixon had pressed the button, there would have been a nuclear holocaust,” it must be assumed that the missiles launched by “the button” would be extremely destructive. That is, the basic terms of the counterfactual situation must be accepted and adhered to. It would thus be a gross violation of logic, an argument in bad faith, to claim that the counterfactual is false because the missiles are filled with confetti rather than plutonium. For Lewis, such an argument is a “non-starter … depart[ing] gratuitously from [the world] by any reasonable standards.”

Other Criterion 1-level laws could easily be imagined, such as the rules of a game being played, as in our soccer example. In the musical analyses discussed later in this essay, both the conventions of notation (i.e. the number of beats per measure in a given time signature), and various purely musical constraints (i.e. the laws or tendencies of tonality) might be cast in this role.

By requiring us to “maximize the spatiotemporal region throughout which perfect match of particular fact prevails,” Criterion 2 points us explicitly towards the spatial nature of possible worlds. This restriction has several implications. First and foremost, it emphasizes

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19 Lewis, “Counterfactual Dependence and Time’s Arrow,” 467–468
20 For the purposes of this study, we will adopt Lewis’ terminology at face value, bracketing off the (very compelling) philosophical arguments against treating time as a quasi-spatial phenomenon that can be laid out in a two- or three-dimensional space and analysed like an almost physical object. On this topic, see, inter alia, Henri Bergson, An Introduction to Metaphysics (1903), trans. T.E. Hulme (Indianapolis: Hackett Publishing, 1999).
the metaphysical stakes of Lewis’ modal realism: his possible worlds are not merely sets, axioms, or other theoretical objects, but worlds, with “spatiotemporal” extension. The notion of “maximizing the spatiotemporal region” is relevant for the task of representing and evaluating possible worlds against one another. In his earlier work (Counterfactuals, 1973), Lewis develops a system of diagrams based on concentric and overlapping circles, with which he represents relationships and commonalities between worlds. One basic pair of these diagrams is reproduced in Figure 3.3, depicting the modal operators □ and ◊ as describing sets of possible worlds that can be separate or overlapping. In Figure 3.3, the circles marked S$_1$ represent all the possible worlds we can imagine. As Figure 3.3a shows, □φ means that φ is true in all worlds. In Figure 3.3b, ◊φ means it is true in some, but not others. Possible worlds, in Lewis’ work, thus become a kind of conceptual space within which states of affairs may be situated. We can even borrow a familiar term from music theory in order to describe them: parsimony. In its original context, parsimony refers to extremely close relationships between two harmonies, which move to one another by displacing only a single voice, and then only by a whole or half step.$^{21}$ Adapting this terminology to describe diagrams such as Figure 3.3,

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we can analyze possible worlds in terms of their parsimony. The two possible states of the water pot described earlier, for example, are depicted in Figure 3.4a. They are parsimonious, differing by only a single binary choice: in one world, the water is boiling, and in the other, it is cold. As shown in Figure 3.4b, however, the many, varied outcomes of our soccer match require us to depict many possible worlds. Here, we see the actual world, with Belgium winning 2 to 1, but also many other worlds in which events went differently and they lose, or they tie, or they win by a different total. Closely-related worlds are parsimonious, and thus close to each other, while others more distant.

Intriguingly, representing these sets of possible words is, to a large extent, a problem of graphic design more than of geometry or mathematics. In simple arrangements of possible worlds (as we have just seen, in Figures 3.3 and 3.4), there are few constraints on how spaces are configured. If I may be permitted to use a counterfactual of my own, there is no reason why even a simple graph like Figure 3.3 might not have been arranged in any number of other
Figure 3.3: “Possible world” diagrams of modal necessity ($\Box \phi$) and modal possibility ($\Diamond \phi$). Reproduced from David Lewis (1973, 6).

Figure 3.4a: Possible worlds interpretation of “If the water were heated to 212 F, it would have boiled.”

ways: the $\phi$ zone on another side, or intersecting more or less of $S_i$, etc. More complex representations, which might include multiple variables, more than one sphere of accessibility, etc., will bring their own sets of constraints and challenges, but these are related more to the need for clear and intuitive presentation than to any mathematical, geometric, or graph-theoretic underpinnings of the space represented.
Figure 3.4b: Possible worlds interpretation of “If the U.S. had scored more goals, they would have beaten Belgium.”

In fact, representations of sets of possible worlds have few of the ready-made constraints that structure many of the diagrams that music theorists use to describe tonal space. For example, multiple versions of the famous Tonnetz exist, but their general structure is dictated by intervallic relationships: the information they represent is structured by successions of perfect fifths, and major and minor thirds. In the Tonnetze shown in Figure 3.5, these same three axes are represented by different cardinal directions. In Figure 3.5a, reproduced from Hugo Riemann’s “Ideen zu einer ‘Lehre von den Tonvorstellungen,’” ascending perfect fifths are represented moving from left to right. Ascending major thirds move from bottom left to
top right, while ascending minor thirds move downwards, from top left to bottom right. In Figure 3.5b, reproduced from Dmitri Tymockzo’s *A Geometry of Music*, the intervals represented remain the same, but are mapped onto different axes: fifths continue to move upwards from left to right, but major and minor thirds are swapped, with the former now moving downwards, from top left to bottom right, and the latter moving upwards from bottom left to top right. While there is some flexibility in these arrangements, the intervallic structures that they represent serve as extreme constraints: C is always adjacent, in some direction or another, to F and G (each related by fifth), E♭ and A (minor thirds), and A♭ and E (major thirds).\(^\text{22}\)

It is important to note, as well, that even the seemingly simple, “graphic design”-oriented choices about how to design a conceptual space are not merely cosmetic—they actually have deep interpretive implications. As now-classic studies of embodied cognition have demonstrated, many cognitive schemas rely on metaphors of space, leading us to interpret abstract diagrams in very specific ways.\(^\text{23}\) Such interpretations can often lead us to make certain

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\(^\text{22}\) Arthur von Oettingen’s *Tonnetz*, not reproduced here, is a perfect square grid rather than a diagonally oriented map of triangles or diamonds; see Oettingen, *Harmoniesystem in dualer Entwicklung* (Dorpat and Leipzig: W. Gläser 1866), 15.

pronouncements about music. Suzannah Clark, for instance, has illuminated the spatial metaphors being invoked when both Berthold Hoeckner and Fred Lerdahl use Gottfried Weber’s “Table of Key Relationships” (shown in Example 3.5c) to analyze the overall tonal structure of Robert Schumann’s Dichterliebe: they include bodily image schemas like “falling
Example 3.5c: Gottfried Weber's Table of Tonal Relations, from Versuch einer geordneten Theorie der Tonsetzkunst, Vol. 2 (Mainz, 1817-1821): 86.
down” into depression as the keys of individual fifths move downward on the diagram. And Hugo Riemann describes qualities of increasing brightness and darkness, not only as tones move up and down in acoustic frequency, but as chords navigate the vertical axes of his Tonnetz (shown above in Example 3.5a), moving metaphorically “up” and “down” in tonal space.

As a final detail, it is worth noting another difference between Lewis' representations of possible worlds, and the tonal spaces depicted here. In all three tonal spaces (Examples 3.5a, 3.5b, and 3.5c) each point of the grid is a specific object: a pitch or a chord. However, Lewis' diagrams (Examples 3.3a and 3.3b) each depict broad swathes of space, in which specific objects (in this case, worlds) might be situated. They depict no actual worlds themselves, but instead show all potential worlds that would fulfill the restrictions of each proposition in turn. In this way, they are similar to graphs of mathematical functions, which depict curves in Cartesian space that fulfill functions of the form \( f(x) = y \).

III. Modal Realism

Before applying possible world semantics to our analysis of counterfactual statements in music, however, we must address a question—an ongoing controversy—that plagues possible worlds...

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world semantics: just what are possible worlds? What is their ontological or metaphysical status? Do they really exist, or are they simply logical tools, as fictional as the statue that Condillac animates and endows with senses in his *Traité des sensations*? Indeed, philosophical discourse abounds with imagined realities and thought experiments, so the stakes surrounding this controversial issue are high: if we argue that possible worlds are real, we must argue that, in some medium unknown or inaccessible to us, a multitude of possible worlds exists, in which every possible outcome of every decision or random act of chance is actualized.

David Lewis was one of the most prominent voices in favor of the reality of possible worlds. The doctrine he espoused came to be known as modal realism: the idea that all possible worlds are equally as valid, equally as concrete, equally as significant, as our own, even if they remain undetectable to us. He first took this stance in his 1973 book *Counterfactuals*, and elaborated upon it in subsequent writings, most notably 1986’s *On the Plurality of Worlds*. Lewis writes:

> It is uncontroversially true that things might be otherwise than they are. I believe, and so do you, that things could have been different in countless ways. But what does this mean? Ordinary language permits the paraphrase: there are many ways things could have been besides the way they actually are. On the face of it, this sentence is an existential

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26 See Etienne Bonnot de Condillac, *Condillac’s Treatise on the Sensations* (1754), trans. Geraldine Carr (London: Favil Press, 1930). Leslie David Blasius gives a succinct summary of Condillac’s working method: he “hypothesiz[es] a marble statue, having the mental potentials of a human, who is gifted with the least important of the five senses, the sense of smell. From this single source of sensation, the statue develops (successively) a capacity for attention, an ability to feel pleasure and pain, a memory, a capacity for comparison and judgement, an imagination, feelings, ideas, and personality. Condillac then awards his statue (in order) hearing, taste, and sight, recording all the while an ever richer process of association and ideation.” See Blasius, “The mechanics of sensation and the construction of Romantic musical experience.” In *Music Theory in the Age of Romanticism*, ed. Ian Bent (Cambridge and New York: Cambridge University Press, 1996), 5.
qualification. It says that there exist many entities of a certain description, to wit “ways things could have been.” I believe that things could have been different in countless ways; I believe permissible paraphrases of what I believe; taking the paraphrase at its face value, I therefore believe in the existence of entities that might be called “ways things could have been.” I prefer to call them “possible worlds.”

For Lewis, having established that possible worlds explain the “ways things could have been,” it is logical to believe that those possible worlds are somehow concrete; they actually exist. The only alternative would be to concede that counterfactual statements are only metalinguistic phenomenon, predicates to be analyzed only in terms of their consistency rather than their ability to actually describe any state of affairs. Such an analysis would force counterfactuals to stand outside of language, stripped of their ability to actually signify. This condition, for Lewis, would leave a powerful aspect of language and reasoning with virtually no efficacy or descriptive power.

Once Lewis deduces that possible worlds must have concrete existence beyond purely linguistic or mathematical sets, he leaves no doubt about his position, nor any room for a sympathetic but skeptical reader to explain away his radical metaphysics. He writes:

I emphatically do not identify possible worlds in any way with respectable linguistic entities; I take them to be respectable entities in their own right. When I profess realism about possible worlds, I mean to be taken literally. Possible worlds are what they are, and not some other thing. If asked what sort of thing they are, I cannot give the kind of reply my questioner probably expects: that is, a proposal to reduce possible worlds to something else.

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27 Lewis, Counterfactuals, 84.
28 Lewis, Counterfactuals, 85
29 Lewis, Counterfactuals, 85.
After this initial defensive outburst, Lewis calmly outlines his position. Due to the current state of physics, he argues, we cannot rule out the concrete existence of possible worlds. Looking back at the scientific knowledge we possessed 100 years ago, he argues, who is to say what knowledge we will possess in the future?\textsuperscript{30} Given a philosophical predilection for taking language at its face value, and the firm conviction that his argument cannot be disproven, Lewis concludes that we have no alternative than to admit that possible worlds can have a concrete existence, even if it may be unknown and inaccessible to us and our powers of observation.

Furthermore, for Lewis, the theory of modal realism is elegant. He argues that the notion that there are many possible worlds is not a large leap from our generally accepted worldview. “You believe in our actual world already,” he argues a few pages later. “I ask you to believe in more things of that kind, not in things of some new kind.”\textsuperscript{31} He calls this facet of his argument {	extit{qualitative parsimony}}: it avoids adding a new class of objects to the universe, unlike non-realist arguments, which (he argues) add the new class, “non-existent possible worlds.” Thus, Lewis stakes out a strong position, which essentially states that because we cannot disprove the existence of worlds inaccessible to our perception, and because it is a weak, inelegant argument to say that the language of possible world semantics is merely figurative and metaphorical, we must believe that the alternate worlds described by counterfactual statements are real. These

\textsuperscript{30} Lewis, \textit{Counterfactuals}, 91.
\textsuperscript{31} Lewis, \textit{Counterfactuals}, 85.
worlds, for Lewis, are just as real as ours; we differentiate our own, and prefer it above all others, merely because we happen to inhabit it, rather than some other world.

Critiques of modal realism (what John Divers calls modal antirealism)\(^{32}\) have taken several forms. Modal antirealism argues that possible worlds need not be real in order to be philosophically useful, although the strongest antirealists reject any form of modal realism outright. In fact, many early arguments against modal realism took on a dismissive, almost mocking tone. Brian Skyrms refutes Lewis’ account of possible worlds by implying that they are the stuff of science fiction, more Asimov than Aristotle.\(^{33}\) Robert Stalnaker (2012, ix) relates a comment he received from philosopher Larry Powers regarding one of his own early papers on possible worlds: “The whole idea of possible worlds (perhaps laid out in space like raisins in a pudding) seems ludicrous.”\(^{34}\) As Brian Skryms argues, modal realism must be rejected in the absence of any physical evidence for the existence of possible worlds. Instead, they can be nothing but “a mathematical structure which is a model for a given language.”\(^{35}\) Others, such as Saul Kripke and Robert Stalnaker, take a subtler approach. While he asserts that possible worlds are more than “a mere formal device,” Saul Kripke finds the terminology overblown, speculating that “confusions would have been less likely but for the terminological

\(^{32}\) See John Divers, *Possible Worlds*, 20.

\(^{33}\) See Brian Skyrms, “Possible Worlds, Physics, and Metaphysics.” *Philosophical Studies* 30(5): 323.


\(^{35}\) See Skyrms, “Possible Worlds, Physics, and Metaphysics,” 324–326. Skyrms’ essay is also an early example of a discussion of possible worlds that makes reference to the many worlds interpretation of quantum physics, asserting that it fails to support modal realism.
accident that ‘possible worlds,’ rather than ‘possible states,’ or ‘histories,’ of the world, or ‘counterfactual situations’ had been used.” Kripke gives the example of flipping a coin or rolling a pair of dice, arguing that we could use the language of “possible worlds” in order to describe the possible outcome states of each flip or roll, without committing ourselves to a full-out ontology in which each flip spawns a new, concrete world. Instead of a seemingly endless proliferation of possible worlds spinning off with each flip of the coin, Kripke argues that it would instead be productive to talk about “micro-worlds,” which would model possible outcomes without worrying about a multitude of possible worlds that would run in parallel, but with most non-relevant details unfolding in precisely the same way (Stalnaker 2012, 12).

Believing that possible worlds are not fully concrete entities, Kripke also rejects Lewis’ “counterpart theory,” the idea that the presumed existence of many copies of a person (in true Cold War fashion, Kripke uses Richard Nixon as his example) across many possible worlds presents a philosophical conundrum. Kripke argues that careful distinctions need not be made, for there is no danger of confusing a possible Nixon with an actual Nixon. Because it is a hypothetical structure, willed into existence only as needed, Kripke argues that “a possible world is given by the descriptive conditions we associate with it ... [It] is stipulated, not discovered.” Kripke argues that because possible worlds do not exist in any meaningful, material sense, we

36 Kripke, Naming and Necessity, 16–20.

37 Here, I like to imagine endless possible worlds multiplying like the army of enchanted broomsticks spawned by Mickey’s axe in the “Sorcerer’s Apprentice” segment of Fantasia (1950): any attempt to stanch the deluge of worlds would merely produce more of them.

38 Kripke, Naming and Necessity, 44. Emphasis in original.
are not really observing them through some fanciful telescope or microscope. Rather, we conjure these possible worlds by our language alone, through modal and counterfactual statements. Thus, he asks, “[w]hy can’t it be part of the description of a possible world that it contains Nixon and that in that world Nixon didn’t win the election?” and that the actual Nixon (or whomever we’re describing) is thus in no danger of coming into contact with a possible, alternate Nixon.³⁹ Since we are conjuring this possible Nixon and his world into being with our counterfactual argument, we need not resort to accounting for the specific details that describe a unique person in a unique world; we need only say he is Nixon, and he is.

Robert Stalnaker takes a position slightly closer to Lewis’, while still shying well away from modal realism. A possible world, Stalnaker writes, is a property of a world, not a world itself (whether real or imaginary); it is a way a world might be. Invoking a possible world is thus a declaration that it is possible for a world (even our world, if certain events had come to pass) to have a certain property, such as the property of “having kangaroos with no tails,” to borrow one of Lewis’ favorite examples. Such a property could be instantiated by a real world somewhere in the universe, but it need not be.⁴⁰ It might thus be safe to say that Stalnaker’s position is something of an agnostic one, resting in between Lewis’ strong modal realism, the mostly anti-realist position of Kripke, and the blistering critique delivered by avowed antirealist Brian Skyrms.⁴¹

³⁹ Kripke, Naming and Necessity, 44. Emphasis in original.
⁴⁰ See Stalnaker, Mere Possibilities, 8–14.
⁴¹ To be clear, Stalnaker is not fully agnostic on this point: he does deny Lewis’ modal realist position. But he critiques it far less than others do, and his argument that possible
IV. Carl Czerny on Mozart’s Sonata in D Major for Four-Hand Piano, K. 381

Having put a few concepts into circulation, we will now turn back to music. At the beginning of his treatment of sonata form in the *School of Practical Composition* (1848), the composer and music theorist Carl Czerny printed a two-hand reduction of Mozart’s Sonata in D Major for Four-Hand Piano, K. 381. Czerny’s arrangement is substantially similar to the original, altering only some multi-octave chord voicings, and de-emphasizing the counterpoint between performers. He never acknowledges these changes, and indeed never even identifies the piece by name, calling it only a “little sonata” by Mozart.

Figure 3.6 reproduces the first part of the exposition. The piece begins with a brief primary theme (mm. 1–5), which gives way to transitional, energy-gaining material in m. 6. The tonic, D major, is prolonged until an embellished chromatic figure leads us to a half-cadence in m. 13: the medial caesura. From there, the secondary theme area begins in m. 14, and continues past the end of this example, ending in measure 30.

Czerny comments upon the brevity of this “little sonata’s” opening, and expresses how it might have gone differently in a two-pronged counterfactual:

Supposing that Mozart had decided upon writing a greater Sonata on the same subject, he *would* either have considerably lengthened bars 10 to 13 in the first part; or, after the 13th bar, he *would* have repeated the principal subject and introduced the necessary modulations in order to pass ... into the key of the dominant.42

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42 Czerny, *School of Practical Composition*, 42 (emphasis added).
Figure 3.6: Mozart, Sonata in D Major for Two Pianos (K. 381), i, mm. 1–20, as reduced in Czerny (1848, 37-38). Annotations added.

Czerny’s paragraph presents two possible solutions to the problem of “writing a greater sonata on the same subject.” Following Lewis’ practice, I will label them—borrowing the Greek letters used by Lewis in Figure 3.3, for the sake of continuity—Solution $\phi$ (lengthening bars 10 to 13) and Solution $\psi$ (repeating the principal subject, etc.). Czerny chooses not to demonstrate his
first proposed solution ($\phi$), though as Figure 3.7 shows, his description sounds very close to what Mozart actually does in the recapitulation: he writes an extended transition. Starting from measure 52, the music unfolds much as it does in the exposition. Mm. 52 to 60 are a verbatim repetition of mm. 1 to 9, encompassing the primary theme and the beginning of the transition. At m. 61, however, the music diverges: an additional phrase follows, spanning mm. 61 to 64. This new material takes the dotted rhythm found in the right hand of mm. 10–12, and moves it to the left hand, combining it with a new sixteenth-note figure in the right hand.

Czerny’s Solution $\phi$: “Supposing that Mozart had determined upon writing a greater Sonata on the same subject, he would ... have considerably lengthened bars 10 to 13 in the first part.”

Figure 3.7: Czerny’s Solution $\phi$, and Mozart, K. 381, recapitulation, mm. 61-68

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43 Czerny, School of Practical Composition, 42.
Figure 3.8a schematizes the way that Mozart has extended the transition in the recapitulation (Figure 3.7), compared to the original exposition (Figure 3.6). Figure 3.8b demonstrates how following Czerny's Solution $\phi$ and recomposing the first transition—that is, lengthening bars 10 through 13—would actually bring the proportions of the exposition and the recapitulation into line with one another. This is, perhaps, an argument for initially preferring Solution $\phi$, even though Czerny does not demonstrate it with a musical example.

That said, Czerny does offer a notated example of Solution $\psi$, which is shown in Figure 3.9. Here, Czerny repeats portions of the opening theme, using them to unfold a circle of fifths sequence that ends with an augmented sixth chord (in m. 13g), pointing us toward E as the dominant of a never-quite-articulated A minor. E is finally tonicized at the end of the recomposition, and Czerny writes a medial caesura on V of V (m. 13o).
**Figure 3.8a:** Comparison between exposition and recapitulation of Mozart, K. 381, as written, showing additional measures in recapitulation.

**Figure 3.8b:** Comparison between Czerny's "Solution ϕ" and recapitulation (as written) of Mozart, K. 381, I, showing additional measures in both exposition and recapitulation.
Figure 3.9: Czerny’s Solution $\psi$: Extension beginning after m. 13. Cf. Czerny (1848, 42); measure numbers added.

This new transition, however, already leaves us with a problem: how do we deal with the rest of the piece, having re-written a significant moment? As shown in Figure 3.10, a medial caesura on V of V means that the sonata would no longer be what we now know as a bifocal close, the formal device which had allowed Mozart to write his original recapitulation by simply transposing the second theme group. $^{44}$ A ripple effect thus travels outward from Czerny’s interpolation, necessitating even more changes if the recomposition is going to be

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successful as anything more than a brief hypothetical exercise. As with most cases of recomposition, then, a small harmonic or metric alteration could have wide-ranging repercussions for the rest of the piece.

Example 3.10a: Phrase structure and modulations in Mozart, K. 381, as written

Example 3.10b: Phrase structure and modulation as implied by Czerny’s recomposed exposition (Solution $\psi$) for Mozart, K. 381.

Circling back a bit, we can approach Czerny’s recompositional analysis—and begin to demonstrate those wide-ranging effects—from a logical perspective. As the reader has no doubt
noticed, I emphasized the word *would* in the English translation of Czerny’s discussion of the piece, above; it calls to mind David Lewis’ “would counterfactual,” a modal statement that implies necessity. Following Lewis’ notation, we can formalize Czerny’s argument as follows.

\[ \alpha \Box \Box (\phi \lor \psi) \]

where \( \alpha = “Mozart decided to write a greater sonata on the same subject” \)

\( \phi = “Mozart considerably lengthens bars 10 to 13” \)

\( \psi = “after the 13th bar, Mozart repeats the principal subject and introduces the modulation.” \)

However, as shown in Example 3.10, \( \psi \) comes with a corollary: we must account for the fact that recomposing the music that follows m. 13 has repercussions for the recapitulation as well. Our set of propositions must thus be further qualified: if the recomposition indicated by Czerny’s solution were to be carried out, we *would* also have to re-write the recapitulation. So, we would write:

\[ \psi \Box \Box \lambda \]

where \( \lambda = “the recapitulation is further recomposed so that the MC occurs on V rather than V/V.” \)

The difficulties for a propositional rendition of Czerny’s ideas do not end here, however. After demonstrating Solution \( \psi \) (Example 13), Czerny comments further on the effects of repeating the principal subject:

\[^{45}\text{In formal logic, \( \lor \) means “or.”}\]
But the middle subject [presumably the second theme, starting in m. 14] in Mozart’s Sonata would be too short, in this case. It would require to be increased about four bars, and likewise to be repeated.

In like manner, bars 24 [subdominant of V] 25, and 26 [the dominant of V, just before the EEC] would also have to be repeated or extended, &c. 46

In these descriptions, Czerny demonstrates a keen sense of proportion and a strong awareness of how altering one bar of a piece of music creates a domino effect, often requiring further recompositions down the line. Each recompositional proposition thus comes with its own consequent (□→), until our formalization begins to look like an entire mathematical proof: ψ □→ λ, but also μ, and χ, and so forth. This cascade of recompositions throws into sharp relief one reason why so many scholars have attempted to develop the notion of a musical “logic”: the need to negotiate between the demands of syntax or grammar, and the desire to compose freely. Simultaneously, however, recomposition destabilizes the distinction between grammar and rhetoric. In declaring the now-displaced secondary theme to be “too short,” Czerny is not reacting to hard and fast musical rules but rather his own sense of taste and balance. His account of structure is based not on logic or musical “grammar,” but rather on the listener’s subjective impressions of what is “right”: a short second theme might sound anticlimactic in the face of an extended first theme, for example, or a quick run-up to the exposition’s closing dominant might sound rushed. These are not explicitly syntactical concerns; rather, they require a wide-angle lens that takes into account how an alteration here or there might have wide-ranging aesthetic consequences for a piece of music, not simply technical consequences such as, for example, λ above: the need to re-write the recapitulation

46 Czerny, School of Practical Composition, 42.
so that it ends in the correct key. For Czerny, recomposition is that wide angle lens through which he reveals the full, or at least potential, image of the piece.

It is thus more effective to view the many (re)compositional possibilities of Czerny’s observation as a set of possible worlds, as shown in Figure 3.11, rather than a jumble of logical propositions. This visual approach allows us to hold both possibilities in view at once. The arcs dividing the figure dramatize the different harmonic implications of Czerny’s two solutions, while the proliferation of nodes in the northeastern side of the figure show how both musical possibilities (ψ) and musical consequences (λ, μ, χ, etc...) proliferate as we move farther and farther from what Mozart actually wrote (the actual world, represented by the WA node in the southwestern corner of Figure 3.11).

**Figure 3.11:** “Possible worlds” interpretation of \( \alpha \square \rightarrow (\phi \lor \psi) \) and \( \psi \square \rightarrow \lambda \)
V. Fétis, Weber, and Mozart’s ‘Dissonance’ Quartet, K. 465

Our second case study returns to material discussed in the Introduction to this study: a pair of treatments of Mozart’s String Quartet in C Major, K. 465, the “Dissonance” Quartet, which are perhaps the most prominent recompositions in the theoretical canon. As Julie Ann Vertrees has chronicled, the Adagio introduction shown in Figure 3.12—particularly the high A♮ that enters on the second beat of the second measure—was the subject of controversy immediately upon its premiere, drawing complaints from critics that the quartet was “too highly seasoned” for Viennese palates and producing rumors that the instrumental parts were believed to contain so many misprints that they had to be torn up.47 Close on the heels of these initial reactions came a series of essays attempting to diagnose and correct the Adagio. Some of the most famous of these attempts came from music theorists François-Joseph Fétis (1829) and Gottfried Weber (1832). Both theorists give accounts of the controversial passage which attempt to excavate some musical core, or animating musical idea, from the dissonant musical surface left by Mozart.

In his 1829 account of K. 465 (published in his own journal, La revue musicale), Fétis initially refuses to believe that the passage in question was actually Mozart’s intention. Instead, in a new twist on the familiar “Kleinmeister strawman” argument,48 Fétis blames the copyist, writing, because I am convinced that the reputation of a great artist cannot excuse the mistakes

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48 See Chapter One of this study.
Figure 3.12: Mozart, String Quartet in C Major (K. 465), I, mm. 1–4

he made, I was sure that this point of imitation was not written by Mozart, and that some ignorant copyist was the author.” However, as he recounts, this belief was short lived: upon consulting Mozart’s manuscript in London, Fétis quickly realized that “the critical passage was written by Mozart, without erasure, and was as severe in all editions, and the inconceivable, aimless dissonances, which tear the ear, are written in his hand.”

Reluctantly accepting that Mozart had indeed composed the offending passage, Fétis then unintentionally highlights the contradictions inherent in theoretical recomposition:

In carefully examining this harmony, which has been the subject of so much speculation and astonishment, I was struck by the ease one would have in making the defects disappear, without changing anything of the principal phrase, or the form of the accompaniments, and how one could even align it more accurately and consistently with the rules of all schools of imitation, which seem to be the cause of the coarse faults that have been remarked upon.

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In other words, Fétis believed that he could make minute corrections to errors in Mozart’s counterpoint “without changing anything of the principal phrase”; that is, he could re-write the piece, yet it would remain the same piece. Such an attitude would seem to fly in the face of the notion of the “work concept” (Werktreue), which most scholars agree had firmly taken hold around 1800. As Lydia Goehr puts it, “to be true to a work is to be true to its score.” Fidelity to the composer and their intentions is implicit in this formulation; as Goehr writes a few lines earlier, “performances and their performers were respectively subservient to works and their composers.” For Fétis and his interlocutors, however, fidelity to Mozart’s intentions—as filtered through their own understanding of his music, and of the music theory of their time—superseded the idea that the notation was “complete and adequate,” even when studying the manuscript showed Mozart’s musical choices in black and white. In this case, critics took it upon themselves to save Mozart from himself—or at least, used the pretense of protecting Mozart in order to advance their own music-theoretical perspectives. Such analytical tinkering—was not seen (by its practitioners, at least) as interfering with the work as it was handed down in the notation of a revered composer.

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54 Ibid.
In setting out to show how the quartet’s introduction might have gone differently, Fétis asserts that the problems arise from Mozart’s poor counterpoint. Conveniently enough, he offers a solution: the counterpoint can be saved by applying a rule from his own *Traité de Contrepoint et de la Fugue* (1826). As shown in Figure 3.13, Fétis delays the entrance of A♮ in the first violin by one beat, citing a rule from his own counterpoint treatise that demands greater spacing between the second and third entrances of an imitative figure, than between the first and second. He also changes two quarter notes in mm. 2 and 3 to eighth notes (boxed in Figure 3.13), in order to soften the dissonant neighbor figures. But even these slight corrections can be said to alter the nature of the piece significantly. Scott Burnham, for example, calls the A♮ that Fétis corrects an “impossible dissonance” that is “utterly captivating”: a description that would imply that it is essential to the character of the introduction. Such

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55 Fétis, “Sur un passage singulier,” 603. The counterpoint rule comes from Fétis, *Traité du contrepoint et de la fugue.* Paris: Au Magasin de musique du Conservatoire: Chez Janet et Cotelle, 1826), 75. The actual rule is short and rather cryptic: “There are phrases which do not lend themselves to imitation in two parts. Others admit more; these are usually compressed [réservées] into a smaller number of measures.” However, Fétis gives a much better explication of the rule in his critique of Mozart’s quartet than in the treatise itself. He writes on p. 603: “I demonstrated in my *Treatise on Counterpoint and Fugue* (1826) that in an imitation which in turn makes use of the fifth and the fourth, there must always be one or two more beats [temps], and occasionally one or two additional steps, between the second and third entrance than between the first and the second. Without this precaution, the harmony can be only vicious, or even unacceptable. Anyone who has any idea of counterpoint knows this; Mozart certainly was not ignorant. The passage I am examining right now, however, is an example of bad disposition, in which the entries have equal distances. What will be the result? It would be absolutely impossible to continue in imitation if the first note of the pattern of imitation in the first violin were worth a longer time [temps] than the first note of the other instruments” (my translation).

a description challenges Fétis’ notion that the piece could be corrected “without changing anything of the principal phrase,” for the “utterly captivating” dissonance would seem to be at least as emblematic of the Adagio as, for example, its pattern of imitative entrances.

Fétis’ correction, based on a rule from his own 1826 counterpoint treatise, has the effect of bringing the piece closer to one of the archetypes proposed a few years later by Gottfried Weber. In one of the many small recompositions that accompany his analysis, Weber strips the Adagio down into a three-part imitative texture, the spacing of which mirrors Fétis’, and which is shown in Figure 3.14. Weber writes that “the intention behind this entire passage was unmistakably the following pattern of imitation, in which the figure that enters at the end of bar 1 is imitated note for note a double octave higher by the upper voice entering one bar.

**Figure 3.13**: Mozart, K. 465, mm. 1-4, as recomposed by François-Joseph Fétis (1829, 604).
Figure 3.14: Mozart, K. 465, mm. 1-4: the “intention behind the entire passage,” according to Weber (1832/1996, 180). Annotations added, based on Weber’s descriptions.

later.”  

Keeping this three-voice structure in mind, Weber proposes six ways in which the opening two measures could have gone differently. Figure 3.15 reproduces these six recompositions, each of which tempers the passage’s harsh dissonances while still generally preserving the three-voice counterpoint that both Weber and Fétis argue was Mozart’s intention. In “possible world” terms, these six recompositions are six closely related possible musical worlds, which I have shown in Figure 3.16. The actual “world” of Mozart’s composition, marked Mz, is in the center. It is surrounded by various recompositions, which are grouped according to significant characteristics: whether the three-voice counterpoint is intact; whether or not the lower contrapuntal voice is altered so that a consonant G lands on the downbeat of m. 2; and whether the entrance of A♮ is left as written on beat two of the

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second measure (indicated here by †, for the rest that precedes it), or is delayed a beat, per Fétis’ recommendation. The diagram allows us to hold all six of Weber’s proposals in superposition with one another, along with Fétis’ version and the original, visually representing the affinities between them and dramatizing the different (re)compositional decisions that the passage demands.

**Figure 3.15:** Six possible recompositions of Mozart, K. 465, mm. 1-2 (Weber 1832/1996, 176).

In Figure 3.16, we find that the musical idea of imitative entrances that Weber isolates in Figure 3.14 can be realized in any of several slightly different ways, which cluster together according to particular features. Figure 3.17 isolates some important aspects of Example 2
Figure 3.16: Possible worlds interpretation of Gottfried Weber’s recompositions of Mozart, K. 465, I, ms, 1-2. “Mz” refers to Mozart’s original; “a-f” refer to Weber’s recompositions in Figure 3.15; “FJF” refers to Félix’s recomposition from Figure 3.13.
Figure 3.17: Detail of four important sections of Figure 3.16, showing a) versions b and c altering the viola’s G in order to preserve the first violin’s entrance; b) altering the first violin entrance to preserve the viola’s A♭; c) maintaining the 9-10 suspension between viola and 1st violin; and d) correlation between viola A♭ and Mozart’s original three quarter-note rhythm.
for further examination. For instance, as shown in Figure 3.17a: while the original work has
the first violin entering on A♮ in m. 2.2 (only one beat after the viola’s downbeat A♭), the two
recompositions that attempt to preserve this rhythmic entrance (Weber’s b and c) both alter
the pitch of the viola on the downbeat of that measure, changing it to G.58 This softens the
cross-relation between the A♮ and A♭. Other recompositions that preserve the pitch in the
lower imitative voice (a, f, and FJF, highlighted in Figure 3.17b) end up altering the rhythm,
in order to separate A♮ from A♭. Additional features can be pointed out. As Figure 3.17c
shows, for instance, only Fétis’ version (FJF) and Weber’s b and c preserve the 9 – 10
suspension that Mozart’s original places between the viola and first violin in m. 2, although
each employs different rhythms in in order to do so. And another subset of possible versions,
pictured in Figure 3.17d, shows how most of the versions that preserve the three quarter-note
rhythm in the viola in m. 2 also leave that voice’s A♭ in place on the downbeat; versions that
change the note to G are forced to alter the rhythm. And FJF, the only version to maintain
A♭ but change the lower voice’s rhythm, was forced to do so in order to achieve the 9-10
suspension.

This networked approach seems to express vividly the core of Weber’s argument: that a
confluence of events comes together to create the “disturbing effect” of the Adagio’s
dissonance. And viewing analysis as opening up possibilities seems like a far more creative and
productive approach than Weber’s famous parsing of the opening bars, undertaken earlier in

58 Weber (1832/1996) doesn’t label the instruments in his recompositions, which are
presented on a grand piano staff. In most cases, this “lower imitative voice” seems to be the
viola; in recomposition f, which alters the imitative texture, it is presumably the second violin.
his essay, which slowly closes off possibilities as the music unfolds. In stark contrast to the singular, reductive approach to recomposition that I sketched earlier, or the creation of a *Kleinmeister* strawman, viewing recompositions as the expression of one or more parsimonious possible worlds speaks to a broader view of the musical object than we usually see in music theory and musicology.

VI. On Musical Realism

In my discussions of these various treatments of Mozart, I have tried to move progressively closer to a view of recomposition that stands in stark contrast to the reductive approach to recomposition that we find in the examples from William Rothstein, William E. Caplin, and Hans Keller (as discussed in the Introduction to this study). With that goal in mind, diagrams like Figure 3.16 and 3.17 allow us to do two things. First, they allow us to carry out the kind of analysis I just performed: a reading of how various musical features cluster together as a musical idea is realized. We see how making a move in one aspect of the piece (holding a dissonant pitch, for example, or vacating it) can force us to make a counter move in another aspect, such as writing a certain rhythm or decorating a particular note with a suspension. Second, they place multiple versions of a work alongside one another, in a manner that obscures hierarchy (even if it admittedly does not eliminate it completely). While I have often

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placed the actual version of a work at the center of each diagram, this is done primarily for the sake of convenience, and out of some lingering (and perhaps even vestigial) concern for the published version of a piece of music. By visually comparing the common features of different recompositions, we come away with multiple images (or perhaps afterimages, blurry impressions on our field of perception) of how a piece might have gone. The musical text is no longer fixed and solid, but a mutable network of possibilities. Visual representations that hold these possibilities in suspension with one another can serve as aids to both listening and analysis, revealing and sharpening the kinds of musical intuitions that are left implicit when theorists deal in the counterfactual conditionals with which this essay opened.

As an analytical tool, then, the possible world diagrams in this essay serve a function somewhat like a parallel transcription of the same chant from a variety of manuscript sources. Transcriptions and tables like the ones reproduced in Figures 3.18 and 3.19 track variations in manuscript sources across different time periods and locations, attempting to trace the transmission of a single chant by searching for characteristic alterations or omissions, and how they proliferate through sources.\(^6\) While they do not directly use notation (only referring to it, as in the pairing of the notation-based Figure 3.15 with Figures 3.16 and 3.17), possible world diagrams also lay out representations of different versions of the same piece. In their multivalent representations, both Figure 3.16 (depicting the possible versions of the Dissonance quartet’s opening) and Figure 3.18 (depicting various incipits of the tract *Iubilate*

\(^6\) These transcriptions and their analysis are found in Emma Hornby, “The Transmission of Western Chant in the 8th and 9th Centuries: Evaluating Kenneth Levy’s Reading of the Evidence.” *Journal of Musicology* 21(3): 427–428.
Domino) pose a challenge to musicologists: how do we declare one version definitive? For a chant scholar, such decisions are made based on a preponderance of the evidence, either in favor of the oldest exemplar(s) possible, or in favor of the variations that are found most widely. In the case of the Dissonance Quartet, we have the original manuscript (which Fétis and others have declared authoritative) and thus the version written by Mozart. For the theorists studied in this essay, the question then becomes not which is the real version, but which is the legitimate one, the correct one: the one that represents the true musical intention that Mozart cloaked in dissonance.

Inspired by David Lewis’ descriptions of possible worlds, however, we might feel free to leave aside the philological impulse—seemingly required by musicological allegiance to the ideology of the “work”—that compels us to trace the authoritative original that animates many parallel transcriptions of chant. After all, the different versions of Iubilate Domino chronicled in Figures 3.18 and 3.19—even those that may have arisen through variations in the oral tradition or through copying mistakes—constitute actual pieces of music, which were performed by actual people (in some cases over the course of several centuries) and which were useful in a local context, without any regard for whether or not what was being sung was precisely what

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61 For example, parallel transcriptions (governed by the latter form of decision making) were the primary historiographical method used by the monks of Solesmes in the mid-nineteenth century during the compilation of the Liber Usualis, leading to an idealized chant that took many regional and genealogical variations into account, yet may never have actually existed in antiquity. Katherine Bergeron (1998) cautions that this impulse to restore a plausible simulacrum of the past is a thoroughly modern one, in this case coupled with the revivals of monastic life and the artistic and architectural restorations that became common in France in the wake of the revolution.
Figure 3.18: Varying notations for “omnis terra” (from the tract Iubilate Domino) in early chant manuscripts (Hornby 2004, 427)

the dove had whispered in Pope Gregory’s ear. The same state of affairs could apply to recompositions: if we do not seek a single exemplar, and instead position our recompositions as a constellation around the original, elaborating upon it and deepening our experience of it, we can still learn much from the approach that parallel transcriptions offer. First and


63 This same lesson might be applied to other modes of musical analysis as well. Charles Smith (2010), for example, argues that we should also feel free to resist making definitive
Figure 3.19: Tracking the features of “omnis terra” in the eighth-mode tracts (Hornby 2004, 428)

foremost, the lesson is that, even in the face of variation, many different iterations of a chant are still, in some significant way the same piece of music. We have seen this, for example, in Weber and Fétis’ analyses of the dissonance quartet, which propose many different corrections, yet nearly all preserve the central notion of a three-voice imitative texture. Second,

choices in certain aspects of Schenkerian analysis. When confronted with multiple valid middleground interpretations, for example, we need not choose, and can instead declare several to be valid answers. For Smith, any implication that there must be a single definitive middleground comes only from an unhealthy attachment to the metaphor of “structure,” by which a piece of music is seen as analogous to a physical object, which can admit only one state.
and more radically, these diagrams (and the philosophical apparatus they represent) allow us
to view recompositions, whether singular or multiple, competing or complementary, as the
expression of one or more parsimonious possible worlds. Such an approach speaks to a
broader view of the musical object than the simple hermetically sealed “work” that is usually
enshrined in music theory and musicology. This echoes one of the central tenets of David
Lewis’ modal realism, the idea that “we call [our world] alone actual not because it differs in
kind from all the rest but because it is the world we inhabit.”

Gone, for example, is the Kleinmeister strawman, the fictional “mediocre eighteenth-century composer” whom Hans
Keller (1956, 51), imagined in our first chapter as a foil to Mozart, or even the defective piece
that, for Fétis (1829, 606), “hurt[s] reason, sense, and taste.”

In its place comes a flatter conception of composition, in which a variety of solutions to the same problem—or
expressions of the same musical idea—are all drawn together. In some cases, it could be argued
that these collections of recompositions even present enough competing, complementary
versions as to make identifying the original among them a challenge.

In light of debates over the metaphysical nature of “possible worlds,” Figures like 3.16
and 3.19 present us with a distinct philosophical challenge: they prod us to choose a position
about the musical realism of the recompositions that they depict. How we answer this question,
and how we deal with recompositions in music theory writ large, depends upon how we

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64 Lewis, Counterfactuals, 85.
66 Perhaps a game for the next music-theoretical dinner party.
interpret the possible musical worlds that they posit. At its core, this interpretive problem seems to come down to whether we are modal realists or anti-realists. Just like modal realism, which posits that all possible worlds are just as concrete as our own, and that our so-called “actual world” is privileged only by circumstance, a theory of recompositional realism might propose that alternate versions of a piece of music are just as valid as the piece enshrined in the score that bears the composer’s name. The arguments for or against such a position might be philosophical in nature—as in the positions for and against the realism of possible worlds described earlier, which will be rehearsed in greater detail in the coming pages—or they may be primarily musical, hinging on value judgments about the “best” version of a given piece, or on a preference for the original version enshrined in the composer’s text.

Alternately, we might be recompositional antirealists—rejecting the idea that Example 20 is anything more than a mathematical structure, visualized: a map of several overlapping sets, or an especially elaborate Venn diagram. This view would follow the skeptical arguments of Richard Stalnaker, Bryan Skyrms, Timothy Williams, and others, who believe that other worlds are merely logically possible, not literally so; they serve only as devices for rhetoric and reasoning to underlie our counterfactual investigations. Such a view would hold that while the diagram’s regions add a layer of interpretive information above and beyond what might be found in a parallel transcription each diagram remains just that: a schematic representation. From this perspective, the alternate versions proposed by Fétis and Weber are less real, less important, and less worthy of study because they are not the versions sanctioned by Mozart.
However, it is interesting to explore the implications of accepting the musical realism of recompositions. The simplest argument for doing so derives from one of David Lewis’ central arguments for the existence of unactualized possible worlds: that of “qualitative parsimony.” To paraphrase his assertion (quoted earlier): we believe in actual pieces of music already, and accepting recompositions as musically real simply asks us to believe in more things of that kind, not in things of some new kind (for Lewis, hypothetical worlds; for me, hypothetical pieces of music).67 If such an argument can be made in favor of possible worlds—which presumably possess material extension, matter, energy—surely the same can be argued for music, given its status, in Lydia Goehr’s words, as an “ontological mutant.”68 From a notational standpoint, there is no discernible difference between one set of dots on a page, and another, slightly different set of dots; neither has a stronger claim on reality than the other, since both could easily be realized in performance.69 Endowing one set of dots with temporal primacy by insisting that it was here first or signing it with the name of a respected composer changes the way we regard a notational object, but does not alter the object itself.70 Two similar notational objects are merely situated differently within a cultural field that evaluates them against the “norms” instantiated in music theory, christening one configuration of dots as the work of a “genius.”

67 Lewis, Counterfactuals, 87: “You believe in our actual world already. I ask you to believe in more things of that kind, not in things of some new kind.”
69 Questions like this one are also central to Chapters Four and Five of Nelson Goodman, Languages of Art: An Approach to a Theory of Symbols (Indianapolis, The Bobbs-Merrill Company, 1968).
Taking Lewis’ modal realism seriously also opens the door to the possibility that studying pieces of music (or their recompositions) as possible worlds might have something to offer to the philosophies discussed in this essay. While we cannot perceive, access, or touch any of the possible worlds that Lewis describes, we actually can sit down at the piano and perform six impossible Adagios before breakfast. Music thus might offer us a rather unique chance to experience possible worlds (or at least a shadow of them), thus contributing to the theorization of modal logic. Tempting as it would be to imagine a piece of music literally transforming our world, Saul Kripke’s moderately skeptical notion of a “microworld” might be the most useful version of possible world semantics for this situation: performing a full version of Mozart’s Dissonance quartet with an altered introduction might reveal, just momentarily, a tiny pocket in which things are different. The die roll, to borrow Kripke’s example, goes differently, but other world events are untouched.

Kripke’s notion of a microworld grants us other affordances as well. For example, it is useful when regarding diagrams like Example 20, and the recompositions they represent. Kripke uses the example of rolling a die. In a sense, each roll represents six possible outcomes, and six possible worlds. But, Kripke argues, viewing every outcome of every roll of the die as the birth of a possible world would be overkill, particularly since any given roll is unlikely to exert any influence over world events. In Naming and Necessity, this position is a compromise, a concession; it still comes within pages of Kripke’s rueful speculation that, had he used a
phrase other than possible “world” (such as “history” or “situation”) in his original papers on modal semantics, no one would be having this conversation at all.\textsuperscript{71}

The question we must ask at the close of this essay, then, is: how real do we consider the possible Mozarts that Weber and Fétis show us: the Mozarts who space their contrapuntal entrances correctly (perhaps even according to the guidelines of a not-yet-published counterpoint treatise) and treat their dissonances gingerly? Thinking back to this study’s Introduction, how real is the symmetrical minuet that William E. Caplin excavates from within the 40th symphony? As Scott Burnham argues, we tend to define our music theories based on the work of revered composers, tailoring our models to express the things we hear in their music.\textsuperscript{72} This is why the controversies over the Dissonance Quartet had such high stakes for those who participated in them, and why they are still frequently discussed today: they challenge not only our image of famous composers, but our own taste in them.

No matter where we come down on the philosophical debates that I have briefly summarized, we can at least see how re-writing a piece of music in an alternate version can be useful for materializing both the propositional and intuitive sets of knowledge that we hold about a piece of music: the ways in which imitation in the Dissonance Quartet does or does not instantiate rules given in counterpoint treatises, for example; or the ways in which we can hear a simple minuet buried amid the tumultuous hemiolas of the 40th symphony; or the ways in which Mozart’s K. 381 Sonata might have gone differently, had the composer chosen

\textsuperscript{71} Kripke, \textit{Naming and Necessity}, 20.

\textsuperscript{72} See the third chapter of Scott Burnham, \textit{Beethoven Hero} (Princeton: Princeton University Press, 1995).
to pursue other compositional goals. Rather than giving into the tempting “strawman interpretation” of recompositions as representing the hypothetical work of a less-interesting composer, embracing recompositions as possible musical worlds is a way of seriously exploring the aesthetic of “what might have been,” so often cited as a justification for recomposition, and yet so rarely taken further than a single possibility. Treating theoretical recompositions as windows on possible musical worlds shows us how tonal music is subject to overlapping guidelines on many levels, and there is often not simply one way that a work might have gone, but many. Looking at recompositions as possible worlds reminds us that individual pieces of music, even those that we refer to as “masterworks,” brush closely against an infinite pool of possible works which, although they may not have been substantiated in the “actual world,” still constitute a fascinating subject of study that promises not only to teach us about musical structure, but about ourselves as listeners and theorists as well.
Chapter Four

Recomposing the Listener in Contemporary Formenlehre

Figure 4.1a: Schematic representation of Rameau’s basse continue and basse fondamentale (Hyer 1996, 77)

Figure 4.1a shows a simple schematic for the operation of Jean-Philippe Rameau’s theory of the fundamental bass, as given by Brian Hyer in his 1996 essay “Before Rameau and After.” B.C., at left, indicates basse continue—the actual, written bass line of a piece of music. B.F., in the right-hand node, represents Rameau’s basse fondamentale: the metalinguistic representation of the chord root, which both controls the movement of the harmony, and serves as a shorthand for it. The square in the center, containing the French word for “reversal,” indicates that the diagram can be read in either direction. The dualism in this schematic is inspired by the writings of the philosopher Étienne Bonnot de Condillac, whom we find, in an early treatise, operating not in his familiar mode of Lockean sensory empiricism, but rather in the reductive method of Descartes.¹ Condillac writes,

¹ Condillac is best known for a pair of treatises in which he approaches his subject through the Lockean notion of a tabula rasa: in his Essay on the Origin of Human Languages (1746) he imagines how two children lost on an island together might develop language; and in his Treatise on Sensations (1754), he describes a statue come to life, and endows it with one faculty after another in an attempt to analyze the role that perception plays in subject formation.
The method I employ to make systems I call analysis. One sees that it comprises two operations: decomposing and composing. By the first, one separates all the ideas which pertain to a subject and examines them until one has discovered the idea which ought to be the germ of all the others. By the second, one disposes them following the order of their generation.²

Hyer thus suggests an annotation for Figure 4.1a, which I have given below as Figure 1b: “decomposition” moves from left to right, while “composition” moves from right to left. The basse continue, then, is the composed realization of the theoretical basse fondamentale; in the other direction, the basse fondamentale is extrapolated from the basse continue—“decomposed,” in Condillac’s parlance, though today we would likely call this “analysis.”

![Figure 4.1b: Hyer’s suggested annotations for Figure 1a](image)

In its original form, Hyer’s diagram argues that in Rameau’s Enlightenment rationalism, there is a transparent relationship (the renversement in the center) between theory and practice.

That is, one can be written into the other, and back, in a lossless manner, based on a set of relatively few axioms—namely, that all harmonic progressions mirror *la cadence parfaite* and are controlled by the fundamental bass, which moves only by the intervals of the third and fifth (and their inversions). These intervals of movement are dictated by the prominent overtones of the *corps sonore*, and any deviations from this formula, according to Rameau, are to be explained by a repertoire of additional devices such as chords by *supposition*. Figure 4.1 thus demonstrates not only how a piece of music might be “decomposed” or analyzed according to the precepts of fundamental bass theory, but also how those precepts act as a guiding force in the composition of new music.

Stepping away from this particular context, however, we can also read Figure 4.1 as the simplest possible schema for how a theory of music works. We can generalize Hyer’s diagram, emptying its nodes of their specific reference to Rameau’s theory, and filling them instead with generalities, as shown in Figure 4.2: a piece of music on the left-hand side, and some representation of musical structure to the right.

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Because it is cyclical, this arrangement is also effectively atemporal: perhaps the musical text at left is decomposed into a set of theoretical underpinnings, or perhaps the germ (as Condillac puts it) is propelled leftwards to become a fully realized piece of music. The reversibility of the diagram would depend upon the commitments of the particular theory at hand; that is, the translation might not go both ways. Heinrich Schenker’s work, for example, fits relatively neatly into the spaces vacated by Rameau: the musical foreground would be at left, the Ursatz at right. The master composer “composes out” (komponiert aus) the Ursatz into the musical surface, while the analyst works in the opposite direction, excavating successive musical layers on her way to the background. But Neo-Riemannian theory, as it is currently and quite loosely

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4 Schenker is explicit in his insistence that master composers had some knowledge, however implicit, of the Ursatz and the processes necessary to realize it on the musical surface. “After the publication of some of my earlier works,” Schenker writes, “the objection was often raised, ‘But did the masters know about this?’ This objection, intended to be a trap, betrays only a lack of education. Those who raised the question were unaware that the masters in fact knew nothing of the false theory which for more than a century has been taught and learned as the only practical one ... The objection can be answered very simply: the great composers in their works have shown a mastery which evinces, both in preconception and in total recall, such a clear overall comprehension of the laws of art that they need say no more to us; by necessity, every artistic act—indeed any action at all—requires a preconception of inner
defined, might not be such a clean fit.\(^5\) The process of analysis works in much the same way, with the analyst determining the triads which underlie a passage. But the leftwards movement is far from clear, making the notion of the “composition” arrow in Neo-Riemannian theory tenuous at best.\(^6\)

As with any binary schematic, there is a great degree of abstraction in Figure 4.1; although the diagram might represent the core of the music-theoretical enterprise, the situation is naturally more complicated. There are any number of additional nodes which we might profitably include in an attempt to be truly comprehensive, each of which exert an influence over how a music piece of music operates: culture, history, politics, intertextual relationships, and many more forces each exert their influence over music. In this chapter, I will explore the treatment of one particular possible node: one representing the position of the listener, and the role he or she plays in the composition and decomposition described in Figure 4.1. And


\(^6\) Richard Cohn’s recent work does seem to argue in this direction, however: he proposes that the triadic transformations that have been the object of Neo-Riemannian theory are epiphenomena of a nineteenth-century style of composition based on parsimonious voice leading, used by Chopin, Liszt, and their contemporaries. See his *Audacious Euphony*, passim, but particularly 1–15.
while the discussion will frequently circle back to the visual representation of the relationships with which we are concerned—that is, the continual revision and expansion of Figure 4.1—our concerns are not merely diagrammatic. Rather, the focus is on how we theorize ourselves and our musical knowledge and experience in relation to individual pieces of music.

Recomposition, I argue, provides us with a lens through which to theorize the relationship between listening and analysis in current theories of musical form. As I argued in Chapter One, recompositions bear the trace of an inherently sonic act: one must hear a piece or a passage of music and somehow find it wanting (in the case of a corrective recomposition), or find that it strongly implies the possibility of a different continuation or ending (in the case of a model recomposition). Presuming that listening and analysis are separate yet complementary acts—the former of which is an occurrence happening in real time and which is potentially different in each iteration, and the latter denoting a considered claim about an objective musical structure—I will explore the ways in which a recomposition can be not only the result of an act of listening, but can also reflect, record, or even re-create a unique and individual listening experience. I am most interested in “listenings” that fall within the domain of individual listeners, which are often ignored either as intersubjectively illegible, or as merely a preliminary step towards a more final, concrete analysis.

\[\text{\footnotesize{\[7\] Interestingly, recompositions of the beginning of a piece are extremely rare; this would seem to be a function of tonal music’s tendency to become increasingly conventional towards the end of a phrase or piece. For example, a musical period will begin with a unique and characteristic melody, but often wind up with a more formulaic cadential figure.}}\]
In studying how recompositions can shape and record an individual listening, I am interested not only in the act of listening itself, but in how that act is mediated by a given theory or methodology. Departing from two diametrically opposed descriptions of listening—the objectively-minded “structural listening” associated with the critical writings of Theodor Adorno, and the deeply personal and subjective writings of philosopher Peter Szendy—this chapter will examine two complementary theories which each manifest the listener implicitly, and in so doing complicate the binary arrangement depicted in Figure 4.1. These theories are Sonata Theory, formulated by James Hepokoski and Warren Darcy, and formal-function theory, espoused by William E. Caplin. The theories, two of the most influential accounts of form in contemporary Anglophone music theory, are often presented as rivals, which has led to a productive cottage industry of colloquia, panel sessions, and back-and-forth publications.

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8 The most definitive formulations of these theories, respectively, are James Hepokoski and Warren Darcy, Elements of Sonata Theory: Norms, Types, and Deformations in the Late-Eighteenth-Century Sonata (Oxford and New York: Oxford University Press, 2006); and William E. Caplin, Classical Form: A Theory of Formal Functions for the Instrumental Music of Haydn, Mozart, and Beethoven (Oxford and New York: Oxford University Press, 1998). Earlier versions and later revisions of both theories will be cited throughout as necessary.

9 For example, Hepokoski and Caplin, along with James Webster, participated in a plenary session together at the 2007 EuroMAC conference in Freiburg, during which each theorist was asked to talk about the same pieces of music, and to respond to one another’s treatments of it. The texts of the plenary session have been published as Musical Form, Forms, and Formenlehre: Three Methodological Reflections, ed. Pieter Berge (Leuven: Leuven University Press, 2009). A sequel to these exchanges took place at the 2014 EuroMAC conference in Leuven, concerning secondary/subordinate themes, the medial caesura and the continuous exposition. Both talks were expanded and published together: see William E. Caplin and Nathan John Martin, “The ‘Continuous Exposition’ and the Concept of Subordinate Theme,” Music Analysis 35/1 (March 2016), 4–43; and James Hepokoski, “Sonata Theory, Secondary Themes, and Continuous Expositions: Dialogues with Form-Functional Theory,” 44–74.
And the two models do have some significant differences in interpretation, most notably the treatment of second themes, and the nature of closings or codas. But along with the fact that their interpretive muscle is arguably brought to bear on different aspects of music–Sonata Theory in its concern for the big picture and with the interpretive hermeneutics that music analysis enables, and formal-function theory with its interest in the intimate, structural details of a given work–I’d like to argue that the two models share an essential core. At their heart, both theories are concerned with the listener’s experience of music, and how it shapes the analysis of form. Their theories, and their recompositions, can be read as attempt to strike a balance between direct, score-based analysis (as exemplified by Rameau and the straight line of Figure 4.1), and a more experientially or cognitively oriented approach: both theories situate the listener as an agent who forms an active, essential node in the pathway between works of music and their theoretical underpinnings, not merely as a passive receiver of musical communication.

This is not to say that other theories are unconcerned with listening. Indeed, it goes without saying that any act of musical analysis is deeply bound up with listening. But because “goes without saying” is so often in danger of being a synonym for “is taken for granted,” a re-

10 While Elements of Sonata Theory (pp. 120–124) defines the Subordinate (S) theme area as a single theme, bounded by the Essential Expositional Closure (or EEC, the first perfect authentic cadence following the medial caesura) and often followed by an extended Closing (C) space, Caplin’s Classical Form (pp. 121–123) allows for several consecutive (and equally important) subordinate themes, while arguing that “closing” should be reserved only for truly short and inconsequential closing gestures (codettas). And while the issue normally does not arise in the typical discourse of comparisons between the two theories, it should be noted that Caplin presents a more comprehensive picture of non-sonata forms than do Hepokoski and Darcy: small binary/ternary, minuet and trio, slow movement form, etc.
assessment of contemporary *Formenlehre* in terms of its theorization of the listener is urgent. For many theories, even when listening is taken into account, it is given a highly restricted role. We will discover, through this analysis, that in order to take listening seriously in a theory of music, it is essential to grant the listener an element of freedom, and to allow for the vagaries of individual experience, taste, and opinion.

I. Structural Listening, Plastic Listening

![Figure 4.3: Provisional elaboration of Figure 1, including “listener” and “composer” nodes](image)

Figure 4.3 represents a first step toward revising our basic theoretical schema: it adds a “listener” node to the left side of Figure 4.1, connected to the musical text, and a corresponding “composer” node at the opposite pole, connected to the structure node. More notably, it eliminates the *renversement* at the center of the diagram, the fulcrum on which, for Condillac, composition could be inverted to become decomposition, and vice versa. The *renversement* is no longer applicable, for reasons which will soon become apparent: while the addition of the listener and the composer preserves a certain visual symmetry, it unbalances the network in other ways.
In its linearity, Figure 4.3 represents an approach to music that has become known as “structural listening.” In the famous typology of listeners that opens his *Introduction to the Sociology of Music* (1962), Theodor Adorno describes structural listening as the action of his “expert listener,” writing that such a figure:

would be the fully conscious listener who tends to miss nothing and at the same time, at each moment, accounts to himself for what he has heard. ... Spontaneously following the course of music, even complicated music, he hears the sequence, hears past, present, and future moments together so that they crystallize into a meaningful context. Simultaneous complexities—in other words, a complicated harmony and polyphony—are separately and distinctly grasped by the expert. The fully adequate mode of conduct might be called “structural listening.”

Adorno’s “expert listener,” though merely one member of a hypothetical typology, shows us a vivid image of a specific mode of listening, in which every detail is perceived and processed. These modes of listening are Adorno’s way of describing a more foundational idea of the nature of musical structure itself: “A premise [of the typology],” Adorno writes, “is that works are objectively structured things and meaningful in themselves, things that invite analysis and can be perceived and experienced with different degrees of accuracy.” His typology “rests upon the adequacy or inadequacy of the act of listening.” The expert listener, then, hears and comprehends every detail, while the other types of listeners described by Adorno are characterized as hearing progressively less and less. And not only does Adorno’s expert

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13 Throughout Adorno’s first chapter, the ‘expert’ listener is followed by, among others, the “good” listener (p. 5), who hears some of the structural connections that lie beneath the “musical details”; the “emotional” listener (p. 8), for whom musical forms are merely
comprehend the details, she hears beyond them, spontaneously understanding the music in a manner that transcends both its temporality ("he hears the sequence, hears past, present and future moments together so that they crystalize into a meaningful context") and its sonorous surface (understanding both the “formal components” and the “concrete musical logic” of a work).\footnote{Adorno, \textit{Introduction to the Sociology of Music}, 4–5. Adorno’s language here echoes that of Schenker, as highlighted by scholars like William Pastille. Pastille writes, “knowing the epistemological principles shared by Goethe and Schenker helps to explain why Schenker’s graphs sometimes place a strain on one’s hearing abilities. The reason is that the graphs do not record the perception of normal hearing ... On the contrary, they record the perceptions of an elevated sense of hearing, one trained by \textit{Anschauung} [intuition] ... to recognize underlying models, and ultimately, the \textit{Urphänomen}.” See “Music and Morphology: Goethe’s Influence on Schenker’s Thought,” in \textit{Schenker Studies}, ed. Hedi Siegel (Cambridge: Cambridge University Press, 1990), 42.}

In recent decades, the notion of structural listening embodied by Adorno’s “expert listener” has been subject to musicological critique. Rose Rosengard Subotnik most famously analyzed the idea of structural listening in a 1988 essay, which was later expanded into the third chapter of her 1996 book \textit{Deconstructive Variations}.

Subotnik positions Adorno’s writings, along with those of Arnold Schoenberg and Igor Stravinsky,\footnote{Subotnik explicitly omits another use of structure, the kind found in the title of Felix Salzer’s \textit{Structural Hearing: Tonal Coherence in Music} (New York: Charles Boni, 1952), writing, “Schenkerian conceptions of structure and perception, such as Felix Salzer’s ‘structural hearing,’ will not be considered here; hence the ‘Toward’ of my title.” This phrasing would seem to indicate that, although it is beyond the scope of this particular essay, Schenkerian analysis should not escape critique entirely. See Subotnik, \textit{Deconstructive Variations}, 150.} within an aesthetic triggers for other subjective experiences; and eventually the “unmusical” listener (p. 17), who hears and understands virtually nothing of music’s structure.

\footnote{Rose Rosengard Subotnik, \textit{Deconstructive Variations: Music and Reason in Western Society} (Minneapolis and London: University of Minnesota Press, 1999), 148–176.}
lineage that passes from the “disinterested aesthetic pleasure” described in Kant’s Critique of Judgement (1790), through the “tonally moving forms” of Eduard Hanslick’s On the Beautiful in Music (1854), and interprets them as a reaction against the Romantic mixture of technical and emotive styles of writing in the critical work of E.T.A. Hoffmann, Carl Maria von Weber, and Robert Schumann. She critiques several troubling aspects of structural listening: its disregard for the “kinds of understanding that require culturally specific knowledge of things external to the compositional structure, such as conventional associations or theoretical systems”; its claim to universal validity despite its origins within the western canon and western tonal theory; and its tendency to ignore the affordances of the medium of sound itself. As Andrew Dell-Antonio writes in a response to Subotnik, “the notion of ‘listening’ that emerges from [the paradigm of structural listening] is potentially detachable from the sense of hearing.” Perhaps most damning, for Subotnik, is the danger that due to its restrictive formalism and emphasis on perceiving a given work in a single, “correct” way, “structural listening reinforces not active engagement but passivity on the part of the listener, suppressing an inclination to participate in some sort of active dialogue with music.”

17 Subotnik, Deconstructive Variations, 150–152.  
18 Subotnik, Deconstructive Variations, 150.  
19 Subotnik, Deconstructive Variations, 157–158.  
20 Subotnik, Deconstructive Variations, 161–163.  
22 Subotnik, Deconstructive Variations, 169–170. Subotnik is inspired in this argument by Russian literary critic Mikhail Bakhtin.
Dell’Antonio diagnoses this as well, locating at the core of structural listening “a ‘contract’ between composer and listener,” which is based upon “intellectual rigor and discipline.”

There is surely a great deal of credence to these criticisms; they have been influential in setting musicology’s agenda for the past twenty-five years, and while some progress has been made, the discipline at large has not yet resolved them. Although litigating their concerns fully is beyond the scope of this study, some of the issues raised by Subotnik and Dell’Antonio are central to this study. Dell’Antonio’s notion of a “contract” resonates with Adorno’s notion of the expert listener, and with the linearity of Figure 3. Chief among my goals is to demonstrate that listening—especially repeated listening—is not a linear process; rather, it involves a constellation of processes and influences.

The other goal of this section is to restore some measure of agency to the act of listening. Quite apart from the passivity of which Subotnik accuses the paradigm of structural listening, I wish to explore models for music theory which cast listening as a flexible and creative act. The first step in doing so is to explore the subtle ways in which we can consider listening to be separate from analysis. Indeed, in my study, the two are not binary opposites, nor are they even very different from one another in their mechanics. Both, in the present study, will mostly be described in the familiar terms of musical structure; the argument is that the two activities work differently, not that they address different things. This is by necessity: not only

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23 Andrew Dell’Antonio, “Introduction,” 2. For more on this topic, see Fred Everett Maus, “The Disciplined Subject of Musical Analysis,” in Beyond Structural Listening, 13–43.

24 For example, the recent rise of Sound Studies as an autonomous discipline would seem to indicate that musicology has not yet come to terms with the problem of medium specificity when discussing music and sound.
is it due to the subject position from which I write—that of an almost-Ph.D. in Music Theory, well-versed in the language of analysis and structure—but also because musical structures themselves remain central to my exploration. This is not an attempt to remove the notion of structure from musical discourse, or to elevate listening over analysis; rather, it is an attempt to sketch out the differences between the two activities, to make space for the former alongside, rather than at the expense of, the latter. Listening, long elided as merely a waypoint in the process of analysis, thus steps into its own as a discrete process, and a distinct object of study for music theory.

In lieu of searching for a pithy summary or a definitive demarcation of analysis (as its practitioners have tried to do for hundreds of years), I will begin simply by noting several features of analysis that will be salient for the present chapter.\(^{25}\) For our purposes, analysis is first and foremost a considered act. It is an attempt to describe the observable features of a passage of music, based on an examination of the evidence. It will nearly always involve listening to a passage several times—whether live, on a recording, by performing it oneself, or silently reading the score—and attempting to account for how it goes: to resolve its ambiguities by describing its structures clearly. Secondly, an analysis stands alone, as an attempt at having the final word on a passage. Analysts may disagree with each other’s decisions, and different theoretical languages will yield completely different results, but any given analysis on its own

represents an attempt to fix firmly the objective features of a piece, and explain how they work. Listening, on the other hand, is temporally determined: it unfolds in real time. Listening is also iterative: I can listen multiple times, and describe each time as a *listening*. Each listening—and this is its primary difference from analysis—can be unique and different. The first listening may be naïve, the second slightly less so, while by the thirtieth, I am surely humming along, having long ago learned the music by heart.

In making a distinction between an analysis and a listening, I am influenced by three texts in particular: Brian Hyer’s “Second Immediacies in the *Eroica*” (1994); Marion Guck’s “Analysis as Interpretation: Interaction, Intentionality, Invention” (2006); and finally Peter Szendy’s *Listen: A History of Our Ears* (2008). The first two are situated centrally within the field of music theory, appearing, respectively, in a volume of essays by prominent music theorists, and in one of the field’s premier journals. The third is an entry from recent French philosophy. All three make useful contributions to the theorization of listening, while Szendy’s work in particular inspires much of this chapter’s argument.

“Second Immediacies” proceeds at first as a reception history of the famous C♯ in the seventh measure of Beethoven’s *Eroica* symphony. Rather than focusing on the narratives that have accrued around the extraordinary moment (as Scott Burnham would do in the opening chapter of *Beethoven Hero*, published a year later),²⁶ Hyer is concerned primarily with the theoretical issues that surround the identification of the anomalous C♯ as an object for

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hermeneutic interpretation in the first place. Heinrich Schenker’s famous analysis of the Eroica is paradigmatic as an object of his critique. Hyer writes:

Schenker ignores the gradual emergence of the music in deference to recounting its unchanging, objective structure. He identifies that structure with what one remembers after hearing the music, dismissing any immediate assessments one might make of the music as errors resulting from the unfortunate fact that the music comes into its precarious existence over time.27

The gentle sarcasm at the end of the passage makes Hyer’s perspective clear: the aim of critical activity towards music should not be to establish abstract, factual “understanding,” but rather to intensify and sharpen one’s engagement with music. Hyer’s critique of Schenker concisely summarizes my distinction between analysis and listening. For Schenker, impressions gained through listening to the piece, in time, are to be discarded, replaced instead with analytical insights gained by looking back, atemporally, and making decisions about what has been heard. For Hyer, on the other hand, “understanding does not so much arise from interpretation, but coincides with it, in this case coinciding with the interpretive activities of an attentive listener.”28 Following Hyer, then, I wish to re-conceive of listening as a theoretically-informed yet pre-analytical act: “a process that makes our ongoing involvement with the music explicit.”29

Marion Guck’s work expands upon this notion of listening as a pre-analytical reflection worthy of study on its own merits: she develops the notion of a musical “hearing,” which for

her is roughly analogous to a literary critic’s “reading” of a novel. I have chosen to use the word “listening” instead (mostly in order to remain congruent with Szendy’s work, but also in deference to Roland Barthes’ essay of the same name), but our concepts remain roughly the same.30 As Guck explains,

I identify the objects of musical interpretation not as works but as “hearings.” The idea of a distinction between a work and hearing lines up, more or less, with a distinction one might make between a “real object,” the material sounds or notations comprising the work, and an “intentional object,” the music as a listener has heard or understood it.31

Within the category of “hearings,” Guck includes both technical descriptions of music (“I hear two voices creating the sound of a dissonant seventh, followed by those two voices creating the sound of a consonant sixth”) and less formal accounts (such as a given musical event being heard as “a welcome change” or “a deflection”).32 These “hearings,” by their nature, have both a certain minimal level of interpretation built right into them, and an initial abstraction from actual sound and temporality: they comprise a translation from purely sonic events into

30 Barthes writes that “[h]earing is a physiological phenomenon; listening is a psychological act.” See his essay “Listening,” in The Responsibility of Forms, trans. Richard Howard (Berkeley and Los Angeles: University of California Press, 1991), 245. One of the word’s possible French equivalents, entendre, is also relevant; it shares a Latin root (“intendere”) with intentionality, as employed by Guck. As Brian Kane has demonstrated, both Pierre Schaeffer and Jean-Luc Nancy have this phenomenological sense of the word in mind when they employ it in their writings, and the notion of a “listening” as a directed, intentional state than the other alternative verbs (ouir, implying distracted listening, comprendre, implying the decoding of language, or écouter, invoking listening to signals in the natural world) used by Nancy and especially by Schaeffer, all of which would seem to imply the more passive English verb “to hear.” See Kane, “Jean-Luc Nancy and the Listening Subject,” Contemporary Music Review 31/5–6 (December 2012), 439–441.
intentional objects. By relocating the focus of musical analysis from Adorno’s “objectively structured” works, Guck makes a productive move away from the paradigm of strict structural listening, interpolating the listening subject between the musical text, and its interpretation into structures. Our earlier figures, in this model, can be reconfigured again, producing Figure 4.4, which depicts the listener translating the musical text into the basic theoretical structure that Guck terms a “hearing.”

![Figure 4.4: Schematic of Guck’s “Hearings”](image)

Both Guck’s “hearings” and my “listenings” are concerned not only with sounding music, but also with the rudimentary propositional descriptions through which we receive and refer to those sonorous and temporal phenomena, the ways in which we make the initial abstraction from sound-in-time to tentative representation. These listenings, however, stop short of the conscious interpretive decisions which characterize analysis; they are characterized by their
potential mutability, the opportunity for an individual listener to regard the same passage differently over time. “Music is created,” Guck writes, between some musical sounds and a person,” and it follows that it is created anew, and in a potentially different manner, with each successive listening. So along with Hyer’s notion of an ongoing, pre-analytic involvement with music, listenings also bear some relationship to John Rahn’s distinction between a “theory of experience” and a “theory of piece,” or to Jean-Jacques Nattiez’s notion of an esthetic level of interpretation, distinct from the poietic or neutral levels.

The third and final piece of our preliminary definition of a musical “listening” comes from Listen: A History of Our Ears, in which philosopher Peter Szendy writes of his desire to “make [his] listening listened to.” Moving from a brief account of his formative musical experiences—hearing Bartok records in Budapest with his uncle, wanting to share the immediacy of those fresh sounds with his sister—Szendy describes his growth into an adult musical amateur, one with a great love for music, but no formal training. “Later on,” he writes,

I wanted to sign my listenings; I enjoyed doing so. As if I wanted to affix a lasting mark on them that would show they were mine and would make them, if not perennial, at least transmissible to others ... It is as a listener that I want to sign my listening: I would like to

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33 Guck, “Analysis as Interpretation,” 194.
point out, to identify, and to share such-and-such sonorous event that no one besides me, I am certain of it, has ever heard as I have.36

Szendy speaks of several issues here. There are interlocking desires to preserve his listening, to sign it as uniquely his own, to transmit it to others. He wants to inscribe it somehow, to write his listening down. Digging deeper, we find a notion in Szendy’s writing that listening is a process that creates something new. No perfect renversement at all, listening is rather a process of translation, in the sense used in the introduction to this study: a transformation which by its nature leaves some remainder, some trace of the listening subject’s engagement. Szendy wants to alter the musical text itself somehow, in order to convey his own experience of it.

Attempting to work out this dilemma, Szendy primarily locates the ability to write down a “listening” primarily within the practices of arrangement and orchestration: Liszt’s piano transcriptions of the Beethoven symphonies, or Webern’s pointillist orchestration of Bach’s Musical Offering, Szendy argues, allowed these figures to make their listening audible.37 “I love them more than all the others, the arrangers,” writes Szendy,

The ones who sign their names inside the work, and don’t hesitate to set their name down next to the author’s … [I]t seems to me that what arrangers are signing is above all a listening. Their hearing of a work. They may even be the only listeners in the history of music to write down their listenings, rather than describe them (as critics do).38

Szendy continues rhapsodically, describing the experience of listening to an arrangement of a piece he knows well: in this case, Leopold Stokowski’s orchestration of J.S. Bach’s Toccata and Fugue in D Minor (BWV 565), most frequently and famously performed by an organ soloist:

36 Szendy, Listen, 2–3.
37 See Szendy, Listen, 35–68.
38 Szendy, Listen, 35–36.
[W]hat fascinates me is the unique experience of listening to such an arrangement: my ear is continually pricked up, torn between the actual orchestration and the imaginary organ that keeps superimposing itself like the shadow of a memory. I hear, inseparably, both the organ screened by the orchestra and the orchestra screened by a phantom organ. That, I think, is the strength of every arrangement: we are hearing double. In this oscillating, divided listening, in this listening that lets itself be hollowed out by the endlessly traversed gap between the original version and its deformation in the mirror of the orchestra, what I hear in some way is that the original receives its own place from being put to the test of plasticity ... [I]n short, I am experiencing the test of elasticity, of the plasticity of a Toccata that I thought I knew. Not only am I continuously listening to Bach from the auditory perspective that Stokowski gives me of it (in the distance from which he lets me desire the original), but also, conversely, I cannot hear Stokowski without being struck by Bach’s organ that pulls me by the ear.  

Taken together, these three passages from Szendy are deeply suggestive for musicologists and theorists. Szendy calls this mode of “hearing double” plastic listening. The plasticity of a work, in this description, is its capacity to exist in multiple; to be pulled, or to pull the listener, back and forth between one version (such as that of the familiar organ) and another (Stokowski’s orchestration), only one of which is actually being heard. Plastic listening, to draw a synonym from later in Szendy’s book, is lacunary listening: listening across the “endlessly traversed gap.”

The first of the above passages throws down a figurative gauntlet: Szendy asks for a way to write his listening down, to transmit it directly to another person rather than simply describe it to them, and in doing so, to take ownership of it, to mark it as uniquely his. By necessity, then, Szendy’s ideal of listening creates something new, something separate from the piece itself, sets him apart from the model of structural listening, and from the linear

40 Szendy, Listen, 104.
pathway of Figure 4.3. Szendy locates this feeling of hearing two things simultaneously in his account of listening to an arrangement, to hear two things simultaneously: in this case, the original organ for which Bach’s piece was written, and at the same time, Stokowski’s orchestral version. Szendy’s description reinforces the expansion of the word “listening,” for which I have been arguing, from the sounding sonic material of music in time, to the combination of this with our mental representations of that music, with its possible continuations, and the silent intertexts with which it is in dialogue.

I’d like to argue, however, that arrangements are not the only musical situations that allow for plastic listening. The experience of double hearing that Szendy describes (i.e. between an arrangement and an original), for instance, is not very different than the experience of hearing two different performances of the same piece. Indeed, plasticity in music is ubiquitous, and attempts to deal with this complex phenomenology correspondingly finds their way—under a variety of names—into many branches of musical discourse. In “Music Theory, Phenomenology, and Modes of Perception,” David Lewin famously argues in favor of such plasticity when he cautions against

> certain false dichotomies in analytic discourse, dichotomies that arise when we implicitly but erroneously suppose that we are discussing one phenomenon at one location in phenomenological space-time, when in fact we are discussing many phenomena at many distinct such locations.\(^{41}\)

For Lewin, in other words, musical phenomena are by nature multifarious. As he demonstrates with his “perception model,” sketched out in the same essay, a single note or harmony may be interpreted in many different ways, and may enter into a variety of relationships with many other notes or harmonies, depending upon the contexts in which they are heard or studied.\(^{42}\) But Lewin’s famous locution does not stand alone. Melissa Hoag’s notion of “multiply directed moments,” which she describes as “moment[s] ... in which there is a prominent melodic disjunction that leads the listener to expect at least one, but often more than one, possible continuation,” seems deeply indebted to this aspect of Lewin’s thought.\(^{43}\) And recent analytical work by Diego Cubero argues for a sense of “blurring” in the music of Robert Schumann and Johannes Brahms, analogous to the frequently blurred landscapes of Romantic painting.\(^{44}\)

These three theorists, whether they couch their arguments in the terms of West Coast phenomenology, musical anticipation and expectation, or an analogy with visual art, all convey the same basic insight: that musical objects express multiple identities, and that Szendy’s “hearing double” (or perhaps even more) is a natural state of affairs. Even going beyond the study of individual pieces of music, scholars of musical intertextuality have demonstrated that

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\(^{42}\) On the perception model, see Lewin, “Music Theory, Phenomenology, and Modes of Perception,” 59–79.


connections are constantly being made among networks of loosely-connected works. “The frontiers of music are never clear-cut,” writes Michael Klein. “[B]eyond its framing silence, beyond its inner form, it is caught up in a web of references to other music: its unity is variable and relative. Musical texts speak among themselves.”

Hearings, then, accrue just as readily as do hermeneutic meanings.

In what follows, I argue both that this plasticity of listening is embodied in the *Formenlehre* of William E. Caplin and Hepokoski & Darcy in ways that it is not present in many other theories (such as Schenkerian analysis and Neo-Riemannian theory, as described above), and also that recomposition, in the hands of both sets of authors, is a way in which such listening is brought to the forefront of musical experience, by allowing such listening experiences to be written down, as Szendy desires. Their theories describe not a set of mechanical tools that can be applied simply to produce analyses, but rather an attempt to describe the way in which listeners—whether well-versed in music theory or not—play a role in actively (re)constructing a dialogic, intertextual process of listening. The notion that such listening is active (rather than passive, as in Subotnik’s critique of by-the-book structural listening) resonates with a passage from Walter Benjamin. Benjamin writes:

> Insight into the realms of the “similar” is of fundamental importance for the illumination of large areas of secret [okkulten] knowledge. Such insight, however, is gained less by demonstrating found similarities than by replicating the processes which generate such similarities. ... The very greatest capacity for the generation of similarities belongs to human beings.

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There are several significant points to be drawn out of this brief passage. The first is the importance of similarity, which may in this context be taken as a synonym for the phenomenon of plastic listening, as established by Szendy. More important than similarity itself, however, is Benjamin’s notion (italicized above) that similarities are not merely observed, passively, but rather are actively generated. In the arguments to follow, recomposition directly takes up the Benjamian role of “replicating the process which generates similarities”: it allows its users to enact the ways in which they bring their musical knowledge to bear in the act of listening. Following Szendy’s challenge, recompositions allow us to write our listenings down, crystallizing the knowledge embodied within a particular mode of theory, and offering it up for study.

Throughout this chapter, I will be especially interested in quick, fleeting impressions as an aspect of the listening process, especially for a listener with some facility in a given genre, repertoire, or body of theoretical knowledge. In these cases, the process of writing down one’s listening becomes important not only for making the rapid, intuitive impressions legible to others, but also to preserve them for oneself. As Benjamin writes,

> The moment of birth, which is decisive here, is but an instant. ... The perception of similarity is in every case bound to a flashing up. It flits past, can possibly be won again, but cannot really be held fast as can other perceptions. The perception of similarities thus seems to be bound to a moment in time. It is like the addition of a third element—the astrologer [Astrolog]—to the conjunction of two stars; it must be grasped in an instant. Otherwise the astrologer [Astronom] is cheated of his reward.47

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47 Benjamin, “Doctrines of the Similar,” 695–696. Note that Benjamin seems to conflate the terms “astronomer” [Astronom] and “astrologer” [Astrolog], or at least the kinds of
Here, Benjamin describes precisely the phenomenon which I wish to examine: “similarities” that spring up fleetingly between two pieces of music. Crucially, for Benjamin, and in keeping with his notion of production, a similarity emerges only through the action of a third-party observer: an astrologer in Benjamin’s argument, a listener in my own. Benjamin’s astrologer is the agent who, upon looking at a group of stars, perceives a constellation: a resemblance borne by a group of stars to some earthly or mythological object. And while Benjamin’s essay, a meditation on the origins of language, is concerned primarily with the modern loss of magical thinking, and what he perceives as the modern inability to understand how primitive peoples conceptualized the world, there is another insight to be teased out: the individuality and cultural contingency of the astrologer’s observation. While the western repertoire of constellations is firmly established—in the form of the 88 official constellations recognized by the International Astronomical Union—it is important to remember that before this standardization, many separate stargazing traditions existed throughout the ancient world: in Greece, in China, among the Mayans in Central and South America. Constellations are subjective similarities, not objective phenomena read from the stars like a text. To take this work they do, in the service of his point. An astronomer would be interested in identifying patterns of stars, an astrologer in making predictions or pronouncements about character, based on the position of our sun relative to those stars. This conflation seems to come about because he wants to emphasize the perceptual act of recognizing patterns in the stars, yet also position that perceptual act as mysterious, occult, and belonging to a bygone era. The original passage can be found in Benjamin, Gesammelte Schriften, Band. II, ed. Rolf Tiedemann and Hermann Schweppenhäuser (Frankfurt am Main: Suhrkamp, 1977), 206–207.

48 Note the resemblance to the semiotics of C.S. Peirce, which also explicitly locate the observer (the “interpretant”) within the semiotic network; see Nattiez, Music and Discourse, 5-8.
further: in Benjamin’s example, the astrologer is an *individual*, making observations based on personal experience. Producing similarities thus becomes something like the popular game of identifying shapes in clouds, or the famous Rorschach inkblot test.

It is that process which I wish to begin to explore in this chapter; but only begin, since it is far too large a question to address here. In asking how listening plays a role that is separate but complementary to music analysis, I gesture towards a larger question: how music theory can address the musical experiences of diverse listeners (with different backgrounds, levels of musical training or ability, experience, and so forth) in a deeper way than is commonly assumed, or perhaps more accurately, across a wider spectrum and a longer timeline. For that reason, I have mostly eschewed notions of an “ideal” or “educated” listener, and have chosen instead to focus on how we might either read or represent unique, individual, and (perhaps most importantly of all) *non-ideal* acts of listening. In much of what follows, I focus on the specific authors of individual theories of musical form; in the final section of this chapter, I turn the microscope—or perhaps telescope—on myself and my own musical experience.49

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49 Here, in attempting to say something about listening, I must acknowledge that my own conceptions, and those of my subjects, are filtered through the academic and social tradition that we share in common: that of Anglo-American music theory. As such, the insights I describe are formulated in the terms of that discourse, though I intend for this chapter to open out into a larger investigation of as a way of accessing informal and semi-formal musical experience.
II. Sonata Theory: Listening to Dialogic Form

Weighing in at more than six hundred pages, Hepokoski and Darcy’s Elements of Sonata Theory was published in 2006 after a long gestation. Aspects of the theory had already appeared in a series of “solo” essays by its two authors, and one of the theory’s defining features—its treatment of the medial caesura—had appeared in the pages of Music Theory Spectrum as early as 1997. After the book was published, its reception and extension took place not only in the usual reviews and review essays, but also in follow-up writings, primarily from Hepokoski. It is those follow-ups, to a great degree, that are of greatest interest to this study, for they extend and contextualize Sonata Theory beyond its technical details.

Sonata Theory’s ambitions are enormous—it is a wholesale rethinking of Formenlehre, the process of listening, and the operations of music theory itself. In Hepokoski’s words, Sonata Theory “blends close analytical description with the larger perspectives of continental...”

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criticism,” and its list of intellectual debts is correspondingly long.\textsuperscript{52} As listed in one of the book’s appendices, its influences run the gamut from literary genre theory, to phenomenology, hermeneutics, sociology, cultural materialism, and French post-structuralism.\textsuperscript{53} Very few members of this impressive roster of literary critics and philosophers, however, are actually cited directly; in most cases, Hepokoski and Darcy do not name representative books or essays.\textsuperscript{54} Excavating these sources fully would take an in-depth study all its own.\textsuperscript{55} Instead, I will focus primarily on the few areas of study which seem to have influenced Sonata Theory most directly.

One of the most important theoretical innovations of \textit{Elements of Sonata Theory} is its notion of \textit{dialogic form}. Dialogic form asserts that form is not a fixed, external aspect of music, but rather a process of negotiation between composer, work, listener, and context. As they write early in the book, “the composer generates a sonata—which we regard as a process, a linear

\textsuperscript{52} Hepokoski, “Sonata Theory and Dialogic Form,” in \textit{Musical Form, Forms, and Formenlehre}, 71.

\textsuperscript{53} The full list can be found in \textit{Elements of Sonata Theory}, 604.


\textsuperscript{55} As a possible model for such work, I have in mind Jonathan W. Bernard, “Chord, Collection, and Set,” in \textit{Music Theory in Concept and Practice}, ed. James M. Baker, David Beach, and Jonathan W. Bernard (Rochester, NY: University of Rochester Press, 1997), 11–50. In it, Bernard thoroughly reads through Allen Forte’s famously brief bibliography to \textit{The Structure of Atonal Music}, attempting to trace the antecedents to Forte’s theory.
series of compositional choices—to enter into a dialogue with an intricate web of interrelated norms as an ongoing action in time.” This dialogic process gives rise to many of the technical details of Elements, such as the notion of “defaults,” under which certain choices are considered to be more likely than others, and thus hermeneutically normative. Listening then becomes a matter of reconstructing this dialogue, of reacting to the choices made, and figuratively asking questions of the piece and its composer.

This central insight of Sonata Theory seems to rest primarily upon two of the interdisciplinary influences cited in EST’s appendix: reader-response theory and genre theory. Broadly speaking, reader-response theory analyzes how texts specify (or fail to specify) their ideal readers, and how those readers interact with texts in order to create meaning. Genre theory explores how artistic genres function as regulative guidelines, and how individual works engage with them. Taken together, these two discourses seem to suggest the core of the dialogic idea, or at least its sine qua non: insights from reader-response theory help to describe the interactions between listeners and composers, as mediated by the musical text, while genre theory suggests the relationships of both the listener and the composer to a broad cultural context (or contexts, given the strong possibility of significant temporal distance between the two figures, about which more later), within which any given piece of music is located. While other influences cited by Hepokoski and Darcy are also relevant to varying degrees

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(phenomenology comes especially to mind, as a way of more technically formalizing the relationships described in reader-response theory), these two seem to be the most important.\textsuperscript{58}

Through their distillation of genre theory and reader-response theory into their notion of \textit{dialogic form}, Hepokoski and Darcy place the listener at the center of their theoretical model. “Texts always take place on the level of their readers,” they assert, quoting literary theorist Wolfgang Iser.\textsuperscript{59} Thus, concerns of form and genre are not objectively observed, but rather reconstructed by the listener in a kind of dialogue with the music. Flying in the face of many strains of contemporary music theory, they write later in the book:

Coherence is not primarily a property of “the notes themselves.” On the contrary, making the piece, or any portion thereof, into an integrated whole is largely the task—and to a significant extent the creation—of the listener. Any consideration of the coherence problem that does not acknowledge this is inadequate. This takes us out of the empirical realm (scientific knowledge) and into that of hermeneutics (interpretation), a different mode of thinking altogether.\textsuperscript{60}

\textsuperscript{58} The other important factor which I am leaving out in the present discussion is hermeneutics. While hermeneutics is the professed goal of Sonata Theory, its presence is rarely felt within the book itself, which seems at times to be only a prolegomenon to a larger theory of musical hermeneutics. Specific issues of interpretation rarely appear, beyond the generic examples that are frequently mentioned within the sections describing the technical details of the theory: the notion that sonatas enact a ‘quest’ narrative (pp. 251–252), for example, or that minor-mode sonatas enact narratives of success or failure based upon whether they end in the tonic major, or the tonic minor (p. 306). Perhaps the clearest summary comes in the first appendix: “Music analysis,” Hepokoski and Darcy write, “is a first stage that cannot be dispensed with. In any discussion of music, insufficient or defective analysis undermines the legitimacy of broader interpretive claims ... all analysis should be directed toward the larger goal of a hermeneutic understanding of music as a communicative system, a cultural discourse implicated in issues of humanness, worldview, and ideology, widely constructed—the second stage of the process” (p. 603).


\textsuperscript{60} Hepokoski and Darcy, \textit{Elements of Sonata Theory}, 340.
In a pre-Elements of Sonata Theory essay that casts nineteenth-century symphonism as a prolonged reception of and response to Beethoven, Hepokoski expresses the core argument succinctly: the question to ask about a given piece or movement, he says, “is not the blunt, reductive one, ‘Is it in sonata form?’, but rather, ‘Are we invited to apply the norms of the traditional sonata in order to interpret what does (or does not) occur in this individualized work?’”\(^\text{61}\) In other words, the attribution of a given formal type is an act of intentionality: we understand a given piece through the lens of sonata form, drawing on our musical knowledge as a background for our interpretations. The dialogic method calls for us to situate individual pieces against a network of other known repertoire; as Frederic Jameson puts it, because of the presence of an existing canon of pre-given forms,

> We never really confront a text immediately, in all its freshness as a thing-in-itself. Rather, texts come before us as the always-already-read; we apprehend them through sedimented layers of previous interpretations, or—if the text is brand new—through the sedimented reading habits and categories developed by those inherited interpretive traditions.\(^\text{62}\)

In their detailed and wide-ranging survey, Hepokoski and Darcy attempt to excavate these “sedimented reading [or more precisely, listening] habits,” to reconstruct them as a systematic theory. But still, they argue, the objects of that theory are not inert on the page, but must be (re)constructed in real time, by a listener with a specific background knowledge.\(^\text{63}\)

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\(^{63}\) On this topic, see Iser’s notion of the “wandering viewpoint,” from which the reader synthesizes a whole image from her necessarily incomplete, fragmentary perspective. See The Act of Reading, 108–113.
Theory’s theoretical objects are intentional objects, imbued with meaning only through our interpretation when we hear them. We can thus say that Sonata Theory is not simply a model of a music theory that involves the listener; it is actually a theory of listening, a claim which many other methods of structural analysis do not make. To be sure, it is a theory of a very specific type of listening—listening for form, as expressed by the many signposts (such as the MC and EEC) that feature in the theory—which is undertaken by highly specialized listeners. It also comes with a very strong prescriptive edge, spelling out what the authors believe to be the proper way to listen for form in music, and for the expressive qualities that formal processes imply. Sonata Theory is thus a kind of methodological middle ground: its focus on the position of the listener separates it from primarily structural methods like Schenkerian and Neo-Riemannian theories, while its prescriptive message is generally foreign to cognitively oriented, descriptive theories of music perception developed by David Huron, David Temperley, Eugene Narmour, and others. No longer a mechanical function of tonal or cognitive laws, the listener becomes a subjective site for the production of Benjamin’s similarities. This opens up Sonata Theory as one venue—again, a very specific one—through which to explore the nature of listening, and how such listening may be written down.

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III. Formal-Function Theory: Listening to Ideal Types

William E. Caplin begins his 1998 treatise Classical Form with an overview of his much shorter list of intellectual debts. Two strains of musical thought come to the forefront. The first is Arnold Schoenberg’s version of Formenlehre, as presented in his Fundamentals of Musical Composition, and extended by his student Erwin Ratz in Einführung in die Musikalische Formenlehre. It is from these works that Caplin takes his notion of formal functions, which he credits directly to Ratz. Distinguished from what Lerdahl and Jackendoff would call grouping structure (the simple partitioning of a passage of music into a set of distinct, smaller units), Caplin’s formal functions describe “the more definite role that [a musical phrase or passage] plays in the formal organization of the work.” The model places musical segments into temporal relations with one another, identifying a set of conventional functions such as beginning, middle/main theme, conclusion, and even “before-the-beginning” (introductory) and “after-the-end” (coda). These formal functions and processes are often expressed in one or more of Caplin’s formal types, such as the period and sentence forms at the phrase level, or larger forms such as minuet and trio or sonata form. Finally, individual formal types are also

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67 Caplin, Classical Form, 9 and 15-16. As with Hepokoski’s contribution to the collection Musical Form, Forms, and Formenlehre, several years of hindsight allow Caplin’s essay in that volume to lay out his list of functions more concisely and completely than does his actual book; see “What Are Formal Functions?” 21–30.
frequently characterized by how their constituent parts enact a series of formal processes such as repetition, fragmentation, expansion or extension, and so forth.\textsuperscript{68}

While the Schoenberg/Ratz school of Formenlehre structures the book’s primary thesis, Caplin’s other influence helps to shape his theoretical approach more generally. Citing the same negative characterizations of formal theories that Hepokoski and Darcy mention—as overly rigid, abstract, and ignorant of the individuality of musical works—Caplin argues that his theory “establishes strict formal categories but applies them flexibly in analyses.”\textsuperscript{69} He credits this approach to the notion of an “Ideal Type,” which he traces to Carl Dahlhaus, who in turn finds it in the work of German sociologist Max Weber. “Ideal types,” writes Caplin, represent abstractions based on generalized compositional tendencies in the classical repertory. A category is not necessarily meant to represent the frequency of occurrence in a statistical sense: it is often the case that relatively few instances in the repertory correspond identically to the complete definition of a given category. Nor are categories meant to represent standards of aesthetic judgment, such that passages deviating from the norm are devalued in any respect.\textsuperscript{70}

Much of this passage echoes Max Weber’s most famous formulation of the ideal type, in the essay “Objectivity in Social Science and Social Policy.” Weber emphasizes its deeply hypothetical nature, writing

An idea type is formed by the one-sided accentuation of one or more points of view and by the synthesis of a great many diffuse, discrete, more or less present and occasionally absent concrete individual phenomena, which are arranged according to those one-sidedly emphasized viewpoints into a unified analytical construct (Gedankenbild). In its conceptual purity, this mental construct (Gedankenbild) cannot be found empirically anywhere in reality. It is a utopia. Historical research faces the task of determining in each

\textsuperscript{68} Caplin, Classical Form, 9.

\textsuperscript{69} Caplin, Classical Form, 4.

\textsuperscript{70} Caplin, Classical Form, 4. Here, surely, the reader will notice the resonance with Hepokoski and Darcy’s protestations over the aesthetic neutrality of their term “deformation.”
individual case, the extent to which this ideal-construct approximates to or diverges from reality.\(^\text{71}\)

Weber is clear here: ideal types do not actually exist. They are, in the language of Chapter One of this study, typological rather than taxonomic constructs; an ideal type is a utopia, a nolpace, which “cannot be found empirically anywhere in reality.” Historical research, for Weber, lies in evaluating a given ideal type against actual cases, determining the degree to which it accurately models some aspect of reality.

Carl Dahlhaus takes up Weber’s idea of the ideal type in several of his musicological studies.\(^\text{72}\) For Dahlhaus, an ideal type

is a hypothetical construction in which a historian assembles a number of phenomena which in historical reality are observed haphazardly and always in different combinations, and relates and compares them to each other in order to bring out the connection between them. It is then possible, in circumstances where only some of the phenomena are encountered together, and perhaps in combination with yet other elements, to discern the significative structure which allows the single detail to be understood and interpreted through the functional nexus of which it forms part.\(^\text{73}\)

Caplin’s methodology follows Dahlhaus and Weber on this account. As observed earlier, his theory of formal functions “establishes strict formal categories [i.e. ideal types] but applies them flexibly in analysis.” In so doing, Caplin’s mode of musical analysis becomes very much like Weber’s mode of sociological or political analysis: although few real-world cases will conform precisely with the ideal, the productive activity is in locating and explicating the


\(^{72}\) Phillip Gossett has collated and critiqued Dahlhaus’ various formulations of the ideal type in “Carl Dahlhaus and the Ideal Type,” 19th-Century Music 13/1 (1989), 49–56.

moments that do not line up: as Caplin puts it, “one can present the range of oppositions and identify which individual characteristics of the musical passage conform to, and depart from, the definitions of established formal conventions.”74 And by constructing his formal types out of a common pool of temporal (beginning/middle/end) and musical (presentation, continuation, etc.) functions, Caplin draws many different kinds of themes together into a single system that provides a means of interpretation for most themes in the Classical style, whether they fit an ideal type, or more likely, deviate from it.

In a very real sense, Caplin’s ideal types are completely compatible with Sonata Theory’s notion of dialogic form; indeed, Hepokoski and Darcy even cite Dahlhaus’ version of the idea early on in their treatise, although this invocation reads less as a positive methodological declaration than as an attempt to differentiate Sonata Theory’s extensive technical vocabulary from the rigid textbook models which they critique early in the book.75 Sonata Theory’s objects, for Hepokoski and Darcy, are hardly ideal types at all; they are sets of intertextual options with which composers and listeners engage, in parallel and not completely separate ways. The symmetry of the theory—composers engage in dialogue with genre norms as they make compositional choices, and listeners engage in dialogue with genre norms as they receive and decode those choices—indicates an attempt to forge a historical connection, however tenuous and imperfectly-defined, between the late eighteenth century and the early twenty-first. Music becomes, in their hands, a semiotic system not unlike the tripartition famously

74 Caplin, Classical Form, 5.
75 Hepokoski and Darcy, Elements of Sonata Theory, 8.
described by Jean-Jacques Nattiez: the poietic level (that of the composer), the neutral or immanent level (the musical text itself), and the esthesic level (the reception of a listener). In Sonata Theory, however, the tripartition becomes less a system of communication, and more a method of historical research: an attempt to account for, and reconstruct, the tradition of conventional tonal forms as they have been passed down. Pieces of music are not examined as neutral or immanent objects in themselves; rather, Nattiez’s esthesis happens when those musical texts are drawn into a network with other musical texts. This dialogic listening, for Hepokoski and Darcy, mirrors the process undertaken by the composer on the poietic side. Dialogic listening and analysis, then, become not just ways of decoding musical communication, but of reconstructing aspects of the composition process.

Caplin’s theory of formal functions, however, embraces the partial and necessary ahistoricism of ideal types as a method. There is no reference to reconstructing any aspect of the process through which Haydn, Mozart, or Beethoven might have composed the music under consideration, nor any claim that the insights generated have a claim to historical authenticity. The method, as both Weber and Dahlhaus establish, is one of observation, induction, and analysis. Describing Caplin’s work as ahistorical, however, is neither an insult,

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77 By this reconstruction, I mean primarily Hepokoski & Darcy’s notion of “defaults,” and the ways in which composers of the late eighteenth and early nineteenth centuries might have negotiated the compositional templates used by their peers and predecessors; see *Elements of Sonata Theory*, 8–13.
78 In fact, Caplin is explicit in his introduction that the theory being constructed is modern, and makes little reference to contemporaneous theories that might have been available to composers of the era, or that might be informed by similar ways of thinking about music. See *Classical Form*, 5.
nor does it render the theory incapable of commenting upon listening. In fact, looking past this slight methodological difference, we can begin to see how both theories can be positioned as models of listening. Caplin’s idea types play a role very similar to the dialogic exchanges which underlie Hepokoski and Darcy’s Sonata Theory: both describe a process by which a piece of music under consideration is compared to an exemplar, or set of exemplars, not currently being heard. For Hepokoski and Darcy, that set of exemplars is a set of real pieces of music that exhibit relevant formal characteristics. For Caplin, the exemplars are a limited set of ideal types: period, sentence, various hybrids, etc. While only the former is a literal intertextuality, the latter operates in virtually the same way: in both contexts, pieces of tonal music are encountered, to some degree, as “always-already-heard” (to paraphrase Jameson). To listen in this manner is precisely what Szendy describes with his notion of double or plastic listening: hearing across a “gap” between the music at hand and prior knowledge or memory.79

IV. Recomposition in Sonata Theory

How might we describe such a process of hearing in real time, or at least as a unique event? In what remains of this chapter, I will argue that recomposition is not only used by both sets of authors (to varying degrees) in order to demonstrate some of the tenets of their theories, but that it also yields insights into the processes of listening employed by these authors, and the kinds of listening which their theories are intended to produce in readers. Caplin’s Classical Form, and its recent textbook revision, Analyzing Classical Form, are filled with

79 See Szendy, Listen, 35–37.
recompositions. Sonata Theory uses them far less frequently. Given the methodological affinities that I have demonstrated, however—primarily their relationship to Szendy’s notion of plastic listening—I argue that the recompositional techniques used in one theory may be brought to bear upon the other, and vice versa. Finally, after examining some suggestive examples of recomposition from Caplin and Hepokoski & Darcy, I will carry out a recompositional experiment of my own, in order to demonstrate the technique’s relevance for the study of listening.

We will begin with a recomposition, from Hepokoski. In one of his later, post-Sonata Theory essays, on Beethoven’s Sonata in D Minor, Op. 31, No. 2 (“Tempest”), he uses recomposition to prove a brief theoretical point. Hepokoski claims that m. 41 of the first movement, pictured in its context in Figure 4.5, presents “the most subtle analytical challenge of the exposition.”

This challenge centers on the identification of a medial caesura (MC, in Sonata Theory’s parlance), the complete break that precedes the secondary theme (S). It is a crucial aspect of Sonata Theory’s approach to music; lacking a medial caesura, a movement must be considered a continuous exposition, that is, a sonata with only a single theme.

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80 James Hepokoski, “Approaching the First Movement of Beethoven’s Tempest Sonata Through Sonata Theory,” in Beethoven’s “Tempest” Sonata: Perspectives of Analysis and Performance, ed. Pieter Bergé (Leuven: Peeters, 2009), 194. Singling out any given moment as “the most subtle analytical challenge” is a bold statement, given the amount of ink that has been spilled in the effort to understand how the piece works. In addition to the remaining essays in the Pieter Berge collection, Carl Dahlhaus analyzes the first movement in Nineteenth-Century Music, and Janet Schmalfeldt devotes a chapter to the work in her In the Process of Becoming.

81 See Hepokoski and Darcy, Elements of Sonata Theory, 23-50.
The medial caesura is generally a cadence that has been “rhythmically, harmonically, or texturally reinforced.” This reinforcement can sometimes last for several measures after the cadential moment itself (as in a “dominant-lock,” which prolongs the cadential harmony), until either a moment of literal silence, or a merely rhetorical break filled with, some kind of “caesura fill,” such as a held voice or a generic scalar ascent or descent. The situation in the *Tempest*’s first movement, however, is somewhat ambiguous. As Hepokoski writes,

From one perspective bar 41 initiates a classic dominant-lock of several bars that, within the style, would be expected to drive to a medial caesura (MC) followed by a secondary theme (S)—something that fails to occur here. From another, bar 41 might be grasped as a problematically articulated v:HC MC (or at least a dominant arrival) and bar 42 as an unusually frantic onset of S-space.

Hepokoski goes on to argue that the former option—“a classic dominant lock”—might be the more preferable one within Sonata Theory. He does not explain why, but this is most likely because having a medial caesura is far more likely—a “higher-level default”—than lacking one. And were the second theme to begin with the pickup to m. 42, its key area, E Major, would be extremely unusual, and its fragmentary thematic content out of character for a secondary theme. According to normative expectations, E Major should be the dominant of the dominant (A Major), and neither of those two options is actually the first-level default for a

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84 Hepokoski, “Approaching Beethoven’s *Tempest* Sonata,” 194.
85 Hepokoski and Darcy write: “[The two-part exposition with a medial caesura] is the format most frequently employed by most composers of the second half of the eighteenth century. Hence when one confronts any sonata form from this period, the most reasonable initial expectation would be that one is about to encounter a two-part exposition.” See *Elements of Sonata Theory*, 23.
minor-key sonata, which would be F Major (III). In this case, A Major (V) would be the second-level default.

Figure 4.5: Beethoven, Piano Sonata in D Minor, Op. 31, No. 2, I, mm. 35-61

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86 See Elements of Sonata Theory, 310–317.
Identifying a medial caesura is not a purely technical exercise, however; along with the harmony, the argument for the potential dominant-lock and medial caesura has an interpretive side: the music beginning in m. 41, Hepokoski writes, is “anxiety-ridden” and “manic”; its character is that of an energy-gaining transition (TR) rather than an S-theme. The fast-paced, four-measure E Major motive in mm. 42–45 is repeated in A Minor in mm. 46–48, eventually landing back in E in m 49. And the implication of an A Minor tonic (with E as V/v) carries hermeneutic implications for Sonata Theory: Hepokoski hears “the ensnared ... protagonist, registering full panic, caught in the unyielding grip of the negative V/v.”

Ultimately, however, Hepokoski concludes that the Tempest sonata’s first movement lacks a medial caesura. He demonstrates his assertion in the form of a recomposition. Given the strongly implied dominant-lock, he argues, the passage clearly could have articulated an MC at the end of the passage in question, which would have led to an “unmistakable” S-theme. This is precisely what he depicts in his recomposition, which is reproduced here as Figure 4.6.

Of this recomposition, Hepokoski writes:

[Figure 4.6] provides a hypothetical illustration (which I have devised as a foreshadowing of what would take place at the parallel point in the first movement of Symphony No. 2) of how easily [a medial caesura] might have been done from bar 52 onward. I have recomposed bar 56 as a normative v:HC MC-moment (notice the characteristic triple-accents provided by the downbeats of bars 54–56); bar 57 and its upbeat provide “juggernaut” caesura-fill (as in the Second Symphony, b. 72); and the S-character of bars 58ff. is self evident. Again: had something along these lines taken place in Op. 31/2, no analysis would ever have suggested that bar 42 initiated a secondary theme.

87 Hepokoski, “Approaching Beethoven’s Tempest Sonata,” 195.
Hepokoski’s recomposition is an effort to prove a negative by disproving its opposite, in counterfactual terms like those explored in Chapter Three: “there is no medial caesura here,” Figure 4.6 says, “because if there were, it would go like this.”

![Figure 4.6: Hepokoski’s recomposition of Beethoven, Sonata in D Minor, Op. 31, No. 2, I, mm. 52–61, showing potential medial caesura, followed by a secondary theme inspired by Beethoven’s Second Symphony.](image)

Figure 4.6: Hepokoski’s recomposition of Beethoven, Sonata in D Minor, Op. 31, No. 2, I, mm. 52–61, showing potential medial caesura, followed by a secondary theme inspired by Beethoven’s Second Symphony.

Given the professed source from which Hepokoski draws his hypothetical second theme, it is possible to parse nearly every note of the recomposition, as I have done in Figure 7. Along with omitting the (admittedly sparse) left hand part, Hepokoski’s recomposition reproduces only a single measure from the actual Tempest sonata verbatim: measure 52’s descending E-dominant-7th arpeggio. Hepokoski repeats this arpeggio a third lower in his measure 53. A somewhat new figure in mm. 54–55 (based on the E-F-\* alternation in mm. 69–70 of the Second Symphony) continuing to emphasize E (the dominant-lock which Hepokoski identifies), before the passage reaches the medial caesura itself (a v: HC MC on E) on the

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89 Hepokoski, “Approaching Beethoven’s Tempest Sonata,” 195.
downbeat of m. 56. Mm. 56 and 57 comprise the caesura-fill which papers over the usual gap, filling the time from the caesura itself to the beginning of the secondary theme in m. 58.

While Hepokoski notes that his imagined S-theme is based on a corresponding moment in in Beethoven’s Second Symphony, only mm. 58 and 59 are borrowed directly from the other piece, and not without a number of modifications, as shown in Figure 4.7. The theme has been shifted into the minor mode, its characteristic arpeggio has been reduced from an octave to a fifth, and its double-dotted rhythm has been “smoothed out.” The brief pseudo-quotation gives way to a measure from earlier: Hepokoski incorporates a piece of the “dominant-lock” music (from m. 54 of the recomposition) into the second theme itself, leading finally into the half-cadence that articulates the MC itself.

![Diagram of thematic relationships](image)

**Figure 4.7:** Sources of Hepokoski’s recomposition of the “Tempest” sonata’s potential MC
Examining the recomposition more closely grants us some access to Hepokoski’s thought process, or his listening, in Szendy’s sense. As with many of the recompositions we have encountered, several decisions are being elided, and these elisions help to reveal the contours of Hepokoski’s listening. First and most obviously, Hepokoski’s recomposition is in only a single voice, yet draws its material from a variety of sources: the left and right-hand parts are taken from the “Tempest” itself, along with excerpts collected from various moments in the cello, flute, and bassoon parts from the Second Symphony. In the absence of a bass line or any annotations, we are left to infer elements of the harmony from what Hepokoski has written, filling in the gaps (such as the identification of a nascent period, and the likelihood that A-G♯ in m. 61 comprises the 4-3 in a cadential 6/4 above E) with a background knowledge of tonal theory.

Hepokoski also positions the “Tempest” sonata in relation to Beethoven’s Symphony No. 2, drawing the latter into the discussion as an explicit intertext through which to imagine how the “Tempest” might have gone. Putting the two works directly in dialogue with one another is one of the more direct invocations of Sonata Theory’s guiding principle. But, why these two? One is symphonic, while the other is for piano, and the characters of the two pieces are very different. On any level save the largest scale, there are few obvious parallels between them. They are both in sonata form, share parallel keys (“Tempest” is in D minor, while Symphony No. 2 is in D Major), and were written at roughly the same time—“Tempest” is Op. 31, No. 2, while Symphony No. 2 is Op. 36, and both are thought to have been composed during 1801
The structural similarities which Hepokoski draws together—the medial caesura and second theme (actualized in the symphony, while merely potential in the sonata)—could be found in other pieces written in compatible keys. Moreover, because of their contrasting major and minor keys, Hepokoski’s treatment of the same theme has different consequences for each. In the second symphony, a secondary theme in A Major (V) is highly conventional: it is the first-level default, and is thus interpretively unremarkable. A Minor (v), however, is much less likely, even in a minor-mode sonata form. According to Sonata Theory, a minor theme carries interpretive baggage, implying a negative space or negative outcome.

It is therefore highly significant that when he borrows the second theme from the second symphony, Hepokoski chooses to alter its mode from major to minor. A major-mode theme would have been conventional, hinting at a desirable and “positive” tonal outcome. The transposition to minor, however, is considered in Sonata Theory to be “a doggedly negative tonal choice,” that produces “a chillingly dark, fatalistic, punishing, or pessimistic [tonal] layout.” And although imagining such a negative secondary theme is Hepokoski’s own choice, it seems to reflect back on his analysis of earlier moments in the piece; recall the passage quoted earlier in which he pictures the imagined protagonist of the sonata “ensnared ...

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90 Beethoven spent the summer of 1802 in Heiligenstadt, outside Vienna, writing the eponymous “Heiligenstadt Testament” in October of that year. In Grove Music Online, Joseph Kerman, Alan Tyson, and Scott Burnham speculate that it was during this time that he finished the Second Symphony, and may also have completed the first two sonatas of Op. 31.
91 See Hepokoski and Darcy, Elements of Sonata Theory, 16.
93 Hepokoski and Darcy, Elements of Sonata Theory, 314.
registering full panic, caught in the unyielding grip of the negative V/v."\(^94\) While an argument could be made that a minor second theme follows logically from the tone of the music that precedes it, the evidence from Hepokoski’s own intertext contradicts this: although the second symphony’s transition seems especially minor (listen, for example, to the F/D augmented sixths in mm. 69 and 70), Beethoven nonetheless pivots quickly and writes a sunny, major-mode theme only a few measures later. Hepokoski thus uses his recomposition to recruit a well-established interpretive principle from Sonata Theory in order to strengthen his written arguments about the piece.

Using Hepokoski’s recomposition to examine his listening might yield further results that are almost psychoanalytic in their scope and subtlety. The medial caesura is one of the central features of Sonata Theory, and—as I have argued throughout this dissertation—it is unsurprising that a recomposition (otherwise somewhat rare for Hepokoski) should arise here. In fact, the framing of the medial caesura within Sonata Theory practically demands it. The MC is conceived as the *sine qua non* of the two-part exposition form; without one, a piece must be labeled a continuous exposition. Even so, it is not truly a singular moment: it arises in context, as part of an extended tonal process which often includes modulation to a secondary key area and an extended “dominant lock” along with the cadence and rhetorical pause that constitute the MC proper.\(^95\) In keeping with Sonata Theory’s general emphasis on the evaluation of significant “signpost” events (including not only the MC, but also the Essential...

\(^94\) Hepokoski, “Approaching Beethoven’s *Tempest* Sonata,” 195.

\(^95\) Hepokoski describe the five-step process of articulating a medial caesura in *Elements of Sonata Theory*, 30–34.
Expositional Closure [EEC] and Essential Structural Closure [ESC]), this entire process is made to rest on the shoulders of the comparatively brief MC itself, which forms the keystone of Hepokoski and Darcy’s arguments about the differences between continuous expositions, two-part expositions, and structures such as the trimodular block. So while the MC is an easily identifiable moment—often clearly present or absent as a tangible silence or a rhetorical pause (in the case of caesura-fill)—it is synecdochic of a much larger and less easily summarized series of tonal events. In a way, then, Hepokoski has no choice but to extensively recompose the Tempest sonata in his analysis; not doing so would be tantamount to admitting the musical insignificance of the medial caesura: if one were able merely to add or fill in a beat or two of silence, the MC would lose its totemic power to dictate the course of both large spans of music, and voluminous intradisciplinary debates.

Such a crucial aspect of the theory can also be read as a site of anxiety, and the likely home of musical ideas that are difficult to articulate directly. For instance: the passage borrowed from Beethoven’s Second might also hint at a resemblance not made explicit in Hepokoski’s description. The interpolated measures from the symphony are extremely similar to one of the “Tempest” sonata’s own themes, which begins in m. 21, shown in context in Figure 4.8. Like

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96 See Chapters Three and Four of *Elements of Sonata Theory*. The MC also does much of the heavy lifting in Chapter Eight, on “S-Complications,” pp. 150–179.
97 Such as colloquy on secondary themes in *Music Analysis* 35/1 (2016), cited above.
98 The nature of this theme has been the source of much of the theoretical controversy surrounding the first movement. Janet Schmalfeldt convincingly labels it “MT → Transition”; see *In the Process of Becoming*, 37–41.
both of the other themes, this one features an octave-spanning arpeggio—in minor—which unfolds across one full measure and a downbeat.

![Musical notation](image.png)

**Figure 4.8**: “Tempest” Sonata, mm. 18-26: “Main Theme → Transition,” and preceding measures.

Presenting a recomposition with an imagined second theme that is actually so close to the first theme might thus reveal the connection between these two otherwise disparate pieces. While Hepokoski’s argument is focused on a very specific moment from the Second Symphony, drawing that piece’s harmonic and thematic structure into an intertextual relationship with the “Tempest” sonata, the original link might also have arisen due to the simple resemblance between m. 21 of the “Tempest,” and the Second Symphony. In other words, the precise contours of Hepokoski’s theoretical point can be informed not only by a particular kind of dominant-lock and the potential medial caesura that it foreshadows, but as part of a larger intertextual relationship between the two pieces, which his recomposition helps to clarify and deepen. As Figure 4.9 demonstrates, Hepokoski’s recomposition even fills in the middle step in a transformational process by which the first theme of the Tempest sonata relates to the
second theme of the Second Symphony. This resemblance is the repressed term in his treatment of the “Tempest” sonata’s lack of a medial caesura: too obvious to be ignored, yet never explicitly acknowledged in the text. Hepokoski’s recomposition thus speaks volumes more than do his words alone, hinting at the complex and non-linear processes of listening which a dialogic approach to musical form can entail.

Figure 4.9: Process of rhythmic and modal transformation between Beethoven, Symphony No. 2 (second theme) and “Tempest” sonata (first theme), mediated by recomposition

V. Recomposition and Formal Function

Hepokoski’s recomposition is a methodological bridge between Sonata Theory and form-functional theory. Recompositions are few and far between in Sonata Theory, yet Hepokoski’s treatment of Beethoven’s “Tempest” sonata shows us a great deal about how listening operates within the model. In attempting to make sense of an ambiguous moment in the piece,
Hepokoski puts it directly in dialogue with another work, the Second Symphony. But this is no mere side-by-side comparison; Hepokoski writes the dialogue out in musical notation for his readers to examine and listen to. In doing so, he makes his own process of listening heard.

While the centrality of dialogic form to Sonata Theory means that the writings of Hepokoski and Darcy are filled with descriptions of the implicit dialogues between listeners and pieces of music, the presence of a listening subject is more difficult to locate in Caplin’s work. Unlike Hepokoski and Darcy, Caplin leaves no clear clues in the (much shorter) methodological bookends to his major study, *Classical Form*. But the notion that analysis is at its core an act of *listening*, which in certain ways goes beyond the mere examination of the score, can be found in various places, and I argue that it is actually an essential aspect of his work.

In brief, Caplin’s theory of formal functions relies on the listener in two primary ways: its emphasis on time and temporality, and its use of ideal types. The former constitutes a kind of folk phenomenology: as noted earlier, individual (small-scale) formal units are categorized initially by whether they play the role of a beginning, middle, or end, or even a “before the beginning” or “after the end.” This phenomenology collects a series of musical features (such as the quality of melodic “opening up” that Caplin locates in an introductory basic idea) and boils them down into a set of general temporal experiences, filtered through layers of convention and experience. Caplin writes:

> Appropriate to its function as the initiator of a theme, a basic idea often projects the character of a melodic “opening up.” (By contrast, a cadential idea generally results in a melodic “closing down.”) An opening-up quality is created most simply by a distinctly ascending gesture. A sense of melodic opening can also be achieved by immediately
sounding (and subsequently embellishing) the third or fifth scale degrees, thus motivating an eventual descent to the tonic at the cadence.99

While he never precisely articulates a theory of listening, Caplin’s treatise is full of moments like this, which seem almost to add up to one: moments in which small musical details are read as communicating specific information to a listener. Caplin’s temporal semiotics are based on convention: there is nothing inherently, objectively introductory in a melodic ascent or a flourish centered on scale degree 3, by itself. The form-functionality arises in our interpretation of that feature, against a backdrop of known, previously heard examples: in other words, a dialogic interpretation.100

Caplin’s focus on temporality and its role in musical listening is also integral to his description of “real” versus “notated” meter. The notion of “real” meter arises, for Caplin, “when the composer adds or deletes bar lines to facilitate reading the score of movements whose tempo is very slow or very fast.”101 He represents this mismatch with a fraction: an extremely slow movement might be labelled \( R = 1/2N \) (where \( R \) is a “real” measure and \( N \) is a notated one); while \( R = 2N \) indicates an extremely fast tempo, in which it takes two notated measures to constitute a single real one. On this phenomenon, Caplin writes:

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99 Caplin, *Classical Form*, 37. Following closely after this description, Caplin notes that in a musical sentence, the immediate repetition of the basic idea (often separated by a very brief pause) notifies the listener that the previous subphrase has ended. This theoretical description dovetails with a trick frequently taught in aural skills classes, in which undergraduates are taught to distinguish between a sentence and a period by listening for the presence (in a sentence) or absence (in a period) of an immediate b.i. repetition.

100 Caplin’s description seems also to betray a Schenkerian orientation: he describes both an initial ascent (Anstieg), and a descent from either 3 or 5 to the tonic as major features of musical structure.

101 Caplin, *Classical Form*, 35.
What a listener perceives as “one full measure” of music does not necessarily correspond to the notated barlines of the score. We thus need to distinguish between a real experiential measure, and a notated measure.¹⁰²

This brief passage betrays several viewpoints that are worth exploring. First, Caplin uses the word real in connection with the listener’s experience, and in contrast with what is written on the page (which is, we presume, less real). This assertion tells us a great deal about Caplin’s view of his own project as one concerned with how we perceive Classical music, not simply how we analyze and annotate its scores; a juxtaposition between the senses of hearing and sight that privileges the former and minimizes the latter. Secondly, the “‘one full measure’ of music” which a listener perceives is itself a kind of ideal type: a default template against which the music currently being heard is compared, or a schema through which it is interpreted.

Finally, although he does not do it himself, Caplin’s description of “real” versus “notated” meter lends itself readily to a simple representation by recomposition. His annotations for real meter (R = 2N, etc.) are essentially formulas by which the original notation of, say, Mozart and Beethoven (the details of which, he seems to argue, were chosen simply for their convenient legibility), can be converted into something more phenomenologically authentic, and which corresponds to our experience—our listening. Figure 4.10 shows two of Caplin’s examples of real vs. notated meter. In Figure 4.10a (the beginning of the Adagio from Mozart’s Piano Sonata in F Major, K. 332), Caplin argues that the real meter is R = 1/2N, because Mozart writes a fully featured sentence in only four measures. The opposite is true at beginning of Beethoven’s Fifth Symphony (Figure 4.10b). The famous (and frequently taught) sentence

¹⁰² Caplin, Classical Form, 35.
takes a full sixteen notated bars, so $R = 2N$; each of its constituent functions unfolds across four bars instead of two. While Caplin does not recompose these examples, he may as well have done; his simple and direct argument is that, despite how they are written (which he chalks up to convenience), they are heard in terms of “real” measures. Figures 4.10c and 4.10d show my own rebarrings of Caplin’s examples in terms of real measures, representing how they might be heard.

**Figure 4.10a**: Mozart, Piano Sonata in F Major, K. 332, ii, mm. 1-4 as written (annotations from Caplin, *Classical Form*, 36)

**Figure 4.10b**: Beethoven, Symphony No. 5 in C Minor, i, mm. 1-16 (annotations from Caplin, *Classical Form*, 36)
Figure 4.10c: Rebarring of Mozart, K. 332, i, mm. 1-4, showing Caplin’s “real” meter

Figure 4.10d: Rebarring of Beethoven, Symphony No. 5, i, mm. 1-16, showing “real” meter

The phenomenon of real meter as an ideal type by which we perceive pieces of misleadingly notated music brings us back around to my assertion that Caplin’s work on formal functions is, at its core, an implicit theory of listening. “A good deal of the aesthetic
pleasure that we gain from listening to this music [i.e., Haydn, Mozart, and Beethoven],” writes Caplin, “involves the interaction of our (often unconscious) understanding of functional norms with their particular manifestations in a given work.”¹⁰³ Such a sentence would fit perfectly into one of Hepokoski and Darcy’s descriptions of dialogic form, for it places the interpretation of music squarely within the realm of the listener’s experience and background knowledge, and it locates interpretation (and aesthetic pleasure) in the liminal space between what is being heard, and what was previously known. The significant difference is that, for Caplin, these unheard exemplars are not existing pieces of music, but are themselves “abstractions based on generalized compositional tendencies.”¹⁰⁴ Ideal types are the figurative grid lines on which Jameson’s “always-already-read” texts are organized.

Like Hepokoski, Caplin develops a vocabulary to describe the relationships between actual pieces and ideal types. Non-conforming pieces are known as deviations, a term which, even if equally as problematic as Sonata Theory’s “deformations,” has drawn less controversy. Caplin’s deviations are primarily metric in nature: they usually involve phrases that come across as too long, too short, or too asymmetrical. Such deviations are often described as extension (in which additional “units” of similar material are added in order to extend a formal function, such as additional fragmentations); expansion (in which a single formal unit

¹⁰³ Caplin, *Classical Form*, 3.
¹⁰⁴ Caplin, *Classical Form*, 5.
is lengthened in its rhythmic duration); and compression (in which formal units are truncated).\textsuperscript{105}

Caplin frequently expresses the relationship between a given piece of music and the ideal type that structures it through recomposition (which he often calls “reconstruction”). These recompositions recur throughout his treatise \textit{Classical Form}, and the recent textbook based upon it, \textit{Analyzing Classical Form}. For example, as shown in Figure 4.11, he demonstrates how a short gesture might be removed from the opening measures of the third movement of Mozart’s Piano Concerto in F, K. 459, in order to align the opening phrase with a prototypical period. The concerto’s opening, Caplin argues, is a deviation from an underlying eight-measure period by means another form of deviation: interpolation, which he describes as “musical material that is inserted between two logically succeeding formal functions, yet seeming not to belong to either function.”\textsuperscript{106} He identifies two complementary interpolations in K. 459: in the antecedent phrase (mm. 2-3) and in the consequent (mm. 7-8).\textsuperscript{107}

In his treatment of this phrase in \textit{Classical Form}, Caplin presents two different arguments, and two distinct ways of listening. In one sense, “both interpolations can easily be excised in

\textsuperscript{105} On Caplinian deviation in general, see \textit{Classical Form}, 47-48 and 55-58. On the easily confused techniques of extension and expansion, see their initial definition on pp. 20 and 21, as well as Caplin’s glossary entries for them, p. 254. On the controversy over Hepokoski and Darcy’s use of the word “deformation,” see Joseph Straus, “Normalizing the Abnormal: Disability in Music and Music Theory,” \textit{Journal of the American Musicological Society} 59/1 (Spring 2006): 113-184.

\textsuperscript{106} Caplin, \textit{Classical Form}, 55.

\textsuperscript{107} An even more dramatic example of this process was discussed in Chapter One of this study: see the passage on Caplin’s analysis of the minuet from Mozart’s Symphony No. 40 in G Minor, in \textit{Classical Form}, 39-40.
order to create a normative eight-measure period." Caplin demonstrates this with the recomposition shown in Figure 4.11b: removing the two interpolations (each of which straddles the second half of one measure and the first half of the next) yields a more normative structure, albeit one whose formal functions are somewhat unbalanced: the basic idea lasts only a measure and a half, while the contrasting idea stretches across two measures, closing on a weak beat in order to make room for the chromatic “lead-in” to the consequent (in which a similar imbalance exists).

Figure 4.11: Mozart, Piano Concerto in F Major (K. 459), iii, mm. 1-9, shown a) as written, and b) as “reconstructed” by Caplin. Cf. Caplin, Analyzing Classical Form, 128–128.

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108 Caplin, Classical Form, 55.
Here, as with most other examples of recomposition in this study, it is notable that Caplin resorts to notation in order to prove his point. It would be one thing to label the measures in question “interpolations” and move on; it is quite another to re-write the passage in question as if they were not there. Doing so is certainly an attempt to “prove” the efficacy of “interpolation” as an analytical device: the term’s first introduction in Classical Form is here accompanied by a demonstration that the passage of Mozart can have musical integrity without the two chromatic figures that Caplin has excised. And composing out the argument in notation makes it not only visible but audible: one can listen to the passage in question in order to test the argument. But looking at Figure 10b from another angle, we might read it evidence of how Caplin himself hears the passage. On a certain level, both examples from Figure 4.11 are annotated in such a way that they become streams of information: basic idea,
repetition of that idea, fragmentation, and eventual cadence. Every pitch is accounted for in a process of listening that, in Caplin’s own words from before, “involves the interaction of our (often unconscious) understanding of functional norms with their particular manifestations in a given work.” Given the non-assimilability of the interpolations within the vocabulary of formal functions, it stands to reason that one listening carefully through that particular lens simply brackets them off as unimportant interludes; it is almost as if they are not even there. Figure 11b represents what this mode of listening might be like.

Viewed from this perspective, Caplin’s recomposition of K. 332 is not merely an argument made in notation but another instance of a written-out past listening, as Peter Szendy wistfully yearns for. As I hinted before, Caplin does not fully commit to his reductive recomposition. Giving a more careful consideration to the theme’s melodic and motivic contours, he makes a lengthy confession that things are not as simple as they seem:

Closer examination reveals that the interpolated lines play a more important role in articulating formal functionality than might originally be thought. Note, first of all, that the basic idea [mm. 1–2] has a strong cadential character: after the initial leap from E up to G, the melody “closes down” to the tonic scale-degree while being supported by a V–I progression. The interpolated figure then helps project an “opening up” of the melodic process by filling in stepwise the E to G leap [mm. 2–3], thus reasserting the initiating character so abruptly cut short by the end of the basic idea. The contrasting idea brings a further stepwise ascent to the high A, at which point the melody suddenly drops down for the half cadence [m. 5]. The gap left hanging by the high A is then filled in by a short lead-in [m. 5], which inverts the chromatic line of the earlier interpolation. Following the restatement of the basic idea at the beginning of the consequent, the interpolated figure restores the high A abandoned at the end of the antecedent and continues the line, completing it up to C [mm. 7–8]. The new contrasting idea begins with C (now an octave lower) and once more carries the stepwise ascent up to A, which then resolves back to G before leaping down again for the final cadence. Thus, rather than being merely

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109 Caplin, Classical Form, 3.
incidental, the interpolations significantly participate in important melodic processes within the theme.\textsuperscript{110}

This admission—a far more detailed explanation than most of Classical Form’s examples receive—is strange in the context of the book. Caplin seems to backpedal from his earlier assertion that “both interpolations can easily be excised,” and from the implicit but unmistakable argument that Figure 4.11b proves their superfluousness. Figure 4.11b has made this particular argument audible, but it seems that its author himself has found it wanting. This hints that the passage can be heard in more than one way, theoretically speaking, and that a single interpretation based on formal functions alone is insufficient. Caplin thus deconstructs the “straw listener” which I constructed a few pages ago, one who shuts their ears when confronted with musical material that cannot readily be labelled.

But even though he has partially rejected it, Caplin leaves his recomposition in the book; indeed, he even re-printed it in his textbook adaptation, fifteen years later.\textsuperscript{111} Figure 4.11b is thus left, seemingly intentionally, as a record of this previous and preliminary way of hearing. Does his recomposition thus represent an important step in his experience of the passage? Its caption certainly reads that way, swerving as it does from the confident excision of the interpolated passages, to a far more subtle account of the linear melodic processes in which they participate. If this is the case, it gives us clues to his working method, to how he himself encountered the music when writing the book: a progression from an initial impression

\textsuperscript{110} Caplin, Classical Form, 55–57. Measure numbers added for clarity.

\textsuperscript{111} See Caplin, Analyzing Classical Form, 55. In fact, Figure 4.11 came from the later book rather than the treatise because, while Classical Form reduces nearly all of its examples to a single staff, the textbook preserves both treble and bass in its transcriptions.
(“hmm, this doesn’t sound right, something is unbalanced”), or perhaps more cynically, a search for clear examples (“Aha! Here’s a good deviation!”), to a more nuanced impression: “These formal interpolations have a melodic role to play after all.” Most likely, we will never know; I can only suggest that the moment is one of tension or anxiety, as was the Tempest Sonata’s illusory medial caesura for Hepokoski.

Recompositions like those we have encountered in these Formenlehren—Hepokoski’s, Caplin’s, and even my own to come in a moment—vividly enact Benjamin’s process of producing similarities. Benjamin, we recall, argues that insight into similarity “is gained less by demonstrating found similarities than by replicating the processes which generate such similarities.”¹¹² The recompositions we have studied, then, are interesting for the comparisons that they draw between two different pieces of music, or between a piece of music and a prototype, but are perhaps even more so for the insights they grant us into the process by which those similarities come about. Caplin’s recomposition of Mozart’s K. 332 sonata, for example, does not merely allow us to observe how he, or at least one well-versed in his theory of formal functions, might hear a piece of music as an intertextuality with silent, generic intertexts, and how attention is consequentially drawn to certain features. Rather, it also lets us observe him working out the precise nature of the ten-measure opening period’s deviation from its expected eight-measure prototype, and from that process (or perhaps before it, in anticipation) adding a new theoretical concept (interpolation) to his treatise.

As an expression of a potential hearing, recomposition materializes the aspects of listening that go beyond the actual sounding music, emphasizing the degree to which listening (in Roland Barthes’ sense, by which it is opposed to animalistic hearing) is bound up not only with sounds in time, but also with the cognition of those sounds, and the associations which they recall, or perhaps create.¹¹³ Recomposition takes the perception and *production* of similarity—the drawing together of disparate musical ideas—that lies at the center of musical experience, and spatializes it into notation. By turning the most fleeting similarities into fully realized passages of music, the act of recomposition becomes a way of studying how similarities and intertextual references form. By employing it in examples like those I have just shown, Caplin reinforces the listener-oriented nature of his theory, bringing it more closely into alignment—philosophically at least—with Sonata Theory, which is explicitly based in the notion that listeners encounter and evaluate pieces of music by placing them into dialogue with one another.

In fact, taking into account the emphasis on a listener who judges form based upon the relationship between the music being heard, and an abstract set of theoretical structures, the functional differences between Caplin’s work and Sonata Theory seem far less significant than they often do in the public debates and colloquia that have dominated nearly the past decade of SMT. Caplin’s repertoire of ideal types, constructed from the Classical literature itself, is functionally the same as the genre-theoretical background of “norms and types” described by

Hepokoski and Darcy. In short, both of these approaches to form force us to open up the figurative black box—the perfect renversement—at the center of Figure 4.1. The earlier figure’s paired cycle of composition and de-composition breaks down somewhere in the middle when we force ourselves, as listeners, into the equation. For these contemporary approaches to form—especially for Hepokoski and Darcy, but also for Caplin—there is no longer a straight line between the work and its analysis, and music theory is no longer a matter of simply reading structures off the page. Rather, all these processes are mediated by a listening subject, who brings their own set of experiences to the table, and crafts their own individual “hearings” of a piece of music. As shown in Figure 4.12, the theories can be represented as isomorphic processes, as pieces of music encountered by the listener are filtered through a store of prior musical knowledge: a repertoire of intertexts in the case of Sonata Theory, or of prototypical models for Caplin.

Having explored how each theory inscribes the process of listening into its model of analysis, and furthermore how each grants us the possibility of writing down that listening, we will close this chapter with a case study of this process. Returning to questions about the nature and individuality of “the listener,” which I had avoided earlier, I will use myself and my own encounter with a specific “listening” of a Haydn symphony in order to put the arguments of this chapter into practice. Here, the process of “working out” the potential similarity of one piece with another, or with a model, will be of primary interest; the production of a similarity, in other words, once the hint of it has already been perceived.
Figure 4.12: Isomorphism between Sonata Theory and Form-Functional Theory
VI. Listening to and Recomposing Haydn’s Symphony No. 46

I first encountered Haydn’s Symphony No. 46 (1772) in a music analysis seminar with Christopher Hasty during my graduate coursework. Hasty’s seminars frequently begin with listening exercises, and this particular session was no different: we were to listen to the symphony’s second movement, and to track its large-scale form without the aid of a score. On that occasion—that first fresh and unaided listening—I had the strong impression that the first few measures of the piece sounded like the beginnings of a sentence form (one of Caplin’s basic theme types), as schematized in Figure 4.13. If one looks only at the first five measures, this seems to be a defensible hearing still today; see Figure 4.14.

The first four measures unfold as a two-measure basic idea in the tonic (B Minor), and its immediate repetition over dominant harmony. Taking our Caplinian taxonomy seriously, this immediate, varied repetition is precisely what we expect from a sentence, and would never be heard in a period. Measure 5 seems to begin a fragmentation: it begins with the first three notes of the basic idea, and makes a subtle change from the pattern with the next two. The descending sixteenth notes of this new idea fill in the third opened up by this presumed liquidation, and lead downward by step, setting up what would be the next event in a conventional sentence form: a sequential repetition of m. 5’s fragmentary figure, one step down on C♯ in m. 6.

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114 The standard period structure would see a two-measure basic idea, followed by a contrasting continuation in measures 3 and 4 (which should end with a weak cadence, either HC or IAC) before bringing the basic idea back in measures 5 and 6, repeating it either exactly, or in some transposed form. See Caplin, Classical Form, 49–55.
<table>
<thead>
<tr>
<th>Sub-phrases</th>
<th>Presentation</th>
<th>Continuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal functions</td>
<td>basic idea (b.i.)</td>
<td>repetition of b.i.</td>
</tr>
<tr>
<td>Measures</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

**Figure 4.13:** Schematic of Caplin’s sentence form (after Caplin 1998, 9-10)

**Figure 4.14:** Haydn, Symphony No. 46, ii, mm. 1-5
However, this does not come to pass; m. 6 is where the music deviates from sentence form. As Figure 4.15 shows, the implied fragmentation of m. 5 gives way instead to a repetition of the sixteenth-note motive from mm. 2 and 4. The expected fragmentation never materializes, and mm. 5 and 6 are revealed instead to be a third iteration of the basic idea. Finally, this “even-measure figure” is expanded in measure 7, leading to a full cadence on D Major (III) on the downbeat of measure 8. Thus, not only have the expected formal functions of the prospective sentence form failed to materialize—the fragmentation is cut off and replaced by a third iteration of the basic idea—but the phrase itself is truncated, coming in one measure too short to fit into a generic sentence form. Its cadence, on the downbeat of m. 8, is overlapped by the entrance of the winds at the beginning of the next theme.

Figure 4.15: Haydn, Symphony No. 46, ii, mm. 1-8, with preliminary formal functions
Throughout the rest of the seminar meeting, my initial impression haunted me like Berlioz’s idée fixe. To exorcise it, I sat down to write out how the passage might have gone, had the initial sentence not been thwarted. In doing so, the stakes of recomposition come sharply into focus, and its value becomes clear: it is one thing to make a simple verbal proposition about listening—“I think I am hearing a sentence”—but quite another to write that listening down in musical form, explore all of its implications, and deal with its ambiguities. Doing so demonstrates just how abstract the dialogic process can be, and how wide is the gulf between the music at hand, and an unheard intertext or ideal type.
Recomposing this theme into a sentence seems like it should be a simple task. Given the strong sentential rhetoric of the first five measures, we should be able to extrapolate three more measures quite easily, according to Caplin’s template. All that remains should be to write the implied sequential repetition in m. 6, and then fill mm. 7 and 8 with a cadential function, the first measure of which will probably be based on a third iteration of measure 5’s motive, grafted onto a conventionalized descending figure (perhaps even based on the “even measure” sixteenth-note motive), which will lead to a cadence.

But as one actually puts pen to paper (or mouse to Sibelius file), the possibilities proliferate and the task proves to be more complicated than it initially seems. There are numerous questions to answer in the attempt to translate a verbal proposition into music. On the large scale: should this recomposition follow the harmonic outline given by Haydn, and modulate to D, the relative major? Or should it deviate by staying in b minor, or modulating instead to the dominant (F♯ major), or even the minor dominant (F♯ minor)? Should I follow the exact pattern of fragmentation given in measure 5, or deviate from it for harmonic reasons? When should I begin to imply the modulation to whatever key I have selected, and how should I do so? Haydn has left no clear cue for this; his original music does not modulate to D Major so much as it simply lands there, led by a full measure of sixteenth notes in the first violin, which seem to suspend both time and tonality. If I am to carry through with the fuller texture of mm. 5 and 6, however, I will need to find a pivot chord, at the very least. Finally, what should I write in measure 8, the cadential measure for which Haydn has left no template?
Figure 4.16 shows the decisions that I made on that February afternoon. After copying the first four measures and much of the fifth verbatim, I began my recomposition with the first violin. Continuing the implied sequence through mm. 6 and 7, I wrote a provisional ending that led to a cadence in D major—the same harmonic trajectory that Haydn had employed. I then added a bass line to accompany the new music, discarding everything that Haydn wrote for the cello from m. 5 on. The cello helped to contextualize the first violin part (which I had initially thought would require revision), reinforcing the modulation to D via E minor and G major in m. 7. The inner voices posed their own challenge. The new harmonies in mm. 6 and 7 required me to discard completely the pattern that Haydn had established for the second violins and violas. Preserving their “quarter note, eighth note” rhythm, I wrote simpler parts in an attempt to fit the available chord tones into the smoothest possible voice leading.

As I noted, Figure 4.16 attempts to record and preserve aspects of my initial hearing in the seminar room—it is my extrapolation, shortly after a brief but vivid musical experience, of how the implications of the opening bars might have been realized. There are certainly other ways it could have gone as well. There is an argument to be made, for example, that in its initial form, the phrase was not truncated at all—the cadence on D major arrives precisely where it should, on the downbeat of m. 8; it is merely elided by the beginning of the next phrase. Recomposing the phrase in a way that would honor that phrase rhythm (thus placing the cadence on the downbeat of m. 8, rather than the fourth eighth-note beat) is not very difficult;
as shown in Figure 4.17, one need only simplify the melodic figure in m. 7 and eliminate the ii chord in order to place the cadence on the downbeat of m. 8.

**Figure 4.16**: My recomposition of Haydn, Symphony No. 46, ii, mm. 1 – “8,” demonstrating my initial hearing as a potential sentence
As Hepokoski and Darcy’s appeals to genre theory and reader-response theory have taught us, many external factors condition our every act of listening; not only our prior knowledge of specific pieces in the repertoire (what David Huron has called veridical expectations) and our abstract (for Huron, schematic) knowledge of formal types, but also the ways in which we interpret both. In my own case, in the example of Haydn’s 46th Symphony, my hearing is

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conditioned by my training in western tonal theory, and my specific knowledge of Caplin’s system of formal functions. This specific prior knowledge affects not only what I hear, but also what I do not hear. We can see this phenomenon clearly in at least two facets of my recomposition: first in my hearing of a projected sentence continuing past the first five measures, and second, in my exploration of precisely where the final cadence should fall.

In the first case, my musical intuition of a potential sentence (as I wrote in Figure 16) is supported not only by the general model of the musical sentence (as formulated by Arnold Schoenberg decades before Classical Form appeared), but also by specific arguments within Caplin’s larger theory. In fact, a nascent sentence is the only reasonable expectation for continuation within this system of analysis. As shown back in Figure 14, the first five measures seem to project a sentence. When the sixth measure arrives, however, this expectation is denied: m. 6 completes a third consecutive statement of the basic idea, again over tonic harmony. Such a configuration is an aberration within Caplin’s theory. He writes:

Of all the logically possible ways in which the various phrases of the sentence and period can be combined to make a hybrid [depicted in Fig. 4.18a], one pattern is conspicuously absent—a theme that begins with a presentation and ends with a consequent. As shown in Figure [4.18b], such an arrangement of phrases brings a threefold statement of the basic idea. The resulting redundancy of material within an excessive tonic prolongation likely explains why this potential type of hybrid seldom appears in the repertory.116

<table>
<thead>
<tr>
<th>Sentence</th>
<th>Hybrid 3</th>
<th>hybrid 1</th>
<th>Hybrid 2</th>
<th>Hybrid 4</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>pres. cont.</td>
<td>c.b.i. cont.</td>
<td>ant. cont.</td>
<td>ant. cad.</td>
<td>c.b.i. cons.</td>
<td>ant. cons.</td>
</tr>
</tbody>
</table>

**Figure 4.18a:** Caplin’s hybrid themes (after Caplin, Classical Form, 63)

116 Caplin, Classical Form, 63.
With this passage in mind, it is not surprising that I initially interpreted the first five measures of Haydn’s slow movement as a sentence, and expected them to continue on as I have written in Figure 16; the only other potential option, a threefold basic idea, is extremely rare. Indeed, Caplin does not attempt to give an example of this “uncommon hybrid,” which would essentially be the first half of a sentence, followed by the second half of a period. At least a few can be found in the literature, however. The opening of Haydn’s Symphony No. 45 in F# Minor, for example, repeats its basic idea three times, as does the first movement of Mozart’s Flute Quartet, K. 285. Though we can put forward this passage from Haydn’s symphony as another potential model, even it does not fit all the requirements of Figure 18b. It has no cadence, which disqualifies its ending from truly acting as a consequent phrase; and it features no contrasting idea in mm. 7-8, but merely a motivic repetition of earlier material. The best label for Haydn’s slow movement would be some form of “presentation + continuation” (see Figure 4.18a), albeit stripped of the more specific formal functions of the

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117 I am grateful to Phillip Duker and Antares Boyle, respectively, for pointing these pieces out to me during a discussion I initiated on SMT-Discuss (see https://discuss.societymusictheory.org/discussion/285/caplin-s-unusual-hybrid).
sentence. The passage’s non-conforming status within Caplin’s system of hybrid forms thus explains why hearing the piece as it is seems so unlikely. For a listener—such as myself, in this case—who has not only been exposed to a great deal of Classical repertoire, but who has also studied Caplin’s rules, the music which Haydn actually wrote seems very strange indeed; this would seem to strengthen the impulse to imagine the passage (via recomposition, perhaps) as gesturing towards a more conventional formal type instead.

Not only do the opening bars of Haydn’s passage resemble a generic ideal type, but they also resonate clearly with the openings of other pieces of music. Haydn’s theme clearly expresses a “Siciliano” topic, a subset of the pastoral. Though named after the island of Sicily and sometimes described as being reminiscent of Italian dances, the lineage of the style is unclear. Sicilianos are generally written in 6/8 or 12/8 meter, and are characterized by their use of what Stephen Rumph calls “the Siciliano rhythm”\textsuperscript{118}: the dotted-eighth, sixteenth, eighth pattern that opens the movement at hand. Performed at a slow to moderate tempo, Sicilianos lack the drone that is common in many other pastoral topics, such as the musette.

The second-movement Siciliano from J.S. Bach’s Flute Concerto in E\textsubscript{b} Major (BWV 1031, shown in Figure 4.19) resembles Haydn’s theme in many ways: it is in a minor key, and the characteristic Siciliano rhythm is prominent; a constant stream of sixteenth notes underpins

the meter; the first four measures share a similar harmonic contour (tonic, dominant, tonic); and the opening of each is structured by similarly constructed two-measure phrases, which feature a melody in the odd-numbered measures, and a long rest in the even measures. Bach’s Siciliano follows a similar harmonic trajectory to Haydn’s (modulating from i to III), and it defies the expectation of an opening sentence as well (though given the differences between Baroque and Classical phrasing styles, this is less surprising in Bach).  

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119 Vasili Byros identifies this theme of Haydn as one of several exemplars of Leonard Meyer’s “changing note” schema. See “Topics and Harmonic Schemata: A Case from Beethoven,” in The Oxford Handbook of Topic Theory, 381.

The third movement of Haydn’s own String Quartet in F Minor, Op. 20 No. 5, provides an even closer intertext. Composed in the same year as Symphony No. 46, the quartet’s siciliano slow movement, pictured in Figure 20, again resembles our B Minor example. Its opening four measures—saturated with the siciliano rhythm in a similar alternating pattern—again project a sentence. This projection, however, mostly collapses in mm. 5-6, which sounds like an altered third statement of the basic idea rather than a true fragmentation, and which eventually drifts upwards to a deceptive cadence on D minor. Measures 7 and 8 then return to the movement’s opening tonic harmony rather than modulating, closing the first rotation of what will prove to be a simple theme and variation form. Notably, however, this movement provides reinforcement for my initial recomposition (Figure 4.16): like that recomposition, the third movement of the F Minor quartet, it does not cadence until the fourth eighth-note beat of measure 8, lending an intertextual model for the loping, end-accented rhythm that I constructed in my first attempt to turn the symphonic slow movement’s opening phrase into a conventional sentence.

Along with the specific aspects of intertextuality which concern me here—the ambiguity between a traditional sentence and Caplin’s “unusual hybrid” and the possibility of unaccented cadences in a slow 6/8 movement—the similarity between the Sicilianos raises the possibility that along with being a pastoral topic, Sicilianos (at least in Haydn) may represent their own formal type: a phrase that is related to the sentence, yet which breaks Caplin’s aesthetic rule against a threefold basic idea. Op. 20, No 5, iii and Symphony No. 46, ii seem to be of a pair here, while the string quartets Op. 50, No. 6, ii and Op. 71, No. 1, ii may each also have something to contribute directly to this discussion. Many other Haydn sicilianos exhibit other features (such as six-measure phrases in the Adagio movements of Symphonies 27 and 89) that point toward a tendency for non-functional but paratactic (i.e. 2+2+2) construction. Phrase structure in Haydn’s siciliano movements will be topic of a future project.

While it is a more conventional period, the 6/8 allegretto first movement of Haydn’s String Quartet in D Major, Op. 76, No. 5, has this feature as well.
Where does this recomposition leave us? First, as I have argued in previous chapters, one of the principal benefits of recomposition is its ability to force an argument—in this case about a fleeting, inchoate musical intuition, present only upon an initial hearing—into the greater fixity and clarity of concrete musical notation. It makes material the precise argument about what I do and do not hear, or perhaps, what I did and did not hear when encountering the piece for the first time. In Szendy’s terms, it is a way to write down my own hearing, and let you hear the piece as I did. And in Benjamini terms, recomposition is a way to model the process by which one hears similarities: to go beyond merely pointing out, “look, this sounds
like x,” and to interrogate precisely how the piece resembles, and does not resemble, an exemplar.

In this chapter in particular, my recomposition draws together the theories of form explored in this chapter. It represents the kind of dialogue theorized by Hepokoski and Darcy, yet carried out with a particular ideal type that is central to Caplin’s Classical Form, and completely absent from Elements of Sonata Theory. In fact, the second movement of Haydn’s 46th symphony seems perfectly to recall Hepokoski’s comment from his essay on “Dialogic Form”: even if the fit is imperfect, we are invited—by the distinctive “basic idea, repetition” pattern of the opening four measures—to engage with the movement through the model of the sentence. Such a dialogue, by which an imperfect or ideal model is used as a tool of analysis, is almost precisely the definition of a Weberian ideal type, as well: a device for reasoning that is useful in analysis, despite the fact that the case under study rarely conforms to the ideal. This illustrates their methodological compatibility even in the face of the occasional discursive hostility that has surrounded the two camps in recent years. Their objects may be different—with Sonata Theory looking towards hermeneutic interpretations against a broad cultural background, while form-functional theory looks almost exclusively at harmonic relationships—but they come together in their mutual pursuit of a middle ground between a purely structural, “score-based” theory, and the highly controlled, cognitive study of listening. Their mutual vision is one of a listening subject with its own agency: not one subject to “cognitive

constraints,” as Fred Lerdahl once put it in a famous essay, but rather “cognitive possibilities.”

In their content, my analysis and the experiences I describe in this chapter do not differ very much from the kinds of experiences often described by music cognition. Huron’s modes of expectation, for example, apply perfectly. And Eugene Narmour’s famous language of “implication” and “realization” encapsulates the experience which led to my recomposition of Haydn’s 46th Symphony: the structure of the first four measures implied a certain imagined realization, which I wrote out in notation. Yet the principles I employ are not perceptual in nature (ala Lerdahl and Jackendoff’s preference or well-formedness rules), nor are they based on Gestalt ideas like good continuation (as in the work of Narmour, and Leonard Meyer). Instead, I am interested in illustrating how higher-level theoretical concepts and schemata can structure an individual’s experience of music. Such an exploration, I argue, can only be carried out through this kind of study of listening. Allowing for individual experience and variation in listening requires an openness to many different possible results: different and diverse

listenings, many of them incomplete or preliminary, preserved in notation for later study even after they have been discarded as incomplete, as intermediate steps toward an analysis, or as merely unfashionable.

While I do not undertake further study along these lines in this dissertation, such an approach is essential in integrating the insights of western tonal theory—where applicable and appropriate—with the study of other forms of music. More importantly, this outlook hints at better ways to accommodate, describe, and incorporate the experiences of listeners from diverse backgrounds with varying levels and foci of training, and with divergent perspectives and preferences. In doing so, I argue, music theoretical knowledge can be made more personal than it frequently is. Cognitive approaches to music generally seek to spatialize music theory across either a broad population (as in many laboratory studies, which are often carried out on groups of undergraduate music or psychology students), or projected onto various imaginary or idealized listeners. Rather, like Benjamin’s imagined astrologer with her personal, imagistic interpretations of the night sky, a music theory grounded in the insights of listening shows us a way in which the interpretation of formal phenomena can be related more closely to unrepeatable experiences, and the background knowledge of individual listeners. Recomposition gives these listening tangible, transmissible form, realizing Peter Szendy’s ideal of writing his listening down, of leaving a trace or producing a surplus when consuming a piece of music.

There is a final irony, here, which reinforces the notion of a listening as a potentially singular, ephemeral event, and emphasizes the importance of finding theoretical methods
through which to deal with it. After (at the time of this writing) two years of working with Haydn’s 46th symphony on and off, I am no longer tempted to hear it in the way depicted in Figure 16; I have grown accustomed to its idiosyncratic structure. In David Huron’s terms, my veridical expectations, or my knowledge of how the piece actually goes, have superseded my schematic expectations of the work. However, that initial impression, now lost to me, is preserved to some degree by my reconstruction of it in Figures 4.16 and 4.17. As Peter Szendy puts it, I have signed my listening, and made it listened to. By doing so via a reconstruction of a way that the piece could have gone, this analysis carves out a space for the subjectivity and individuality of the listener, outside of the actual text of the piece, or its realization in sound.

And in the difficulties that I encountered, and briefly described, we also see that writers like Benjamin and Szendy are on to something when they emphasize the fleeting elusiveness of their subjects. Just as Szendy’s attempt to describe his hearing in words proves clumsy, and Benjamin’s “similarities” are present only at “[t]he moment of birth, which is ... but an instant,” and which “flits past, possibly [to be] won again, but [which] cannot really be held fast, as can other perceptions,” so too does the initial intuition of a possible sentence which I heard in a single moment two years ago, proves much harder to pin down when I attempt to force it into concrete notation. In that way, my intitial recomposition does as much to preserve and re-enact that original, naïve hearing for myself, as it does for any reader. Subsequent recompositions (such as the experiment with phrase rhythm in Figure 17) serve to bring the naïve hearing into ever-closer contact with the musical text itself, mimetically enacting the process by which listening and interpretations are produced. And finally, as Benjamin writes,
the uncertain status of my reconstructive recomposition of Haydn’s 46th Symphony demonstrates vividly how “the perception of similarities ... seems to be bound to a moment in time, [and] must be grasped in an instant.”¹²⁵

On the evening of September 7th, 1957, listeners to the BBC Radio’s Third Programme were treated to a unique broadcast of Mozart’s String Quartet in D Minor, K. 421. The performance by the Aeolian String Quartet was punctuated between movements by several minutes of additional music, composed and arranged by music critic Hans Keller. The broadcast was the public’s first exposure to what Keller called “functional analysis” (abbreviated “FA”), or as he more vividly put it in a magazine article describing the broadcast, “the musical analysis of music.”¹

The wheels that set this event in motion had begun turning almost a year and a half earlier. In April 1956, Keller sent an unsolicited proposal to Roger Fiske, the producer in charge of music lectures for the British Broadcasting Corporation. In it, he describes an idea for a radio broadcast that would build upon the analytical method he had recently described in a pair of articles on Mozart’s music: his chapter on “The Chamber Music” in H.C. Robbins Landon’s collection The Mozart Companion, and a detailed study of Mozart’s C Major Piano Concerto, K. 503, in The Musical Times.² In the letter, Keller describes his project, and what the audience might hear:

I propose an hour’s broadcast, wordless throughout, which would attempt to analyse a work or movement of your own choice according to my method of analysis. ... With a ten minutes’ interval in the middle, this experiment would not, I think, prove too exhausting for the Third Programme Listeners ...

Not a word need be spoken, though the announcer may perhaps have to say an introductory word or two; in addition, an introduction in The Listener [a weekly magazine listing literary and musical lectures on the BBC] and/or the Radio Times [a weekly schedule of all programming] would be useful, but nowise indispensable. For the rest, the sections played and repeated, the analytic extracts and outlines demonstrated, and the placing and length of pauses between the various “exhibits” would make the trend of the analysis quite clear. ... Like music itself, my method is more easily “played” than described.³

In the spring of 1956, Keller was still a freelance journalist, critic, and violist, and his initial pitch to the BBC has the air of a parlor game to it: “give me a piece, any piece, and I’ll analyze it using my new method.” Keller emphasized this in a later piece of correspondence, writing “I think it is much better if I don’t choose the work, in order to preclude any possibility of special pleading on my part. It is, after all, my submission that FA applies equally to all masterpieces, the only condition being that one must understand the work.”⁴

Intrigued, Fiske and his BBC colleague Walter Todds took the bait. Working with Keller over the next 14 months, they developed his idea. While the scope of the broadcast changed slightly, this passage more or less describes what was heard that autumn night a year and a half later. The proposed intermission was shortened from ten minutes to three, and even in that reduced duration must still have seemed like an excruciatingly long period of primetime


dead air to the BBC bosses. Keller was also forced to sacrifice his initial plan of playing the entire program twice in a row: an “exposition and recapitulation” of his new method, as he put it.

The broadcast began with a brief introduction from the presenter:

“The Unity of Contrasting Themes,” an experiment in functional analysis, by Hans Keller. The Aeolian Quartet play Mozart’s String Quartet in D Minor (K. 421) and analytic interludes between the movements designed to show how the contrasting themes and movements hang together. The analysis is entirely wordless. It consists of a continuous score, except for a three-minute silence, for the recreation of the listener, after the unity between the slow movement and the minuet has been shown. Mr. Keller calls his method “functional analysis” because instead of descriptively dissecting a piece of music, it is intended to isolate the unifying functions of the organism that is a living work of art. The programme begins with the complete first movement and ends with the complete last.⁵

After the announcer’s brief introduction, the form of the broadcast unfolded as shown in Table 5.1. The first two movements were played in their entirety, each followed by an analytical interlude. The third movement closed the first half, and was followed by a three-minute interval, during which the audience members were expected to reflect upon what they have heard. After the brief intermission comes the most ambitious of the analytical interludes, which seeks to tie the third movement—the Minuet—to the already-heard first movement, and the upcoming fourth.

⁵ Typescript from the Hans Keller Archive: Radio Scripts, Ex. 4/1, Cambridge University Library. I am very grateful to Susi Woodhouse for a transcription of the radio script.
### Functional Analysis #1: Mozart, String Quartet in D Minor, K. 421 (1957)

<table>
<thead>
<tr>
<th></th>
<th>As written</th>
<th>Added by Keller</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Allegro</td>
<td>A1: incorporates primary theme and secondary theme (in both exposition and recapitulation forms) from mvt. I.</td>
<td></td>
</tr>
<tr>
<td>II. Andante</td>
<td>A2: incorporates themes from mvt. II and mvt. III (minuet), along with new triple-meter material</td>
<td></td>
</tr>
<tr>
<td>III. Menuetto</td>
<td>Interval (3 minutes)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A3: extended interlude, incorporating Mvt. III's minuet and trio themes, along with primary themes from mvt. I and mvt. IV.</td>
<td></td>
</tr>
<tr>
<td>IV. Allegro ma non troppo [to m. 32]</td>
<td></td>
<td>A4: very brief, based on mvt. IV, first variation [mm. 25 - 32].</td>
</tr>
<tr>
<td>IV. Allegro ma non troppo [mm. 25 - 48]</td>
<td></td>
<td>A5: incorporates mvt. IV, first variation, and mvt. I, primary theme.</td>
</tr>
<tr>
<td>IV. Allegro ma non troppo [mm. 49 to end]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 5.1**: Form of “The Unity of Contrasting Themes: Mozart’s String Quartet in D Minor (K. 421), broadcast September 7, 1957 on the BBC Third Programme.

The broadcast seems to have been a moderate success, eliciting enthusiastic responses from listeners who were intrigued by Keller’s premise, even if many admitted that they didn’t fully understand the broadcast. Reasons cited by listeners for their confusion included their own lack of prior musical knowledge, the absence of verbal or sonic signposts to differentiate Keller’s analytical contributions from Mozart’s original, and even sleepiness due to the late hour of the broadcast: 10 o’clock in the evening. Keller himself was disappointed in the

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6. Keller originally proposed that a pianist should play his analytical interludes in between the movements of a string quartet recording, but later jumped at the chance to have the Aeolian Quartet perform the entire broadcast; see Garnham, *Hans Keller and the BBC*, 36–37.

7. BBC Written Archive Centre document “R9/6/69 Audience Research” (reproduced in Garnham, *Hans Keller and the BBC*, 38) reports: “Several [listeners] wished they had armed themselves with a score, or that the programme had been timed earlier, as
quality of the Aeolian Quartet's performance: “Not a [very] good interpretation of my score, but [could] be worse,” he wrote in a letter a few days after the June 1957 recording session.\(^8\) This displeasure, however, did not stop him from making broad claims about the success and popularity of functional analysis. “Reactions to my first wordless FA,” wrote Keller in a letter to *The Music Review* on December 9, 1957,

> Show that proportionately, my appreciative audience is pretty evenly distributed among composers, teachers, practical musicians, musicologists, critics, amateur musicians, and music lovers. So far, the genuine success of the method—by “genuine success” I mean explicit understanding—has in fact proved immeasurably wider than I hoped, but I should be the last to deny that it is too early to point to a victory of musical over unmusical analysis. We shall see.\(^9\)

Despite the warm reception noted by some, the response was not universally positive. For example, while *Music Review* reader John Boulton was enthusiastic about FA, and compared it to the revelation of learning to think in a foreign language, he also wondered who would actually benefit from Functional Analysis, and was skeptical of Keller’s claim that FA is accessible to non-experts.\(^10\) And Eric Blom quipped in *The Observer*: “If anyone succeeds in making me hate Mozart’s music, it will be Hans Keller’s boast to have done so.”\(^11\)

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Given the relative success of the broadcast, the BBC commissioned more FAs, and eventually hired Keller as a full-time critic and broadcaster in 1959. Keller produced four more functional analyses for the BBC’s Third Programme, along with three more for Hamburg-based North German Radio (NDR, with whom the BBC had a working partnership), and several more designed for live concert performances. In all, Keller produced a total of 15 FAs; they are listed in Table 2, along with as much information as I have pieced together about each.

Keller’s method of Functional Analysis is reasonably well-known (particularly in Britain), and is one of the most famous aspects of his musical output. It is mentioned, for example, in many of the major introductions to music analysis, from Bent and Drabkin’s *Analysis*, to Arnold Whittall and Jonathan Dunsby’s *Music Analysis in Theory and Practice*, and Nicholas Cook’s *A Guide to Musical Analysis*.\(^{12}\) Keller’s work has also been championed by British musicologists like Christopher Wintle, who administers Keller’s Nachlass, and Allison Garnham, whose detailed archival study of Keller’s years at the BBC provides deep insight into the origins and reception of Functional Analysis, among other aspects of his musical career. Yet while Keller often speaks of functional analysis as a coherent project—writing at

Table 5.2: Hans Keller’s Functional Analyses

<table>
<thead>
<tr>
<th>FA #</th>
<th>Composer</th>
<th>Piece analyzed</th>
<th>Broadcast(s)/Performances</th>
<th>Performer(s)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>FA 4</td>
<td>Haydn</td>
<td>String Quartet in D Major, Op. 64, No. 5</td>
<td>DSS: August 1958 (repeated August 1959); NDR: Autumn 1959 BBC3: March 11, 1962</td>
<td>Dartington (DSS, BBC3) &amp; Benthien (NDR) Quartets</td>
<td>Commissioned by BBC</td>
</tr>
<tr>
<td>FA 5</td>
<td>Haydn</td>
<td>String Quartet in F Major, Op. 50, No. 5</td>
<td>NDR: recorded Jan 17, 1959; broadcast with FA 4 in Autumn 1959</td>
<td>Benthien Quartet</td>
<td>Commissioned by NDR</td>
</tr>
<tr>
<td>FA 6</td>
<td>Haydn</td>
<td>String Quartet in E Major, Op. 20, No. 1</td>
<td>NDR: recorded Jan 16, 1959; broadcast date unknown</td>
<td>Hamann Quartet</td>
<td>Commissioned by NDR</td>
</tr>
<tr>
<td>FA 7</td>
<td>Haydn</td>
<td>String Quartet in D Major, Op. 76, No. 2</td>
<td>NDR: broadcast on Jan. 21, 1959; recording date unknown</td>
<td>Hamann Quartet</td>
<td>Commissioned by NDR</td>
</tr>
<tr>
<td>FA 8</td>
<td>Beethoven</td>
<td>Piano Concerto in G Major, Op. 58</td>
<td>BBC3: broadcast May 6, 1959; manuscript dated March 29, 1959</td>
<td>Clifford Curzon, piano; Stanley Pope &amp; London Symphony Orchestra</td>
<td>Dedicated to Clifford Curzon</td>
</tr>
</tbody>
</table>

| FA 9a | Mozart | Piano Sonata in A Minor, K. 310 | 1961 Aldeburgh Festival (Jun 28 - Jul 9, 1961) | Susan Bradshaw and Susan McGaw, pianists | |
| FA 10 | Mozart | Clarinet Quintet in A Major, K. 581 | Completed March 9, 1961; Hampton Music Club, March 24, 1961; BBC, March 3, 1962 | Thea King, clarinet; English String Quartet | |
| FA 11 | Mozart | String Quartet in F Major, K. 590 | 1961 Aldeburgh Festival (Jun 28 - Jul 9, 1961) | Dartington Quartet | Commissioned by Benjamin Britten |
| FA 12 | Britten| String Quartet No. 2 in C Major, Op. 36 | Radcliffe Festival of British Music, October 23, 1962 (earlier broadcast possible; Keller (1984) claims that Britten commissioned FA11 after hearing FA 12 on the radio.) | Dartington Quartet | |
| FA 13 | J.S. Bach | Brandenburg Concerto No. 3 in G Major, BWV 1048 | Completed May 5, 1963; premiered at 1963 Tilford Bach Festival (May 20, in Surrey) | Dartington Chamber Orchestra | |
| FA 14 | Mozart | String Quartet in G Minor, K. 516 | BBC: November 4, 1978 | David Fanning, piano, & the Lindsay Quartet | Published in Music Analysis 4/1-2 (1985) |

Abbreviations: BBC3 = BBC Radio Third Programme; NDR = Norddeutscher Rundfunk (Hamburg); DSS = Dartington Summer School (Devonshire, England); ISM = Incorporated Society of Musicians

one point that FA constitutes both “a body of knowledge which is gradually building up as a result of the method’s musical fact-finding” and “a theory of music which I have developed over the past decade or so” — there is little indication of what that knowledge actually is, nor of the precise methods by which FA exposes it.\textsuperscript{14} This is probably due to the fact that Keller’s “musical analyses of music” have been mostly inaccessible—Nicholas Cook names this specifically as the reason that he omits any details of Keller’s method from his book.\textsuperscript{15} Until 2001, only two of the FAs were available in print, with the rest held in manuscript form by the library at Cambridge University. In 2001, Gerold W. Gruber published a full edition based on Keller’s manuscripts and notes.\textsuperscript{16} Now that Gruber’s edition has been published, scholars have the opportunity to study Keller’s scores in detail, and I believe that they have much to offer to our understanding of twentieth-century tonal theory, and have much to teach us about both Keller and his contemporaries. In this chapter, I begin the work of analyzing Keller’s functional analyses in order to test his sometimes grandiose claims and lay out clearly the contours of his theory. Taking Keller at his word—that “Functional Analysis is to be understood like—indeed as—music,”\textsuperscript{17} I will analyze several passages from Keller’s functional analyses as pieces of music in themselves, searching for what motivated him to compose these analytical interludes.

\textsuperscript{16} FA1 was published in the British music magazine \textit{The Score} 22 (February 1958), 56–64; FA 14 (Mozart’s String Quintet in G Minor, K. 516) appeared in \textit{Music Analysis} 4/1-2 (1985), 73–94.
\textsuperscript{17} Hans Keller, “Functional Analysis: the Second Year and Beyond,” \textit{The Music Review} 21/2 (February 1960), 76.
I. Functional Analysis and Unity: Deciphering Keller’s Theory

Keller’s descriptions of his own project are somewhat fragmented, scattered throughout the popular and academic press over the course of the late 1950s and early 1960s. While Keller spent at least some of his time in the late 1950s developing a comprehensive book about his analytical method, the text never materialized. While his comments on FA are short and frequently cryptic, when read together they begin to circle around a few themes. Keller’s project is animated by two central ideas, which are laid out within the first two pages of his earliest major essay on musical analysis: a chapter in a collection called *The Mozart Companion*, edited by H.C. Robbins-Landon and published in 1956. The first of these ideas is the distinction between the description of music (for which Keller has nothing but contempt) and the analysis of it; this distinction leads to his quest for a purely musical, non-textual form of criticism. The second central idea is an aesthetic one: the notion that “a great piece [of music] grows from an all-embracing idea.” This latter notion is familiar from many of the twentieth century’s structural theories of tonal music, but finds a unique formulation in Keller’s work.

Keller lays out his opinions on analysis and criticism in no uncertain terms: “What usually goes by the name of analysis,” he writes,

is nothing of the sort. Most critics have never grasped the essential distinction between analysis and description. Description gives a verbal account of what you hear, and is essentially unnecessary. Can anyone seriously suggest that a music-lover has to be told that a contrasting theme is a contrasting theme? Verbal or symbolic analysis shows, on the other hand, the elements of what you hear.

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By “description,” it seems that Keller means the kind of narratively driven analysis most closely identified with critics like Donald Tovey. Labels such as “second theme” (a locution which he repeatedly insists that Mozart “didn’t know”) are symptoms of the kind of “dissection” which Keller—in invoking a common nineteenth-century metaphor—mentioned in the introduction to the first FA broadcast. Keller instead yearns for a method that will expose the way in which tonal masterworks develop and operate; hence, the title *Functional Analysis*. Keller does not only object to musical descriptions because of an aesthetic commitment to treating musical works as living organisms, however. On another level, he simply believes them to be unnecessary: “All conceptual thought about music is a detour,” he writes, “from music, via words, to music, whereas functional analysis proceeds direct [sic] from music via music to music.” And he has harsh words for those who purvey verbal descriptions to their audiences, expressing hope in his initial 1957 essay that his wordless method will bring about “the twilight of twaddle” and put descriptive critics out of a job. He declared a year later: “Words about music, more often than not, are the unproductive mind’s revenge upon the creator, the conceptual arrest of the right-doer.”

The other aspect of Keller’s thought—his interest in musical unity—is what occasionally sees him grouped with many of the influential figures of twentieth-century theories of musical structure. Keller’s “all-embracing idea” bears at least a passing resemblance to

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Heinrich Schenker’s Ursatz (“fundamental structure”), and is also closely related to Arnold Schoenberg’s Grundgestalt (“basic idea”) and Rudolph Reti’s “motif.” Keller himself names these theorists as three of the four primarily influences on his work: Reti, Keller writes, “exaggerates the melodic aspect” of music analysis. Schenker, he says, goes the opposite direction by emphasizing harmony over melodic and rhythmic features. Arnold Schoenberg is his Goldilocks, and gets it just right: Keller believes that his music and writings are indispensable for any music analyst. Finally, Keller names his former viola teacher Oskar Adler, whose “uniquely organic and motif-conscious way of playing taught [him] more about the essentials of chamber-musical forms and textures than any analytical teacher could possibly have done.”

Keller’s earliest musical writings give us some sense of what we might be looking for. His chronological account of Mozart’s String Quartets in “The Chamber Music” is primarily aimed at performers: he assesses the quartets based on their quality and difficulty, identifies difficulties that individual performers might face (i.e. a challenging cello part or an exposed second violin line), and highlights interpretive issues that may arise. In his introduction, however, he proposes the axiom that will guide his assessments of musical unity, and thus musical quality: “the looser the manifest integration, the stricter the demonstrable latent unification.” In this latter aspect of the essay, Keller’s interest in connections between and among works is immediately apparent. Dismissing a few early works as mere juvenilia, the consideration of which might hold “genuine musicological interest,” but would “insult

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Mozart's genius,"\(^{26}\) Keller first turns his attention to the G Major Quartet, K. 156 (1772). He begins by highlighting the similarity of the first movement’s theme (shown in Figure 5.1a) to the melody of the “Lacrimosa” movement of Mozart’s *Requiem* (K. 626, 1791, shown in Figure 5.1b). This lineage, he suggests, should inform the performance practice of the earlier work. “In playing the quartet,” he writes,

it will be good to remember both the theme’s latent waltz rhythm, and its ‘Requiem’ version, in order to prevent too reckless a speed and to invest the gaiety of the melody with the kind of flowing gracefulness which, by its very insistence on pure joy, warns us that sadness is around the corner.

As Keller continues his analysis of K. 156 with its second movement, he produces his very first recomposition in order to illustrate his axiom: that manifest diversity is underlain by latent unity. Here, he sets up his brief metric recomposition with the kind of statement that has become familiar throughout this study, and which lacks the polemic edge with which he would cast many later statements. “I shall save quite a few technical words,” Keller declares, “if I reshape [the Adagio theme, Figure 5.2a] in the metre of [the opening], its

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\(^{26}\) Keller, “The Chamber Music,” 95.
relation to the theme of the opening movement [Fig. 5.1b] will at once be clear."27 This reshaping is shown in Figure 5.2b—Keller re-writes the second movement’s theme in the metrical style of the first movement’s Primary theme; or, even more, in the metrical style of a mutual intertext, the much later Lacrimosa. “[Figure 5.1b] and [Figure 5.2b] might be complementary phrases in the same period,” Keller writes. “The principle confronting us here is a forerunner of what I call ‘the principle of reversed and postponed antecedents and consequents,’ which I have found to obtain quite often in later Mozart.”28

![Ex. 2](image)

**Figure 5.2:** Mozart, String Quartet in G Major, K. 156, 2nd mvt., measure 1 a) as written, and b) as recomposed by Keller to match Figure 5.1b (above).

Through these examples, we can learn a few important details of Keller’s approach to tonal music. First of all, he is interested in thematic similarities both among movements of a single work, and between different works by the same composer. The latter aspect especially informs his theorizing, which posits a kind of Freudian unconscious in which musical ideas are turned around, re-purposed, and re-connected in various ways. Along with his musical background, Keller was an enthusiastic student of Freudian psychoanalysis. His first professional publication, in 1946, was an essay entitled “Male Psychology,” which argued

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against the typical Freudian emphasis on masculine normality, and criticized the clinical tendency to pathologize women’s experiences.  

29 Psychodynamic theories influenced some of his early musical writings as well, such as “A Slip of Mozart’s: Its Analytical Significance,” which reads a missing accidental in the manuscript of the Overture to Le nozze di Figaro as evidence of Mozart’s preoccupation with the dominant-key secondary theme.  

30 His distinction between the manifest diversity of the musical surface and the latent unity that underlies it mirrors exactly Freud’s identification of “manifesten und latenten Trauminhalt [dream content]” in The Interpretation of Dreams, using the clear English cognates found in both of the standard English translations.  

31 In order to explain how even painful or frightening dreams can still engage in wish fulfillment (as his previous chapter argued), Freud argues that the images, emotions, and narrative elements of a dream—the manifest content—may be “distortions” or transformations of hidden—latent—content. Interpreting the meaning of a dream thus becomes a process of decoding the meanings that are hidden beneath the dream’s disjunct or impressionistic surface. In borrowing these terms, Keller casts his theory of musical unity as a musical version of Freud’s therapeutic method: presented with the musical surface, the analyst traces common elements throughout the work, revealing deep, hidden meanings that elude the average listener, and are perhaps even inaccessible to the


31 Keller, hailing from Vienna, would also have been familiar with the original German terms. See Sigmund Freud, Die Traumdeutung (Leipzig and Vienna: Franz Deuticke, 1906), 104; or its English versions, The Interpretation of Dreams, trans A.A. Brill (New York: The Macmillan Company, 1913), 114; and The Interpretation of Dreams: The Complete and Definitive Text, ed. and trans. James Strachey (London: Hogarth Press, 1953), 148.
This hidden knowledge, for Keller, underlies the connections between music that would become central to his first Wordless Functional Analysis: both motivic/thematic similarities between movements, and also the compositional tendency for motives or phrases in disconnected movements to complement and complete one another, which Keller attributes to Mozart as “the principle of reversed and postponed antecedents and consequents.”

The second thing we learn from these examples is Keller’s frustration with words. As he writes in The Mozart Companion, a single recomposition might do the work of a whole paragraph. While Keller never completely abandoned written text, he devoted increasing energy to the development of his analytical compositions throughout the late 1950s and 60s. The kinds of examples used here—the scale degree-based depictions of thematic similarities and other connections among movements and works—help to shed some light on the intentions that Keller might have had when writing his analytical scores.

II. Keller’s FA1: Mozart’s String Quartet in D Minor, K.421

Let us now turn to Keller’s first functional analysis, written to fill in between movements of Mozart’s D Minor String Quartet, K. 421. Keller’s first analytical score

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32 Keller brags, for example, that his functional analysis of Benjamin Britten’s Second String Quartet successfully taught the composer—a close friend of Keller’s—something about his own compositional process. “When Benjamin Britten heard my FA of his second string quartet,” Keller writes, “he immediately commissioned an FA of a Mozart quartet for a performance at his Aldeburgh Festival. When I asked him what had made him so enthusiastic about my method, he replied that it was the only type of music analysis that interested him, because it confined itself to the composer’s own pre-compositional thought, partly conscious, partly unconscious. He had thus learnt a lot about himself from my FA of his Second Quartet.” See Keller, “Functional Analysis of Mozart’s G Minor Quartet,” 73.
attempts to demonstrate not only how the different themes within a movement are related to one another, but also how motivic ideas echo across different movements within the same work. In this sense, he is frequently working at two different levels: he illustrates how the piece should be heard in a linear fashion, as a series of transformations from one theme to the next; and he reminds listeners to keep the whole quartet in mind, by periodically surfacing themes from different movements, whether they have already been heard, or are yet to arrive.

First, we will deal with the disposition of themes within the first movement. One of the principal challenges facing the composer of a minor mode sonata is how to treat the Secondary theme in the recapitulation. As shown in Figure 5.3, the most common configuration of themes—the “first level default” for James Hepokoski and Warren Darcy’s influential Sonata Theory—is a Primary theme in the tonic minor, with a Secondary theme in major, most often on III.\(^{33}\) When the recapitulation comes around, the Secondary theme is transposed to the pitch level of the tonic, but the composer faces a decision: whether to re-write the theme into minor, or to leave it major.\(^{34}\)

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\(^{34}\) While Keller makes no reference to musical narrative or hermeneutic interpretation, modern commentators like Hepokoski and Darcy imbue this choice with a heavy burden of narrative implication: a Secondary theme recapitulation in major is often read as indicating triumph over struggle, while a far less common recomposition into minor (as heard in Mozart’s first movement) depicts tragedy, defeat, or loss. See Hepokoski and Darcy, *Elements of Sonata Theory*, 307–310.
In the first movement of K. 421, Mozart chose to re-write the major secondary theme in a minor key for the recapitulation. In fact, he altered it even more than necessary, testing the limits by which it can even be called the same theme. In Keller’s hands, and as shown in Figure 5.4, this recomposition of the exposition’s secondary theme—which I have labeled $S_{\text{MAJ}}$—into minor becomes an analytical tool: Keller casts this “third theme” (which I have labelled $S_{\text{MIN}}$, for “Secondary Theme, minor version”) as an equal player alongside the other two.\footnote{To be clear, Keller does not use the term “third theme,” nor any other label. In one brief essay, however, he argues in reference to Mozart’s G Minor String Quintet that Functional Analysis might solve the problem of how to describe a second theme that is not truly a second theme; see “The Home-Coming of Musical Analysis,” The Musical Times 99/1390 (Dec. 1958), 657.} For Keller, the theme is the linchpin in a transformational process by which the Primary theme’s rhythmic, melodic, and harmonic contours are connected to the exposition’s $S_{\text{MAJ}}$ theme, by way of the recap’s $S_{\text{MIN}}$. In Figure 5.4, we see reduced versions of all three first movement themes. The thick black arrow across the top of the figure indicates the linear progression through the piece. But, as we will see, Keller’s Functional Analysis argues that they should perhaps be considered in a different order.

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\begin{tabular}{|c|c|}
\hline
\textbf{Exposition} & \textbf{Recapitulation} \\
\hline
i $\rightarrow$ III & i $\rightarrow$ I \\
& OR \\
& i $\rightarrow$ i \\
\hline
\end{tabular}
\caption{Common tonal trajectories for minor-mode sonatas}
\end{table}
Let us turn to Keller’s analytical score, the beginning of which is pictured in Figure 5.5. Section A1, which is played after the first movement, begins by reproducing the piece’s opening phrase almost exactly. Keller omits the final measure of the first phrase, leaving silence in place of the original imperfect cadence, and omitting the first violin’s turn figure around A. After this bar of silence, Keller repeats the three measures we have already heard, and again leaves a measure of silence. The first violinist is then instructed to “remove violin and bow.” She begins to clap on the downbeat in m. 11, replacing the cello’s bass line as it goes silent, and helping to emphasis the off-beat rhythm being played by the second violin and viola.
Here, in the absence of anything but a rhythmic accompaniment, we can hear Keller’s first transformation: the inner strings switch to sixteenth notes in m. 13, audibly illustrating

Figure 5.5: Hans Keller, Functional Analysis #1 (FA1), mm. 1–18
the similarity between the guitar-like figure that accompanies the first theme, and the more active sixteenth notes that underpin the second theme. We remain in D Minor, however; we are about to hear the version of the second theme found in the recapitulation, not the exposition: $S_{\text{MIN}}$, not $S_{\text{Maj}}$. In m. 14, the claps end, giving way again to the cello. The first violinist must quickly take up her instrument to play this minor version of the second theme. After four measures, Keller again leaves us hanging on the dominant, with an incomplete cadential $6/4$ in m. 18.
The sparse texture that follows—in which only one instrument plays—is to become a hallmark of Keller’s analytical style, appearing again and again throughout the fifteen FAs. In m. 19 (shown above in Figure 5.6), he introduces his most characteristic analytical technique: the repetition and gradual transformation of short melodic fragments. Here, Keller breaks down what we have just heard. The violinist plays an identifiable fragment of
SMaj, twice. Then, we hear two altered versions of this fragment: the first emphasizes the interval from D to F, the second the interplay of D and C#. This latter fragment then expands the D-F leap from a third to a tenth, repeating again for emphasis. Measure 24 begins to put the pieces together by bringing us back to the first theme. The version of m. 2 presented in m. 25 is embellished by a portamento on the D-string: Keller wants us to hear the physical connection between the two registers, as the violinist literally drags D upwards by a minor tenth.

After yet again playing the piece’s opening three measures, Keller brings about the final analytical point of this segment: beginning in m. 28, he audibly compares the incipit of SMIN (which we have just heard, unadorned, several times) with the closing figure of the Primary theme (mm. 33–36). As shown in Figure 5.7, this leads finally to the transition (mm. 37–38), the end of which is then compared back to SMIN. These motivic comparisons end in m. 43, in which a descent through scales degrees 3 and 2 sets up F Major. The SMaj theme follows, the end result of a motivic process that Keller believes structures the music’s “background.”

In Keller’s A1, we can see the essence of how Keller thinks of complete movements. Recalling the notion of the composer’s unconscious knowledge as latent musical unity, it seems that Keller’s goal in functional analysis is to illuminate the composer’s background knowledge for us, the listener: to make the implicit, explicit. Mozart’s “background,” in Keller’s psychological sense, is his pre-compositional activity such as planning or sketching, or it’s his synoptic view of all his materials at once as he’s writing the piece. And Keller wants to make that synoptic view of the piece into our own background, so that we can use it to interpret the foreground that we hear in a standard performance. By re-arranging and
stringing together the themes as he does, Keller makes the argument that Mozart conceives of the first movement’s themes as a cohesive unity, which is progressively elaborated as he writes the piece. He attempts to make this nonlinear temporality of composition into our linear temporality of listening, in order to convince us of his thematic analysis without using any words.

Figure 5.7: Hans Keller, FA1, mm. 38–51
III. Motivic Trees, Chains, and Networks

Despite unfolding in the completely linear manner of a radio broadcast, Keller’s analysis actually proposes a different kind of temporality than is usually found in motivic or thematic analysis. He tracks the development of musical ideas, but those ideas don’t necessarily unfold in the order in which we would normally hear the piece. Keller’s analytical recomposition in A1 helps us to jump around the first movement in order to hear its conceptual contours. In the other major example from his FA1, which we will consider in a few pages, Keller’s music leaps among all four movements, forging thematic connections between each.

In other words, Keller presents a somewhat different view of motives than Schoenberg’s “developing variation.” Take, as a contrast, Figure 5.8, which reproduces Ex. 23 from Schoenberg’s 1947 essay “Brahms the Progressive,” one of the most famous formulations of the idea of “developing variation.”36 The figure analyzes the second theme from Brahms’ String Sextet No. 1 in B♭, Op. 18 (1860). There are two motives here, a and b. Each iteration is marked by triangular brackets, and an ever-rising number (a, a1, a2, and so forth) marking each motive’s successive variation. With this notation system, Schoenberg not only demonstrates which of the two initial ideas informs any given fragment, but also obsessively tracks each time we hear a new version of that idea. This all unfolds in a larger argument about the asymmetry of Brahms’ phrases, such as this nine-measure excerpt. The music, Schoenberg argues, is structured by the alternation and development of motives a and b, not by a conventional formal function.

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We see something similar in an earlier, lesser known treatise: Fritz Cassirer’s *Beethoven und die Gestalt* (1925) anticipates Schoenberg’s analysis of Brahms, and extends it even further.\(^\text{37}\) Take, for example, Cassirer’s analysis of the opening measures of Beethoven’s *Appassionata* Sonata, shown in Figure 5.9a. Clearly, the musical surface is again saturated by a pair of contrasting motives: the descending minor triad of \(a\), and the elaborated upper-neighbor motion of \(b\).

Cassirer, like Reti and Keller, is interested in showing motivic continuity across movements. He is as economical as possible with his motivic labels. For example, he quite rightly casts this moment from the opening of the development (Figure 5.9b), in which Beethoven turns a G♯ minor chord into E major, as a variation on the opening measure.

![Figure 5.9b: Cassirer, analysis of Beethoven, Appassionata, 1st mvt., mm. 65–69 (Cassirer 1925, 47)](image)

Still, by the time we reach the Appassionata’s second movement (Figure 5.9c), we are already in the double digits when it comes to motivic variations, and the analysis is in danger of becoming phenomenologically opaque. The simple upper neighbor motion that opens the movement is easy enough to hear, but how much is our listening experience informed by the knowledge that this is the 13th new variation on upper-neighbor motion that we have heard?
Keller’s Functional Analysis, by necessity, avoids this aspect of other motivic analyses. Working in the form of analytical scores, Keller uses no brackets and no labels to make his points. This is fine—the radio audience wouldn’t hear the brackets anyway! The arguments are delivered in a purely auditory form, even though I would argue they require the kind of decoding that I am undertaking in this chapter. Much as Allan Keiler says of Rameau’s fundamental bass, Keller turns music into its own metalanguage: he uses music to make analytical statements about music.38 In the case of his radio broadcasts, he effectively manages to use real, sounding performance rather than notation, although his scores are the most accessible aspect of his analytical legacy. As Keller shuttles back and forth and juxtaposes different melodic fragments, we may have the sense that the fragments he

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38 See Allan Keiler, “Music as Metalanguage: Rameau’s Fundamental Bass,” in Music Theory: Special Topics, ed. Richmond Browne (New York: Academic Press, 1981), 83–100. Just as many in Hans Keller’s radio audience had trouble differentiating Mozart’s original music from Keller’s analytical interludes, Keiler chronicles how Jean-Philippe Rameau’s early readers (many of whom were not musicians) found it difficult to tell the difference between Rameau’s fundamental bass analyses, and actual written music.
isolates—for he does not use a particular word for the objects of his analysis, such as motive, figure, Grundgestalt, or any other cognate—are all connected to one another, but not necessarily in a direct way. In other words, Keller’s conception of thematic process, of the latent unity in manifest diversity, ends up unfolding not through reference to singular, originary forms, nor through a successive chain of developing variations—either of which we might apply to the motivic analyses of Schoenberg and Cassirer, and which are schematized as Figures 5.10a and 5.10b. Instead, Keller’s analyses might be productively thought of as representing a network of thematic resemblances, as depicted in Figure 5.10c. The Primary theme of the first movement appears first, of course, but it would seem to take on no sense of primacy, at least as a coherent unit. In keeping with both Keller’s methodological outlook and his medium, there are no labels to declare that one fragment or another is motive form a, or b, or a¹, and so forth. And even despite his temporal ordering, his analysis makes audible an entire series of transformations between and among the motive’s various appearances throughout the D minor quartet, taking care to connect not only adjacent movements, but also motives and themes from different parts of the work.

Figure 5.10a: Hierarchical Organization of Motive Forms
Figure 5.10b: Linear Organization of Motive Forms

Figure 5.10c: Network of Equal Motive Forms

We can see this in action, for example, in the remarkable sequence that follows the intermission: Keller’s A3, the beginning of which is depicted in Figure 5.11. The second half of the performance begins with what would have sounded, to the home radio audience, like the third movement all over again. However, as A3 begins, we hear only the opening phrase of the minuet, its “A” section. Keller then skips ahead, bringing us to the first four measures of the Trio (mm. 114–117). Next, he rhythmically simplifies this gesture, using accidentals to
Figure 5.11: Keller, FA1, A3, mm. 103–121
transform it from its sunny, contrasting D Major, back into K. 421’s prevailing D Minor (mm. 118–121), and pausing to compare its contours to the Minuet’s A section (mm. 133–143). In m. 143, Keller begins to break the theme down, preparing to audibly compare it to the Primary theme from the first movement. As shown in Figure 5.12, he makes this comparison explicit in mm. 148–152 by dropping the Minuet’s first note down the octave,
turning MIN’s minor third (i.e. D in m. 143.1 to F in m. 144.3) into the Primary theme’s characteristic minor tenth leap, and then isolating the first violin’s stepwise descent from F to C♯, an important feature of both the Minuet theme’s second full measure (i.e. m. 145 in Fig. 5.12) and the Primary theme’s third measure (m. 152). After running through the Primary theme again, he audibly compares the cello lines of the Primary theme and the Minuet in mm. 162–180. The former is a diatonic lament bass, the latter a chromatic one.

Figure 5.12: Keller, FA1, A3, mm. 144–162
As shown in Figure 5.13, Keller sets up another connection, this time between the MINUET theme and the FINALE, in the measures leading up to m. 194. He alternates progressively shorter fragments from these two figures several times in order to highlight their motivic similarities, before finally completing the FINALE’s consequent phrase, beginning in m. 222. In m. 226–229, Keller makes his final comparison: he connects the FINALE theme to the PRIMARY theme. Finally, in m. 242 (not shown), Keller gives us a full statement of the FIN theme, to close off section A3.
Figure 5.13: Keller, FA1, A3, mm. 162–231
(Figure 5.13 continued)
(Figure 5.13 continued)
IV. Listening to Abstraction

We can draw another distinction between Keller’s method and the primary tradition of motivic analysis. Consider the notation of Rudolph Reti, shown in Figure 5.14. These examples are taken from Reti’s Thematic Process in Music (1951), and they represent his analysis of the motivic resemblance between the first movement of Beethoven’s Ninth (Fig. 5.14a), the second, the scherzo (Fig. 5.14b), and the Adagio third movement (Fig. 5.14c).

**Figure 5.14a:** Rudolph Reti’s motivic analysis of Beethoven, Symphony No. 9 in D Minor, first movement (Reti 1951, 11).

**Figure 5.14b:** Reti, Analysis of Beethoven, Symphony No. 9, 2nd movement (Reti 1951, 12).
Reti’s idea of thematic process focuses on simple motivic shapes that form a common thread through multiple themes of a single movement, or among movements of a single piece. In his analyses, Reti performs visual abstractions on standard notation, using one of two techniques. He uses either a second staff to show the notes that form his basic pitch cells (as in the first two movements of the Ninth Symphony, Figs. 5.11a and 5.11b), or he uses full-sized notes to represent his basic motivic shapes while printing the other notes in a smaller font (as he does with the third movement, Fig 5.11c). The latter aspect of his practice is what has drawn criticism from those skeptical of Reti’s tendency to search for patterns.

As we see in Figure 5.11c, Reti defies most theories of tonal music by de-emphasizing the tonic B♭—arguably the central note of the passage, and the target of A’s lower neighbor note—because it does not fit with the motivic shape he located in the previous two movements, which outlines a D minor triad.

39 Alvin Bauman, for example, accuses Reti of “Pretension and overambition .... Illogicality, false evidence, and other-worldliness.” Reti’s system, writes Bauman, is “a priori,” and neglects harmony, rhythm, and counterpoint in its relentless pursuit of thematic development and variation. See Bauman, “Review of Reti, The Thematic Process in Music,” *Journal of the American Musicological Society* 5 (1952), 139–140. Philosopher Peter Kivy accuses Reti of “finding a theme by tinkering with the notes until [he gets] one.” The only rule for such tinkering, Kivy argues, seems to be “Tinker until you get what you have already decided must be there.” See Kivy, *Philosophies of Arts: An Essay in Differences* (Cambridge and New York: Cambridge University Press, 1997), 191.
But it is the *visuality* of Reti’s diagrams that is significant here, in contrast with Keller. While the styles of motivic analysis we have seen from Cassirer and Schoenberg highlight surface features, Reti’s work uses visual signifiers to point to deeper structures below the musical surface.\(^{40}\) His basic argument—that connections are forged between movements by means of “imitation, variation, and transformation”—is not so different from Keller’s. Indeed, Reti’s views on musical unity anticipate Keller’s, and the latter acknowledges this influence. The composer, writes Reti, “strives toward homogeneity in the inner essence, but at the same time toward variety in the outer appearance. Therefore he changes the surface but maintains the substance of his shapes.”\(^{41}\) Reti highlights these “inner essences,” or what Keller might term the background, by means of notation. In a sense, he does all of the necessary abstraction *for* us. Keller, on the other hand, shows no notation to his audience: they only *hear* his analyses. The *argument* that Keller makes might have been represented in visual notation that would look something like Figure 5.15, which identifies the motivic connections that Keller’s Section A3 highlights. Because this argument is presented in the form of recorded music, however, the audience has to do a great deal of work through active listening. Keller wants to give the home radio listener the synoptic overview—the background, or the latent unity—but he wants to do so by means of the listener’s linear temporality, not the composer’s spatial one.

\(^{40}\) While I do not mean this in a negative way, Alvin Bauman makes the same observation in an accusatory tone, calling Reti’s work “the application of the field of painting to music—what one might call analysis for the eye.” See Bauman, “Review of Reti,” 141.

Demanding this kind of rigorous engagement was considered entirely appropriate for the BBC’s Third Programme in the late 1950s. As Jenny Doctor writes,

Functional Analysis was particularly suited to the philosophy and identity of the Third Programme. ... A mixed cultural arts programme, the Third nightly presented music, drama, experiments in arts broadcasting, and talks, with no hampering of ‘fixed points’ (such as news or time signals). It was intended for culturally aware audiences who would devote their full attention to listening.\(^{42}\)

The audible nature of Keller’s medium thus shapes the way that his analyses work. As mentioned above, Keller had initially hoped to have the whole program played twice, so that listeners could hear the music \textit{with} the analysis again, back-to-back. Even though his broadcasts were never directly repeated, Keller held out hope that at least the chamber music recordings might be heard again. Live performances, particularly with orchestras or well-

known soloists, he admitted, were particularly unlikely to be heard again. Early on, he acknowledged in writing that this affected the way that he wrote his FAs for orchestra, such as FA3 and FA8:

[T]he question of immediate accessibility is indeed at its tensest in the case of an orchestral score. ... The reason is, of course, that an orchestral performance is a costly undertaking, still moreso with a first-rate soloist. From the standpoint of analytic composition, this means that when writing an orchestral score, I must always try to hit the listener as directly as possible, so that, whatever happens to him in the intellectual dimension, his intuitive experience of the analytic music’s development throughout at the first hearing, and without there being any immediate hope of “another time.”

Even with an audience of culturally literate and musically engaged listeners, then, it seems that it was frequently not enough merely to play two themes back to back in order to suggest a connection—recall, for instance, that some listeners claimed they were confused by the format, or too tired to follow the thread of the broadcast. Keller was aware of this challenge, and seems to have compensated for it Instead, Keller performs minute transformations that are immediately audible—such as the transformation of the Trio theme from major to minor (in Fig. 5.9). He also repeats and alternates short fragments a number of times, to make sure his listeners can follow. So, while he intends for his functional analyses to represent and draw out the “background” of the piece, as depicted in Figure 5.12 (and in much the same way as Reti and Schoenberg expose their readers to deeply buried patterns), Keller does so almost entirely by means of the foreground or surface of the music. His sometimes repetitive functional analyses thus take on a didactic tone: they are not unlike a teacher explaining the piece to a listener; or perhaps more democratically, they take the form of a conversation among friends. “Hey, listen to this,” he seems to say (albeit without words). “Doesn’t it

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sound like this other thing? Isn’t it interesting how they both outline D – F, then walk down through C♯…” and so forth. “Now listen to this.”

In making this realization, we return to Keller’s earlier assertion that Functional Analysis is a *method*. It is not merely a method carried out by him (for it would seem to have no adherents but him); rather, it is a method for teaching someone how to listen. So, if Functional Analysis is to be a “body of knowledge,” as Keller calls it—that is, if we are meant to learn anything by listening to his work—then surely it is *how to listen* and *how to identify* structural elements and similarities. Although he offers us a model of developing variation that is different from Schoenberg’s, it is a model that shows us directly *how* developing variation works, and exemplifies the kinds of details that make it audible, and the connections within and among movements that must be forged in order for it to be meaningful.
Conclusions

Along with a deeper understanding of thematic processes and an alternate model for motivic analysis, Hans Keller’s method of functional analysis has one final insight to offer music theorists in the twenty-first century: his work is a rare example of public music theory. Public musicology is a growing field, as scholars attempt to reach outside of the academy in new ways, but examples of public music theory are relatively rare. Keller’s example of a purely musical form of discourse that avoids engaging in disciplinary debates and eschews technical terminology can inspire us to invent new ways of doing analysis that might be more accessible to audiences not already well-versed in music theory. His ideas might also be useful for the analysis of non-notated music, such as pop music or folk traditions. As Timothy Warner has recently written, for example, Hans Keller’s functional analyses operate on principles not unlike those used by DJs when they identify songs that can be smoothly bridged by musical transitions, or by mashup artists who identify common features of two different recordings.\(^1\)

Thinking about ways in which we can follow Keller’s lead, and transform the kinds of music-theoretical insights that are often expressed through complex and specialized visual diagrams, into insights than can clearly be heard by someone who has never seen an Ursatz or a transformational network, will sharpen our theorizing of all repertoires, and help music theory continue to develop and thrive in the 21st century.

The case studies in this dissertation have shown a large group of geographically and temporally disparate music theorists, engaged in a series of particularly intimate relationships with music. Their recompositional interventions have taken many forms: from the corrections with which this study opened; to a series of “theory-building” examples from Jean-Philippe Rameau to James Hepokoski and Warren Darcy, which attempt to demonstrate how a given passage of music should go; to speculations about underlying models, as found in the works of William Caplin and Janet Schmalfeldt; to creative, notation-based interventions by Matt BaileyShea and Hans Keller. These recompositions demonstrate how music theorists have often blurred the lines between criticism and creativity, between the mundane and the exceptional, between the canon as untouchable monument, and as readily available reference material.

As we have seen, these border crossings often produce anxiety on the part of the recomposer, either through the aesthetic threat to the integrity of their musical heroes (as in Fétis’s treatment of Mozart) or the risk of rebuke to which they open themselves by altering a canonical passage. As easy as it is to sit in our armchairs, declare our own sophistication, and denounce this anxiety, I have learned that those who express discomfort, or apologize preemptively for their recompositions, are unfortunately still justified in doing so. At a recent music theory conference, I heard an excellent paper on Stravinsky’s Petrouchka. Near the end, the presenter recomposed several passages in order to propose possible tonal models that Stravinsky might have been building upon, and she gave many of the usual disclaimers: “I’m sorry; this is just my opinion; I’m not trying to say that Stravinsky was thinking about this; I
won’t actually play these aloud for you because they don’t sound good.” The presenter mentioned to me after her talk that at a different recent presentation, a senior scholar had accosted her in the question and answer period for daring to interfere with Stravinsky’s music, even in the service of a mere hypothetical proposition. There are many layers to this story, including the unfortunate and unbalanced spectacle of a middle-aged scholar shouting down a female graduate student in an open forum. But we can learn from this anecdote that the kinds of anxiety in evidence among the disclaimers that so often accompany contemporary recompositions are unfortunately justified: too many theorists and musicologists, it seems, stand ready to accuse recomposers of unjustly tampering with works of art.

If there is any single takeaway from my dissertation, however, it is my firm conviction that neither music theorists—whether in their capacity listeners, as researchers, or as teachers—nor their students should feel any anxiety about recomposition, whether it is undertaken for theoretical or creative reasons. The practice of rewriting music, as I have shown, has a long history, dating back hundreds of years. If earlier models of music analysis, such as Schenkerian analysis or pitch-class set theory, were based on an epistemology of structural listening in which musical information is transmitted to an expert listener transparently and without loss, then perhaps in an age of what Anahid Kassabian has called “ubiquitous listening” we need new methods that can draw together traditional technologies of music analysis and music theory pedagogy—such as model composition—with new techniques that reflect our contemporary immersion in music of all genres, from many sources, available to us in our cars, on our phones, on television and in video games, in coffeeshops and department stores, and on every
corner of the internet.\footnote{See Anahid Kassabian, \textit{Ubiquitous Listening: Affect, Attention, and Distributed Subjectivity} (Berkeley, Los Angeles, and London: University of California Press, 2013), xi. She writes: “\textit{Ubiquitous Listening} is about the listening that fills our days, rather than any of the listenings we routinely presume in musicology, sociology, media studies, and elsewhere.”} I hope that I have shown that historical techniques in music theory need not be at odds with an ethos of recutting, remixing, and recontextualizing. Mozart is not diminished when we playfully or probingly re-write his counterpoint or re-balance his phrase rhythm, nor is our appreciation of his music. And a healthy willingness to treat music playfully may open avenues between repertoires, styles, and cultural registers (i.e. “highbrow”/”lowbrow”) that are traditionally viewed as separate. Such oppositions are another symptom of disciplinary or aesthetic anxiety. Recomposition, whether undertaken for personal expression or scholarly endeavor, is not antithetical to appreciation of a great work of art; indeed, following Peter Szendy, I would argue that the recompositional impulse that makes so many music theorists want to make a piece of music their own somehow, constitutes the deepest possible appreciation. It should be celebrated and cultivated, not shouted down in a conference Q&A session. So remember: it is not only composers who have been remixing, rewriting, and repurposing existing music for hundreds of years—music theorists have been right alongside them, from Glarean to Rameau, to Weber and Fetis, and into the present day.
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