

Schenker and Schoenberg on the Will of the Tone

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Abstract As a comparative reading informed by recent work in integration theory and metaphor theory shows, Heinrich Schenker's and Arnold Schoenberg's *Harmonielehren* adumbrate broader theories of composition based in part on a conception of the tone as a partly unconsciously perceived, living idea, which the artist imitates in a piece of music as a manifestation or development of one particular tone by means of the motive and the key. Schenker and Schoenberg further conceive of a piece as a picture of the tone and a statement about the tone. This analysis reveals that Schenker's and Schoenberg's peculiar clashes, such as in their starkly opposed attitudes toward tonality, are the result of a mere difference in emphasis—attributable to temperament—on the absoluteness of the tone as an idea of nature versus the contingency of the artist's response to the tone in the formation of music, a contradiction inherent in both of their remarkably parallel theories. This deep unity in Schenker's and Schoenberg's musical thought invites a reassessment of the opposed historical categories of tonal and post-tonal music, which have informed our perception of a fundamental conflict between their theories and limited our perception of commonality between their theories.

THE MUSICAL THOUGHT OF HEINRICH SCHENKER and Arnold Schoenberg, their thinking in and about music, presents a certain curious paradox. On the one hand, Schenker and Schoenberg share a set of stern beliefs in the supremacy of German music; the authority of the genius composer; the organic unity, necessity, purity, and eternity of the musical masterwork; and their own identities as Moses-like lawgivers. These shared beliefs reflect their shared cultural and intellectual backgrounds as Jewish musicians in Vienna in the first part of the twentieth century.¹ On the other hand, Schenker and Schoenberg clash bitterly with one another over the music of their time, with Schenker rejecting all of it—especially Schoenberg's music—as degraded drivel, and with Schoenberg upholding some of it as a vital continuation of musical tradition. They also lock horns over certain theoretical particulars, such as what counts as a chord. Their conflict is all the more peculiar as well

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¹ Botstein 1997 discusses Schenker's and Schoenberg's shared cultural and intellectual backgrounds.

as poignant considering their initially cordial interactions, which include Schoenberg orchestrating a set of *Syrian Dances* by Schenker in 1903.²

Writers have generally taken one of two tacks in relating Schenker's and Schoenberg's musical thought, emphasizing either their conflict or their commonality. Starting with Carl Dahlhaus, some have explained their theoretical disagreements as emblems of their opposite historical orientations as tonal antiquary and post-tonal luminary. Dahlhaus regards their dispute over nonharmonic tones as an indicator of "a gulf which could hardly be imagined deeper" between their conceptions of musical coherence as tonal and motivic, respectively, and he attributes this gulf to their "directing their attention to different stages of musical history" (1974, 214, 214–15).³ Gianmario Borio takes a slightly different approach, arguing that their theoretical differences "can finally be traced back to two opposite paradigms: music as nature and music as language" (2001, 274).⁴ Starting with David Epstein (1979), others have attempted to reconcile their theories as they apply to tonal analysis. Janet Schmalfeldt, for example, has endeavored to reconcile Schenkerian analysis of form in tonal music with traditional and recent analytical techniques, including Schoenbergian analysis (1991).⁵ Still others have explored Schenker's and Schoenberg's common adaptation of the thought of Johann Wolfgang von Goethe⁶ and Arthur Schopenhauer.⁷

These somewhat limited approaches have left the paradox basically unresolved. Moreover, they are frequently based on questionable premises. Do Schenker and Schoenberg direct their attention to different stages of music history? Or, as others would have it, does Schoenberg split his attention

2 On Schenker's and Schoenberg's relationship and their polemics, see Dahlhaus 1974, Simms 1977, Erwin and Simms 1981, Federhofer 1982, and Boucquet 2005.

3 Robert W. Wason echoes Dahlhaus, claiming that Schenker's and Schoenberg's ideas about "passing harmonies" make their theories "completely irreconcilable" and that, whereas Schenker's theories are of particular aid in tonal analysis, Schoenberg's theories are "prophetic" for our understanding of twentieth-century music (Wason 1985, 142). James K. Wright likewise posits a "deep gulf" between Schenker's "doctrinaire" conception of harmony and dissonance and Schoenberg's "revolutionary" conception (2005, 53, 51, 43). Proceeding from a similar standpoint, Catherine Dale argues that Schoenberg's Second String Quartet is a "transitional" work on the path to "atonal composition" and that, consequently, "its analysis cannot proceed in one manner from beginning to end," by means of either "Schenkerian theory" or Schoenbergian "motivic approaches" (1993, 251, 249). Hellmut Federhofer can be grouped with these authors, but with the difference that he sees Schoenberg as a would-be luminary whose self-serving theories pale in comparison to Schenker's (1994). Finally, Stephen Peles attributes differences in

Schenker's and Schoenberg's theories to differing aesthetic and historical beliefs (2010, 166).

4 Actually, as we will see, both Schenker and Schoenberg endorse both paradigms, and they are not opposed to one another. Jonathan Robert Pieslak presents a more abstract paradigmatic reading, seeing the relation between Schenker's, Schoenberg's, and Hugo Riemann's theories as one of context and hierarchy versus context and symmetry versus hierarchy and symmetry as ways of ordering knowledge (2003, 219). Oliver Schwab-Felisch presupposes the irreconcilability of Schenker's and Schoenberg's theories, although he still uses them in conjunction to analyze contradictions in tonal music (2010).

5 Other studies applying Schenker's and Schoenberg's theories jointly to tonal analysis include Campbell 1982, Cinnamon 1984, Fowler 1984, Mathis 1996, Clemens 1998, Boss 1999, and Moreno 2001.

6 On Schenker, Schoenberg, and Goethe, see Boucquet 2005 and Neff 2006.

7 On Schenker, Schoenberg, and Schopenhauer, see Eybl 2006.

between the tonal and post-tonal periods as theorist and composer, respectively? On the contrary, Schenker and Schoenberg—at least at the beginning of the twentieth century, the crucial moment thought to mark the boundary between the tonal and post-tonal eras—are concerned first of all with *their* stage of music history. In other words, they are concerned with composition,⁸ as they state in their *Harmonielehren* (cited hereafter as *HL*), published nearly simultaneously in 1906 and 1911.⁹ Schenker, who identifies himself only as “an artist,” writes, “In contrast to other books on music theory, conceived, one might say, for their own sake and apart from art, the aim of this book is to build a real and practicable bridge from composition to theory” (*HL*, v, xxv). And Schoenberg writes, “Courses in harmony and counterpoint have forgotten that they, together with the study of form, must be the study of composition” (*HL*, 13). In fact, Schoenberg is writing in part “to make things clear to himself” about composition (*HL*, 417). To be sure, Schenker draws his examples exclusively from eighteenth- and nineteenth-century music (at least, the examples he commends), but that is just because he believes that twentieth-century music sets a poor example (for itself). And Schoenberg likewise focuses on eighteenth- and nineteenth-century materials, but that is just because he proceeds historically, and “we do not yet stand far enough away from the events of our time to be able to apprehend the laws behind them” (*HL*, 70). Whatever application Schenker’s and Schoenberg’s theories of harmony might have to the analysis of tonal music is incidental to their purpose.¹⁰

Yet Schenker and Schoenberg are vitally concerned with “tonal” music in another sense: in these harmony texts, as a comparative reading informed by recent work in cognitive science demonstrates, they sketch out strikingly parallel broader theories of composition based in part on a shared conception of the *tone* as a living idea that manifests itself in the musical work. In this essay, I first explain the nature of the texts, how integration theory and metaphor theory bear on their interpretation, and how my work relates to that of others; I then use these theories to analyze Schenker’s and Schoenberg’s shared conception of the tone. This analysis reveals that the stark

8 Wason has traced music theory’s separation from composition over the course of the nineteenth century (2002, 59–70). Volker Kalisch observes that Schenker and Schoenberg, together with Riemann, are among the last advocates of a compositional mission for music theory (1996, 122–24).

9 On the development, publication, and translation of Schenker’s and Schoenberg’s *Harmonielehren*, see Wason 2006 and Simms 1982, respectively.

10 Bryan R. Simms argues that Schenker’s professional activities as an independent writer and teacher direct his theories toward the acquisition of knowledge and away

from the composition of music (2006, 25–26). Analysis is indeed the practical fallout of Schenker’s theories, but composition remains their purpose. Even after Schenker determines in *Free Composition* ([1935] 1979) that “the schools cannot pretend to breed composers,” he still regards analysis as only a preliminary yet compensatory step toward the unattainable ideal application of his theories to composition. He writes, “If a student, under firm discipline, is brought to recognize and experience the laws of music, he will also grow to love them. He will perceive that the goal toward which he strives is so meaningful and noble that it will compensate for the fact that he himself may lack a genuine talent for composition” (xxii–xxiii).

differences in their theories result from a mere difference in emphasis on either of two basic aspects of music that both of them endorse. The analysis thereby goes a long way toward resolving the paradox of their shared backgrounds and separate paths. And this elucidation of their musical thought in turn places the historical categories of tonal and post-tonal music that have colored its reception in a new light.

The texts

Schenker's and Schoenberg's *Harmonielehren* have similar motivations, similar approaches, and similar significances as the first parts of broader theoretical-pedagogical projects aiming at comprehensive theories of composition.¹¹

Besides being motivated to write their *Harmonielehren* as a way of establishing their theoretical credentials, Schenker and Schoenberg are both combating a pair of trends in music theory that are detrimental to musical culture in general and to composition in particular: the failure, seen especially in pedagogical works, to comprehend and distinguish the principles of harmony and counterpoint and their joint functioning in music, and more generally, the invention of theories that are disconnected from art. Schenker puts forward a schematic four-voice chorale-style example from a textbook by Ernst Richter as an illustration of all that is wrong with theory, saying that the example is uninterpretable as an illustration of harmony or counterpoint and therefore comprehensible only as a pathetic example of free composition. "It is funny enough," writes Schenker, "that a theorist should offer a theoretical example which really cannot be accepted as such, because it serves neither the theory of harmony nor that of counterpoint. Even stranger is it, however, if that theorist flatters himself that he has offered therewith an artistic example, which, he thinks, frees him from the obligation of bringing in a living quotation!" (*HL*, 227/176).¹² Just as he criticizes Richter's textbook for failing to relate theory to actual music, so Schenker criticizes Hugo Riemann's dualistic theory of harmony for willfully ignoring compositional practice. He writes, "Theory has to accept the fact that artists at all times have based harmonic progressions on the principle of the ground tones being in the bass and that they have proceeded to do so with equal verve in both the major and minor systems and without any regard for the occurrence of minor triads" (*HL*, vii/xxvi). Similar to Schenker in his criticism of Richter, Schoenberg condemns the pedagogical exercise of embellishing chord progressions with figuration as an illegitimate and immoral mishmash of

¹¹ Regarding Schenker's and Schoenberg's lives at the time their *Harmonielehren*, see, respectively, Cook 2007, 17–22; and Stuckenschmidt 1977, 126–44.

¹² For all citations of German-language works in the article, numbers separated by a slash indicate that I have

translated the text myself, modified the published translation, or quoted a German word. In such cases, the first citation refers to the original, while the second refers to the published translation. For Schoenberg's *Harmonielehre*, German page number references are to the first edition except where otherwise noted.

harmony and counterpoint. He writes, “I am compelled to proscribe any exercise whose solution attains at most to that trashy fake art which anyone who is striving for truthfulness must hate. . . . Such embellishment does not belong in the harmony course, but rather in counterpoint, if it belongs at all in art and the pedagogy of art” (*HL*, 203). Schoenberg writes that theorists conceal their compositional ignorance and incapacity by presenting the limits of their understanding as limits not to be transgressed:

The evolution of no other art is so greatly encumbered by its teachers as is that of music. For no one guards his property more jealously than the one who knows that, strictly speaking, it does not belong to him. The harder it is to prove ownership, the greater the effort to do so. And the theorist, who is not usually an artist, or is a bad one (which means the same), therefore understandably takes pains to fortify his unnatural position. He knows that the pupil learns most of all through the example shown him by the masters in their masterworks. And if it were possible to watch composing in the same way that one can watch painting, if composers could have *ateliers* as did painters, then it would be clear how superfluous the music theorist is and how he is just as harmful as the art academies. He senses all this and seeks to create a substitute by replacing the living example with theory, with the system. (Schoenberg *HL*, 7–8)

In this regard, Schoenberg, like Schenker, attacks Riemann “with the will to annihilate” for building his theory of harmony “upon air” rather than upon art (*HL*, 409). The reader will note that in the above quotation, Schoenberg echoes Schenker’s description of musical examples as “living” (*lebendig*). Such echoes, together with Schoenberg’s conspicuous denial of having read Schenker’s *Harmonielehre* even as he responds to it at length—“I have not read his book,” he insists, “I have merely browsed in it” (*HL*, 318)—lead one to wonder whether Schoenberg may in fact be indebted to Schenker for some of the theoretical ideas that they share.¹³

Schenker’s and Schoenberg’s *Harmonielehren*, which are both theoretical and pedagogical, begin to address their concerns by setting forth the laws of harmony apart from all contrapuntal considerations and apart from all part-writing exercises that obfuscate the principles of harmony and counterpoint. Schenker writes, “All exercises in voice leading, which so far have constituted the main material of textbooks, had to be banned from the study of harmony and relegated to that of counterpoint” (*HL*, v/xxv). And Schoenberg writes, “All harmony courses that, following the old thorough-bass method, require the pupil to write out the other voices over figured basses are inappropriate; for there he learns mere voice leading” (*HL*, 13). Unlike Schenker, Schoenberg endorses part-writing exercises done from scratch, but these are to involve only a bare minimum of counterpoint “to avoid unmelodic voice leading”; chord connections are still to be explained “strictly from the nature of the chords themselves” (*HL*, 14, 13).

¹³ Nicholas Cook makes a similar point (2007, 170).

Schenker's and Schoenberg's *Harmonielehren* represent merely the first installments of lifelong theoretical-pedagogical projects aiming at comprehensive theories of composition.¹⁴ In Schenker's case, this project is *New Musical Theories and Fantasies*, of which *Harmonielehre* is the first volume, *Counterpoint* is the second ([1910, 1922] 1987), and *Free Composition* is the third ([1935] 1979). Schenker believes that a theory of counterpoint would ideally precede a theory of harmony, but he turns first to harmony because he hopes it will have a greater immediate impact in the effort to reform composition (see *HL*, xxvi).¹⁵ His *Harmonielehre* anticipates the large-scale, synthetic, theory-to-practice trajectory of *New Musical Theories and Fantasies* by organizing itself into a theoretical and a practical part: the theoretical part introduces the motive and the key, which are joined in actual music, as shown in the practical part. To a certain extent, *Free Composition* has the air of being the capstone to *New Musical Theories and Fantasies*, but it is fragmentary, and the coherence of the three volumes is far from transparent. Although Schenker often cites the earlier volumes in *Free Composition*, their content is overshadowed by the *Urfinie* and *Baßbrechung*, as if by a freeway overpass with its concrete pylons.

Schoenberg projects a series of theoretical-pedagogical works forming a comprehensive aesthetics of music in a letter to his publisher in 1911.¹⁶ The components are to be *Harmonielehre*, a volume on counterpoint, a treatise on composing for orchestra, a preliminary study of form—the “disposition [of the material] for the construction and development of musical ideas” (Schoenberg *HL*, 13)—and a comprehensive theory of form. Over the course of his life, Schoenberg completes only fragments of this project, the most significant of which are *Coherence, Counterpoint, Instrumentation, Instruction in Form*, drafted in 1917 (1994); *The Musical Idea and the Logic, Technique, and Art of Its Presentation*, drafted from 1923 to 1936 (1995); and *Fundamentals of Musical Composition*, assembled from lecture notes from 1937 to 1948 (1967).

Thus, Schenker's and Schoenberg's *Harmonielehren* adumbrate broader theories of composition that never attain clear expression. For assistance in reconstructing elements of these theories from their fragmentary traces, I turn to integration theory and metaphor theory.

Integration and metaphor theory

Recent work in cognitive science has sparked exciting developments across the humanities and sciences. Integration and metaphor theory, two areas of

¹⁴ On Schoenberg's theory of composition, see Carpenter 1998.

¹⁵ Schenker elaborates on the dire state of composition in a supplemental text that he drafts perhaps in 1905 but

does not publish, titled *The Decline of the Art of Composition: A Technical-Critical Study* (2005).

¹⁶ Letter to Emil Hertzka, dated July 23, 1911. Vienna: Arnold Schoenberg Center. <http://www.schoenberg.at> (accessed May 21, 2010).

research in cognitive science, have significant implications for the interpretation of historical music theories, implications that have not been fully recognized.

Integration theory, spearheaded by Gilles Fauconnier and Mark Turner, posits a general cognitive operation called integration or blending.¹⁷ Basically, integration is the dynamic creation of mental spaces, or cognitive structures activated as units, through the blending of elements from two or more input spaces, for example, when a person solves the following puzzle:

A Buddhist monk begins at dawn one day walking up a mountain, reaches the top at sunset, meditates at the top for several days until one dawn when he begins to walk back to the foot of the mountain, which he reaches at sunset. Making no assumptions about his starting or stopping or about his pace during the trips, prove that there is a place on the path which he occupies at the same hour of the day on the two separate journeys.¹⁸

One way to solve the puzzle is to imagine the monk walking from both directions at once. Figure 1 illustrates the integration network, or collection of interconnected mental spaces, involved in such an act of imagination. The top two circles, input spaces 1 and 2, are mental representations of the two trips; the little white dot (a1 or a2) moving up or down the diagonal line is the monk walking up or down the mountain. The line joining a1 and a2 shows that the monks in the two input spaces are connected as counterparts, in this case as identical instances of the same monk. The bottom circle, the blended space, is a mental representation of the monk walking from both directions at once. The lines joining a1 and a2 in the input spaces to a1' and a2' in the blended space show that the two instances of the monk are projected into the new scene. Similarly, the lines from d1 and d2 to d' show that day 1 and day 2 are projected onto the imaginary day on which the two trips happen together. From this mental representation, it is clear that the monk would wind up at the midpoint at about noon, both ascending and descending. Input spaces with connected counterparts such as the two instances of the monk and blended spaces with emergent structure such as the monk meeting himself are the basic components of integration networks.¹⁹ What is critical to recognize about blending is that it is recursive and formative: blended spaces can themselves become input spaces for further blends, and blended spaces can become entrenched in our memories. Consequently, blending is thought to underlie a vast range of cognitive and cultural

¹⁷ Fauconnier and Turner 2002 is the most extensive exposition of the theory. Significant recent work includes Fauconnier and Turner 2008 and articles in Coulson and Oakley 2005. Turner 2010 features an extensive bibliography.

¹⁸ Arthur Koestler, *The Act of Creation* (New York: Macmillan, 1964), quoted in Fauconnier and Turner 1998, 136.

¹⁹ Generic spaces, which contain what input spaces have in common and thereby pick out counterparts, are also important components of integration networks. For example, the input spaces here are connected to a generic space containing a monk traversing a mountain during a day. But Fauconnier and Turner do not always mention or depict them, because they merely spell out what is implicit in the counterpart connections.

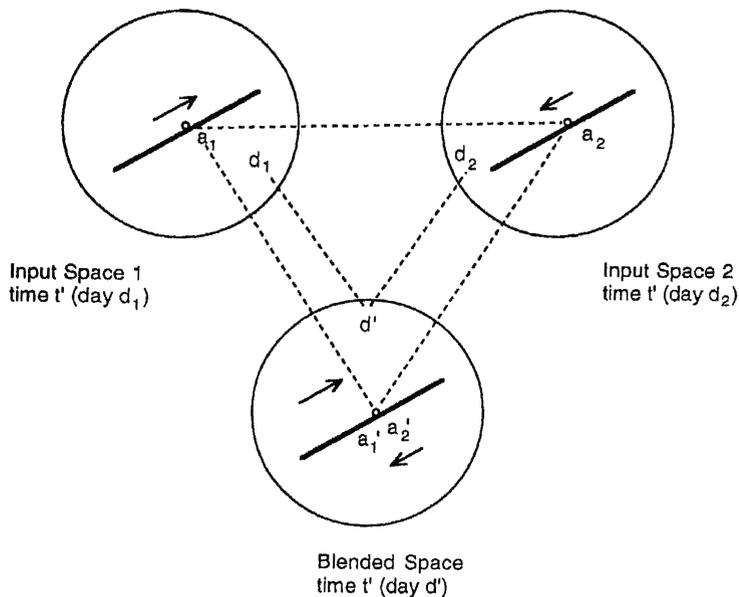


Figure 1. The integration network for the riddle of the Buddhist monk (Fauconnier and Turner 1998, 141, figure 5)

phenomena, from perception, categorization, conceptualization, and grammar to language, problem solving, artistic creativity, and social interaction.²⁰ As Fauconnier and Turner point out, even the apparently simple act of perceiving a cup of coffee is a complex feat of integration (2002, 8).

In light of its application to conceptualization and language, integration theory impinges upon another major area of research, which is metaphor theory.²¹ George Lakoff and Mark Johnson, among others, have hypothesized that metaphor is not simply a form of figurative language but is more fundamentally a general characteristic of thought. They claim that we conceptualize things in more abstract cognitive domains through cross-domain mapping—the projection of structure from more concrete domains—and that the ultimate grounding for our knowledge is our bodily experience in the world. A striking phenomenon put forward as evidence of conceptual metaphors is that pairs of domains frequently use shared sets of words. For example, the conceptual metaphor “knowing is seeing” is said to underlie the dual meanings of words such as *see*, *look*, *view*, *examine*, *inspect*, and *perspective*. This is an example of a primary metaphor, a relatively universal metaphor that is claimed to come directly from our basic physical experience. Conceptual metaphors are undergirded by image schemas, which are relatively universal patterns of objects and forces that are said to be abstracted from

²⁰ On account of its wide purview, blending theory invites the criticism that it explains “too much.” Fauconnier 2009 addresses criticisms such as this one.

²¹ Significant general studies in metaphor theory include Lakoff and Johnson 1980, Johnson 1987, and Lakoff and Johnson 1999.

our interactions with the world. Three image schemas, shown in Figure 2, are source/path/goal, derived from our experience of moving through space for various purposes; center/periphery, derived from our experience of being surrounded by other things in space; and part/whole, derived from our experience of having a body with various appendages. The physical relationships in image schemas are claimed to enable logical reasoning in other domains to which they are projected.

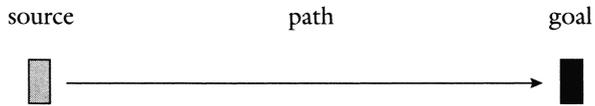


Figure 2a. Source/path/goal image schema (Spitzer 2004, 57, figure 2.4)

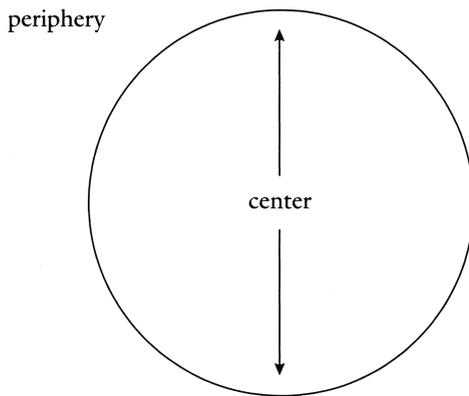


Figure 2b. Center/periphery image schema (Spitzer 2004, 58, figure 2.5)

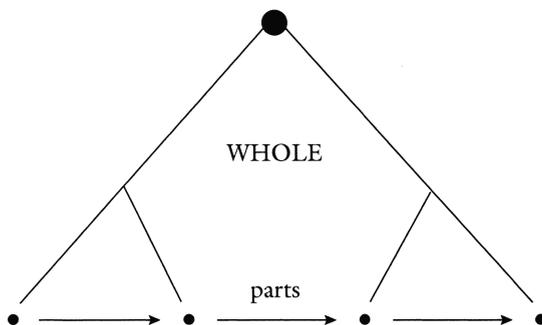


Figure 2c. Part/whole image schema (Spitzer 2004, 59, figure 2.6)

While recognizing that metaphor plays an important role in conceptualization, Fauconnier and Turner have shown that mere cross-domain mapping cannot account for the full complexity of thought and language revealed by integration networks. For example, they have analyzed statements and writings that employ the “time is space” metaphor to show that this apparently elemental cross-domain mapping actually involves an intricate network of many spaces linked in different ways that allow for thinking of time as a path in space or as a moving object in space, objective and subjective perspectives on time, and poetic elaboration of these ideas, all of which present emergent structure not present in the inputs. In fact, the concept of time itself shows up as a product of the network (2008).

Because integration theory and metaphor theory reveal things about cognitive structures in general, and because they reveal particular cognitive structures implied by texts, they have profound significance for the interpretation of historical music theories. Integration theory and metaphor theory suggest that reason and knowledge are not autonomous principles and facts that we tap into; rather, the way we think is shaped dynamically by our particular brains, bodies, and interactions with the world. Although these shaping forces are remarkably consistent from person to person in different times and places, everybody has a uniquely formed understanding of the world. What this means for interpreting a historical music theory is that nothing can be taken for granted; rather, we must strive to recover the theorist’s unique understanding of music. To this end, we need to read the theorist’s text dialogically, listening carefully to all its metaphorical resonances and responding to the questions that it raises through its foreignness, just as we listen and respond to a conversation partner.²² We especially need to refrain from jumping to conclusions about what seems transparent, just as we refrain from interrupting people. For it is precisely when a text seems transparent that the inner workings of its thought most readily escape us, just as the transparency of perceiving a cup of coffee prevents us from recognizing the integrative work involved.

Several writers have applied integration theory and metaphor theory to music, but they have not utilized the full potential of these theories, and only a few have addressed the history of music theory. Starting with Lawrence Zbikowski (1999), some have applied integration theory to such areas as the analysis of text-music relations in songs.²³ In these studies, the music as a whole tends to occupy a single mental space, which is blended with the contents of some extramusical space to create musical meaning. This approach

²² Thomas Christensen (1993) and Gary Tomlinson (1993) also advocate a dialogical historiography of music theory.

²³ Other studies applying integration theory to music include Cook 2001; Zbikowski 2002, 2002–3, and 2008; Sayrs 2003; Bauer 2004; Johnson 2004; and Bhogal 2006.

is a decidedly limited application of the theory, which again pertains to an enormous range of cognitive phenomena, not just the creation of global meaning. Many writers have applied metaphor theory to music,²⁴ and a few have applied it to the interpretation of historical music theories, including those of Schenker and Schoenberg, but they have generally applied it in a fairly limited way. Janna Saslaw (1996, 1997–98) and Diane Urista (2001, 66–94, 111–19) have explored the role of image schemas in music theories and have identified image schemas in Schenker’s and Schoenberg’s theories, but they are more interested in demonstrating how these theories involve bodily experience than in reconstructing or reconciling them. Accordingly, Saslaw and Urista consider these theories only with regard to tonal music. Zbikowski has given a sketch of Schenker’s theory of free composition from a cognitive science standpoint that includes elements of metaphor theory (2002, 126–30, 317–18). And Golan Gur has attempted to use metaphor theory to analyze Jean-Philippe Rameau’s conception of tonal space (2008), but he mistakenly supposes that all conceptual metaphors map directly from bodily experience.

Michael Spitzer’s work (2003, 2004) stands out far and away as the most elaborate application of metaphor theory to the history of music theory, both in its scope and in its analysis of intramusical as well as extramusical metaphors. In *Metaphor and Musical Thought* (2004), Spitzer identifies three linked pairs of metaphors of vital significance for German musical thought and culture, which are aligned primarily with different style periods: music as harmony and painting in the baroque era, music as rhythm and language in the classical era, and music as melody and life in the romantic era. As valuable as Spitzer’s work is, he neglects integration theory almost entirely, and he takes certain musical objects as given. Despite recognizing that “the categories we apply to music . . . are made by people; they are not universal absolutes,” he understands musical metaphors to be projected onto “the notes themselves” (2004, 16, 10). The concept of a note is just as contingent as every other musical concept; there are no notes apart from our perception of music *as notes*.²⁵ Do we agree on what a note is? Evidently not: the authors and a reviewer of a recent analytical anthology use the word *note* variously to mean a notated pitch, a pitch, a pitch class, and a scale-degree function—and they do not agree on all these terms either (Williams 2007, 265). For their part, Schenker and Schoenberg don’t care about notes. They care about *tones*, which are not the same.

Interpreters of Schenker’s musical thought have generally not fully appreciated the structural significance of his figurative language. Leslie Blasius suggests that Schenker’s figurative language may be a rhetorical icing that fills in the cracks between the layers of his discursive cake. “Schenker, to draw together the disparate strands of his discourse,” writes Blasius,

²⁴ Lawrence Zbikowski has provided a thorough account of this work (2008, 510–12).

²⁵ On the central role of perception in music theory, see Lewin 1986.

“locates a particular point of synthesis in the idealist formula that ‘the inner life of the tones’ which stands outside of the epistemologies justifies these various strands” (1996, 100). Robert Snarrenberg claims that Schenker’s figurative language is a tool for conveying the holistic effect of music but is not essential to his thought. He writes that Schenker’s “portrayal of tones as creatures was just that, a manner of speaking” (1997, 133). Nicholas Cook finds that an examination of Schenker’s cultural contexts, based in part on a consideration of his figurative language, does not alter our understanding of his theories. He concludes that “the specifically theoretical content of Schenkerian theory remains intact” (2007, 307).

Interpreters of Schoenberg, meanwhile, in keeping with his reception as a composer first and a theorist a distant second,²⁶ have often underestimated the significance of his writings for his musical thought. For example, Ethan Haimo writes that the Schoenberg’s “philosophical/acoustical” remarks in his *Harmonielehre* “seem suspiciously like ex post facto justifications, appeals to history and the laws of nature to justify a musical transformation that had already taken place” (1997, 73). And Michael Cherlin regards Schoenberg’s theories as behind the times of “the music itself”: “In many ways Schoenberg’s critical writings cling to a teleological world-view. Yet, Schoenberg’s abandonment or repression of tonality was concomitant with the development of a musical syntax that did not, and could not, end in perfection. Despite Schoenberg’s formidable contributions to theory and criticism, his intuitions and vision as a composer outstripped his capacity as a theorist and critic” (2007, 19, 8). Schenker and Schoenberg have more to say than we have heard, and on the 100th anniversary of the publication of Schoenberg’s *Harmonielehre*, it is fitting that we should lend them an ear once again.

In this article, I use blending theory to analyze Schenker’s and Schoenberg’s shared conception of the tone within their theories of composition as represented in their *Harmonielehren*, taking nothing as given. I regard Schenker’s and Schoenberg’s apparently figurative language as an extremely important indicator of the structure of their thought, and I draw on certain established conceptual metaphors and image schemas. However, I analyze the specific ways that their concepts emerge through blending, not simply the cross-domain mappings involved, or cross-space mappings in Fauconnier and Turner’s terms.

Tones as composite sounds

The atoms of music for Schenker and Schoenberg are tones (*Töne*), which they conceive of as composite sounds identified with their pitches. This seemingly innocuous idea has profound consequences for their theories of composition.

²⁶ Dunsby 1997 discusses the undervaluing of Schoenberg as a theorist.

For Schenker and Schoenberg, everything in music is made of tones. Schenker writes that music occupies the “world of tones” (*Tonwelt*; *HL*, 6/6). Schoenberg writes that “the material of music is the tone” (*HL*, 19). Schenker calls a composer a “tone artist” (*Tonkünstler*; *HL*, 39/26). Schoenberg calls music “tone art” (*Tonkunst*; *HL*, 23/25) and composers “tone poets” (*Tondichter*; *HL*, 350/313). Both of them call a piece of music a “tone piece” (*Tonstück*; Schenker *HL*, 42/29; Schoenberg *HL*, 18/20). As tone art, music is tautologically tonal, so neither of them uses the word *tonal*. Schoenberg only bothers to characterize music as “tonal” in the revised edition of *Harmonielehre* in reaction to Josef Hauer’s trumpeting of his own “atonal” music (Simms 2000, 8–9). He writes, “A piece of music will always have to be tonal, at least in so far as a relation has to exist from tone to tone by virtue of which the tones, placed next to or above one another, yield a perceptible continuity. . . . To call any relation of tones atonal is just as farfetched as it would be to designate a relation of colors spectral or complementary. There is no such antithesis” (*HL*, 432).

The idea that music is made of tones is hardly noteworthy. What is significant, though, is the particular structure of Schenker’s and Schoenberg’s conception of tones. To begin with, Schenker and Schoenberg conceive of these musical atoms as perceptual phenomena with acoustical counterparts. In this regard, the study of harmony is a form of applied psychology.²⁷ Schenker writes that “the study of harmony is an abstraction that involves only the most secret psychology of music” (*HL*, 198/153). And Schoenberg writes that “every musical explanation must be at the same time psychological” (*HL*, 164). Perceptually speaking, a tone is a unified sound, one aspect of which is its pitch, signified by a letter. Schenker refers to “the pitch of” overtones (*HL*, 22), and Schoenberg refers to the “three characteristics” of a tone: “its pitch, color [timbre], and volume” (*HL*, 421). In a synecdochic blend, shown at the top left of Figure 3, tones as sounds are identified with their pitches. To take just two of countless such instances, Schenker refers to “the tone C” (*HL*, 39), and Schoenberg refers to “the series of tones C, D, E, F, G, A, B” (*HL*, 23).²⁸ Acoustically speaking, a tone is a composite vibration, a harmonic tone made up of a ground tone and a series of harmonically related overtones, one aspect of which is their frequencies, for which Schenker uses the term *Tongrößen* (*HL*, 105) and Schoenberg uses the term *Schwingungszahlen* (*HL*, 19/21). In a second synecdochic blend, shown at the top right of Figure 3, tones as vibrations are identified with their frequencies, as are their components. Schenker refers to a “major triad, 1:5:3” (*HL*, 29), meaning a ground tone and overtones

²⁷ This blurring of music theory and psychology is characteristic of the period. According to Alexandra Evonne Hui, the science of sound in Germany from the mid-nineteenth century to the beginning of the twentieth century is intertwined with the art of music in that scientists such as Hermann Helmholtz, Carl Stumpf, and Ernst Mach study

the psychophysics of sound to address questions of musical aesthetics (2008).

²⁸ I have capitalized and deitalicized all references to pitches.

with the relative frequencies 1, 5, and 3, and Schoenberg says that harmonic relations “are expressed by fractions” (*HL*, 21). Since the frequency of a ground tone is the same as that of the entire tone, the ground tone, one *part*, is the *whole*. So Schoenberg refers to partials 5 and 3 as “components” of a ground tone (*HL*, 24), and Schenker, relying on the common metaphor of the whole as a container for the parts (see Turner 1987, 27), calls partials 5 and 3 “the content” of a ground tone (*HL*, 40). Finally, Schenker and Schoenberg, supposing that tones as vibrations and tones as sounds represent each other, blend these, as shown at the bottom of Figure 3, to arrive at a tone as a sound with the structure of a vibration—that is, a harmonic tone made up of a ground tone and a series of overtones. Since the pitch of a ground tone is the same as that of the entire tone, the ground tone, one *part*, is again the *whole*. Schenker refers alternately to “C as a ground tone” and “the tone C” (*HL*, 34/21, 39), and Schoenberg writes that the ground tone of a tone “is actually played or sung itself” (*HL*, 23); in other words, it is the tone. This paradoxical synecdochic identity between ground tones and tones reverberates through Schenker’s and Schoenberg’s theories of composition in ever widening circles.

The tone as a living idea

Schenker’s and Schoenberg’s conception of tones as composite sounds identified with their pitches leads to the notion of the tone as a partly unconsciously perceived, living idea, a notion that lies at the heart of their theories of composition.

To begin with, the blend of tones as composite sounds poses a puzzle that motivates its completion: how can a tone be made up of a ground tone and a series of overtones, each of which has its own pitch, if we hear only one pitch (more or less)? In short, how can a tone be a chord? Schenker writes that a ground tone with its overtones makes up “nature’s major triad” (*HL*, 39/26), and Schoenberg writes that “a harmonic tone [*Klang*] is a composite, made up of a series of tones sounding together . . . ; hence, it forms a chord” (*HL*, 21/23). To solve this puzzle, Schenker and Schoenberg both have recourse to the psychological distinction between conscious and unconscious perception. Tones do not sound like chords because we perceive overtones at least partly unconsciously on account of their greater complexity. Schenker says that “artists have used . . . nature’s proposition [the overtone series] unconsciously” (*HL*, 33/21), and Schoenberg says that “the more remote overtones are recorded by the subconscious” (*HL*, 20–21). Schoenberg refers here to the subconscious, but he uses the terms *unconscious* (*Unbewußt*) and *subconscious* (*Unterbewußtsein*) interchangeably (*HL*, 362/323).

The paradoxical blend of tones as composite sounds spurs two further blends. First, the notion of a tone that includes or contains hidden tones is

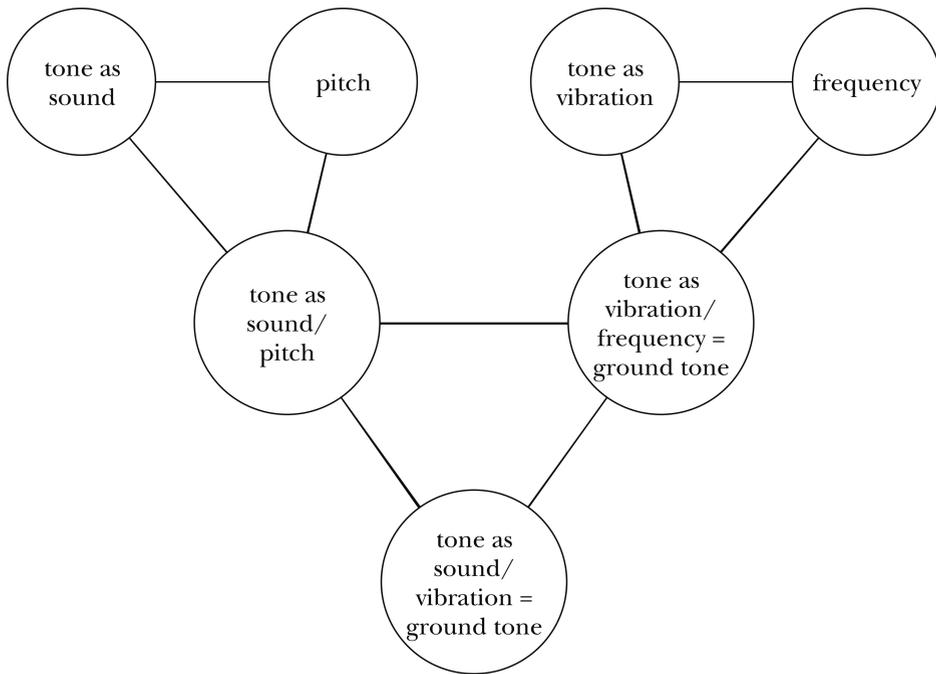


Figure 3. Tones as composite sounds

analogous to a parent that includes or contains hidden gestating offspring.²⁹ This analogy prompts the most distinctive blend of Schenker's and Schoenberg's theories of composition, shown in Figure 4: they identify tones with living creatures driven by procreative urges. Schenker writes that "we should get accustomed to looking tones in the eye as creatures; we should get accustomed to assuming biological urges in them, since these are inherent in organisms" (*HL*, 6/6), and Schoenberg writes that "the tone lives and seeks to propagate itself" (*HL*, 313). The ground tone of a tone or the tone as a whole is identified with a parent, the overtones are identified with its offspring, and their relation is accordingly one of generation. Schenker writes that "in the womb of the ground tone, the only relationships are those of begetting according to a series of divisive principles which we recognize as the numbers 1, 2, 3, 4, and so on; that is, the vibrating body vibrates in two halves, three thirds, four fourths, and so on" (*HL*, 37/24),³⁰ and Schoenberg

²⁹ The metaphor of the whole as the parent of the parts is well established in Western thought (see Turner 1987, 23).

³⁰ Thus, Schenker's overtone series is a nuclear family and not, as Snarrenberg suggests, a series of generations (1994, 35). Schenker explicitly denies Snarrenberg's suggestion; he accepts as being derived from the overtone series only those intervals formed between the ground

tone and its overtones, because only they are concrete relationships of procreation, and he rejects intervals between adjacent overtones, because they are abstract relationships of siblinghood (*HL*, 24). It is easy to make Snarrenberg's mistake, for Schenker uses the terms *Generation* and *Generationen* in connection with overtones to mean "progeny," not "generation" and "generations" in the familiar familial senses.

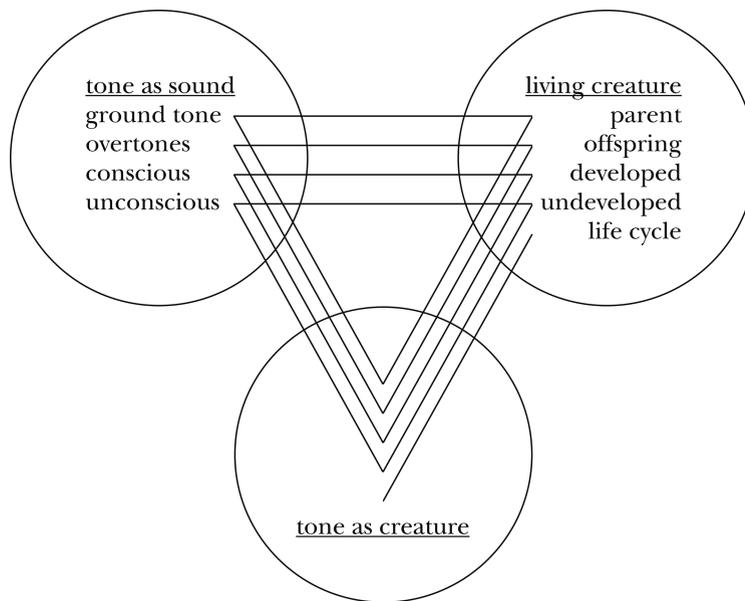


Figure 4. Tones as living creatures

writes that “in the tone, . . . which is indeed composite, the lowest tone is recognized as the one that begets the whole complex” (*HL*, 65/56–57).

Since the ground tone of a tone is identical with the tone as a whole, tonal reproduction for Schenker and Schoenberg is also tonal development. These notions of tonal reproduction and development play into that of a tonal life cycle, an emergent feature of the blend. Before a ground tone begets overtones, it must be just a bare partial. From this it follows that overtones, which are likewise bare partials, can beget overtones of their own and become ground tones. Thus, Schenker and Schoenberg characterize relations not only between partials but also between ground tones in terms of generation. Schenker writes that “if G has proven to be the strongest overtone in the womb of the ground tone C, the power and honor of this close relationship is preserved when, in the life of a composition, C meets G as an independent ground tone: it is as if the predecessor acknowledges the heir” (*HL*, 42/29), and Schoenberg writes of the same G that “if we think of this G as a real tone . . . , it then has overtones itself (as a tone actually played)” (*HL*, 23). Even if they become ground tones, overtones remain members of the original tone, and so the procreative urges of overtones are also those of the original tone. To put it another way, the tone satisfies its procreative urges vicariously through the exploits of its young. Schenker writes that each tone asserts “its right as a ground tone to keep its own fifth and major third, in a word, its right to its own offspring” (*HL*, 43–44/30), and Schoenberg writes that “a

bass tone strives to impose its own overtones, thus has the desire to become the ground tone of a major triad” (*HL*, 432/385). Note that “ground tone” in these quotations means the root of a triad. This meaning is simply an extension of the basic meaning to include cases where not only a ground tone but also its offspring are harmonic tones.

Second, a tone as a partially hidden entity is also analogous to an idea, an immaterial essence that is only partially manifest in the phenomenal world, and this analogy opens the door to a blend, shown in Figure 5, in which Schenker and Schoenberg identify the tone with an idea of “nature” (Schenker *HL*, 20; Schoenberg *HL*, 225).³¹ Schenker refers to “the idea of the triad,” that is, a tone with its offspring (*HL*, 176/133),³² and Schoenberg refers to “the idea of the harmonic tone [*Klang*]” (*HL*, 29/28), both of them using the Platonic word *Idee* here. In the blend, Schenker and Schoenberg identify conscious perception of the tone with its manifestation and unconscious perception of the tone with its latency, so that the incomplete phenomenon of the tone still bears traces of the complete idea. Schenker refers to the perceptual “phenomenon” of the tone (*HL*, 28), which serves as a “hint” through which the artist has “divined nature” (*HL*, 20), and Schoenberg refers to a phenomenal “impression,” which gives an intimation of the “entire complex” of the tone (*HL*, 20). He writes that “the constitution of the ear . . . relates to the constitution of the tone somewhat as do well-fitting concave to convex parts” (*HL*, 19), as if to say that the tone’s impression is a literal imprint in the ear.

An emergent feature of the blend is that the tone has ideal acoustic characteristics. First, Schenker and Schoenberg ascribe ideal relative strengths to the partials. Schenker claims that the third partial is “more powerful” than the fifth partial, since it “precedes the latter” numerically (*HL*, 26), and Schoenberg likewise claims that the third partial is “the next strongest tone” after the ground tone, “because it occurs earlier in the series, therefore more often than the other tones” (*HL*, 23). But the relative strengths of partials in actual tones are by no means constants; rather, they vary with respect to the fundamental frequency, the instrument, the force of the attack, and the time relative to that of the attack. Second, as shown above (but without my calling attention to it), they identify the relative frequencies of partials with the partial numbers, which is not actually the case with every instrument; the piano, to take a well-known case, has inharmonic partials. Along the same lines, they identify the relative frequencies of different tones with integer frequency ratios, not with the actual frequency ratios of a particular tuning; Schenker says that with equal temperament “the artist . . . made . . . different frequencies artificially identical” (*HL*, 105/82), and Schoenberg

31 I have decapitalized all of Elizabeth Borgese’s translations of *Natur* as “Nature,” because this capitalization casts a quaint patina over the word that dulls its impact.

founding harmonic tone [*Klang*] that reaches the point of being composed out at the same time remains an idea [*Idee*]” (188/105).

32 Schenker explicitly describes the tone as an idea in *The Masterwork in Music* ([1925] 1994). He says that “the

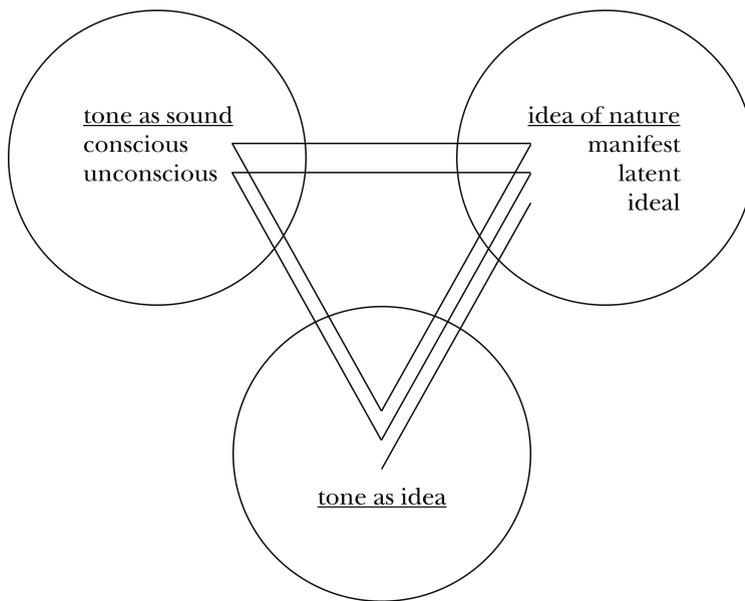


Figure 5. The tone as an idea of nature

says that music “neglects in part the natural prototype by putting in place of the real tones the artificial, the tempered ones” (*HL*, 314).

Now, the development of a living creature, which follows a predetermined pattern, is analogous to the manifestation of an idea. Accordingly, Schenker and Schoenberg identify the tone as a living creature with the tone as an idea in a further blend, shown in Figure 6. The tone’s procreative urge is thus an urge for “self-expression” in Schenker’s words (*HL*, 84). For example, Schoenberg explains modal pieces ending on major triads as the ground tone having “freed itself at the close from the unnatural force that had been imposed upon it, as if, since it substituted its own overtones, it sensed its natural euphony,” its ideal sound (*HL*, 28).³³

The tone and the artist

Schenker’s and Schoenberg’s conception of the tone as a living idea informs their understanding of music as formed by both the tone and the artist’s response to the tone, and ironically, it is this shared understanding that gives rise to the conflicts between their theories, beginning with their differing takes on the limits of unconscious perception.

³³ Schenker’s and Schoenberg’s notion of the tone as an idea with an urge for self-expression in music connects with Schopenhauer’s concept of the will as the ultimate

reality, which objectifies itself in ideas that are represented in art (see Schopenhauer [1819] 1966, 105, 175, 184; Eybl 2006).

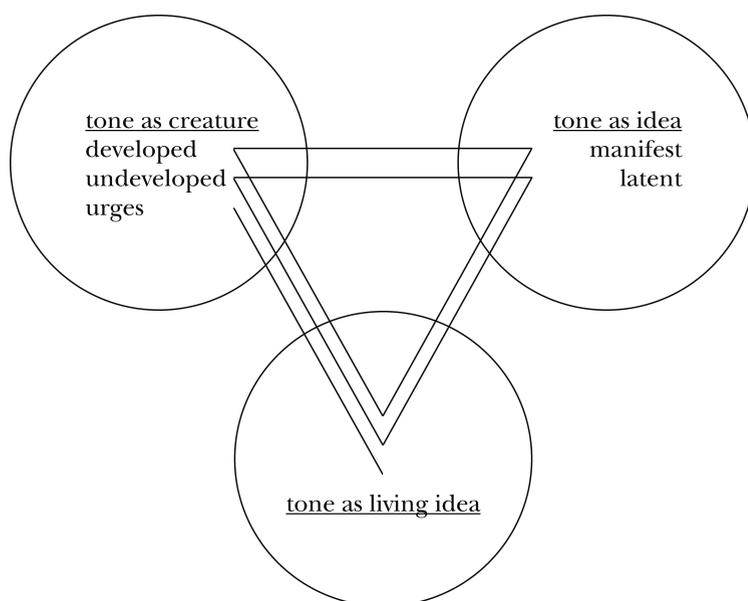


Figure 6. The tone as a living idea

For Schenker and Schoenberg, music has two sources: the tone as an idea of nature and the artist, who embodies “the human spirit” (Schenker *HL*, 164; Schoenberg *HL*, 30) or “the spirit of mankind” (Schoenberg *HL*, 411). Schenker describes harmonic forces as “born of nature or of art” (*HL*, xxv)—that is, the artist—and Schoenberg writes that “art has set its course not only by the nature of tones but by the nature of man as well” (*HL*, 68). However, the artist is not independent; rather, the artist’s urge for self-expression is a reflection of and a response to the tone’s urge for self-expression, as intuited through contemplation.³⁴ Schenker writes that “the artist harkens to the soul of the tone as it were—the tone seeking a life content as rich as possible—and thus the artist, who is the mere slave of the tone as he apprehends it, submits to it as much as possible” (*HL*, 109/86), and Schoenberg describes the artist’s activity as a response to having “picked up the signal” of the tone’s incipient offspring, so that “he is merely the instrument of a will hidden from him” (*HL*, 350/313, 416). Schoenberg describes this chain of command in terms of a chain reaction leading from the tone to the world of feeling. “The material of music is the tone,” writes Schoenberg; “what it affects first, the ear. The sensory perception releases associations and connects tone, ear, and the world of feeling. On the cooperation of these

³⁴ Severine Neff points out that both Schenker and Schoenberg regard the tone as an object of intuitive contemplation (2006, 33), but she does not consider that for both of them it is the artist who is the subject.

three factors depends everything in music that is felt to be art" (*HL*, 19). Schenker and Schoenberg sometimes ascribe the tone's intentions synecdochically to the more inclusive "nature," who is "guiding [the artist's] pen" (Schenker *HL*, 60) and which "has us desire and enjoy that which fulfils her purposes" (Schoenberg *HL*, 248).³⁵

On the face of it, Schenker's and Schoenberg's subjection of the artist's will to the will of the tone would seem to head off any conflict between these—as well as any serious conflict between their theories. But whereas the tone is an eternal idea, the spirit of mankind as manifested in "the artistic instinct" (Schenker *HL*, 137), or "the intuitive power granted by the spirit" (Schoenberg *HL*, 416), undergoes a progressive "evolution" (Schenker *HL*, 180/137; Schoenberg *HL*, 30), and accordingly, there is an "evolution of music" as well (Schenker *HL*, 69/53; Schoenberg *HL*, 21). Consequently, an irremediable tension arises in the formation of music between the tone as an absolute idea of nature and the artist's contingent response to the tone.³⁶ It is this tension that is at the root of all the major differences in Schenker's and Schoenberg's theories of composition, for Schenker emphasizes the absoluteness of the tone while Schoenberg emphasizes the contingency of the artist's response. Schenker refers to an ideal of "art as nature, finally understood correctly" (*HL*, 69/53),³⁷ while Schoenberg writes that "art reduces the perceptible to the expressible. Hence, one can perceive differently and express differently" (*HL*, 94). But again, because they both endorse the tone and the artist as sources of music and even both subject the will of the latter to that of the former, it is as if their conflicting theories are two halves of one

35 The tone and the artist as sources of music are parents, as Schenker and Schoenberg make clear in other writings. In *The Masterwork in Music* ([1925] 1994), Schenker writes, "The law of all life, that movement which as procreation carries on beyond the boundaries of the individual being, man also carries into the harmonic tone [*Klang*], which nature has pointed out in his ear. Everything in music depends on this movement, this procreation" (12/2–3). In his eulogy for Mahler, Schoenberg writes that musical works are "conceived, carried through and born" (1975, 447). The notion of the tone and the artist as parents recalls Richard Wagner's description of music as born of a "mother-element, the Musical Tone," and "the poetic-aim," the "begetting seed" ([1851] 1893, 276, 296). But for Wagner the poetic aim must be literally poetic, whereas for Schenker and Schoenberg words are superfluous. Moreover, the tone and the artist for Schenker and Schoenberg have somewhat ambiguous gender roles with respect to activity versus passivity. On the one hand, it is the composer who actually composes the music, playing an active, masculine role. On the other hand, the tone dictates music to the composer, putting him in a passive, feminine position. Thus, Snarrenberg goes too far when he writes that for Schenker "the effectual agent of

Auskomponierung [composing out] is, of course, the composer. Nature's triad, because it is a static simultaneity, is incapable of giving the effect of movement. . . . Schenker thereby restores the order that he sorely missed in the world around him: at least man's rightful place in the world of tone is assured: the husband is rightly valued more than the wife" (1994, 41). On the contrary, whenever Schenker uses the terms *prolongation* or *composing out* in their verb forms, the subject is a series of events, not the composer. Moreover, Schenker never says that the harmonic tone (nature's triad) is static; on the contrary, he says that "the harmonic tone [*Klang*] comes to life through a vital natural power" ([1935] 1979, 57/25).

36 This tension reflects a broader tension between nature and culture in the intellectual exchange identified by Hui between the science of sound and the art of music (2008). Schenker and Schoenberg enter into this exchange just as expansions of the sound world at the turn of the twentieth century heighten its inherent tension to the breaking point.

37 In *Counterpoint*, Schenker writes more specifically that "the artist learns to humble himself before the absolute character of tonal life" ([1910, 1922] 1987, 1:14).

contradictory theory. Their differences are more a matter of temperament than of fundamental disagreement: as Byron Almén has shown, Schenker has a “pistic” temperament, prioritizing stability and laws, whereas Schoenberg has an “iconic” temperament, prioritizing variety and freedom (2005, 42–54).

Susan McClary argues somewhat differently that Schenker and Schoenberg emphasize opposite aspects of the creative genius: Schenker privileges a rational, masculine role for the artist, whereas Schoenberg privileges an irrational, feminine role (1991, 105). It is true that Schenker’s emphasis on the absoluteness of the tone as an idea leads him to suppose that music should be demonstrably rational. But the source of this rationality is nature, never the artist’s reason. Schenker writes that “the artist, steadier in his instinct than in his knowledge, continues to be led by the former rather than by the latter” (*HL*, 33/21). Further still, not even the theorist is led by his reason. As a way of stating his credentials, Schenker identifies himself as “an artist endowed with intuition” (*HL*, 21). Schoenberg similarly supposes that music should be at least potentially comprehensible, but not owing to the artist’s reason. He writes that “comprehensibility and clarity are not conditions that the artist is obliged to impose on his work, but conditions that the observer wishes to find fulfilled,” yet “the connection that gives access to what was once incomprehensible is always finally made” (*HL*, 30).³⁸

The tension between the tone and the artist surfaces first of all in Schenker’s and Schoenberg’s differing takes on the limits of unconscious perception, and all further conflicts between them can be traced back to this one. Schenker, who emphasizes the absoluteness of the tone, assumes that nature places limits on perception and, consequently, on music and that these limits have been reached and are identifiable. Accordingly, he identifies a natural limit on unconscious perception at the fifth partial. “*The human ear can only follow nature as revealed in the overtone series up to the major third as the ultimate limit,*” writes Schenker, “thus up to that overtone whose principle of division is five” (*HL*, 37/25; emphasis original). This limit and a couple of others in music are based on “the mysterious demand of the number five” (*HL*, 54/40).³⁹ Schenker’s physiological and numerological claims allow him to suppose that the tone as an absolute idea informs the artist’s contingent response, inasmuch as perception of the tone is likewise absolute. However, Schenker does not actually abide by his limit. He makes allowance for the perception of those partials whose numbers “are products and can be reduced to 2, 3, and 5,” so that in the end, the limit is actually “5 as a principle of division,” not a particular partial corresponding to this principle (*HL*, 39/26). “Thus 6 can be recognized as 2×3 or 3×2 , 9 as 3×3 , 10 as 5×2 , etc.,” he

³⁸ However, earlier writings of Schenker and later writings of Schoenberg allow for rational deliberation in composition (see Karnes 2008, 110–16, 188–90).

³⁹ Clark 1999 provides a thought-provoking examination of Schenker’s notion of the number 5.

writes, “whereas partials 7, 11, 13, 14, etc. remain entirely foreign” (*HL*, 38/25). And yet not entirely foreign: Schenker hears the E_b marked with an asterisk in the penultimate measure of Example 1, excerpted from Chopin’s Prelude in F major, op. 28, no. 23, “as a poetic-visionary attempt to offer an association with the seventh partial” (*HL*, 40/27).

Schenker’s acceptance of the fugitive perception of higher partials approaches the view of Schoenberg. Schoenberg, emphasizing the contingency of the artist’s response to the tone, believes that the evolution of the human spirit includes an evolution of perception, that “acute senses” accompany a “highly evolved spirit” (*HL*, 471/422). Schoenberg describes the evolution of perception as involving two factors: first, the progressive appearance of new tone color, through which “the tone becomes perceptible” (*HL*, 421), and which drives the artist to “give expression to something that moves him, something new, something previously unheard-of” (*HL*, 400), and, second,

Moderato

Example 1. The association of the seventh partial in Chopin’s Prelude in F major, op. 28, no. 23 (Schenker *HL*, 40/27, example 21/17)

the progressive analysis of remote overtones, through which remote overtones go from being only partly consciously perceived as tone color to being consciously perceived as both pitched sounds and components of tone color.⁴⁰ Schoenberg describes this progressive analysis in the following quotation:

Once again: the tone is the material of music. It must therefore be regarded, with all its properties and effects, as suitable for art. All sensations that it releases—indeed, these are the effects that make known its properties—bring their influence to bear in some sense on the form of which the tone is a component, that is, on the piece of music. In the overtone series, which is one of the most remarkable properties of the tone, there appear after a few stronger-sounding overtones a multitude of weaker-sounding ones. Without a doubt the former are more familiar to the ear, while the latter, hardly perceptible, are rather strange. In other words: the overtones closer to the ground tone seem to contribute more or more perceptibly to the total phenomenon of the tone—the tone accepted as euphonious, suitable for art—while the more distant seem to contribute less or less perceptibly. But it is quite certain that they all do contribute more or less, that of the acoustical emanations of the tone nothing is lost. And it is just as certain that the world of feeling somehow takes into account the entire complex, hence the more distant overtones as well. Even if the analyzing ear does not become conscious of them, they are still heard as tone color. That is to say, here the musical ear does indeed abandon the attempt at exact analysis, but it still takes note of the impression. The more remote overtones are recorded by the subconscious, and when they ascend into the conscious they are analyzed and their relation to the tone as a whole is determined. (*HL*, 18–19/20–21)

Schoenberg acknowledges a full perception of the absolute tone as a goal for the evolution of perception, referring to “the growing ability of the analyzing ear to familiarize itself with the remote overtones, thereby expanding the conception of what is euphonious, suitable for art, so that it embraces the whole natural phenomenon” (*HL*, 21). However, Schoenberg does not identify any effective natural limit to perception or music, only a temporal one. He writes, “What today is remote can tomorrow be close at hand; it is all a matter of whether one can get closer. And the evolution of music has followed this course: it has drawn into the stock of artistic resources more and more of the harmonic possibilities inherent in the tone” (*HL*, 21). Schoenberg ridicules Schenker for his limit of the number 5 on perception and other things in music. “He speaks of the ‘mysterious number five,’” writes Schoenberg, “beyond which (if I remember correctly) we are not to go. A poetic thought, certainly, yet somewhat too poetic in the bad sense, since the real poet recognizes the truth; for that five is already far behind us” (*HL*, 318).

⁴⁰ Although Schoenberg does not know Sigmund Freud’s work well (see Cherlin 2007, 10), Schoenberg’s distinction between comprehensive unconscious perception and filtered conscious perception resonates with that of Freud

(see Freud [1900] 1938, 491). Schoenberg’s conception of tones as both pitched sounds and components of tone color was shared by Riemann (see Cramer 2002, 13).

Schoenberg may feel that Schenker's numerological limit on perception is dubious, but Schoenberg's stance is likewise numerological, in that he attributes musical and even mystical powers to numbers. As perception and music evolve, the operative set of numbers expands. "It is quite probable," writes Schoenberg, "that the higher, the more complicated numbers, the more complex harmonic relations conceal in themselves a mysticism still richer than that of the prime numbers, of the irreducible, simpler harmonic relations" (*HL*, 150/132). Schoenberg's physiological and numerological claims allow him to reconcile the tone as an absolute idea with the artist's contingent response, inasmuch as this response always allows for "mystical union with the universe" (*HL*, 26/26).⁴¹

Pausing here for a moment, we have to ask, does Schoenberg really hear the tone this way? And what is he listening to, anyway, if he is hearing an idea? I would argue that Schoenberg probably does hear an unusually intense assortment of pitches and colors in whatever sound in his environment he might take to be a conduit for the tone, and that he likely augments this perception through his vivid aural imagination. This augmentation would serve as an experiential correlate for Schoenberg's hypothesis of the emergence of new tone color and pitch. Schoenberg may associate the nether regions of the tone with real or imagined noise in his environment, which Emily Thompson shows to be a significant phenomenon accompanying urbanization at the turn of the twentieth century that some musicians make an object of aesthetic interest (2002, 130–44).

The motive and the key

For Schenker and Schoenberg, the tone as a living idea manifests itself in music through the motive and the key as imitations of the tone. Their differing takes on the limits of the key reflect their differing takes on the limits of unconscious perception.

If a tone manifests itself in or begets other tones, such as the tones of a chord, these are, in a plain sense, not the same as the original tone: first you had one tone, and now you have several. The puzzle of how a tone can be a chord thus gives way to the puzzle of how a chord can be a tone or, more generally, how music or musical materials can be a tone. Schenker and Schoenberg account for the obvious difference between music and a tone through the venerable notion of art as the "imitation of nature" (Schoenberg *HL*, 18) or the "association with ideas of nature" (Schenker *HL*, 3/3). Schenker writes that, for example, "the actual appearance of our triad is based on an association with nature" (*HL*, 176/133), and Schoenberg writes that music aims at "creating the truest possible imitations" of "the natural

⁴¹ On Schoenberg's mysticism, see Föllmi 1999.

material, the tone" (*HL*, 313). But this imitation is at the same time a development or manifestation of the tone, because the tone, like music, is essentially composite. In other words, reproduction of the tone (imitation) is tonal reproduction (procreation).

Schenker and Schoenberg both finesse the notion of music as an imitation of the tone in contrasting but compatible ways that reflect their shared concern with the artist's experience as a source of music. Schoenberg distinguishes between the primitive imitation of outer nature, or phenomena known according to objective concepts, and the advanced imitation of inner nature, or ideas apprehended through subjective impressions.

Art in its most primitive state is a simple imitation of nature. But it quickly becomes imitation of nature in the wider sense of this idea, that is, not merely imitation of outer but also of inner nature. In other words, art does not then represent merely the objects or the occasions that make impressions, but above all these impressions themselves, ultimately without reference to their What, When, and How. Inference of the original, external object is here perhaps of only secondary importance due to its lack of immediacy. In its most advanced state, art is exclusively concerned with the representation of inner nature. (Schoenberg *HL*, 18)

In the case of music, the phenomenon of the tone known through conscious analysis is outer nature, and the tone as an idea apprehended through its impression is inner nature. So when Schenker limits perception of the tone at the number 5 because higher numbers are too complicated, Schoenberg criticizes him for limiting music to the primitive imitation of outer nature. According to Schoenberg, Schenker "takes the *known* phenomena to be the *only ones* there are, to be the ultimate and immutable manifestations of nature, and *explains only these*, instead of contemplating nature comprehensively in its relation to our feelings and perceptions" (*HL*, 319). In a sense, Schenker also distances himself from a notion of music as imitating external nature, meaning in this case nature as something external to music. He says that the artist's discovery of the motive, an "*innate* means of association," frees music from "external associations" with "a model in nature" (*HL*, 4/4). But "in this discovery, the exaltation of nature manifests itself" nevertheless (*HL*, 70/54), for it is the tone that both incites the artist and produces the motive through repetition.

In nature: procreative urge → repetition → individual kind;
In the world of tones, analogously: procreative urge → repetition → individual motive. (Schenker *HL*, 6/6–7)⁴²

⁴² Schenker explicitly identifies this procreative urge with an urge of the tone, not the artist as has sometimes been supposed. Elsewhere he emphasizes "the biological

assessment of events in the life of the tone, as was already stressed above with motivic procreation" (*HL*, 42/29).

The motive is in fact one of two basic types of imitation of the tone for Schenker and Schoenberg, as shown in Figure 7.⁴³ These imitations are connected to the tone but not blended with it, because the notion of imitation already entails manifestation, or, to put it in Fauconnier and Turner's terms, the conceptual relation of representation is already compressed to identity. A closer look at Schenker's analogy between procreation in nature and procreation in the world of tones reveals that he identifies the motive with the tone. According to Schenker, the reproduction of an organism yields a category for the organism. "In nature," he writes, "procreative urge → repetition → individual kind" (*HL*, 6). So the repetition of tones as organisms should yield the category of a tone, but instead it yields the category of a motive. "In the world of tones, analogously," he writes, "procreative urge → repetition → individual motive" (*HL*, 6/7). Schenker thus identifies the motive with the tone and motivic repetition with tonal reproduction. Schenker implies that since tonal reproduction is also tonal development or manifestation, motivic reproduction must involve motivic development or manifestation in the form of variation. He writes that music "shows the motives in ever changing situations in which their characteristics are revealed, just as people are represented in a drama" (*HL*, 19/12). Schoenberg likewise identifies the motive with the tone. He says that a motive can be "regarded as the germ of the whole" (*HL*, 144/127), but he also says that "everything emanates from the tone" (*HL*, 146/128).⁴⁴ And like Schenker, Schoenberg identifies repetition with reproduction and variation with development or manifestation. Schoenberg does not say much about the motive in *Harmonielehre*, but in the contemporaneous essay "Why New Melodies Are Difficult to Understand" (1913) he refers to variation as developing or revealing an organism, and he refers to a series of motives as a series of organisms.

Every melody results from the repetition of a more or less varied basic motive. The more primitive, the more artless the melody is, then the more modest the variation and the more numerous the repetitions. The lower the demands which may be put upon the capacity for comprehension, the quicker the tempo of repetitions, then the more inferior must be its inner organization. Now, since every genuinely new melody, as a premise of its newness, must deal with the preexistent lower organisms, the melody uses either barely new basic motives in fewer or more artful variations, therefore developing itself more quickly, or it uses quite new motives, which it develops slowly in perhaps many variations.⁴⁵

43 Van den Toorn 1996 discusses Schenker's and Schoenberg's similar concepts of the motive.

44 Schoenberg later seems to disavow this description of the motive when he writes, "An attempt to recognize and define the musical idea stands in clear contradiction to the sentimental poeticising notion that a composition might arise from the motive as a germ of the whole, as a plant grows from a seed" (*Gedanke* manuscript #10, 108–9,

quoted in Carpenter 1998, 212). These conflicting descriptions reflect the dual identity of the ground tone as both a musical idea and a single tone, discussed below.

45 Quoted and translated in Simms 1977, 115; translation modified. Simms 1977 examines Schenker's and Schoenberg's views on repetition as expressed in that essay and other writings.

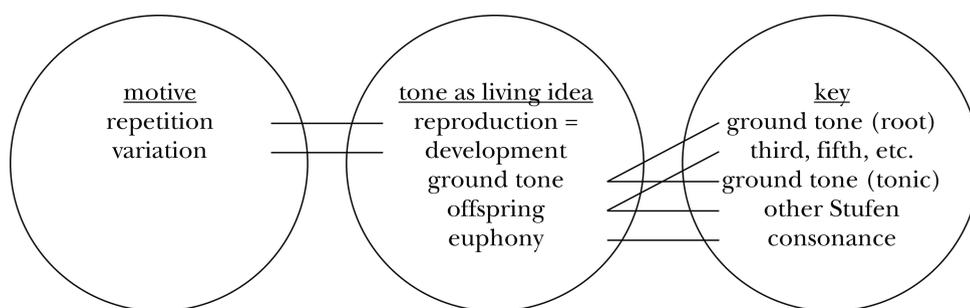


Figure 7. The motive and the key as imitations of the tone

Thus, both Schenker and Schoenberg value both repetition and variation as reproduction and development, and there is no fundamental conflict between them here, despite their later polemics regarding repetition.

Identifying the motive as a basic concept for Schenker raises the question of how the integration network being described here may have changed, because in *Free Composition* he dismisses the motive in favor of the *Urlinie*. I would argue that this integration network, while transformed, remains recognizable in Schenker's later writings as well. As Bryan R. Simms (1977, 117–18) and Pieter van den Toorn (1996, 374) have pointed out, Schenker's concept of the *Urlinie* develops out of and fills the role of the motive in his theory of composition. Indeed, throughout his career, Schenker continues to affirm the principle of repetition that underlies the motive. In *Counterpoint* ([1910, 1922] 1987) he writes, “The masters . . . recognized the act of repeating a series of pitches as the principal force of all music of all times” (1:22), and in *Free Composition* ([1935] 1979) he writes that “repetition . . . is a biological law of life” (118). And this continued affirmation is remarkable, because as Patrick McCreless has observed, the principle of repetition does not square easily with that of harmonic and contrapuntal unity (1989, 223).

The other basic type of imitation of the tone for Schenker and Schoenberg is the key. A key (*Tonart*) is a clan of tones or chords (*Art of Töne*) springing from a “ground tone,” or tonic (Schenker *HL*, 55/40; Schoenberg *HL*, 22/24). This meaning of “ground tone” is yet another extension of the basic meaning to include cases where not only the ground tone but also its offspring can be chords. We first consider chords in themselves.

The consonance of a chord is analogous to the euphony of the tone, and since a tone is in fact a chord, these qualities are identical, so a chord that directly imitates the tone must in some way be consonant. Schenker and Schoenberg determine the extent of consonance in contrasting ways that again reflect their contrasting notions about unconscious perception of the tone. Schenker, who limits perception of the tone at the number 5, likewise limits consonance to “the simple ratios using 1, 2, 3, and 5 from the overtone

series”—that is, the perfect prime (1:1), perfect octave (2:1), perfect fifth (3:2), perfect fourth (4:3 or $2 \times 2:3$), major third (5:4 or $5:2 \times 2$), and minor sixth (8:5 or $2 \times 2 \times 2:5$), along with the minor third and major sixth as “alterations” of the major third and minor sixth, respectively (*HL*, 174/131, 132). Schoenberg, who regards perception of the tone as evolving, likewise regards consonance as evolving. He writes, “The expressions ‘consonance’ and ‘dissonance,’ which signify an antithesis, are false. It all simply depends on the growing ability of the analyzing ear to familiarize itself with the remote overtones, thereby expanding the conception of what is euphonious, suitable for art, so that it embraces the whole natural phenomenon” (*HL*, 21). According to Schoenberg, consonances imitate and are the more immediate overtones, while dissonances imitate and are the more remote ones; that is, they imitate tone color.⁴⁶ He writes, “The major consonances are direct imitations of the prototype, the other consonances, indirect. Both the latter and the former are contained in the overtones series, as overtones more or less close to the ground tone. The dissonances, corresponding to the remote overtones, are likewise in part direct imitations of nature . . . , in part indirect or inferred” (*HL*, 357–58/320). By indirect imitations, Schoenberg means imitations of imitations (see *HL*, 385). Since both consonances and dissonances imitate the tone, dissonances are virtual consonances. “Dissonances are nothing else but more remote consonances whose analysis gives the ear more trouble on account of their remoteness,” writes Schoenberg, “but once analysis has made them more accessible, they will have the chance of becoming consonances just like the closer overtones” (*HL*, 66). On account of the identity between overtones and tones, the analysis of dissonances furthers the analysis of remote overtones, so that the evolution of consonance drives the evolution of perception.⁴⁷

Both Schenker and Schoenberg present the major triad as the basic chord, because in Schoenberg’s words it “imitates the euphony of the single tone by omitting the more distant overtones and reinforcing the more immediate” (*HL*, 26), but they have differing assessments of its verisimilitude on account of their differing notions about the extents of unconscious perception of the tone and consonance. For Schenker, who regards the fifth partial as the limit of hearing and consonance, the major triad, which imitates and contains the third and fifth partials, is uniquely similar to the tone, so much so that every tone is pregnant with a major triad. He writes that “every tone carries its own progeny and . . . its own major triad, [partials] 1:5:3,

⁴⁶ Regarding the imitation of tone color, see Cramer 2002.

⁴⁷ Schoenberg’s notion of analyzing latent overtones by means of manifest dissonances calls to mind Freud’s notion of analyzing the “latent content” of dreams by means of “the manifest dream-content” (Freud [1900] 1938, 319).

with itself" (*HL*, 42/29). He also describes the major triad as "a companion picture in reduced proportions for the over-life-sized phenomenon of nature, as it were" (*HL*, 41/28). One would think that the major triad, which contains three tones, would be bigger than a single tone, yet Schenker insists "that what we call a 'major triad' is nevertheless far more correctly understood as a conceptual abbreviation of nature," because even though the appearance of the tone is just one harmonic tone, the idea behind this phenomenon is "nature's major triad," a widely spaced chord made up of five full-grown harmonic tones (*HL*, 41/28, 39/26), and this chord is bigger than the regular major triad, with a mere three closely spaced harmonic tones. All other chords, then, are combinations or modifications of this basic chord. For Schoenberg, who does not identify an effective natural limit to unconscious perception of the tone or consonance, the major triad, which omits the remote overtones, is merely a rough sketch of the tone. "The triad is without doubt similar to the tone," writes Schoenberg, "but it is no more similar to its model than, say, Assyrian reliefs are to their human models" (*HL*, 26). Many but not all chords, then, are combinations or modifications of this basic chord.

Both Schenker and Schoenberg present the major system or mode as the basic type of key, and they give parallel descriptions of its constitution. The major system consists of seven ground tones called *Stufen*, which are both tones and triads, parts and wholes. So Schenker, in describing how a *Stufe* appears in music, refers to it alternately as a triad and a ground tone. "Not every triad can be taken to be identical with a *Stufe*," he writes, "and so one must distinguish very carefully between C as the ground tone of a triad and C as a *Stufe*" (*HL*, 181/138–39). And Schoenberg writes that "D in the triad D–F–A," for example, is "the second *Stufe*" in C major (*HL*, 34/32), but also, "the second *Stufe* is D–F–A" (*HL*, 43/39). Since the triadic thirds and fifths are the offspring of the *Stufen*, while the other *Stufen* are the offspring of the ground tone, the major system constitutes a group of tonal families under the authority of the ground tone. Schenker describes the major system as a "community, a type of state with its own social contracts by which the individual tones are bound to abide," and he writes that the system "gives the tone the means to dominate its fellow tones" (*HL*, 106–7/84).⁴⁸ Schoenberg describes the ground tone as "the sovereign" of the major mode and each *Stufe* as "sovereign" within its triad (*HL*, 33, 116). For both Schenker and Schoenberg, the offspring of the ground tone, dominant, and subdominant determine membership in the major system. Schenker, who describes the *Stufen* as a series of fifths, writes that "the content of the more remote fifths in rising order, beginning with the second, was tuned downward to match the content of the ground tone, its first overfifth, and its underfifth" (*HL*, 55/40), and Schoenberg writes

⁴⁸ Snarrenberg argues that Schenker's description of the major system as a state made up of family heads who subordinate their own interests to that of the whole reflects G. W. F. Hegel's notion of such a state as "the ultimate

form of Spirit's realization" (1997, 69). Cook discusses Schenker's notion of tonal society and argues "that there is a specifically Viennese history of associating music and social structure" (2007, 188).

that the major mode “is put together from the most important components of a ground tone and its nearest relatives,” namely, the dominant and subdominant, “the two strongest subordinates” (*HL*, 22/24, 151). In both cases, this determination solves a “problem” or “question” of competing tones through the suppression of weaker tones (Schenker *HL*, 30; Schoenberg *HL*, 25). In Schenker’s case, the junior *Stufen* are obligated to sacrifice their major triads. For example, “if F and F# were in conflict, then the latter, as the third of the second overfifth [D], had to yield to the former, whose superior significance is authenticated by its character as ground tone and underfifth” (*HL*, 55/40). In Schoenberg’s case, the third partials of the ground tone and the dominant (E and B) win out over the seventh partials of the subdominant and the ground tone (E♭ and B♭), which “necessarily sound more weakly” (*HL*, 23/25).

But as with the major triad, and for similar reasons, Schenker and Schoenberg have contrary assessments of the major system’s significance. Schenker, who regards unconscious perception of the tone as limited by nature, accordingly regards music as having attained to its natural limit of perfection in the major system, “the real and most solemn truth of nature” (*HL*, 53). However, as with unconscious perception of the tone, Schenker does not stick to his limit. Nature demands that the major system be supplemented by minor through mixture. “Issuing from the life of the tone,” writes Schenker, “the principle [of mixture] enters into the living organism of the piece, wherever it appears, with the power of an element of nature” (*HL*, 150/115). Mixture allows the tone to live as rich a life as possible by forming relationships from both systems. Schenker writes that “the vitality of the tone A,” for example, “is reflected in its striving not only for those relationships with the other tones determined by the major system but also for those made possible by the minor system” (*HL*, 107/85). Supplementation by minor through mixture is at the same time supplementation by the church modes. Schenker writes that in the abandonment of the church modes, “the tone allowed nothing to be taken away, and it appears to have been the tone itself which urged the artist to leave mixolydian, dorian, etc., relationships open to it” through mixture (*HL*, 108/86). It would seem, then, that the “major-minor system” (*HL*, 86), which includes the church modes, is the ultimate limit for Schenker. But he does not stick to this limit either, for nature demands that the system be supplemented by chromaticism. Through chromaticism, Schenker writes, “the artist reconciles, on a higher level, his system with nature, who always seems to be lying in wait to surprise him with her best gifts” (*HL*, 58/44). Nature demands chromaticism because it allows more *Stufen* to satisfy their procreative urges and thus allows the ground tone to satisfy its own urges by proxy. Chromaticism allows more *Stufen* to satisfy their procreative urges for two reasons. First, it results from tonicization, which is when a *Stufe* surrounds itself with its offspring, just like the tonic. Second, chromatic chords are generally secondary dominants, which allow more

Stufen to keep their major triads. In this context, Schenker writes that “the ground-tone character that nature originally intended for all tones with equal justice finally comes to expression, albeit in another way, here in the chromatically tonicized *Stufen*” (*HL*, 379/288).

Schenker’s ambivalent view of keys as continually expanding to conform with nature is actually quite similar to that of Schoenberg. At times, Schoenberg gives a nod to the tone as an absolute idea, suggesting that imitation of the tone may eventually attain completeness. He writes that “imitation [in our chord relationships] does not yet, will not yet for a long time, go as far as the prototype” (*HL*, 225). But for the most part, Schoenberg sees the tone as inexhaustible, in keeping with the contingency of the artist’s response. He writes, “What is attainable in that which lies outside us, in the tone, theoretically speaking, has no limits” (*HL*, 357/319). Accordingly, Schoenberg regards the major and minor modes as just a stepping-stone in the “evolution of the harmonic resources” (*HL*, 432/385). He writes, “It is easy for us now to say that ‘the church modes were unnatural, but our scales conform to nature.’ That they conformed to nature was undoubtedly also believed of the church modes in their day. Besides—just how far do our major and minor conform to nature, since they are, after all, a tempered system? And what about those parts that do not conform? It is precisely these that foment revolt” (*HL*, 28). Progressive conformation with nature means the expansion of the community of tones ever further outward to embrace the entire progeny of the tone, just as one’s love extends ever further outward to embrace the entire world.

The ability to acknowledge relationship between elements more distant from one another depends principally on the understanding and the insight of the observer. The individual with the most primitive conceptual and perceptual powers regards only the members of his body and his senses as belonging to him. The more cultivated includes his family. At the next stages of cultivation the sense of community is exalted to the belief in nation and race; but at the highest stage the love for one’s neighbor is extended across the species, across humanity, to the whole world. Even if the individual at this highest stage becomes a mere speck in the infinite, he nevertheless (remarkably) finds his love returned more often and more fully than those whose love is more exclusive.

Thus, although . . . the mutual relationships of a number of chords are apparently not direct, they nevertheless have the capacity for creating unity—a capacity that the ear must grasp, because in the prototype, in the tone given by nature, sounds even more remotely related unite to form one composite euphonious sound. (Schoenberg *HL*, 253/224–25)

So for Schoenberg the major and minor modes are giving way to a more inclusive chromatic mode, just as the church modes gave way to the more inclusive major and minor. “The replacement of major and minor with a chromatic scale,” he writes, “is no doubt the same sort of step as the replacement of the seven church modes with merely two scales, major and minor:

greater uniformity of relationship with an unchanged number of possible relationships. . . . One may hope, in this little matter, to have guessed the will of nature" (*HL*, 247–48).

If identifying the motive as a basic concept for Schenker raised the question of how his integration network may have changed over time, identifying the key as a basic concept for Schoenberg in a comprehensive theory of composition is in itself questionable, since to all appearances Schoenberg stopped writing in keys. But as Schoenberg writes, "the harmonic sense of the key (*Tonart*) in all its ramifications is comprehensible only in relation to the idea of tonality" (*HL*, 27), so we will have to defer this question until we address that concept.

The piece as an imitation of the tone

For Schenker and Schoenberg, the motive and the key combine in a piece of music as an imitation of the tone. More specifically, the piece is an imitation or manifestation of a ground tone as a musical idea. But Schenker and Schoenberg are divided over the issue of the perceptibility of the ground tone, ultimately because of their contrasting emphases on the absoluteness of the tone and the contingency of the artist's response to the tone.

The motive and the key, being imitations of the tone, are analogous to one another, and Schenker and Schoenberg blend these in a piece of music as an imitation, development, or manifestation of the tone, as shown in Figure 8. The motive and the key appear as the piece's two main aspects, melody and harmony, by means of an imported source/path/goal image schema: the "movement" of the voices, all of which are somehow melodic, traces out a path along a scale in time (Schenker *HL*, 204/159; Schoenberg *HL*, 34), and the "movement" or "roaming" of the chords (Schenker *HL*, 203/158; Schoenberg *HL*, 169/150) traces out an imaginary path "on the scale of fifths" (Schenker *HL*, 153) or through "the domain of the ground tone" (Schoenberg *HL*, 169/150). In this way, the motive and the key codetermine the course of the music. For Schenker, this codetermination involves what he calls a fusion of harmony and content. "Now," he writes, "inasmuch as the harmonic concept uses for its interpreter only the motive, which forms the elemental part of content, harmony and content fuse and merge, so that, from now on, only a particular member of the total organism's content brings a triad or seventh chord from our feeling to our consciousness, and, vice versa, the laws of harmony exercise an influence on the rise of content" (*HL*, 282/212). Schoenberg writes that "the only justification, the only motor for the independent movement of voices is the driving power of the motive" (*HL*, 224/203), but he also writes that "in the ground tones of the chords . . . alone is expressed the inner drive of the harmonic tone, its capacity for shaping progressions" (*HL*, 64/56).

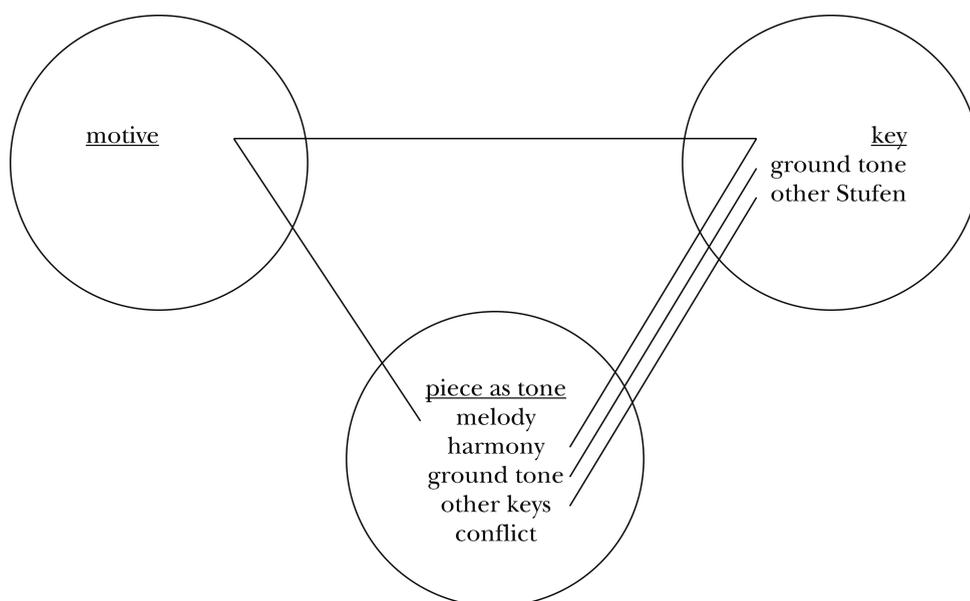


Figure 8. The piece as an imitation of the tone

According to Schenker and Schoenberg, this codetermination furthers a dialectical evolution of the motive and the key.⁴⁹ Schenker, who regards the major system as the ultimate, describes this evolution as a completed process. He writes that “at bottom, the experiments ran parallel: learning to explore the ways of the motive at the same time furthered work on the system, and, vice versa, building the system yielded new motivic possibilities and paths” (*HL*, 32/20). We have already seen that Schoenberg regards the evolution of harmony as ongoing, and the same is true for the evolution of the motive. He describes the evolution of these elements in terms of the disciplines of harmony and counterpoint, “the art of voice leading with respect to motivic combination” (*HL*, 13). “The interpenetration of the two disciplines, harmony and counterpoint, is as complete as their separation is incomplete,” he writes, “because every occurrence in voice leading can become harmony and every chord can become the basis for voice leading” (*HL*, 331). According to Schoenberg, the dialectical evolution of harmony and counterpoint weaves together two parallel processes of familiar, freely used patterns providing openings for new, restricted patterns, which can then become familiar and free as well.⁵⁰ With harmony, consonant chords—on account of their greater familiarity as

⁴⁹ The notion of a melodically driven evolution of harmony has a precedent in the writings of François-Joseph Fétis, who posits a four-stage evolution of tonality driven by the melodic tendencies of appellative consonances (see Simms 1975, 125–32). Josef Schalk similarly posits a

three-stage evolution of chromaticism driven by melody (see Wason 1985, 109).

⁵⁰ On dialectical opposition in Schoenberg’s musical thought, see Cherlin 2007, 44–67.

imitations of the more immediate overtones—“are completely free, subject at most to the necessities of the root progressions” (*HL*, 316). Consonant chords provide openings for dissonant chords, which—on account of their unfamiliarity as imitations of the more remote overtones—appear first in the restricted contexts of passing tones and the like. Schoenberg says that “passing tones, changing tones, suspensions, etc., are, like sevenths and ninths, nothing else but attempts to include in the possibilities of tones sounding together—these are of course, by definition, harmonies—something that sounds similar to the more remote overtones” (*HL*, 321). Through familiarization, dissonant chords can become consonant, “emancipated” (*HL*, 323), thus renewing the cycle. “Restricted usage is the first means,” writes Schoenberg, “free usage the next goal. And then, on to the next! For we are only at the beginning” (*HL*, 320). In the same way, with ornaments, “the familiar effect of certain established, cliché-like figures, whose satisfying resolution is promised by the memory and anticipated by the ear, makes possible the fulfillment of necessity outside the excessively narrow rules. . . . Gradual familiarization favors freer usage. New clichés come into being” (*HL*, 332). And the same principle “can be applied to . . . any well-defined motive” (*HL*, 332).

Before moving on, I wish to highlight that the process of emancipating dissonances is an ongoing struggle for Schoenberg here that is only at the beginning, not an accomplished fact as it is generally understood. “Even today,” writes the composer of *Erwartung*, “I feel that here, too, there are certain conditions on which my choice of this or that dissonance depends” (*HL*, 70). In his later writings, Schoenberg revises his thinking to accord with twelve-tone music, and that is when he begins to use the familiar term *the emancipation of dissonance*.⁵¹ He gives his clearest definition of this concept, which involves both a compositional preparation and a theoretical “leap,” in his Princeton lecture on twelve-tone music from 1935:

The emancipation of dissonance is based on the experience that in the course of a few centuries all dissonances are worn down to such a degree, that they are far from making the rough impression, as if endangering coherence, that they had made in former times. I refer to this theoretically in my *Harmonielehre*, as follows: dissonances are those more distantly located consonances of the overtone series. The emancipation of dissonances allows for their completely free use by virtue of the *assumption* that they no longer today afford the trained hearer any perceptual difficulties. (1974, 75, 81–82; emphasis added)

This assumption is a precondition for twelve-tone music, in which consonances and dissonances are used equivalently. But it is at odds with Schoenberg’s theory of composition in *Harmonielehre*. To be sure, “the precise accommodation of all overtones” (*HL*, 319) is a goal for “the evolution of music,” which “has drawn into the stock of artistic resources more and more of the harmonic possibilities inherent in the tone” by introducing dissonances and

⁵¹ On the development of Schoenberg’s concept of the emancipation of dissonance, see Falck 1982.

turning them into consonances (*HL*, 21). However, the perpetual newness of art always defers the attainment of this goal. “Evolution is not finished,” writes Schoenberg, “the peak has not been crossed. It is only beginning, and the peak will come only, or perhaps never, because it will always be surpassed” (*HL*, 97). The later Schoenberg pulls a Schenker: he “*assumes* an end of evolution because one can thus round off the system” (*HL*, 31; emphasis added).

There is one main motive in a piece, which Schoenberg again calls “the germ of the whole” (*HL*, 144/127), and which Schenker calls “the hero” of the piece, considered as a drama of “the destiny, the fate, the real personal fate, of a motive or of several motives together” (*HL*, 13, 19/12). There is likewise one main key in a piece, in the sense that the ground tones of other keys are merely *Stufen* of the main key. Schenker writes that “in the series of established keys we again have a *Stufe* progression, just of a higher order” (*HL*, 327/246), and Schoenberg similarly writes that “the harmonic plan of every musical composition,” the series of keys, is “an extended cadence,” a *Stufe* progression (*HL*, 152).⁵² This hierarchy of keys illustrates Schenker’s and Schoenberg’s literally generative conception of music, where tones procreate, are elaborated by, and include other tones in melodic and harmonic progressions, inclusion now being understood in both an abstract, atemporal and a concrete, temporal sense.

A particular piece of music, which combines one main motive and one main key as imitations of the tone, is thus an imitation of one particular tone, the global tonic, called “the ground tone of the piece” (Schenker *HL*, 52/38) or simply “the ground tone” (Schoenberg *HL*, 169/150). Accordingly, “the life of a piece” (Schenker *HL*, 42/29) as an “organism” (Schoenberg *HL*, 53) is the life of the ground tone.⁵³ And since the tone is an idea, the ground tone of a piece, which individuates the tone, is a “musical idea” (*Gedanke*; Schoenberg *HL*, 322/289) or “the spirit of the individual composition” (Schenker *HL*, 184/141). Throughout his career, Schoenberg focuses on the contingent, particular musical idea,⁵⁴ whereas Schenker focuses throughout on the absolute, general idea of nature, but it is only half true to say, with Schmalfeldt, that “for Schoenberg, . . . each vision of the totality must necessarily be a new vision,” whereas “in Schenker’s theory . . . , all great composers share one and the same vision” (1991, 233–34). It is also the case that for Schoenberg all composers share a vision of the tone, and that in Schenker’s theory each vision must be new, for the idea of nature and the musical idea are complementary and inseparable concepts. As Schenker puts it in what comes to be his motto, “always the same, but never in the same way.” The piece presents

⁵² Schenker’s and Schoenberg’s notion of a series of keys as a *Stufe* progression may draw on Simon Sechter’s theory, according to which a *Stufe* progression can be elaborated by treating each triad as a tonic (see Wason 1985, 49, 140).

⁵³ On Schenker’s and Schoenberg’s organicism, see, respectively, Cook 2007, 29–88, and Carpenter 2005.

⁵⁴ Schoenberg also uses the term *Idee* to mean “musical idea” (*HL*, 144/127). On Schoenberg’s concept of the musical idea, see Carpenter and Neff 1997.

its idea through its imitations of the ground tone in melody and harmony. Schenker writes that when harmony and content are fused at every scale of magnitude, from the individual chord to the piece as a whole, “there arises the image of organic unity” (*HL*, 245), and Schoenberg writes that melody and harmony are the external form of the internal idea, like words for a thought (more on this later):

Articulation is necessary for every idea, the moment it is expressed; for, although we think an idea at once, as a whole, we cannot say it all at once, only little by little: we have to divide up the idea into its components, and these, put together again, reproduce more or less precisely its content. In music we regard melodic or harmonic progressions as the components of an idea. That notion is correct, however, only as it applies to what is visible or audible, to those aspects of music that can be directly perceived by the senses; it applies only by analogy to that which makes up the actual content of a musical idea. But we may still assume that the image formed by the notes constitutes a valid symbol of the musical idea, and that the form and articulation manifested by the notes corresponds to the inner nature of the idea and its movement, as the ridges and hollows of our bodies are determined by the position of internal organs—as indeed the external appearance of every well-constructed organism corresponds to its internal organization, hence the native external appearance is not to be regarded as accidental. (*HL*, 322–23/289)

Schoenberg’s assertion that the external form corresponds to the internal content makes sense, because for him as well as Schenker, the ground tone as a piece of music is the form, and the ground tone as a musical idea is the content.⁵⁵ But this identity of form and content presents a paradox: how can a tone, heard all at once, be an idea for a piece of music, heard over time? Schenker and Schoenberg resolve this dilemma through the notion of ideal movement: a tone by itself sounds all at once because its movement, which is an aspect of its vitality, is latent, but a tone as a piece sounds over time because its movement is manifest. Schenker writes that the study of harmony concerns “ideally moving forces” (*HL*, xxv). Schoenberg similarly writes that “the tone . . . is *capable of continuation*,” that “*movement is latent in it*” (*HL*, 313), and he refers in parallel fashion to “the movement latent in an idea, through which alone an idea acquires life” (*HL*, 289).

Schenker and Schoenberg conceive of this movement as being driven by a problem, in Schoenberg’s words, “a movement-generating conflict” that is latent within the tone and manifest in a piece of music (*HL*, 151).⁵⁶ Conflicts between tones arise because, in Schenker’s words, “every tone is possessed of the same urge to procreate an infinite progeny of overtones” (*HL*, 42/28), but only the ground tone is absolutely free to fulfill this urge, so

⁵⁵ The identity of form and content is a central tenet of Eduard Hanslick’s formalism. Cook (2007, 48–62) argues that Schenker is deeply influenced by Hanslick. Patricia Carpenter argues that Schoenberg is likewise (1984). For the romantics, the identity of form and content is the

essence of a symbol, a term that Schoenberg uses in the preceding quotation (see Todorov 1982, 147–221).

⁵⁶ On Schoenberg’s notion of problems, see Dineen 2005.

tones jockey for position, with the ground tone holding the ultimate position. Schenker writes that “the *Stufe* does not strive to be, say, the sixth or second of the system; on the contrary, it rather wants to be or at least seem to be the fifth if not indeed the first, that is, the tonic itself” (*HL*, 333–34/252), and Schoenberg refers to “the inclination of every *Stufe* either to become the ground tone or at least to gain a more significant position in another district,” that is, another key (*HL*, 170/151). We have already seen conflicts between tones in the formation of the major system, which, as part of the evolution of music, we have to understand as taking place through composition.

Every musical idea, in fact, aims at reforming society in the world of tones, and as the reader might expect, Schenker and Schoenberg have differing attitudes to such social reform, stemming from their differing attitudes toward the major-minor system. Schenker writes that “the total content of a piece basically presents a real and continual conflict between the system and nature” (*HL*, 379/288), which is to say the chromaticism demanded by nature. The system, which for Schenker represents a natural limit on the key, must always win this conflict, so that chromaticism is subordinate to a “diatony,” just as *Stufen* are subordinate to a ground tone (*HL*, 380/288). Schenker writes that “chromaticism is not an element that destroys diatony but rather one that confirms it all the more forcefully” (*HL*, 380/288). Schoenberg agrees that whatever does not kill the ground tone only makes it stronger. “The greater the lead the ground tone grants those that are breaking away from it,” he writes, “so much the more impetuous must be the seven-league strides with which it overtakes and captures them. The greater this exertion, the more overwhelming the effect of victory” (*HL*, 171/152). But since he regards twelve-tone temperament, which underlies the major-minor system, as merely “an indefinitely extended truce” with nature that still leaves “many problems that will have to be faced” (*HL*, 25), he has no qualms about letting the tones overthrow the system in an attempt to solve those problems. On the contrary, he wholeheartedly embraces this possibility, which for the tones means following a natural law rather than an autocratic law:

Since indeed all the simple relationships derive from the simplest essential aspects of the tone (from its first overtones), the ground tone then has a certain sovereignty over the structures emanating from it; that is, its most important components are, so to speak, its satraps, its advocates, since they derive from its splendor: Napoleon, who installs his relatives and friends on the European thrones. I think that would indeed be enough to explain why one is justified in obeying the will of the ground tone: gratefulness to the progenitor and dependence on it. It is the Alpha and the Omega.⁵⁷ That is morally right, so long as

57 In Revelation 1:8, the Lord God calls himself the Alpha and the Omega, the first and last letters in the Greek alphabet, to declare his eternal sovereignty. In referring to the ground tone as Napoleon, the Alpha, and the Omega, Schoenberg is likely thinking of Beethoven’s “Eroica”

Symphony, which was originally dedicated to Napoleon, and in which the first movement begins and ends with assertive blasts of the tonic triad. On Beethoven’s “Eroica” as a prototypical musical work, see Burnham 1995.

no other moral code obtains. Yet another can indeed prevail! If, for example, the supreme lord becomes weak and his subjects strong, a situation that arises only too often in harmony. (Schoenberg *HL*, 145/128)

If following the law of the autocrat means obeying the will of the ground tone, then rebelling would seem to mean opposing its will. But nothing can truly contravene the will of the ground tone, that is to say, its will to self-expression, for the self-expression of the ground tone is identical with the presentation of the musical idea. Elsewhere Schoenberg affirms that the ground tone can be defeated only if it wills to be defeated, that is, if it follows the same natural law as the revolutionaries. To the question of whether or not the ground tone is strong enough to rule all the other tones, he offers the following answer:

Both. It can be strong enough; it can also be too weak. If it believes in itself, then it is strong enough. If it doubts its divine right to rule, then it is too weak. If from the outset it goes forth autocratically, believing in its mission, then it will conquer. But it can just as well be skeptical; it may have seen that everything designated as good for its subjects serves only its own interests. It may have seen how its sovereignty is not absolutely necessary for the prosperity and growth of the whole. That its sovereignty is admissible, but not indispensable. That its autocracy can be, in truth, a unifying bond, but that the discarding of this bond could favor the self-directed functioning of other bonds; that . . . its erstwhile domain would not thereby necessarily sink into chaos but would automatically, following its own dictates, make for itself laws consistent with its nature. (*HL*, 152)⁵⁸

These new laws are those of the more inclusive and egalitarian chromatic scale. Echoing the preceding quotation, Schoenberg writes that the consequence of revolution “is not necessarily disintegration and formlessness. For the chromatic scale is a form, too” (*HL*, 247). The ground tone’s contrary inclinations toward autocracy and democracy are broader expressions of the tone’s more basic urges in harmonic progressions to *become* the ground tone of a harmony, “to have its overtones prevail,” and to *be overcome* by a ground tone, “to lose itself in, to become part of a higher entity” (*HL*, 66/58, 116n); this latter desire is the tone’s “most urgent yearning” (*HL*, 50), just as the law of nature trumps the law of the autocrat.⁵⁹

⁵⁸ The antecedent to the initial word *it* is actually *tonality*, a term that I address presently, but Schoenberg uses the word here as a metonym for “the ground tone.”

⁵⁹ Schenker’s and Schoenberg’s understanding of tonal life, where procreation often coincides with domination, brings to mind McClary’s argument that “the tonality that underlies Western concert music” reflects a construction of sex as conquest (1991, 124). McClary’s claim raises the questions of how the tone’s procreative urges might be related to its sexual urges and, more specifically, how the ground tone might continue to fulfill its sexual urges after relinquishing its sovereignty. Schenker and Schoenberg do

not use sexual language in their *Harmonielehren*; however, Schoenberg’s notion of the tone’s two complementary urges in harmonic progressions can be interpreted in sexual terms. In an authentic cadence, which McClary identifies as an analogue to sexual climax, both the tonic and the dominant fulfill their urges: the tonic becomes the ground tone of a harmony, and the dominant is overcome by the ground tone of a harmony. This mutual fulfillment of desire is analogous to an erotic encounter marked by domination. In relinquishing its sovereignty, then, which is a broader expression of being overcome, the ground tone does not forgo sexual gratification; it merely goes from being a top to being a bottom.

The issue of social reform in the world of tones through chromaticism is inextricably linked for Schenker and Schoenberg to the issue of the perceptibility of the ground tone of a piece, because the uniform, egalitarian structure of the chromatic scale tends to make the ground tone of a piece indistinguishable from the other *Stufen*. Because of their differing attitudes toward the major-minor system and, more generally, because of their contrasting emphases on the absoluteness of the tone and the contingency of the artist's response, Schenker and Schoenberg sharply disagree on the necessity of perceiving the ground tone. For Schenker, the perceptibility of the ground tone serves as an indispensable link between a piece of music and the tone as an idea of nature. Schenker writes that "the artist must always take care that in all circumstances not the slightest doubt arise in the listener as to the diatony" (*HL*, 381/290), because the diatony refers all *Stufen* to a tonic and all tonics to the ground tone. For Schoenberg, the perceptibility of the ground tone can easily go by the wayside, because in the imitation of inner nature, the artist's reflective absorption in sense impressions entails a sort of distortion-producing feedback loop, where impressions continually enter into "new complexes, new movements," so that "inference of the external stimulus is almost certain to be inadequate" (*HL*, 15/18). He describes a spectrum of possible effects from the complete clarity of the ground tone to its total obfuscation. If the ground tone is clearly perceptible, if "all the chords in a complete piece of music appear in such progressions as allow the chords to be related back to a common ground tone" (*HL*, 29/28), then the music is said to employ or convey "tonality."⁶⁰ Schoenberg seems to be paraphrasing Rudolf Louis and Ludwig Thuille, who declare "the law of tonality" in their *Harmonielehre* as follows: "A succession of harmonies can only be musically comprehensible if every independent *chord* is apprehended in a distinct relationship of dependence upon a *main chord* that underlies the harmonic coherence of the whole" ([1907] 1910, 7).⁶¹ Schoenberg emphatically denies that tonality is "an eternal law, a natural law of music" (*HL*, 27). However, he allows that tonality is still a vital possibility. He writes that "music has not yet evolved so far that we can now speak of discarding tonality" (*HL*, 29). Artists such as "Mahler and Strauss, for example," can freely produce tonality, because "there is the feeling for this tonality in the unconscious" (*HL*, 396, 395).⁶² If one "hints at" or "blurs" "the relationship to the ground tone" (*HL*, 146/128),

⁶⁰ Beiche 1992 provides an excellent summary of the history of tonality as a concept.

⁶¹ Schalk 1888–90 also declares "Das Gesetz der Tonalität."

⁶² One gets the sense that Schoenberg is somewhat ambivalent about the permissibility of tonality. He famously refers to "the dissolution of tonality" as a *fait accompli*, but he also writes that "tonality is dissolving" (*HL*, 196, 97). On the one hand, it represents for him an illegitimate

autocracy of the ground tone, but on the other hand, it represents the practice of unassailable masters like Mahler. Schoenberg expresses both his misgivings and his deference to other composers in the following quotation: "It depends . . . on the composer, whether he creates tonality or not. For, that one *can* create it, I consider possible. Only, whether one *must* still work for it, indeed, whether one generally *should* still work for it, I doubt" (*HL*, 440n/394n).

then the music is said to feature “fluctuating tonality” (*HL*, 383), and if one “leaves the question entirely open” of which tone is the ground tone (*HL*, 146/128), then the music features “suspended tonality” (*aufgehobene*; *HL*, 430/383). The term *tonality* has been subject to some confusion, perhaps in part because in the revised edition of *Harmonielehre*, Schoenberg sometimes uses it to refer to “everything implied by a series of tones” with respect to the ground tone (*HL*, 432), regardless of whether the music features fluctuating tonality, suspended tonality, or tonality in the narrow sense. Crucially, it is the perceptibility and power of the ground tone that can fluctuate or be suspended, not the ground tone itself. Schoenberg writes that he has “called attention to the formal possibilities of fluctuating and suspended tonality; whereas these [like tonality] also permit the supposition of an operative center, they show how it is not necessary to help this center attain externally a power that it has, at most, internally” (*HL*, 440n/394–95n). The ground tone in such cases is “a mere speck in the infinite” (*HL*, 225), like one whose love extends across the universe, but it is still a speck.

We can now address the question raised earlier as to how the key can be a basic concept for Schoenberg. First, we must recognize that, although Schoenberg sometimes uses “tonality” as a metonym for major or minor “key” (*HL*, 153), being in a key is not equivalent to conveying tonality, because “the key may be expressed exclusively by chords other than its own diatonic chords,” in which case tonality has in all probability “actually been cancelled” (*aufgehoben*; *HL*, 30/29). In other words, chromatic keys tend to cancel tonality. Schoenberg writes, “Where many chords foreign to the [major or minor] key make an appearance, the key is based on the chromatic scale. It is obvious that through the accumulation of such phenomena the solid structure of tonality could be demolished” (*HL*, 273/247). And that is what happens in his music from this time: it uses chromatic keys with suspended tonality. I would also argue that in Schoenberg’s later writings on twelve-tone music, just as the *Urlinie* displaces the motive for Schenker, the row displaces the key, but the ground tone remains. In the revised edition of *Harmonielehre*, Schoenberg speculates that the very undetectability of a (self-effacing) ground tone in twelve-tone music may indicate its presence:

There has been no investigation at all of the question whether the way these new sounds go together is not actually the tonality of a twelve-tone series. It is indeed probably just that, hence would be a phenomenon paralleling the situation that led to the church modes, of which I say: “The effect of a ground tone was felt, but since no one knew which tone it was, all of them were tried.” Here we do not even feel it, but it is therefore probably present. (Schoenberg *HL*, 488n/432)

Schoenberg uses the term *tonality* in the preceding quotation in its broader sense encompassing tonality, fluctuating tonality, and suspended tonality. His counterintuitive suggestion that the undetectability of a ground tone may

indicate its presence shows just how fundamental the tone is to his theory of composition, and why he has such a hard time formulating this theory. Thus, in characterizing Schoenberg's post-1908 music, I wholeheartedly support Haimo's rejection of the term *atonal*, which suggests a fundamental discontinuity in his musical thought (2006, 355), but I would go even further and, with Schoenberg, ask "whether it is not again simply 'tonal'" (*HL*, 432), in the sense of having a ground tone. If so, then contrary to Dahlhaus's claim that Schenker's and Schoenberg's conceptions of musical coherence are divided as tonal and motivic, respectively, both Schenker and Schoenberg conceive of music as both tonal and motivic. These conceptions of musical coherence may indeed be incompatible in a sense, but then the contradiction would lie within Schenker's and Schoenberg's theories, not between them. Moreover, such a contradiction would again be related to the tension between the tone and the artist as sources of music, inasmuch as the key is primarily engendered by the tone, while the motive is primarily engendered by the artist.

The piece as a picture of the tone

Schenker and Schoenberg further blend a piece of music as an imitation of the tone with two specific forms of expression, a picture and a statement, giving rise to the blends of a piece as a picture of the tone and a piece as a statement about the tone. These two blends are intricately enmeshed with the original blend of a piece as a development of the tone, and together these blends constitute Schenker's and Schoenberg's engagement with the three central metaphors in German musical thought of music as painting, language, and life.

We have already seen that Schenker and Schoenberg describe a chord as a picture of the tone. A piece of music is itself a chord, a chord that is activated by melody, so for Schenker and Schoenberg a piece of music is also a picture of the tone, namely, the ground tone, which is both the form and the content. Melody and harmony, the basic aspects of a piece, are analogous to the "horizontal" and "vertical" dimensions of a picture (Schenker *HL*, 32; Schoenberg *HL*, 134), and they are identical with these dimensions in the blend, shown in Figure 9.

There is a third dimension as well, that of represented "depth" (Schenker *HL*, 164; Schoenberg *HL*, 420), and in order to understand its place in music for Schenker and Schoenberg we must first outline the system of central perspective, the simplest means of producing the effect of depth in a picture. The basic idea of perspective, as illustrated in Figure 10, is to project the image of a three-dimensional scene as seen from a viewpoint, the center of projection, onto a two-dimensional surface, the picture plane, which lies perpendicular to a viewer's line of vision, the centric ray; the picture, which reproduces this projection, then has the appearance of a window on the original scene. In central perspective, all planes in the represented

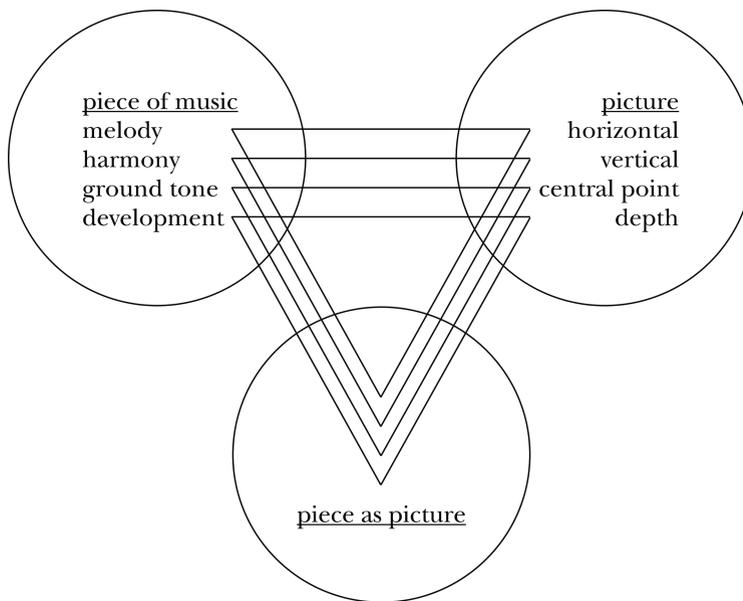


Figure 9. The piece as a picture of the tone

space are parallel to or at right angles with the picture plane, and all lines in the represented space are parallel or perpendicular to the centric ray; planes parallel to the picture plane are represented by planes whose size is inversely proportional to the distance along the centric ray, and lines parallel to the centric ray are represented by lines that converge on a point, the vanishing point, which lies directly opposite the viewpoint. The vanishing point, as Brian Rotman observes, is both a sign and a metasign: it is a sign in that it represents an infinitely distant point in space, but it is also a sign about signs in that it organizes the other signs into a coherent image (1987, 19).

Schenker and Schoenberg map a perspectival picture onto a piece of music according to a shared center/periphery image schema. The ground tone is analogous to a “central” point (Schenker *HL*, 135; Schoenberg *HL*, 28), and melodic and harmonic progressions at different scales of magnitude, from the actual music to block chords to *Stufen* to keys, are analogous to planes at different distances. But this central point can be either the viewpoint or the vanishing point, and these planes can be ordered in two opposite ways.

In the first view of a piece, the planes can be ordered so that the actual music lies on the picture plane and each preceding development lies farther in the distance. The ground tone then lies at the vanishing point. The ground tone is indeed pointlike, being notated by a dotlike notehead, but more substantively, the ground tone, like the vanishing point of a painting, is both a sign and a metasign: it depicts itself at an infinitely distant point, and it

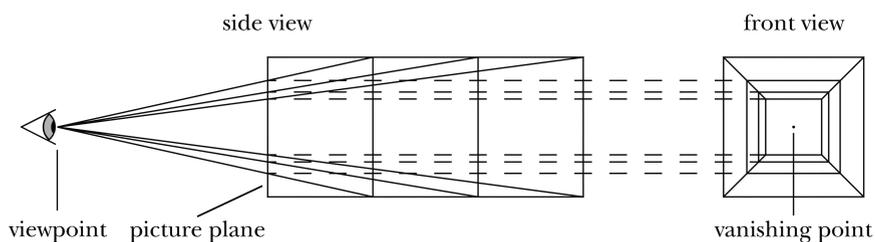


Figure 10. Central linear perspective

organizes the other tones into a coherent image.⁶³ Schenker describes such a view of the moment just prior to the recapitulation in the first movement of Beethoven's Third Symphony, a moment that he calls "a poetic vision" (*HL*, 207/162). He describes mm. 392–97, reproduced in Example 2, as "a realization in enlarged proportions" of the "originary idea" in Example 3 (*Urdee*; *HL*, 208/163). This idea itself elaborates a "largely conceived *Stufe*" by means of the passing motions A^b-G-F and $(F)-E^b-D$ (*HL*, 209/163).⁶⁴ Example 4 illustrates this view. The actual music is enlarged relative to the originary idea, which is in turn enlarged relative to the dominant *Stufe*, but each of these planes of music is conceived as equally large in the represented space. The content of these planes diminishes as they recede, just as an object appears less detailed with distance. The orthogonals of the planes of music converge on the ground tone of the piece at the vanishing point. An emergent feature of the blend is that each of the planes of music represents the vanishing point of the ground tone, unlike in a regular picture. The paradoxical collapse of these planes into a point vividly illustrates the synecdochic identity between the ground tone as a tone and the ground tone as the music. Another emergent feature of the blend is that the view of the piece shifts over time, unlike that of a picture, because time here is a dimension of space. The given view is for m. 394, which is to say that the centric ray passes through m. 394 in each of the planes of music. Ironically, since the ground tone is always active, it remains fixed in place. The fixity of the vanishing point and the mobility of the planes of music illustrate the latent and manifest movement of the ground tone.

Schoenberg alludes to such a view of a piece and this duality of fixity and mobility when he writes that "if one thinks about tonality, everything, with the exception of the first *Stufe*, is so to speak passing, or at least going—everything is in motion" (*HL*, 396/352). Does he mean that this view only

⁶³ Interestingly, Johannes Kepler and Gerard Desargues independently arrive at the concept of an infinitely distant point represented by the vanishing point in the early seventeenth century, precisely the time when composers start systematically arranging chords around tonics.

⁶⁴ Scott Burnham has provided an excellent critical reading of this moment (1995, 13–18).

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Example 2. Enlargement of proportions in Beethoven's Symphony no. 3 in E \flat major, op. 55, first movement, mm. 390–99 (Schenker *HL*, 208/162, example 167/133)

Example 3. The originary idea behind mm. 392–97 (Schenker *HL*, 208/163, example 168/134)

applies to pieces with tonality? No, it is just that in pieces with fluctuating or suspended tonality, the ground tone is difficult or impossible to pick out, like a vanishing point that is not pointed out by orthogonals, and so such pieces do not feature a visual duality of fixity and mobility. Furthermore, placing the ground tone at the vanishing point in a picture of the ground tone is consistent with Schoenberg's general principle that "we must be at some distance from an object if we are to see it as a whole" (*HL*, 330).

In the second view of a piece of music, the planes of music are reversed so that the actual music lies in the far distance and each preceding development lies closer at hand. The ground tone then lies at the viewpoint.⁶⁵ Schenker describes such a view when he explains that *Stufen* stand prominently in the foreground, giving us points of orientation, whereas their component triads lie in the background:

⁶⁵ To the extent that this perspective can be attributed to the ground tone itself, the ground tone can be supposed to administer its noncoercive power backed up by force through a panoptic mechanism, which elicits obedience through constant surveillance. On panopticism, see Foucault 1977.

Example 4. A perspectival view of mm. 392–97 in Beethoven’s Symphony no. 3, first movement, at m. 394

If every ground tone seeks its fifth and third in both the horizontal and vertical directions, and every fifth and third answers its ground tone, what plan does the ear use to order the infinite sum of eternally busy relationships? . . .

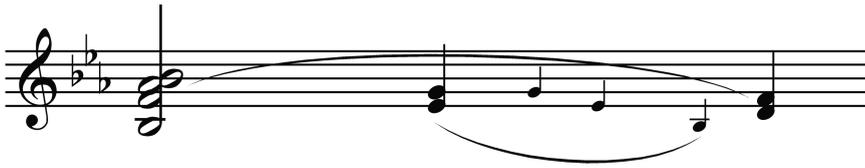
The artist is able to order these relationships so that only a few stand in the foreground, while the others work more weakly in the background, and our sense organ is able to follow this gradation of effects with the same degree of effortlessness that the composer invents it with. And the most prominent means of orientation, as much for the composer as for the listener, is the so-called “*Stufe*.” (HL, 180–81/138)

This usage of the terms *background* and *foreground* is the opposite of that in Schenker’s later writings, which corresponds with the first view of a piece of music.⁶⁶ However, Schenker’s later graphic analytical technique actually shows a view corresponding with his original usage of the terms *background* and *foreground*. Example 5, another representation of the moment discussed earlier from Beethoven’s Third Symphony, illustrates this second view of a piece of music. The *Stufen*, which are more widely spaced in time, appear to be the closest, in the foreground, while the tones of the actual music, which are more narrowly spaced in time, appear to be the farthest away, in the background, in keeping with the phenomenon that the visual field embraces a greater number of similar objects—trees, for instance—as distance from the observer increases.

Schoenberg alludes to such a view of a piece of music when he writes that “new harmonies” (HL, 417), dissonant chords with six or more tones, produce an effect of depth. “Simple chords, which are imperfect imitations

⁶⁶ Schenker’s reversal in his use of the terms *foreground* and *background* seems to have gone unnoticed, perhaps in part on account of Borgese’s translations of *stehen* here as

“to be perceptible” instead of “to stand” and of *schwächer wirken* as “to do their work more discretely” instead of “to work more weakly” (HL, 181/138).



Example 5. A different perspectival view of mm. 392–97 in Beethoven’s Symphony no. 3, first movement

of nature, seem to us too primitive,” he writes. “They lack something, which, for example, Japanese painting lacks when compared with ours: perspective, depth” (*HL*, 420).⁶⁷ New, dissonant chords produce an effect of depth because they are the “more remote overtones” (*HL*, 418), and Schoenberg correlates distance from the ground tone in space with distance from the ground tone in the overtone series. More specifically, he correlates distance from the ground tone at the viewpoint with distance in the overtone series, because objects distant from a viewer make a weak impression, and the more remote overtones are weaker. This correlation is consistent with Schoenberg’s description of imitation of the tone as “penetration of its essence” (*HL*, 313).

On the face of it, these two opposite views of a piece of music seem to be incompatible with one another, for the ground tone is the vanishing point in the first view but the viewpoint in the second view. However, if a picture executed in central perspective is reflected back toward itself with a mirror and viewed through a hole in the picture at the vanishing point, as illustrated in Figure 11, then the vanishing point and the viewpoint actually do coincide, as do the eye and the ground tone.⁶⁸ This coincidence of the eye and the ground tone at the vanishing point serves as a vivid illustration of music’s dual descent from the tone and the artist. In this context, Schoenberg writes, on the one hand, that “what is worth striving for is to discover everything that lies within the natural tone” (*HL*, 319), but on the other hand, he also writes that “what really matters” in music is “the ability to listen to oneself, to look deep into oneself” (*HL*, 413).

The piece as a statement about the tone

Schenker and Schoenberg blend a piece of music with a statement, as shown in Figure 12, according to a shared part/whole image schema, where the

⁶⁷ Therefore, Theodor Adorno ([1955] 1981, 161n1) and Werner Hofmann (1969) are wrong when they suppose that Schoenberg means to destroy a sense of spatial depth in his music by suspending tonality.

⁶⁸ Filippo Brunelleschi in fact does this in his first experiment with linear perspective around 1413; see Cole 1992, 12.

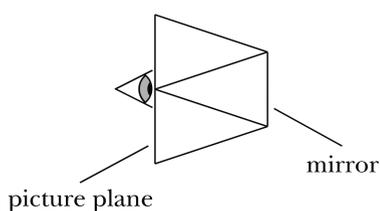


Figure 11. Coincidence of the viewpoint and the vanishing point

ground tone of a piece is the main point and its constituent melodic progressions and chords are the subsidiary points. Logical implication maps onto tonal procreation, because in both cases you have something that issues from another thing. So melodic and harmonic progressions elaborate a ground tone as a postulate through deductive reasoning and possibly as a conclusion through inductive reasoning.⁶⁹ As with the blend of a piece as a picture of the tone, the ground tone is both the form and the content, but unlike a picture, a statement is not simply a representation but rather a predication. Because the content of a piece as a statement about the tone ultimately comes down to just a single tone, the predicate must be somehow implied in this tone as the subject. So for Schenker and Schoenberg, a piece of music is the tautological statement that the ground tone is in fact the ground tone, the all-encompassing progenitor of the piece.⁷⁰ By extension, any segment of a piece is a statement that its ground tone (a *Stufe* or a tonic) is its ground tone.

Schenker's and Schoenberg's blend of a piece as a statement about the tone surfaces primarily in their comments relating to proof. A rigorous logical proof and the elaboration of a perceptible ground tone both consist of an unbroken chain of transparent connections, so Schenker and Schoenberg map the former onto the latter. Schenker says that the elaboration of a *Stufe* through passing motions and the like "proves the vertical harmony in the horizontal line"; in other words, it provides "proof that it is this or that *Stufe*" (*HL*, 212/167, 200/155).⁷¹ Such proofs are necessary for *Stufen* to contribute to the proof of a tonic, and contrariwise, a "sequence of triads lacks the power to prove to the same extent that each individual triad remains unproven" (*HL*, 212/166). But also, *Stufen* have an "immanent, natural logic" in their

69 On the origins and implications of the notion of music as language without external signification, see Chua 1999, 191–98.

70 Since a piece of music for Schenker and Schoenberg is an expression of the ground tone's urges, the statement that the ground tone is the ground tone is more precisely an utterance by the ground tone, "I am I," or perhaps just "I." As it happens, the assertion "I am I" is the fundamental

principle of Johann Gottlieb Fichte's *Science of Knowledge*, through which the "I" understands the world as its own reflection, just as the ground tone understands a piece of music as its own reflection (see Fichte [1794–95, 1797] 1970, 93–119).

71 On the historical background of Schenker's concept of the *Stufe* as a chord elaborated by other chords, see Wason 1983.

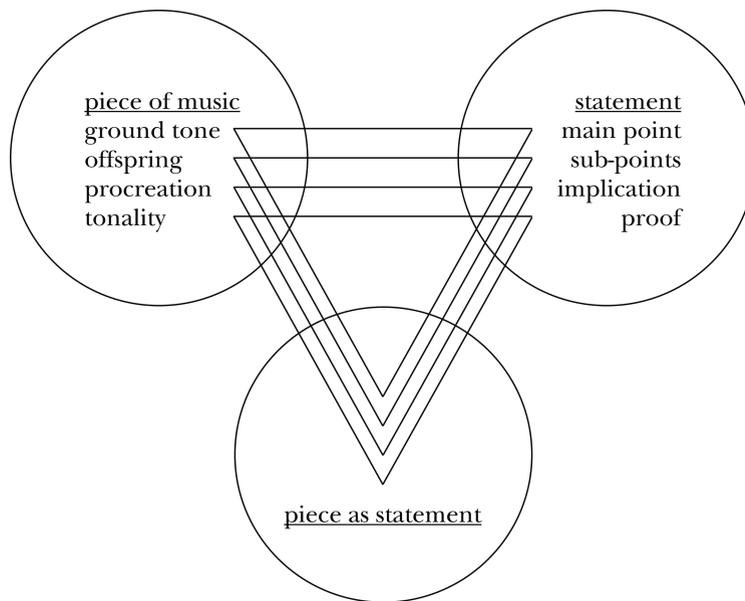


Figure 12. The piece as a statement about the tone

progression that is necessary for the proof of a tonic (*HL*, 203/158).⁷² In particular, the *Stufe* progression of a full cadence, IV–V–I, “speaks in favor of a tonic” (*HL*, 288/217) through its inclusion of a “univalent” interval (*eindeutig*; *HL*, 172/128). Normally, *eindeutig* and *zweideutig* just mean “unambiguous” and “ambiguous,” but Schenker uses these and related words literally according to the numbers *ein* (1), *zwei* (2), and so on, to refer to intervals with a single meaning, a double meaning, and so on. More specifically, “univalence” is the property of appearing “only on one *Stufe*” (*HL*, 164/127), that is, above one tone in the key, so a particular instance of a univalent interval allows one to deduce the key as the one containing that one particular instance of that interval. Schenker writes that “the key can be concluded with certainty from univalence, from the unique position of the interval” (*HL*, 164/127). Foremost among the univalent intervals are the diminished fifth and its counterpart, the augmented fourth. One of these intervals must appear between the ground tone of IV and the third of V in the *Stufe*

⁷² Snarrenberg has a slightly different interpretation of Schenker’s notion of musical logic. He writes, “The analogy is not strict, but seems to be this: the initial I is a hypothesis . . . , the mediating V the condition that would make I true, and the final I the affirmation of that truth” (1997, 28). Snarrenberg does not take into account that V

is generated by and included in I, which means that I mediates itself; the ground tone is not a *hypothesis* but a *postulate*, a premise that forms the basis for all further reasoning, and the ground tone also follows from itself as a conclusion. Regarding Schenker’s understanding of musical logic, see also Cook 2007, 63–88.

progression of a full cadence, thus lending the progression persuasiveness.⁷³ Schoenberg likewise says that the *Stufe* progression of a full cadence establishes the key “unambiguously” (*eindeutig*; *HL*, 148/130) through its inclusion of two tones that form a diminished fifth or augmented fourth:

Should we want to establish C major in such a way that there is no doubt about it, that is, so that we can think of neither F nor G major, then we must introduce B and F. The most important means for expressing the key will thus be those that distinguish it from the keys it most resembles, that separate it clearly from its nearest neighbors. Once we have succeeded in excluding confusion even with those keys with which it could most easily be confused, then we have defined the key unambiguously. (*HL*, 130)

Through such means as this, a piece of music with tonality proves the ground tone as a postulate:

Whenever all the chords in a complete piece of music appear in progressions that can be traced back to a common ground tone, one can then say that the idea of the harmonic tone [*Klang*] (which is conceived as vertical) is extended to the horizontal succession. Everything following it springs from this fundamental postulate, refers back to it, even when antithetical to it, elaborates and complements it, and finally leads back to it, so that this ground tone is treated in every respect as the center, the germ. (*HL*, 29/28)

The second sentence of this passage is only found in the third edition (*HL*, 29/28), but it contains ideas that are found in the first edition,⁷⁴ and it serves as a rich encapsulation of the entire integration network that I have been describing: Schoenberg refers to the ground tone as a composite sound, an idea, a germ from which things spring, a center that extends out vertically and horizontally, and a postulate that is also a conclusion.

Just as Schenker and Schoenberg have opposing views on the necessity of perceiving the ground tone of a piece, so too they have opposing views on the necessity of proving the ground tone, and for the same reason. In assessing the ground tone as a postulate, Schenker, who focuses on the absoluteness of the tone as reflected in the absoluteness of perception, accordingly gives credence only to the perceptual evidence immediately at hand and so sees the proof of the ground tone as paramount. When the music does not prove the ground tone as a postulate, when indeed the music puts forward conflicting claims about the ground tone, as, for example, in Gregorian chant, Schenker judges the results to be artistically void:

73 Or rather, Schenker would *like* the diminished fifth and augmented fourth to be univalent, but in fact they are not, because they actually occur above a few different *Stufen* in the combined major-minor system. Schenker attempts to patch this hole by distinguishing between a univalent interval and a “literally univalent” interval such as the diminished seventh (*HL*, 128) or, as he also puts it, “strictly univalent” or “the most univalent” (*HL*, 128, 191).

74 For example, Schoenberg says that “tonality is a function of the ground tone: that is, everything that makes up tonality emanates from that tone and refers back to it” (*HL*, 169/150).

is thus his faith in the accumulated wisdom of music history, which gives us all the evidence we might need in assessing the ground tone as a postulate, so that proving the ground tone is like reinventing the wheel. He writes, “It is superfluous to prove the lineage of the chords from the progenitor with absolute thoroughness when it is familiar to everyone. . . . The postulate that everything emanates from the tone can easily forgo demonstration, since one is constantly reminded of it anyway by every tone” (*HL*, 146/128). Basically, Schoenberg does not feel the need to prove the ground tone, the postulate that everything emanates from the ground tone, because it is tautological, and so one is free to focus on the conclusions drawn from the ground tone rather than on the ground tone itself as a conclusion drawn from the music. The piece as a statement about the tone is more a research report than a certificate of its own authenticity. Schoenberg writes that “our relation to this prototype is that of the analyst, of the seeker; in imitating it we discover more or fewer of its truths” (*HL*, 319).

* * *

Before closing, I would like to address a possible objection to the preceding analysis: if Schenker and Schoenberg really thought this way, why didn't they just say so? First of all, one must bear in mind that authors are not always fully aware of what they are thinking. But also, integration theory explains the reason for this lack of awareness: although thought is intricately structured, it is not entirely logical, and so it does not yield readily to introspection. Scrutinized individually and logically, the synecdochic and analogical links in Schenker's and Schoenberg's musical thought dissolve into mist, leaving their mental spaces distinct, and within these rings Schenker and Schoenberg duke it out. But taken in collectively from the distance of a century, these links weave their thought into a cohesive whole. As Schoenberg appositely says in another context, “If proximity teaches us diversity, so distance teaches us the general. If the present shows us the divergencies of individuals, so the median distance shows the similarity of means; but the great distance in turn cancels out both, shows the individuals as different, but even so also shows what really connects them” (*HL*, 412).

To sum up, then, Schenker's and Schoenberg's *Harmonielehren* adumbrate broader theories of composition, not analysis, based in part on a conception of the tone as a partly unconsciously perceived, living idea, which the artist imitates by means of the motive and the key in a piece of music as a manifestation or development of one particular tone called the ground tone. They further conceive of a piece as a picture of the tone and a statement about the tone. The complete integration network for their conception of the tone is shown in Figure 13. The preceding analysis reveals that Schenker's and Schoenberg's peculiar clashes, such as in their starkly opposed attitudes toward tonality, are not the result of their attending to different stages of

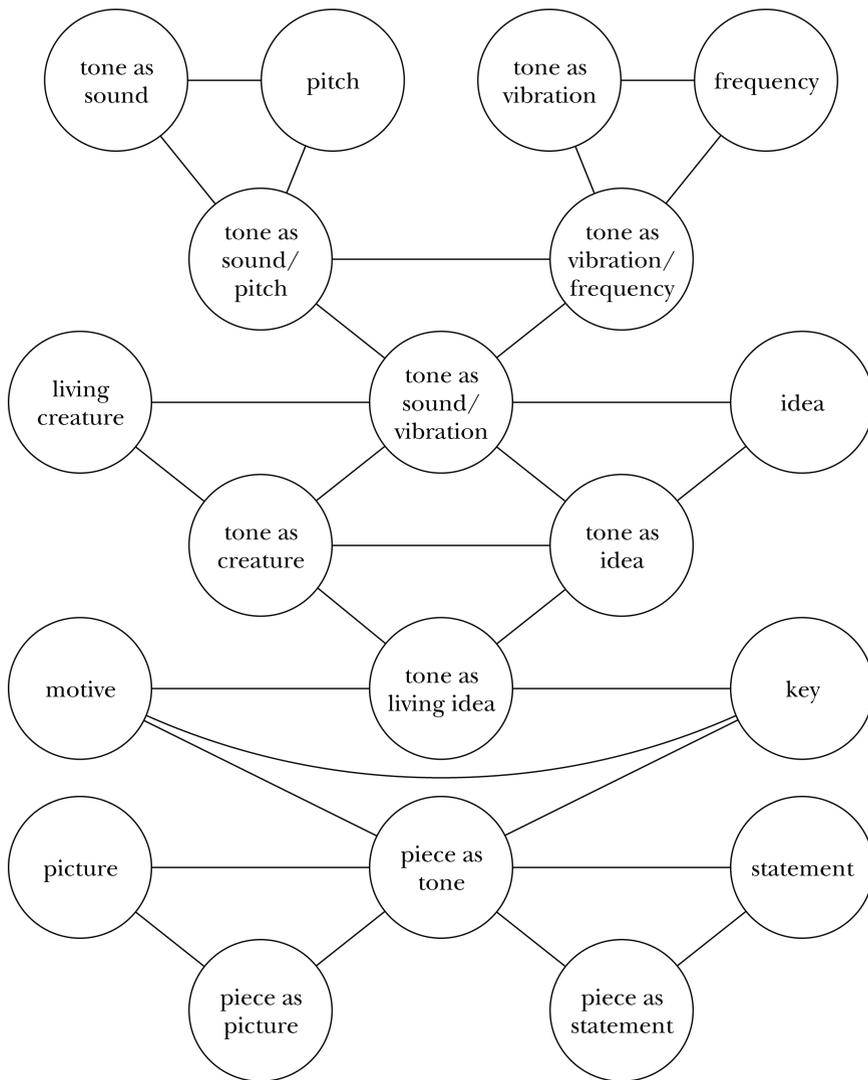


Figure 13. The tone as a living idea manifested in the musical work

music history or the result of different paradigms of nature and language; rather, they are the result of a mere difference in emphasis, attributable to temperament, on the absoluteness of the tone as an idea of nature versus the contingency of the artist's response to the tone in the formation of music, a contradiction inherent in both of their remarkably parallel theories. This deep unity in Schenker's and Schoenberg's musical thought suggests new possibilities for analysis and invites a reassessment of the opposed historical categories of tonal and post-tonal music, which have informed our

perception of a fundamental conflict between their theories and limited our perception of commonality between their theories, and which continue to inform our theoretical, analytical, and pedagogical practice.

Works Cited

- Adorno, Theodor W. [1955] 1967. "Arnold Schoenberg, 1874–1951." In *Prisms*, trans. Samuel and Shierry Weber, 147–72. Reprint, Cambridge: MIT Press, 1981.
- Almén, Byron. 2005. "Musical 'Temperament': Theorists and the Functions of Music Analysis." *Theoria* 12: 31–68.
- Bauer, Amy. 2004. "Tone-Color, Movement, Changing Harmonic Planes: Cognition, Constraints, and Conceptual Blends in Modernist Music." In *The Pleasure of Modernist Music: Listening, Meaning, Intention, Ideology*, ed. Arved Ashby, 121–52. Rochester: University of Rochester Press.
- Beiche, Michael. 1992. "Tonalität." In *Handwörterbuch der musikalischen Terminologie*, ed. Albrecht Riethmüller. Stuttgart: Franz Steiner.
- Bhogal, Gurminder Kaur. 2006. "Debussy's Arabesque and Ravel's *Daphnis et Chloé* (1912)." *Twentieth-Century Music* 3: 171–99.
- Blasius, Leslie David. 1996. *Schenker's Argument and the Claims of Music Theory*. Cambridge: Cambridge University Press.
- Borio, Gianmario. 2001. "Schenker versus Schoenberg versus Schenker: The Difficulties of a Reconciliation." *Journal of the Royal Musical Association* 126: 250–74.
- Boss, Jack F. 1999. "'Schenkerian-Schoenbergian Analysis' and Hidden Repetition in the Opening Movement of Beethoven's Piano Sonata op. 10, no. 1." *Music Theory Online* 5/1. <http://mto.societymusictheory.org/issues/mto.99.5.1/mto.99.5.1.boss.html>.
- Botstein, Leon. 1997. "Music and the Critique of Culture: Arnold Schoenberg, Heinrich Schenker, and the Emergence of Modernism in Fin de Siècle Vienna." In *Constructive Dissonance: Arnold Schoenberg and the Transformations of Twentieth-Century Culture*, ed. Juliane Brand and Christopher Hailey, 3–22. Berkeley: University of California Press.
- Boucquet, Kristof. 2005. "Schenker and Schoenberg Revisited." *Revue belge de musicologie/ Belgisch Tijdschrift voor Muziekwetenschap* 59: 193–203.
- Burnham, Scott. 1995. *Beethoven Hero*. Princeton: Princeton University Press.
- Campbell, Bruce Benedict. 1982. "Beethoven's Quartets opus 59: An Investigation into Compositional Process." Ph.D. diss., Yale University.
- Carpenter, Patricia. 1984. "Musical Form and Musical Idea: Reflections on a Theme of Schoenberg, Hanslick, and Kant." In *Music and Civilization: Essays in Honor of Paul Henry Lang*, ed. Edmond Strainchamps and Maria Rika Maniates with Christopher Hatch, 394–427. New York: Norton.
- . 1998. "Schoenberg's Theory of Composition." In *The Arnold Schoenberg Companion*, ed. Walter B. Bailey, 209–22. Westport, CT: Greenwood Press.
- . 2005. "Schoenberg's Tonal Body." *Theory and Practice* 30: 35–68.
- Carpenter, Patricia and Severine Neff. 1997. "Schoenberg's Philosophy of Composition: Thoughts on the 'Musical Idea and Its Presentation.'" In *Constructive Dissonance: Arnold Schoenberg and the Transformations of Twentieth-Century Culture*, ed. Juliane Brand and Christopher Hailey, 146–59. Berkeley: University of California Press.
- Cherlin, Michael. 2007. *Schoenberg's Musical Imagination*. Cambridge: Cambridge University Press.
- Christensen, Thomas. 1993. "Music Theory and Its Histories." In *Music Theory and the Exploration of the Past*, ed. Christopher Hatch and David W. Bernstein, 9–39. Chicago: University of Chicago Press.

- Chua, Daniel K. L. 1999. *Absolute Music and the Construction of Meaning*. Cambridge: Cambridge University Press.
- Cinnamon, Howard. 1984. "Some Elements of Tonal and Motivic Structure in 'In diesen Wintertagen,' op. 14, no. 2, by Arnold Schoenberg: A Schoenbergian-Schenkerian Study." *In Theory Only* 7: 23–49.
- Clark, Suzannah. 1999. "Schenker's Mysterious Five." *19th-Century Music* 23: 84–102.
- Clemens, Jon. 1998. "Combining *Ursatz* and *Grundgestalt*: A Schenkerian-Schoenbergian Analysis of Coherence in Hugo Wolf's *Italienisches Liederbuch*." Ph.D. diss., University of Cincinnati.
- Cole, Alison. 1992. *Perspective*. London: Dorling Kindersley.
- Cook, Nicholas. 2001. "Theorizing Musical Meaning." *Music Theory Spectrum* 23: 170–95.
- . 2007. *The Schenker Project: Culture, Race, and Music Theory in Fin-de-Siècle Vienna*. Oxford: Oxford University Press.
- Coulson, Seana and Todd Oakley, eds. 2005. *Journal of Pragmatics* 37/10: 1507–1742.
- Cramer, Alfred. 2002. "Schoenberg's *Klangfarbenmelodie*: A Principle of Early Atonal Harmony." *Music Theory Spectrum* 24: 1–34.
- Dahlhaus, Carl. 1974. "Schoenberg and Schenker." *Proceedings of the Royal Musical Association* 100: 209–15.
- Dale, Catherine. 1993. *Tonality and Structure in Schoenberg's Second String Quartet, op. 10*. New York: Garland.
- Dineen, Murray. 2005. "The Tonal Problem as a Method of Analysis: In Memoriam Patricia Carpenter." *Theory and Practice* 30: 69–96.
- Dunsby, Jonathan. 1997. "Schoenberg and Present-Day Theory and Practice." In *Constructive Dissonance: Arnold Schoenberg and the Transformations of Twentieth-Century Culture*, ed. Juliane Brand and Christopher Hailey, 188–95. Berkeley: University of California Press.
- Epstein, David. 1979. *Beyond Orpheus: Studies in Musical Structure*. Cambridge: MIT Press.
- Erwin, Charlotte E. and Bryan R. Simms. 1981. "Schoenberg's Correspondence with Heinrich Schenker." *Journal of the Arnold Schoenberg Institute* 5: 23–43.
- Eybl, Martin. 2006. "Schopenhauer, Freud, and the Concept of Deep Structure in Music." In *Schenker-Traditionen: Eine Wiener Schule der Musiktheorie und ihre internationale Verbreitung/ A Viennese School of Music Theory and Its International Dissemination*, ed. Martin Eybl and Evelyn Fink-Mennel, 51–58. Vienna: Böhlau.
- Falck, Robert. 1982. "Emancipation of the Dissonance." *Journal of the Arnold Schoenberg Institute* 6: 106–11.
- Fauconnier, Gilles. 2009. "Generalized Integration Networks." In *New Directions in Cognitive Linguistics*, ed. Vyv Evans and Stéphanie Pourcel, 147–60. Amsterdam: John Benjamins.
- Fauconnier, Gilles and Mark Turner. 1998. "Conceptual Integration Networks." *Cognitive Science* 22: 133–87.
- . 2002. *The Way We Think: Conceptual Blending and the Mind's Hidden Complexities*. New York: Basic Books.
- . 2008. "Rethinking Metaphor." In *The Cambridge Handbook of Metaphor and Thought*, ed. Raymond W. Gibbs, Jr., 53–66. New York: Cambridge University Press.
- Federhofer, Hellmut. 1982. *Heinrich Schenkers Verhältnis zu Arnold Schönberg*. Vienna: Verlag der österreichischen Akademie der Wissenschaften.
- . 1994. "Heinrich Schenker (1868–1935) und Arnold Schönberg (1874–1951) als Musiktheoretiker." *Studien zur Musikwissenschaft* 43: 319–40.
- Fichte, Johann Gottlieb. [1794–95, 1797] 1970. *Science of Knowledge (Wissenschaftslehre) with the First and Second Introductions*. Translated by Peter Heath and John Lachs. New York: Appleton-Century Crofts.

- Föllmi, Beat A. 1999. "‘Schönberg ist Theosoph’": Anmerkungen zu einer wenig beachteten Beziehung." *International Review of the Aesthetics and Sociology of Music* 30: 55–63.
- Foucault, Michel. 1977. *Discipline and Punish: The Birth of the Prison*. Translated by Alan Sheridan. New York: Pantheon Books.
- Fowler, Andrew Judson. 1984. "Multilevel Motivic Projection as a Compositional Process in Tonal Music." Ph.D. diss., University of Texas–Austin.
- Freud, Sigmund. [1900] 1938. *The Interpretation of Dreams*. In *The Basic Writings of Sigmund Freud*, trans. A. A. Brill, 179–549. New York: Modern Library.
- Gur, Golan. 2008. "Body, Forces, and Paths: Metaphor and Embodiment in Jean-Philippe Rameau’s Conceptualization of Tonal Space." *Music Theory Online* 14/1. <http://mtosociety.musictheory.org/issues/mt.08.14.1/mt.08.14.1.gur.html>.
- Haimo, Ethan. 1997. "Schoenberg and the Origins of Atonality." In *Constructive Dissonance: Arnold Schoenberg and the Transformations of Twentieth-Century Culture*, ed. Juliane Brand and Christopher Hailey, 71–86. Berkeley: University of California Press.
- . 2006. *Schoenberg’s Transformation of Musical Language*. Cambridge: Cambridge University Press.
- Hofmann, Werner. 1969. "Beziehung zwischen Malerei und Musik." In *Schönberg/Webern/Berg: Portretten—partituren—documenten*. Haag: Gemeentemuseum.
- Hui, Alexandra Evonne. 2008. "Hearing Sound as Music: Psychophysical Studies of Sound Sensation and the Music Culture of Germany, 1860–1910." Ph.D. diss., University of California–Los Angeles.
- Johnson, Mark. 1987. *The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reason*. Chicago: University of Chicago Press.
- Johnson, Shersten R. 2004. "Hearing the Unvoiceable: Writer’s Block in Benjamin Britten’s *Death in Venice*." Ph.D. diss., University of Wisconsin–Madison.
- Kalisch, Volker. 1996. "Zum Verhältnis von Analyse und Musiktheorie zu Beginn des 20. Jahrhunderts." In *Zur Geschichte der musikalischen Analyse*, ed. Gernot Gruber, 119–130. Laaber, Germany: Laaber-Verlag.
- Karnes, Kevin C. 2008. *Music, Criticism, and the Challenge of History: Shaping Modern Musical Thought in Late Nineteenth Century Vienna*. New York: Oxford University Press.
- Lakoff, George and Mark Johnson. 1980. *Metaphors We Live By*. Chicago: University of Chicago Press.
- . 1999. *Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought*. New York: Basic Books.
- Lewin, David. 1986. "Music Theory, Phenomenology, and Modes of Perception." *Music Perception* 3: 327–97.
- Louis, Rudolf and Ludwig Thuille. [1907] 1910. *Harmonielehre*, 3d ed. Stuttgart: Carl Grüninger.
- Mathis, Michael. 1996. "Arnold Schoenberg’s *Grundgestalt* and Gustav Mahler’s ‘Urlicht.’" *International Journal of Musicology* 5: 239–60.
- McClary, Susan. 1991. *Feminine Endings: Music, Gender, and Sexuality*. Minneapolis: University of Minnesota Press.
- McCreless, Patrick. 1989. "Reading Schenker’s *Kontrapunkt*." *Intégral* 3: 201–25.
- Moreno, Jairo. 2001. "Schenker’s Parallelisms, Schoenberg’s Motive, and Referential Motives: Notes on Pluralistic Analysis." *College Music Symposium* 41: 91–111.
- Neff, Severine. 2006. "Schenker, Schoenberg, and Goethe: Visions of the Organic Artwork." In *Schenker-Traditionen: Eine Wiener Schule der Musiktheorie und ihre internationale Verbreitung/ A Viennese School of Music Theory and Its International Dissemination*, ed. Martin Eybl and Evelyn Fink-Mennel, 29–50. Vienna: Böhlau.
- Peles, Stephen. 2010. "‘Was gleichzeitig klingt’: The Schoenberg-Schenker Dispute and the Incompleteness of Music Theory." *Music Theory Spectrum* 32: 165–71.

- Pieslak, Jonathan Robert. 2003. "Conflicting Analytical Approaches to Late Nineteenth- and Early Twentieth-Century Tonal Music: A Meta-theoretical Study." Ph.D. diss., University of Michigan.
- Rotman, Brian. 1987. *Signifying Nothing: The Semiotics of Zero*. New York: St. Martin's Press.
- Saslaw, Janna K. 1996. "Forces, Containers, and Paths: The Role of Body-Derived Image Schemas in the Conceptualization of Music." *Journal of Music Theory* 40: 217–43.
- . 1997–98. "Life Forces: Conceptual Structure in Schenker's *Free Composition* and Schoenberg's *The Musical Idea*." *Theory and Practice* 22–23: 17–33.
- Saysr, Elizabeth. 2003. "Narrative, Metaphor, and Conceptual Blending in 'The Hanging Tree.'" *Music Theory Online* 9/1. <http://mto.societymusictheory.org/issues/mto.03.9.1/mto.03.9.1.saysr.html>.
- Schalk, Josef. 1888–90. "Das Gesetz der Tonalität." *Bayreuther Blätter* 11–13.
- Schenker, Heinrich. [1906] 1954. *Harmonielehre*. Vol. 1 of *Neue musikalische Theorien und Phantasien*. Reprint, Vienna: Universal Edition, 1978. Translated by Elisabeth Mann Borgese as *Harmony*, ed. Oswald Jonas. Chicago: University of Chicago Press.
- . [1910, 1922] 1987. *Counterpoint*. 2 bks. Translated by John Rothgeb and Jürgen Thym. Edited by John Rothgeb. New York: Schirmer Books.
- . [1925] 1994. *Das Meisterwerk in der Musik: Ein Jahrbuch* 1. Translated by Ian Bent, Alfred Clayton, William Drabkin, Richard Kramer, Derrick Puffett, John Rothgeb, and Hedi Siegel as *The Masterwork in Music: A Yearbook*, Vol. 1, ed. William Drabkin. Cambridge: Cambridge University Press.
- . [1935] 1979. *Der freie Satz*, 2d ed. Edited by Oswald Jonas. Vienna: Universal Edition, 1956. Translated by Ernst Oster as *Free Composition*. New York: Longman.
- . 2005. *The Decline of the Art of Composition: A Technical-Critical Study*. Translated by William Drabkin. *Music Analysis* 24: 33–129.
- Schmalfeldt, Janet. 1991. "Towards a Reconciliation of Schenkerian Concepts with Traditional and Recent Theories of Form." *Music Analysis* 10: 233–87.
- Schoenberg, Arnold. [1911] 1978. *Harmonielehre*. 1st ed. Leipzig: Universal Edition. 3d ed. Vienna: Universal Edition, 1922. Translated by Roy E. Carter as *Theory of Harmony*. Berkeley: University of California Press.
- . 1967. *Fundamentals of Musical Composition*. Edited by Gerald Strang with Leonard Stein. London: Faber and Faber.
- . 1974. "Vortrag / 12 TK / Princeton." Translated by Claudio Spies. *Perspectives of New Music* 13/1: 58–136.
- . 1975. *Style and Idea: Selected Writings of Arnold Schoenberg*. Edited by Leonard Stein. Translated by Leo Black. New York: St. Martin's Press.
- . 1994. *Coherence, Counterpoint, Instrumentation, Instruction in Form / Zusammenhang, Kontrapunkt, Instrumentation, Formenlehre*. Edited by Severine Neff. Translated by Charlotte M. Cross and Severine Neff. Lincoln: University of Nebraska Press.
- . 1995. *The Musical Idea and the Logic, Technique, and Art of Its Presentation*. Edited and translated by Patricia Carpenter and Severine Neff. New York: Columbia University Press.
- Schopenhauer, Arthur. [1819] 1966. *The World as Will and Representation*, Vol. 1. Translated by E. F. J. Payne. 2d ed. New York: Dover.
- Schwab-Felisch, Oliver. 2010. "Haydn, Schenker, Schönberg: Ein Beitrag zur Eklektizismusdebatte in der Musiktheorie." *Zeitschrift der Gesellschaft für Musiktheorie*, <http://www.gmth.de/zeitschrift/artikel/568.aspx>.
- Simms, Bryan [R.]. 1975. "Choron, Fétis, and the Theory of Tonality." *Journal of Music Theory* 19: 112–38.
- . 1977. "New Documents in the Schoenberg-Schenker Polemic." *Perspectives in New Music* 16/1: 110–24.

- . 1982. Review of Arnold Schoenberg, *Theory of Harmony*, translated by Roy E. Carter (Berkeley: University of California Press, 1978). *Music Theory Spectrum* 4: 155–62.
- . 2000. *The Atonal Music of Arnold Schoenberg, 1908–1923*. Oxford: Oxford University Press.
- . 2006. “Schoenberg, Schenker, and the Metier of Music Theory.” In *Schenker-Traditionen: Eine Wiener Schule der Musiktheorie und ihre internationale Verbreitung/A Viennese School of Music Theory and Its International Dissemination*, ed. Martin Eybl and Evelyn Fink-Mennel, 19–27. Vienna: Böhlau.
- Snarrenberg, Robert. 1994. “Competing Myths: The American Abandonment of Schenker’s Organicism.” In *Theory, Analysis, and Meaning in Music*, ed. Anthony Pople, 29–56. Cambridge: Cambridge University Press.
- . 1997. *Schenker’s Interpretive Practice*. Cambridge: Cambridge University Press.
- Spitzer, Michael. 2003. “The Metaphor of Musical Space.” *Musicae scientiae* 7: 101–20.
- . 2004. *Metaphor and Musical Thought*. Chicago: University of Chicago Press.
- Stuckenschmidt, H. H. 1977. *Schoenberg: His Life, World and Work*. Translated by Humphrey Searle. London: John Calder.
- Thompson, Emily Ann. 2002. *The Soundscape of Modernity: Architectural Acoustics and the Culture of Listening in America, 1900–1933*. Cambridge: MIT Press.
- Todorov, Tzvetan. 1982. *Theories of the Symbol*. Translated by Catherine Porter. Ithaca: Cornell University Press.
- Tomlinson, Gary. 1993. *Music in Renaissance Magic: Toward a Historiography of Others*. Chicago: University of Chicago Press.
- Turner, Mark. 1987. *Death Is the Mother of Beauty: Mind, Metaphor, Criticism*. Chicago: University of Chicago Press.
- . 2010. *Blending and Conceptual Integration*. <http://markturner.org/blending.html>.
- Urista, Diane. 2001. “Embodying Music Theory: Image Schemas as Sources for Musical Concepts and Analysis, and as Tools for Expressive Performance.” Ph.D. diss., Columbia University.
- Van den Toorn, Pieter C. 1996. “What’s in a Motive? Schoenberg and Schenker Reconsidered.” *Journal of Musicology* 14: 370–99.
- Wagner, Richard. [1851] 1893. *Opera and Drama*. Vol. 2 of *Richard Wagner’s Prose Works*, trans. William Ashton Ellis. Reprint, New York: Broude Brothers, 1966.
- Wason, Robert W. 1983. “Schenker’s Notion of Scale-Step in Historical Perspective: Non-essential Harmonies in Viennese Fundamental Bass Theory.” *Journal of Music Theory* 27: 49–73.
- . 1985. *Viennese Harmonic Theory from Albrechtsberger to Schenker and Schoenberg*. Ann Arbor: UMI Research Press.
- . 2002. “*Musica practica*: Music Theory as Pedagogy.” In *The Cambridge History of Western Music Theory*, ed. Thomas Christensen, 46–77. Cambridge: Cambridge University Press.
- . 2006. “From *Harmonielehre* to *Harmony*: Schenker’s Theory of Harmony and Its Americanization.” In *Schenker-Traditionen: Eine Wiener Schule der Musiktheorie und ihre internationale Verbreitung/A Viennese School of Music Theory and Its International Dissemination*, ed. Martin Eybl and Evelyn Fink-Mennel, 171–201. Vienna: Böhlau.
- Williams, J. Kent. 2007. Review of *Engaging Music: Essays in Music Analysis*, edited by Deborah Stein (New York: Oxford University Press, 2005). *Music Theory Spectrum* 29: 263–75.
- Wright, James K. 2005. *Schoenberg, Wittgenstein and the Vienna Circle*. Bern: Peter Lang.
- Zbikowski, Lawrence M. 1999. “The Blossoms of ‘Trockne Blumen’: Music and Text in the Early Nineteenth Century.” *Music Analysis* 18: 307–45.
- . 2002. *Conceptualizing Music: Cognitive Structure, Theory, and Analysis*. Oxford: Oxford University Press.

- . 2002–3. “Music Theory, Multimedia, and the Construction of Meaning.” *Intégral* 16–17: 251–68.
- . 2008. “Metaphor and Music.” In *The Cambridge Handbook of Metaphor and Thought*, ed. Raymond W. Gibbs, Jr., 502–24. New York: Cambridge University Press.

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