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Metaphor and Music

Lawrence M. Zbikowski

The music in Example 1 is a shorthand version of the string parts and solo bass melody from the opening of the fourth movement of Johann Sebastian Bach's 1714 cantata for the first Sunday of Advent, "Nun komm der Heiden Heiland." The music in the string parts for the passage might be described in one of two contrasting ways. The first is more colorful and more accessible: "The bass obstinately plods along throughout the passage; the chords above are either sour and biting dissonances (as in the first half of measure 1, and all of measures 2–3) or sweet but dark consonances (as in the second half of measure 1, or at the end of the excerpt). The mostly murky sounds of the pizzicato strings, together with the slow tempo, make this a brooding, melancholy piece." The second description is drier, and makes more use of technical jargon: "Above an ostinato tonic bass Bach sounds first a dominant-seventh chord (in the opening portion of measure 1), and then a leading-tone chord with seventh (in measures 2–3). He provides momentary release for the tension created by these dissonances through the introduction of the tonic chord in the second half of measure

1 and then again at the conclusion of the passage."

In analyses of how language is used to characterize music, the first description is typically characterized as metaphorical, the second as literal. The metaphors in the first description are readily apparent:

- the "plodding bass" is nothing more than a repeated note plucked by the cellos
- the consonant harmonies of measures 1 and 4 and dissonant harmonies of measures 1–3 are sounds, and so cannot taste like anything, sweet or sour
- the dissonances in measures 1–3 are simply a consequence of F[#] and D[#] sounding against the E in the bass – no mechanisms for biting are in evidence
- as products of the resonance of a sounding medium the E minor chords of measures 1 and 4 have no particular reflectance and so can be neither dark nor light
- even if we grant that what is meant by the characterization of the piece as "brooding and melancholy" is that it is *expressive* of these feelings, how can a simple sequence

♩=54

Sie-he, sie-he, ich ste-he vor der Tur und klo - pfe an, und klo-pfe an.

Example 1. Measures 1–4 of the fourth movement (Recitativo) from J. S. Bach's cantata "Nun komm der Heiden Heiland" (BWV 61).

of sounds – which is not in any way sentient – express anything?

It would appear that none of the things picked out by the first description could in fact be found in the music – thus the metaphoricality of the description.

The second description does seem to be more literal. The definition of an ostinato is, indeed, a repeated pattern of notes. The pitches B-D[#]-F[#]-A are those of the dominant-seventh chord of E minor, and D[#]-F[#]-A-C are those of the leading-tone chord with seventh. With mention of tension and release in the second sentence we are, however, on somewhat shakier ground, for the dissonant chords in the passage require no more or less tension for their production than do the consonant chords. One might argue that such chords give all knowledgeable listeners the sensation of tension and release, but this begs the question: the description is supposedly about a given musical passage, not a listener's reaction to the passage. One solution would be to eliminate the second sentence from the description, but we would then be left with little more than a narrativized rendering of the musical terms that could be applied to this passage. It is the second sentence, with its metaphorical evocation of tension and release, that gives some indication of how the music sounds, rather than what musical elements it comprises. Metaphor seems to be an inescapable part of musical descriptions that aspire to more than a rehearsal of defined terms.

There are, of course, many areas of human experience about which discourse

is resolutely metaphorical, emotions being a prominent example. What makes music special is its relationship to language. Both music and language, for instance, are unique to the human species, both unfold over time, both have syntactic properties, and both make use of sound. Indeed, the notion that music is a language is the basis for some of the most prevalent metaphors used to describe music. But music is also *not* like language in at least one important respect: aside from a limited number of exceptional cases when music mimics natural sounds, music makes no reference to the outside world. Music *does* make reference to – or perhaps embody – the interior world of emotions or physiological states, but it is just this world that typically escapes the grasp of non-metaphorical language.

Given this situation, one could conceivably trace connections between the phenomenon of metaphor and the cultural practice of music back to the earliest written records. (There is, for instance, a brief discussion of metaphors used by Aristoxenus, a fourth-century BCE writer on music, in the introduction to Zbikowski, 2002.) The focus in this chapter, however, is on work that has contributed directly to discussions about metaphor and music and on theoretical frameworks for understanding how the domain of music correlates with other conceptual domains, including that of language. Most of this work dates from the past 50 years, and encompasses a range of disciplines, including philosophy, semiotics, cognitive science, and the critical and analytical study of music. It should be noted that scholars of music are often divided

into three subdisciplines, reflecting different intellectual commitments. Although *musicology* is the most comprehensive term, it is currently used to refer to those whose research concentrates on music viewed as a historical practice; *ethnomusicology*, by contrast, tends to focus on the social and cultural contexts of musical practice, with an emphasis on non-western music; *music theory* is concerned, by and large, with developing systematic perspectives on musical organization and on close readings of individual musical works based on these perspectives.

The first part of this chapter is given over to a historical and conceptual survey of music and metaphor (moving through a range of disciplines, including the three subdisciplines of music scholarship), organized around some of the topics adumbrated in the discussion of my opening example. These include the status of knowledge about music, the nature of musical semiotics, the relationship of music to other aspects of human experience (and in particular the expression of emotions), and music as a manifestation of human cognitive capacities. The second part of the chapter will return to the music of example 1 and explore a theoretical framework for analyzing how the domain of music correlates with other conceptual domains, including that of language.

Research on Metaphor and Music

Music and Knowledge

Perhaps the first extended discussion that connected music with metaphor appeared in the philosopher Nelson Goodman's *Languages of Art* (1968/1976). Goodman was interested in developing a theory of symbols that could apply to works of art as well as to natural language. According to this theory, a painting is a symbol (if of a rather special sort); so are a sequence of musical sounds or a sculpture. One distinctive feature of artistic symbols is that they are typically regarded as expressive: a gray-toned painting with a somber theme is thus described as "sad," as would be a lugubrious melody in a minor key. For Goodman, such sadness is not an

attribute of the symbol proper but is instead figurative or metaphorical: in describing the painting or the melody as "sad," we transfer a system of concepts from its typical realm (the emotional states associated with sentient beings) into a new realm (colors and shapes on a canvas or a sequence of sonic events; Goodman, 1976, 72). The expressivity of an art work is, in consequence, not an attribute of the work as such but is simply *attributed* to the work.

Goodman's account of the expressivity of works of art – and in particular, music – was met with two sorts of challenges. The first, and most straightforward, came from philosophers who argued that the expressive character of a work is basic to it: expressivity is an ineliminable property of the musical work. When Goodman relegated the sadness of a melody to the domain of the metaphorical, he simply missed the point, since the purpose of the melody was to be expressive of some emotion (Budd, 1989; Davies, 1994, 150–166).

The second challenge to Goodman came from the philosopher Roger Scruton, who noted that Goodman's approach made no place for human understanding – indeed, for Goodman artistic symbols and the expressive values attributed to them are completely independent of human cognition (Scruton, 1974, 222). Scruton's aesthetic theory, as a whole, sought to place works of art in the intentional realm; in subsequent work on music this strategy led Scruton to argue that to hear various sounds *as music* (as opposed to unconnected if pleasant noises) requires construing such sounds in terms of concepts taken from some other domain. To take a simple example, when the bass sings the first three notes of measure three in Example 1 – C₄-A₃-F[#]₃ – we typically describe them as descending.¹ This descent is, however, an illusion: not only does the singer remain where he is, but there is nothing in a scientific account of the sounds themselves that supports the notion that they descend. From Scruton's perspective, this "illusion" is key to understanding the sequence of notes *as music*: the "motion" that we ascribe to the sequence

of notes sung by the bass is a consequence of our framing their succession in terms of the motion of physical objects through space from low to high. This sort of metaphorical transfer – taking concepts from one domain (such as that of movement, or space, or concrete objects) and applying them to another – is essential to hearing sounds as music. “If we take away the metaphors of movement, of space, of chords as objects, of melodies as advancing and retreating, as moving up and down – if we take those metaphors away, nothing of music remains, but only sound” (Scruton, 1983, 106).

Scruton took pains here and in later work to emphasize the disjunction between the properties of sounds and the properties of music, for this disjunction pointed directly to the intentionality of art works like music:

There lies, in our most basic apprehension of music, a complex system of metaphor, which is the true description of no material fact, not even a fact about sounds, judged as secondary objects. The metaphor cannot be eliminated from the description of music, because it defines the intentional object of the musical experience. Take the metaphor away, and you cease to describe the experience of music. (Scruton, 1997, 92)

For those who placed little trust in metaphor as a tool for discovering the essential properties of music, however, Scruton’s account of musical understanding was just as flawed as Goodman’s, if in a different way. Where Goodman isolated the fact of music from its expressivity, Scruton failed to explain how metaphorical statements connected with musical facts (Budd, 1985, 2003). Raising a similar objection, the music theorist Naomi Cumming noted that the sharp distinction between literal and figurative language that Scruton drew was ultimately untenable when the range of language used to describe music was considered (Cumming, 1994, 2000, 49–51).

This difficulty points to a problem common in philosophical writings about music, which tend to treat language as the gold standard for conceptualization and grammar (see, for instance, Dempster, 1998).

Against such a standard music comes off rather poorly, for it cannot supply the factuality that is believed to mark language. A somewhat different, albeit related, problem stems from the special status granted instrumental music by some nineteenth-century thinkers. As Lydia Goehr has observed, within German Romanticism “‘The purely musical’ . . . served as a general metaphor for all that was unknowable by ordinary cognitive or rational means” (Goehr, 1998, 18). For writers who adopt this perspective the impenetrability of music is its *raison d’être*: “the musical mystery is not ‘what cannot be spoken of,’ the untellable, but the *ineffable*” (Jankélévitch, 2003, 72; see also Charles, 1995). The metaphors used to describe music – especially to the extent that the mechanisms behind these metaphors remain unexamined – are thus symptomatic of music’s ineffability. A final complication is that accounts of metaphor grounded in the philosophy of language may simply be inadequate for music, as can be seen in Steven Krantz’s application of Max Black’s theory of metaphor to music (Krantz, 1987), and as is demonstrated in Leo Treitler’s critique of Goodman (Treitler, 1997).

Musical Semiotics

The somewhat uncomfortable relationship between language and music evident in philosophical treatments of music and metaphor is also apparent in efforts to adapt semiotic theory to music. Hints that such an adaptation might be possible can be seen as early as Ferdinand de Saussure’s *Course in General Linguistics*, where, summing up the possibility of separating out the elements of language for analysis, Saussure comments, “Similarly, a musical series *do, re, mi* can be treated only as a concrete series in time, but if I select one of its irreducible elements, I can study it in the abstract” (Saussure, 1959, 40). A half-century after Saussure the Belgian linguist Nicolas Ruwet, in what proved to be an influential essay, adopted a similar perspective for detailed analyses of four melodies from the middle ages (Ruwet, 1966; reprinted in Ruwet, 1972;

(Slow) J.S. Bach, 1733 **Moderate tempo** Franz Schubert, 1827

(p) Qui - tol - lis (p) Ich muss auch heu - te wan - dern

Example 2. Two descending melodies from Cooke 1959 (from Cooke's Ex. 58b, p. 134).

for a discussion see Powers, 1980, 10–22). Limitations of the approach, however, soon became evident, especially where meaning was concerned. As the music theorist Kofi Agawu has observed, while it is the case that the basic units of language have a more or less fixed lexical meaning, the basic units of music most typically do not (Agawu, 1999, 144). Related to this, the symbolic structure of language consists of a dense network of mutually interrelated symbols which typically share little if anything with the things to which they refer (Deacon, 1997, chapter 3; 2003). The symbolic structure of music has nothing like this level of complexity: the relationships into which symbols enter are typically more local, and there tends not to be the sort of abstract reference typical of linguistic symbols (see, however, the analyses in Agawu, 1991). Where the perspectives of semiotic theory have reaped the most benefit has not been in showing how music replicates the features of language but through explorations of how meaning specific to music – and in some cases beyond the capacities of language – is possible.

Deryck Cooke, in *The Language of Music*, proposed that certain types of musical materials (with a special focus on the intervals that occur between the notes of a melody) were expressive of certain types of emotions. For instance, Cooke proposed that a descent from the fifth note of a minor scale through the first, of the sort shown in the melodies of Example 2, expresses “acceptance of, or yielding to grief, discouragement and depression; passive suffering, and the despair connected with death” (Cooke, 1959, 133). Cooke’s account of the vocabulary of music is much more complex than suggested by this example (for instance, the descent from the fifth through the first note of the scale could be filled in with the fourth and second

notes of the scale, or embellished in various ways) and much more detailed. Indeed, the very specificity Cooke offered may have told against him, for this provided fuel for critics who argued that musical meaning was much more various than Cooke seemed to maintain. Nonetheless, Cooke’s basic idea – that musical meaning is tied up with the expression of emotion – is not only broadly accepted among musicians (as suggested by the commentary in Agawu, 1999, and the essays in Juslin and Sloboda, 2001) but has recently been the focus of further work. Jan Broeckx, for instance, has argued that musical meaning is a consequence of the direct representation of emotion through musical figures (Broeckx, 1997). While we can certainly *describe* these emotions through language (thus giving rise to the metaphorical descriptions of music’s expressivity) such descriptions do not create the meaning that the emotions have. Broeckx, however, does not develop his methodology further, and just how musical figures express emotions remains obscure. Hallgjerd Aksnes, for her part, has made use of current work in cognitive science and metaphor theory to bring clarity to this perspective, proposing that the emotions summoned by passages in the music of the Norwegian composer Geirr Tveitt can be grounded in embodied experience (Aksnes, 2002, chapter 8). Additional methodological support can be found in the composer and semiologist David Lidov’s work, recently brought together in Lidov (2005). Although metaphor theory does not figure large in Lidov’s theory of musical signification, one can find the integration of an approach sympathetic to Cooke with a general theory of semiotics. The result is a theory of musical meaning based on correlations between emotions, physical gestures, and sequences of musical events.

(Andante)

The image shows a musical score for a piece in G-flat major, marked (Andante). The score is written on a single treble clef staff and consists of nine measures. The first four measures are labeled 'Träumerei' and the last five measures are labeled 'Humoresque'. The score is divided into three systems. The first system contains measures 1, 2, and 3. The second system contains measures 4, 5, and 6. The third system contains measures 7, 8, and 9. The melody is a simple, flowing line with a mix of eighth and quarter notes. The key signature has two flats (B-flat and E-flat). The time signature is not explicitly shown but is implied to be 3/4 or 4/4 based on the note values.

Example 3. The melody of Schumann's "Träumerei" combined with the melody of Dvořák's "Humoresque" (adapted from Example 4 from Karbusicky 1987, 436).

Another perspective on musical meaning and its relationship to metaphor was provided by the musicologist Vladimir Karbusicky. Working from a thorough knowledge of the history of semiotic approaches developed by German musicologists under the influence of Ernst Cassirer, Karbusicky made a strenuous argument *against* using semiotic theories formulated for language to explain musical meaning: "The popular definition of music as a kind of language or as auditive communication, which has all too often been taken for granted even in scientific essays, is nothing more than a metaphor" (Karbusicky, 1987, 431). For Karbusicky, "thought in music occurs primarily in asemantical shapes and formulas" (433); any attempt to interpret these shapes and formulas through language or linguistic theory would ultimately fail to capture the substance of musical thought. Karbusicky was, however, willing to entertain the notion that there might be purely musical metaphors (as distinct from linguistic metaphors used to describe music). The example Karbusicky chose to illustrate this idea was inspired by a cabaret pianist who put together the melody of Robert Schumann's "Träumerei" (from *Kinderszenen* op. 15, no. 7) with the melody of Antonin Dvořák's "Humoresque" in G-flat major (op. 101 no. 7; here transposed to F major); see Example 3. (The title "humoresque" makes reference to a term used for literary sketches by German writers during

the early nineteenth century. Applied to musical works, it often indicates short occasional pieces with a relaxed – but not necessarily humorous – character.) The opening sections of both Schumann's "Träumerei" and Dvořák's "Humoresque" are eight measures long, and for the most part Karbusicky's example moves back and forth between the two pieces: measure 2 of Example 3 is measure 2 of the "Humoresque"; measures 3–4 of Example 3 are measures 3–4 of "Träumerei." The exception occurs in the second phrase (measures 5–9): while measure 5 replicates measure 5 of the "Humoresque" and measure 6 replicates measure 6 from "Träumerei," measure 7 and the first half of measure 8 are drawn from measures 6–7 of the "Humoresque." This change results in an added measure, with the latter half of measure 8 and all of measure 9 of Example 3 drawn from measures 7–8 of "Träumerei." This minor modification notwithstanding, the free interchangeability of musical materials evident in Example 3 is important for the point Karbusicky wishes to make, for it indicates basic structural similarities between the two melodies that supports their meaningful combination. A closer look at the music of Example 3 suggests that the materials of "Träumerei" – and the image of childhood dreaming that they are meant to evoke – control the musical discourse. These materials frame the beginning and ending of the first phrase (measures 1–4), and, in doing so,

help to define its tonal structure. Although the “Humoresque” melody attempts to take control in the second phrase – shoving aside the reprise of the opening of “Träumerei” in measure 5, and running on for nearly two measures in measures 7–8 – the melody of “Träumerei” ultimately wins the day to conclude the second phrase.

In his analysis Karbusicky proposed that both melodies carry a basic semantic charge that might be described as “nostalgia, sentiment” (keeping in mind that each melody projects this charge in a different way). Musical metaphor, as Karbusicky conceived it, comes about because the meaning of “Träumerei” is changed when the unfolding of its languid melody is interrupted by the sprightly gestures of the “Humoresque.” The resulting modification of the sentiment of “Träumerei” – pushing it toward cheerfulness – is a consequence of both the introduction of the contrasting semantic content of the “Humoresque” and the common structural features of the two melodies, a commonality that supports associating the sentiment of “Träumerei” with that of the “Humoresque” (Karbusicky, 1987, 436–437).

The basic idea behind Karbusicky’s notion of purely musical metaphor, in which disparate musical materials are brought together to generate new meaning, can also be seen in Robert Hatten’s work on musical meaning (Hatten, 1994, chapter 7; 1995). Hatten, for his part, proposes that the correlations between musical materials and meaning must be established prior to their being brought together to create new meaning. This process occurs not in the manner of Karbusicky’s rather exceptional example (which relies on structural similarities between the two melodies to support their combination) but instead takes advantage of what Hatten calls functional locations, which can be thought of as important structural moments within a musical work (such as the reprise of a significant theme). A functional location may be a consequence of syntactic expectations set up within a particular piece, or may reflect stylistic formal schemas common

to any number of pieces. When musical materials with markedly different meanings are subjected to the syntactic pressures that characterize such locations, new meaning emerges. Hatten’s general term for this process is musical troping – metaphor is just one type of musical trope that may result. (For a similar perspective, but framed relative to the work of Roman Jakobson and Jacques Derrida, see Ayrey, 1994.) As Hatten readily admits, his approach bears more in common with poetic than with linguistic theory (Hatten, 2004, 297, n. 1); such a perspective is well suited to the interpretive challenges presented by the music of Mozart, Beethoven, and Schubert on which Hatten has focused.

Relationships between similar but structurally (or conceptually) distinct musical entities have long been recognized by musicians, although such relationships are of a sort closer to the pragmatic ones that underlie Karbusicky’s analysis that they are to the poetic ones invoked by Hatten. Indeed, one could argue that teaching students how to identify and exploit such relationships is one of the cornerstones of music pedagogy. It is perhaps for this very reason that the framework provided by theories of metaphor or analogy has not generally been used to characterize such relationships. When such frameworks have been applied to relationships among musical materials, it has been as part of a more comprehensive study of correlations between music and other media (Kielian-Gilbert, 1990) or to characterize how idealized musical constructs relate to actual musical practice (Dubiel, 1990, 327; Perlman, 2004, chaps. 6, 8). Again, the topic of metaphor more typically crops up when the issue is how things that are musical relate to things that are not musical.

Music and Other Aspects of Human Experience

The issue of music’s connection with other aspects of human experience emerged with force in music scholarship in the period after World War II when, as a consequence

of developments in music composition began a generation before and in keeping with the climate of aggressive positivism that informed a broad range of humanistic studies, there arose the idea that the analysis of music could proceed along the lines of scientific inquiry (see, for instance, Babbitt, 1972/1961). The analyses produced would focus solely on matters of musical structure, on the assumption that a comprehensive account of this structure would explain everything of importance about music. Matters such as what music expressed would either be answered by such an account or regarded as beyond analysis. This perspective was troubling to some; in 1960, Donald Ferguson proposed that “scientific” music theory, in fact, could not provide an adequate account of musical expression. As a corrective he offered a careful and thorough consideration of the basis of expressivity in music. Although the approach had much in common with that of Cooke (as discussed in the appendix to Ferguson, 1960), Ferguson was adamant that expressivity in music had to be connected with human experience. It was because the expressive elements in music were connected to emotional experience that music could serve as a metaphor for the significance of experience (Ferguson, 1960, ix, 185). (For a similar perspective, but one more thoroughly grounded in semiotic theory and more systematically presented, see Coker, 1972, chapter 10.)

Metaphor served as a powerful image for Ferguson but not as an explicit part of his response to analytical practices that ignored music’s expressivity. For Marion Guck, it was metaphor itself that suggested an alternative to positivistic descriptions of musical structure. Early in her career Guck became interested in the communicative potential of metaphorical language about music, having noticed that some of her students preferred such language over the formalistic accounts of musical structure that were commonly the focus of instruction in music analysis. Through a series of analytical exercises she and her students explored the use of such language and its relationship to

traditional structuralist approaches. She concluded that metaphorical language could put students more directly in touch with those aspects of music upon which traditional analytical techniques were focused, and add richness to their understanding of those aspects.

If perceived musical structure is indivisible from physical and emotional response, then metaphors may offer an embryonic structural interpretation reinforced by – explained through – physical-emotional responses. If a structural interpretation is not understood by itself, experiencing the responses may be another avenue to understanding the structure. Equally, metaphors offer a physical-emotional experience reinforced by – explained through – an embryonic structural interpretation. (Guck, 1981, 42)

Guck eventually came to argue that the whole of analytical discourse was rooted in metaphor (Guck, 1991), although she also strove to connect metaphorical discourse with the “scientific” approach adopted by many music analysts. She concluded that, while the claims for a scientific language about music could not be sustained, statements about music – whether such statements made use of explicit metaphors or whether they were restricted to less colorful technical descriptions – could be organized into consistent and coherent systems correlated with intersubjectively apprehended musical events, and thus able to approach the methodology of scientific inquiry (Guck, 1994).

Although the Anglo-American approach dominated research in music theory and analysis in the latter half of the twentieth century, scientism of the sort to which Ferguson and Guck (among many others) took exception never grabbed hold as firmly on the English side of the equation. When, in 1990, Nicholas Cook described music analysis as metaphorical he was attempting to place it within the context of aesthetic and psychological approaches to music that he viewed not only as viable but as offering key insights into music as a cultural product. Analysis, from this perspective, is a way

of imagining music – a metaphor for musical experience rather than any sort of literal record of that experience – much as for Scruton musical understanding itself was fundamentally imaginative (Cook, 1990, 10–43).

As a whole, Anglo-American musicology (as distinct from music theory) was less in thrall to the scientific paradigm during the post–World War II period than were music theory and analysis (although some musicologists aspired to a commensurate positivism; see Kerman, 1985, chapter 2). On the rare occasion when metaphor rose to the surface of musicological inquiry it was in the context of an over-arching pattern of thought that shaped ideas about music. Thus Ruth Solie, in her study of melody, proposed to explore the metaphoric language used to characterize melody to better understand how earlier periods conceived melody.

For example, if you are dealing with an “organic structure” or a “melodic curve” or a “universal language,” what sorts of behavior will you expect to observe from it, and therefore make note of? What characteristics will you perceive in “the embodied will to motion” that you might not see in a “pitch-time trajectory” or in a “stochastic process with sequential dependencies” – notwithstanding the fact that all three phrases refer to the same melody? (Solie, 1977, 9; see also Solie, 1980)

Some 20 years later Bennett Zon used a similar approach in his exploration of conceptual models used by nineteenth-century British musicologists, but focused on the metaphorical templates provided by art, religion, and science. These templates provided British musicologists with alternatives to straightforward chronological narratives; Herbert Spencer, for instance, writing in 1857, adopted the framework of evolutionary theory to explain the development of music, and the colloquy that arose around this proposal had a significant impact on the course taken by British musicology in the latter half of the nineteenth century (Zon, 2000, 120–125).

Music, Metaphor, and Cognitive Science

The perspective that guided Solie’s work, focusing as much on the language used to describe music as the music itself, was also one that came to prominence in the field of ethnomusicology around the same time. Steven Feld, who had a long-standing interest in how language was used to describe music, noted this trend in a 1981 essay that also made an important contribution to the study of music and metaphor. Drawing on the work of Lakoff and Johnson (1980), David Rumelhart (1979/1993), and Robert Verbrugge (1979), Feld argued that the metaphorical descriptions used by the Kaluli of Papua New Guinea were a reflection of key aspects of their everyday experience. The Kaluli describe melodic intervals – whether in their own music or in the music of others – with the same terms they use to characterize features of waterfalls. For instance, in the language of the Kaluli *sa* means “waterfall,” and a *mogan* is a still or lightly swirling waterpool; *sa-mogan* is the flow of a waterfall into a level waterpool beneath it. *Sa-mogan* is also used to describe a melodic line that descends to a repeated note, the contour of which replicates that of a waterfall flowing into a pool (Feld, 1981, 30–31; see also Feld, 1982). The system of metaphorical relationships upon which such characterizations draw offers a rich description of musical events, but one that also has its limitations: for example, the Kaluli do not have specific names for ascending intervals, which nonetheless do occur in their music.

Feld’s work pointed toward a new approach to metaphor and music that was based on two important assumptions. The first was that metaphor was not simply a literary device but was instead a basic structure of understanding (Lakoff, 1993). The second was that music constituted a conceptual domain that was, in some measure, independent of language. As a consequence of these two assumptions metaphorical descriptions of music came to be regarded as capable of providing key insights into how the understanding of music was structured. A notion closely associated

with the contemporary theory of metaphor, and that would prove important for music scholars, was that of an image schema (Johnson, 1987). Image schemas provided a theoretical basis for metaphorical descriptions of music grounded in embodied experience, an approach that fit with many analysts' intuitions about the nature of musical knowledge and that offered a way to move beyond – or add another dimension to – the abstract formalisms prominent in much music-theoretical work. Subsequent to a special session at the 1996 annual meeting of the Society for Music Theory, an issue of the journal *Theory and Practice* was given over to connections between music theory and embodied knowledge, and included articles by Janna Saslaw on force dynamics in the theoretical writings of Heinrich Schenker and Arnold Schoenberg (Saslaw, 1997–1998), Candace Brower on embodied schemas in Edgard Varèse's *Density 21.5* for solo flute (Brower, 1997–1998), and Steve Larson on how the understanding of tonal melodies is shaped by experience with the forces of gravity, magnetism, and inertia (Larson, 1997–1998).

The cognitive perspective on metaphor and music was, in some instances, part of a broader perspective on the cognitive capacities that shape humans' understanding of music (Spitzer, 2004; Zbikowski, 1991, 1998, 2002) but was often employed in one of two more restricted ways. First, metaphor theory was brought to bear on recognized but not clearly understood conceptual models within music theory, including those pertaining to musical invariance (Saslaw & Walsh, 1996), modulation theory (Saslaw, 1996), hierarchical structures in music (Zbikowski, 1997), and historical conceptions of tonal organization (Gur, 2008). Second, metaphor theory provided a way into novel repertoires, including heavy metal (Walser, 1991), musical multimedia (Cook, 1998, chapter 3), the music of the Grateful Dead (O'Donnell, 1999), the music of Neil Young (Echard, 1999, 2005, chapter 4), Javanese Gamelan (Perlman, 2004, chapter 6), and film music (Chattah, 2006).

Recent research on metaphor and music that embodies a cognitive perspective has coalesced around a somewhat broader set of issues, in many cases offering alternatives to previous approaches. Prominent here is work on musical meaning that takes as its starting point the assumption that meaning is grounded in embodied experience (Aksnes, 2002; Borgo, 2004; Chuck, 2004; Cox, 2001; Johnson, 1997–1998; Walker, 2000); an account of the ontology of the musical work framed around the metaphorical notion of a musical object (Butterfield, 2002); and explorations of the bases for and applications of ideas about musical motion and musical space (Adlington, 2003; Cox, 1999; Johnson & Larson, 2003; Johnson, 2007; chapter 11; Spitzer, 2003).

The broad-based approach advocated by Zbikowski (2002, chapter 2), which adopts a generalized view of metaphor as a kind of cross-domain mapping and proposes that music represents a conceptual domain that can be drawn into such mappings, has recently been extended to correlations between patterns in Azerbaijani carpet weaving and musical practice (Naroditskaya, 2005) and to theoretical work on conceptual blending and music. Preliminary work on conceptual blends in which music occupies one of the input spaces was focused on the possibilities for meaning construction created by the correlation of text and music in nineteenth-century art songs (Zbikowski, 1999, 2002, chapter 6) but has since been applied to analyses of the nature of musical meaning (Cook, 2001), analyses of film music, opera, and musical multimedia (Johnson, 2004; Sayrs, 2003; Zbikowski, 2002–2003), the analysis of György Ligeti's *Lontano* (Bauer, 2004), the role of the arabesque in the music of Ravel (Bhogal, 2007), and to the construction of musical meaning as a whole (Chuck, 2004).

Although most applications of the contemporary theory of metaphor to music have been broadly theoretical, recent empirical studies by Zohar Eitan and his colleagues have begun to show in greater detail how metaphor structures our understanding of

music (Eitan & Granot, 2006), and how the metaphors used to characterize musical relationships reflect the influence of culture (Eitan & Timmers, 2006). These studies suggest not only ways to study how metaphor structures our understanding of music, but also ways to investigate how metaphorical processes operate in nonlinguistic domains.

Metaphor and the Analysis of Music

Although the preceding section provided a historical and conceptual context for the questions asked at the opening of this chapter, it did not provide a methodology for answering these questions. The purpose of this section is to present such a methodology, which takes as its point of departure the contemporary theory of metaphor (as characterized by Lakoff, 1993) and the compositional technique of text painting.

The basic idea of text painting is simple enough. When a particularly strong or compelling image occurs in the text for a musical work, the composer writes the accompanying music to suggest, or “paint,” the image. Thus, if the text mentions a galloping horse, the music coincident with the text might imitate the sound and action of a horse proceeding at full speed. While there are limits to what can be represented in this way, composers have found the means to portray descents from heaven, rippling streams, spinning wheels, physical trembling, sexual climax, and a host of other vibrant images (Macy, 1996; Zbikowski, 2002, chapter 2).

The example of text painting I want to consider here involves the portrayal of the act of knocking on a door. It comes to the fore near the beginning of the movement that provided the music for Example 1, which was from Bach’s Advent cantata “Nun komm der Heiden Heiland” (BWV 61). Each of the three preceding movements of the cantata explores an aspect of the Advent theme. The first movement is an overture whose text is taken from a chorale by Martin Luther: “Come now, Savior of the gentiles, known to be the child of a

Virgin, the whole world marvels that God should have ordained such a birth for Him.” The text for the second-movement recitative is by the Hamburg poet, theologian, and pastor Erdmann Neumeister and speaks of the wonder of God made incarnate. The third movement, an aria with a text also by Neumeister, returns to the summons stated by the overture: “Come, Jesu, come to Thy church and grant a blessed New Year!” But with the fourth movement Christ is suddenly before us, speaking words from the third chapter of Revelation: “Behold, I stand at the door, and knock. If any man hear my voice, and open the door, I will come in to him, and will sup with him, and he with me.” Bach sets this passage as an accompanied recitative for baritone, with the strings playing pizzicato throughout; the score for the entire movement is given in Example 4.

Bach’s text painting is centered on the words “und klopfe an” – that is, “and knock.” Bach uses three compositional techniques to paint this activity. First, he summons the repetitions we associate with the act of knocking by repeating the words, and by using three notes to set the first syllable of the initial “klopfe” (a device called a melisma). Second, he uses staccato marks on the three notes of the melisma, which place silences between these notes; these silences are similar to those that fall between knocks on a door. Third, he sets the words with a broken chord (or arpeggio). This places a kind of distance between each successive note but also allows us to hear all as belonging to a single connected gesture.

The conventional explanation for why text painting works relies on the idea of mimesis: the image of knocking is summoned by Bach’s setting of “und klopfe an” because the music imitates the sound of knocking. While this is partially true for Bach’s text painting, there are certain things that are not quite right. Knocks are usually unpitched, but Bach gives us different pitches for each blow; knocking is not usually accompanied, but here we have pizzicato strings pulsing in the background. A few writers have gone so far as to

Violin I $\text{♩} = 54$ pizz.

Violin II pizz.

Viola pizz.

Viola pizz.

Violoncello pizz.

Bass $\text{♩} = 54$

Sie-he, sie-he, ich ste-he vor der Tur und klo - pfe an, und klo-pfe

4

an. So je - mand mei-ne Stim-me hör - en wird und die Tür auf - tun, zu

Example 4. Score for the fourth movement (Recitativo) from J. S. Bach's cantata "Nun komm der Heiden Heiland" (BWV 61).

interpret the steady plucking of the orchestra in this movement as a further embodiment of knocking, but this seems something of a stretch. Not only are the attack points

too widely spaced to sound much like knocking but the effect is far too persistent, more like Edgar Allen Poe's telltale heart than a summons from the Savior.

7

dem wer-de ich ein - ge - hen_ und das Ab - end-mahl mit ihm hal - ten,_ und

9

er mit mir.

Example 4. (cont.)

In fact, text painting is not a matter of simple mimesis, in which music, through its resemblance to a natural sound, represents that sound, but of a more complex process through which music represents the image-

schematic structure of some event or situation. This sort of representation is somewhat like the iconicity of rhetorical figures discussed by Mark Turner (1998). Turner noted that the form of a rhetorical figure

is sometimes matched to the meaning the speaker wishes to convey, connecting the image-schematic structure of the form with the image-schematic structure of the meaning. Thus, a rhetorical figure based on repetition, such as anaphora (which involves the repetition of the same word or group of words at the beginning of successive clauses, sentences, or lines), can be used to summon the image of repeated blows, as in an example attributed to Longinus: "By his manner, his looks, his voice, when he strikes you with insult, when he strikes you like an enemy, when he strikes you with his knuckles, when he strikes you like a slave." The efficacy of such a connection is straightforward enough – Turner remarks, "Involving members of the audience in the image schema of the iconic form automatically involves them in the basic structure of the meaning, thus moving them part way toward accepting the whole" (1998, 50–51). In a similar way, Bach's recitative embodies the image-schematic structure of the act of knocking at the very moment when knocking is mentioned in the text. Bach's music thus moves the listener part of the way toward understanding the force of Christ's act of knocking: where previous movements in the cantata have summoned Christ, Christ is now summoning *us*.

More generally, the connection of music to text in instances such as this relies on structural correlations between the two domains. The specific correlations are between image-schematic structures. In the present example, the text calls up the familiar situation of a person standing before a door with the intent of communicating with people on the other side of the door. A scene of this sort typically involves knocking on the door to establish communication; knocking, in turn, is accomplished through a series of regularly spaced physical gestures that yield a sequence of unpitched sounds of short duration. The conceptual domain set up by the text thus includes the image-schematic structure associated with the act of knocking. The bass melody in the opening measures of this movement does not summon anything as specific as does the text,

but it nonetheless participates in establishing a conceptual domain structured in part by image schemata. Features of this conceptual domain include the steadily pulsing strings which contrast with the flowing melody of the bass voice, the dissonances that occur against the pedal E₃ in the accompaniment, and the E minor tonality that is projected. The projection of any tonality is a process that unfolds over time – an important part of that process in the case at hand is the bass melody, which is restricted to just those pitches that are necessary for defining E minor. In the course of this melody the distinctive melodic gesture that occupies the beginning of measure 3 stands out: it introduces the largest leap thus far (the minor seventh from D₃ to C₄), the only melisma, and concludes with another minor-seventh leap (A₃ to B₂). The passage ends with the shortest notated durations of the passage (the sixteenth notes at the end of measure 3) which serve to further set this measure off from the rest. The image-schematic structure that is relevant here is of a series of discrete events that are evenly spaced and that stand out from their surroundings; this then correlates with the image-schematic structure of the conceptual domain set up by the words to produce an instance of text painting.

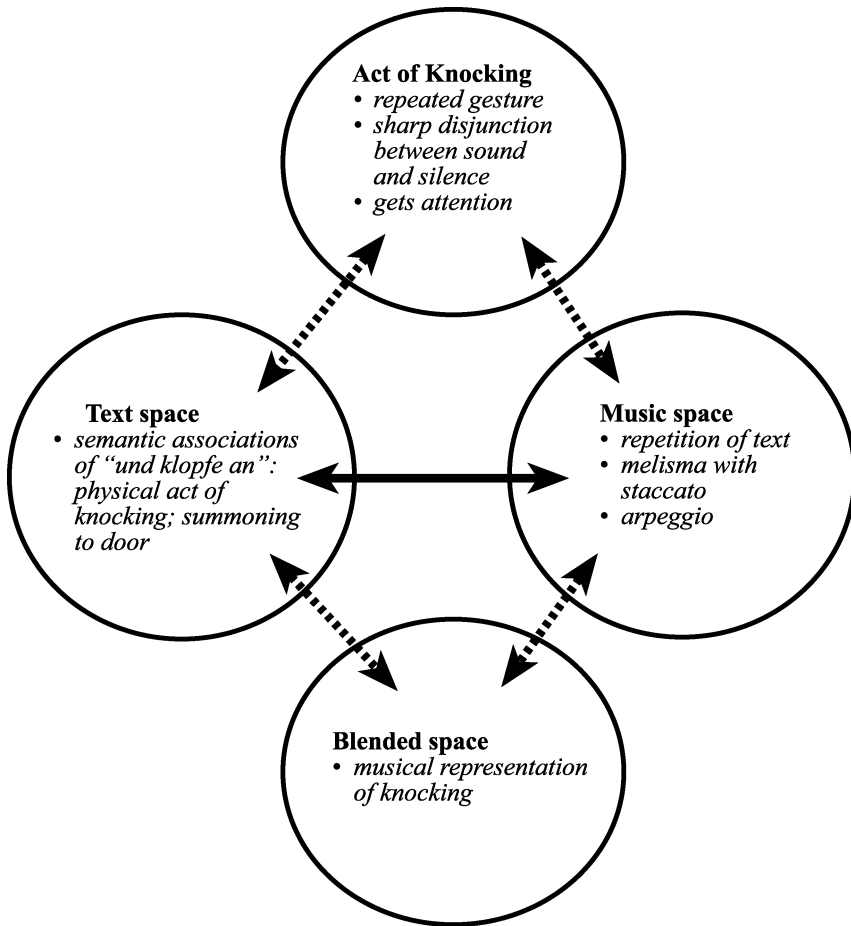
One question raised by this example is whether the connection between the image-schematic structure of knocking and the image-schematic structure of this musical passage is necessary. The answer is a qualified "no." It might indeed be possible, without the text, to make a connection between the act of knocking and the music of measure 3. There is enough urgency in the music Bach writes – an urgency that includes both the more rapid durations at the end of the measure and the much smaller registral space they inhabit (contracting from C₄ to B₂ in the first part of the measure to F[#]₃ to B₄ at its end) – that knocking seems a fairly good description for the music. But the music could be described in other ways as well: the whole of the melody in these opening measures could be characterized in terms of the imagined movements of an actor on a

stage who, after a series of relatively constrained gestures (in measures 1–2), suddenly gestures in an exaggerated, expansive way (at the beginning of measure 3) before correcting her excess at the end of the passage. This characterization would draw on the metaphor of musical “space” (and its attendant image-schematic structure) and tend to emphasize the way the pitches of the melody are disposed within this space more than their rhythmic features. The characterization would also provide a perspective that encompasses the whole of the passage rather than focusing on measure 3. The context provided by the text from Revelations is thus key to hearing the music of measure 3 as a representation of knocking and not as a representation of something else. There are, nonetheless, limits to how the passage can be characterized – were someone to describe the passage as an energetic portrayal of religious bliss we would wonder if they had listened to the same music as we had, since there is almost nothing in the musical events of measures 1–4 – or the image-schematic structures through which we might organize our understanding of these events – that would support such a characterization.

Another important factor that shapes correlations between music and other domains is cultural knowledge. Describing musical pitches in terms of their disposition in space (with one pitch “higher” or “lower” than another) has been a commonplace in western traditions since at least the Middle Ages (Cox, 1999; Duchez, 1979; Zbikowski, 2002, chapter 2). Other descriptions are, however, possible: in Bali and Java, for instance, pitches are conceived of not as “high” and “low” but as “small” and “large” (Zanten, 1986, 85), a conception that reflects accurately the norms of acoustic production – small things typically vibrate more rapidly than large things. Thus we would not expect members of a culture that did not practice knocking as a way of announcing an arrival or the initiation of communication to make the connection between the music of measure 3 and the words “und klopfen an” (translated, of course, into the appropriate language for communication).

Text painting is, admittedly, a somewhat rarified compositional technique. It nonetheless points to the basis for metaphorical descriptions of music and gives some sense of how the conceptual domain of music might participate in metaphorical mappings. When we describe a musical passage as “obstinately plodding” or a chord as “sour and biting” we are making connections between one domain of experience (having to do with the ways bodies can move through space, the sense of taste, or the physical actions accomplished by teeth) and the domain of music. The domain of music includes various musical events as well as ways of understanding their relationships to one another; these relationships are in part structured by image schemata. Just how this is accomplished is still being explored empirically, but one of the best theoretical accounts is provided by Lawrence Barsalou’s theory of perceptual symbol systems (Barsalou, 1999). According to this theory, sequences of musical events produce brain maps that can be correlated with brain maps produced by other modalities (including vision, taste, and proprioception); these correlations then operate as symbols to form the basis for conceptual knowledge. The array of perceptual symbols (or image schemata) that may be used to structure a given relationship is potentially quite extensive; cultural knowledge provides one constraint on which structures are chosen.

The notion of music as an independent domain with its own properties and relationships – properties and relationships that language attempts to capture through metaphorical descriptions – invites two extensions of the discussion of metaphor and music. First, mappings *within* music (of the sort discussed in Karbusicky, 1987; Kielian-Gilbert, 1990; Perlman, 2004) are a logical entailment of this perspective, and a straightforward example of such a mapping would be between a theme and variations derived from the theme. (For a rich consideration of this topic see Cone, 1987.) These mappings may, however, be closer to those of analogy (and emphasize the alignment of



Example 5. Basic conceptual integration network for Bach's text painting of "und klopfe an."

structural features) than to metaphor (with its emphasis on the construction of meaning through the correlation of rich networks of knowledge; cf. Gentner, Bowdle, Wolff, & Boronat, 2001). Second, concepts from the musical domain may combine with concepts from another conceptual domain to create a conceptual blend (Fauconnier & Turner, this volume). Two interconnected examples of conceptual blends are provided by the music of Example 4.

The first blend is produced by the text painting that occurs in measure 3; a diagram of the conceptual integration network for the blend is shown in Example 5. The generic space for the blend focuses on physical aspects of the act of knocking: the repeated actions that make up knocking, the

sharp disjunction between sound and silence that results, and the way knocking breaks into our attention. The text space is set up by the semantic associations generated by the words "und klopfe an," which not only bring the physical act to mind but also its typical context: a summons of some sort (if only to come to the door and open it). The music space is set up by Bach's text painting: his repetitions of "und klopfe an," the melisma with staccato articulation, and the arpeggio that provides a contextual frame for the notes that set the words. In the blend, musical and linguistic concepts combine to provide a musical representation of someone knocking on a door.

There is more, of course, to the passage from the third chapter of Revelation than

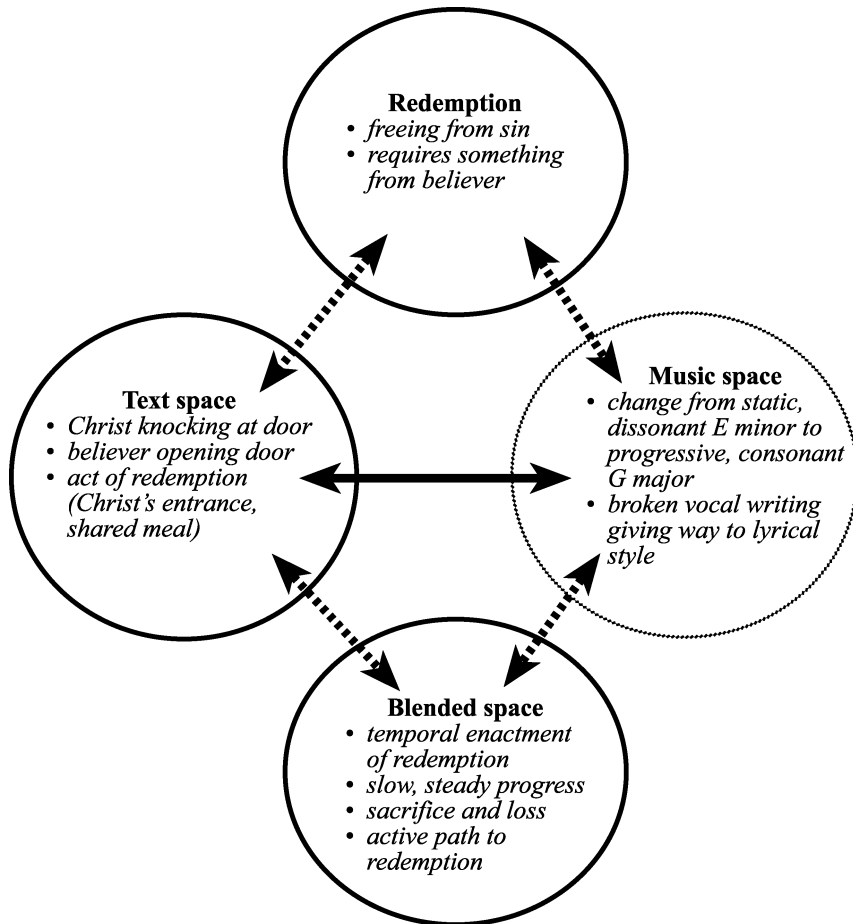
simply a description of someone knocking on a door. The image is central to the summons with which this fragment is concerned: Christ is calling us to his church. A simple, everyday act is thus made to resonate with a much more profound meaning: answering this summons is but the beginning of a chain of entailments with profound consequences for all who are concerned. A glimpse at one manifestation of this chain of entailments is provided by a second conceptual blend, which is set up over the course of the movement as a whole.

As noted in my discussion of the first four measures of the movement, Bach makes use of some striking dissonances in the process of establishing E minor. These dissonances – which involve the dominant-seventh and leading-tone chords of E minor – resolve at measure 4, coincident with the second iteration of “und klopfe an.” Christ’s knocking thus has a real and audible effect on the music.

After the arrival on E minor in measure 4 the bass pedal is abandoned, and the music moves toward G major, which first appears in measures 6 and 7 and then is confirmed with the final cadence in measure 10. The move toward G major is accompanied by a change in the vocal writing, which becomes more lyrical. By the end of this short movement we understand that the opening portion, with its obstinate pedal tone and dissonant harmonies, is meant to lead toward this denouement – it is something we have to leave in order to get to the safe haven of the final cadence. This journey is in fact prepared by Bach’s text painting, for it is the musical materials associated with the setting of “und klopfe an” that push us away from the static and dissonant opening materials toward the progress and consonance represented by the G major music. Just as the image of knocking is crucial for the larger story told by the text, the musical representation of knocking is crucial for the larger story told by the music.

This leads us to the conceptual blend shown in Example 6, which takes in the whole of the movement. The generic space

for the blend focuses on the notion of redemption. Within the general context of an Advent cantata, redemption is naturally associated with the act of freeing the believer from the consequences of sin. Within the more specific context of the Pietism that influenced Bach’s interpretation of the text, redemption means something closer to its etymological roots – that is, to buy something back – and thus requires something of the believer as well. The text space provides the basic elements of the story of redemption: Christ knocking at the door; the believer opening the door; and the act of redemption itself, symbolized by Christ’s entrance and the shared meal. Within the music space we get nothing quite as precise as this – indeed, the musical events could be mapped onto a variety of stories or situations – but we do get a tightly organized sequence of events. This sequence involves a number of musical elements and connects with some of our ideas about redemption, including movement from a static and dissonant situation into a progressive and consonant one. In the blend, the narrative from the passage out of Revelation is compressed with syntactic processes proper to music. We begin in a static, dissonant environment with Christ announcing himself and then knocking at the door. This knock is a summons to redemption, and the dissonant environment starts to become more consonant. By the time the opening of the door is mentioned (in measure 6, with the words “und die Tür auftun”) we have entered the orbit of G major, and the remainder of the movement fills out the theme of redemption and affirms G major, with one important exception. With the singer’s very last word (“mir,” in measure 9), Bach returns momentarily to E minor, a move that casts a shadow over the scene and seems to suggest the sacrifices that redemption requires. Although there is little doubt of the promise of redemption at the conclusion of the movement, the musical syntax through which the story is told points to the struggles that are required to achieve redemption. Tonal closure is not assured, but must be won; redemption requires



Example 6. Conceptual integration network for the fourth movement from J. S. Bach's cantata "Nun komm der Heiden Heiland."

more than simply opening the door to the Savior.

Conclusion

Music is a rich and complex product of culture – the brief examples discussed here include music that is part of the ritual of religious service (Bach's cantata), music with a programmatic title (Schumann's "Träumerei"), light instrumental music for diversion (Dvořák's "Humoresque"), and even music for the cabaret (which inspired Karbusický's example). These possibilities barely scratch the surface of musical expression, which is manifested in all known

human cultures; includes music for ritual, dance, song, diversion, and a multitude of other activities; and touches on the complete range of human emotion. The cultural practice of music is also largely non-linguistic and non-referential, although both language and reference can play a role in musical practice. Given the range of musical expression and its independence from language, it is not surprising that language *about* music is often metaphorical, nor that the topic of metaphor and music has been touched on by a wide range of scholarly disciplines.

Michael Tomasello (1999, chapter 5) recently proposed that one of the primary functions of language is to manipulate the attention of another person within

a shared referential frame. It could be argued that one of the primary functions of music is to manipulate the emotions of others. Although this argument is hardly new (see, for instance, Meyer, 1956), it has often been advanced within the relatively narrow context of instrumental music produced in western Europe during the late eighteenth and nineteenth centuries. The argument could easily be broadened through the recognition that music can also manipulate the emotions through the way it shapes ritual, dance, and the rendering of a text. If it is that case that language and music have different functions within human culture – that they comprise different domains of experience – it follows that mappings between these domains would yield numerous possibilities for the sort of meaning construction associated with metaphor.

According to current theory, mappings between language and music rely on image-schematic structures that are common to the two domains. Music will tend to instantiate such structures dynamically, while language will call them up through reference. When music summons knocking in the fourth movement of Bach's "Nun komm der Heiden Heiland" it does so by replicating features of the act of knocking. The text, by contrast, simply refers to the act, relying on the listener to call up the dynamic schema once the referential frame has been activated. Combinations of music and text such as those created through the compositional technique of text painting thus represent a kind of laboratory for the study of image-schematic structure. Any schema thought to underlie mappings between the two domains will have to be represented in each, and the two different modes of activating schemas – dynamically, and through reference – will give further indications of their relevant properties.

Music, as an expressive medium distinct from that of language, can also offer interesting possibilities for thinking about metaphorical processes. More purely "musical" mappings, such as those between a theme and variation, appear to be closer

to analogy. Similar relationships between sonic patterns can also be seen in prose and, more typically, metered poetry, suggesting an exploration of these instances in terms of analogy as well as metaphor. The participation of music in conceptual integration networks, such as the two discussed in connection with the movement from Bach's cantata, offers possibilities for meaning construction that blends concepts from music and other domains. Conceptual blends that involve music and some other domain also provide an opportunity to study the structural features of each domain, given the assumption that blends require a uniform topography between the mental spaces involved in the conceptual integration network.

The question that has often been posed is, "Is music a language?" The composer David Lidov (2005) proposed reversing the terms with his question, "Is language a music?" The exploration of metaphor and music has much to say to both questions, as well as to the constituent features of both of these uniquely human modes of expression.

Note

- 1 The pitch designation I use is that of the American Society of Acousticians: middle C is C₄; the B below middle C is B₃; the octave above middle C is C₅.

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