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Music, Language, and What Falls in Between

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The story that Francesca Lawson tells about *shuochang* in both her essay and her recent book (Lawson 2011) is a fascinating one, not least because the genre presses against the boundary between speech and music. Lawson uses this pressure as an opportunity to explore recent work on language and music by Ani Patel (Patel 2008) and to engage with the larger issue of the relationship between ethnomusicology and the empirical sciences brought into prominence by Judith Becker's recent publications (Becker 2004, 2009a, 2009b; Penman and Becker 2009). Her essay concludes with the proposal that there is much to be gained by combining empirical and humanistic methodologies, and that by doing so scholars may be able to achieve a synoptic view on human knowledge that E. O. Wilson called "consilience."

My own research over the past couple of decades has involved applying recent work in cognitive science (especially that done by cognitive linguists and cognitive psychologists) to various problems confronted by music scholars, including the problem of the relationship between music and language. I am, in consequence, quite sympathetic to the approach to language and music that Lawson develops in her research. In what follows, however, I would like to argue for a fundamental change in our conception of the communicative resources offered by language and music. This change has broad applicability to genres such as shuochang and points the way to a methodological perspective that has profound implications for the empirical study of musical practice.

Language and Music in Human Cultures

Over the past ten years or so I have been involved with a project whose aim is to develop a cognitive grammar of music. The notion of such a gram-

mar draws on work done by cognitive linguists like Ron Langacker, George Lakoff, Bill Croft, Adele Goldberg, and Len Talmy since the mid 1980s. Among cognitive linguists it is commonly assumed that grammatical units combine form and function—syntax and semantics are, in consequence, not separate domains, but points along a continuum. This has led to the development of what has come to be called construction grammar (Croft and Cruse 2004: chapter 10), in which the grammar of a language is organized around constructions: "stored pairings of form and function, including morphemes, words, idioms, partially lexically filled and fully general linguistic patterns" (Goldberg 2003:219).

My primary formation is as a music theorist, and in general music theorists think they have a fairly good idea of the formal structures which are used to organize musical utterances, at least to the extent that they can characterize these structures for a particular repertoire and teach students how to form musical utterances that conform with the traditions of that repertoire. What is less clear—and what is not really a part of the tradition of music theory—is the function that would be paired with these forms. The project of developing a cognitive grammar of music, organized around grammatical constructions which pair form and function, must thus confront at its outset a fundamental question: What function can we ascribe to musical utterances? Another way to put this question is to link it with a similarly fundamental question: Why has every human culture of which we have knowledge developed both language and music?[1]

In thinking about the latter question I have been influenced by the work of the developmental psychologist Michael Tomasello, who situates the emergence of language in our species within the broader development of human culture. In Tomasello's view, the primary function of language is to direct the attention of another person to objects or events within a shared referential frame (1999: chapter 5). Music, for its part, is not particularly good at directing the attention of another person to objects or concepts within a shared referential frame. What music *is* good at, however, is at doing the kind of thing illustrated by the end of the clapper introduction to *Wu Song Kills a Tiger* (Lawson's Figure 2). Having set up a vigorous aural environment around the interplay of the two clappers (for which the regular quarter-note pulse of the *jiezibar* serves as an anchor) the performer returns (in measure 15) to opening motifs and then slows down just prior to the entrance of the voice. The musical materials of the introduction thus set out a brief process which begins, grows in intensity, is interrupted (by means of the sparse attacks at the end of measure 14), starts anew, and then moves into another (and slower) phase. Together, these provide an analog for the process of having one's attention commanded (as the listener's attention is grabbed by the density of

attacks beginning at the end of measure 5 and the rhythmic complexity of the measures that follow), brought into clearer focus (as the opening material, which might have been heard with only half an ear by an inattentive listener, returns in measure 15), and then directed toward a new process (the unfolding of the performer's tale). Although this introduction is, in certain respects, a rather minimal example (using only percussion instruments and being quite brief), it illustrates what I believe is the primary function of music within human culture: to represent through patterned sound various dynamic processes that are common in human experience. Chief among these dynamic processes are those associated with various psychological states (such as the focusing of attention which might be correlated with the introduction to *Wu Song Kills a Tiger*, or with the waxing and waning of emotions) and the movements of bodies—including our own—through space.

Before going further, I should emphasize that these ideas about the function of language and music in human cultures are focused on the *primary* function of each. Clearly, language and music have other functions within human culture, oftentimes associated with the expression of utterances of great complexity. That said, I would like to propose that these more complex utterances are in all cases grounded in the primary functions I have set out.

The potential for sequences of musical sounds to serve as analogs for dynamic processes which might be almost wholly soundless (such as a focusing of the attention, the flight of a distant bird through the air, or a leaf fluttering to the ground) points to a form of reference markedly different from that of language, one associated with the type of signs C. S. Peirce called icons. Although Peirce's characterization of the icon was more than a little complicated, in the main the icon needed to capture the essential features of the object to which it made reference. In some formulations Peirce characterized this function in terms of a similarity between the icon and the object (Peirce 1960, Volume 2:157), but it is more productive to conceive of the relationship as analogical.[2] In the case of similarity, both attributes and relations are shared: for instance, a pencil and a pen are similar to each other in appearance and in function, although the kind of marks each makes on a writing surface (permanent or impermanent; of relatively consistent coloration or subject to gradation) are different. In the case of analogy, only relations need be shared: a finger is analogous to a pen in that it is an approximately cylindrical structure that can be used to trace characters on a writing surface; unlike a pen or pencil, however, the finger leaves no discernible marks on the writing surface and its "cylinder" is firmly attached to the larger structure of the hand. In the case of analogical reference, then, structural relationships must be shared between the token and what it represents: if we understand the sequence of musical materials that make up the introduction to *Wu Song Kills a Tiger* to make reference to the dynamic

process of focusing the attention, it is because we can discern structural relationships between the two. Language, by contrast, relies almost exclusively on symbolic reference, in which the relationship between the token and the thing it represents is completely arbitrary (Deacon 1997: chapter 3). The form symbolic tokens take is thus virtually unlimited—they can be as simple or as complex as we like—but they can be thoroughly opaque to those unfamiliar with the system of signs of which they are a part (Deacon 2003:119).

In summary, then, I wish to argue that language and music have different functions in human cultures, and that these functions are supported by different forms of reference. The symbolic tokens of language make it possible to direct the attention of another person to objects or events within a shared referential frame. The analogical tokens of music make it possible to represent, through sequences of patterned sound, dynamic phenomena which range from inner psychological processes to the trajectory of bodies through space to the steps of a dance (Zbikowski 2008, 2011). Finally, these different forms of reference—supporting the different functions of language and music—will lead to grammars that are markedly different from one another in the forms they take, the meanings to which they give rise, and the specific cognitive capacities they engage.

I realize that the perspective on grammar that I have outlined is an unfamiliar one: our typical view of grammar is of a systematic and orderly if not necessarily exciting prerequisite for communication. The approach that I am advocating, however, sees grammar as a consequence of, rather than a precondition for, communication. As the linguist Ron Langacker has observed, "Putting together novel expressions is something that speakers do, not grammars. It is a problem-solving activity that demands a constructive effort and occurs when linguistic convention is put to use in specific circumstances" (1987:65). I recognize that not all who make music are concerned with putting together novel expressions—there are any number of performance traditions, bounded by ritual practice or aesthetic conceit, in which novelty is the last thing that is wanted—but for those who are, the musical utterances that are produced (or written down, or imagined) will reflect how musicians make use of conventions to solve the expressive problems with which they are confronted.

To the best of our knowledge, language and music are among the things that are unique to humans. It follows, then, that the solutions to the problems of creating linguistic or musical expressions, originating as they do with a single species, will exhibit broad commonalities of strategy and design, and share certain features. There is, for instance, empirical evidence that speech, through the shaping forces of prosody, makes use of analogical reference (Shintel, Nusbaum, and Okrent 2006). There is also research that suggests that music can make use of symbolic reference (Boiles 1967). And, as Patel has shown

(2008), language and music share resources at the level of cognitive and neural systems. I would argue, however, that the design principles of language and music—principles reflected in their respective grammars—address different challenges raised by the complex social systems that mark human cultures. Language makes possible the cooperative behavior that distinguishes human interactions from those of other primates (Carpenter, Call, et al. 2005; Tomasello 2008: chapter 6, 2009). Although there is evidence that musical practices can enhance cooperative behavior (Kirschner and Tomasello 2009, 2010), they are less well adapted to setting out the framework of shared intentionality basic to cooperation. Music, through providing sonic analogs for emotional and psychological processes, provides an ideal means of sharing attitudes and feelings among the members of a group; language can certainly do this as well (Tomasello 2008: chapter 3), but without the immediacy and potential for corporeal engagement of music.

Given the differences between language and music that I have described, what are we to make of a genre such as shuochang, which seems to fall in between? I would like to suggest that we regard such a genre as an example of what Nicholas Cook calls an "instance of multimedia" (IMM; Cook 1998), with music representing one medium and language the other. In some cases, music, organized around sonic analogs for dynamic processes, will dominate the IMM; in other cases, language—and the dense system of reference made possible by its symbolic systems—will take over. And there will also be cases of IMMs involving language and music in which the symbolic reference of language is no longer functional (as in the case of songs in Twi sung by speakers of Siwu or Ewe; see Agawu 1988:84–85, 1995:10) or absent (as when words are replaced by nonsense syllables); in cases such as these the sense that two media are operational will be attenuated, and the utterances may come to be regarded as purely musical.

The Challenges of Empirical Research

As might be gathered from the wide range of sources on which I have drawn for my characterization of the communicative resources offered by music and language, I regard the issues raised by genres such as shuochang to be profound and endlessly stimulating. I also believe that they are not issues into which our present empirical methodologies can give us much insight. Put another way, I do not think that we are quite at the point where anything close to consilience is possible. That said, I believe that there is enormous promise in cooperative ventures between scholars of the humanities and researchers in the sciences. What is wanted, however, are clearer formulations of the problems we wish to study, openness to the traditions of inquiry of our respective disci-

plines, and humility about what sort of results we might achieve. As suggested by the example of shuochang, what is most interesting is not simply music or language, or research programs guided by the humanities or the sciences, but what falls in between.

Notes

1. I am quite aware of the problems associated with defining music, something with which I dealt in some detail in Zbikowski (2002: chapter 5). For the present purposes, I shall adopt the view that music is a mode of human communication that has as one of its distinguishing features the use of patterned non-linguistic sound.

2. For a research review that contrasts similarity and analogy, see Gentner and Markman (1997). As they acknowledge, similiarity and analogy are perhaps best viewed as points along a continuum, although they also make a strong argument for ways to distinguish between judgments guided by these two cognitive strategies.

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