



Review of Eric Clarke, *Ways of Listening: An Ecological Approach to the Perception of Musical Meaning* (Oxford University Press, 2005; paperback, 2011)

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[1] Ten years have passed since the first publication of *Ways of Listening*. As with all anniversaries, this one presents us with an opportunity for reflection: to consider the ingenuity of Eric Clarke's project, to be sure, as well as its enduring relevance. Now, as it did then, *Ways of Listening* appeals to a wide audience in its content and tone. At the time, it offered the most extensive application of ecological psychology to music perception and analysis. And as a study of musical meaning from the standpoint of listening, it complements and challenges influential approaches that employ different frameworks, for instance those of semiotics, hermeneutics, and multimedia.⁽¹⁾ More broadly, *Ways of Listening* presents a significant attempt to integrate the perspectives of psychology and musicology. While Clarke notes in 2005 that only "partial convergence" between the two fields had taken place, in 2015, such a union is hardly uncommon. In the past decade alone, music scholars have celebrated several new books that deftly handle their interdisciplinary subject matter and tackle some rather weighty issues, including but not limited to: the way music evokes emotion; how listener expectations are formed; and the roles of metaphor, physical motion, and repetition in everyday musical experiences.⁽²⁾ Against the current landscape, Clarke's central concern—how it is that listeners *perceive* musical meaning—is as relevant as ever. And remarkably, his discussion incorporates ideas that have gained currency over the years (no doubt contributing to the paperback reissue), most notably musical listening as an embodied experience. Clarke's writing style is straightforward and engaging, aimed at a readership both with and without formal psychological and music-theoretical training. Moreover, numerous lengthy and diverse music examples feature prominently.

[2] Clarke concisely sets forth the following premises in his Introduction. Auditory perception works to discover "what sounds are the sounds *of*, and what to do about them" (3), that is, what actions to take. In turn, hearing sounds as "sounds of" contributes to an understanding of what sounds *mean*—where they are located, who or what produced them, and so forth. And musical sounds, Clarke underscores, inhabit the same world as everyday sounds. The perception of musical meaning, then, is the "awareness of meaning in music while listening to it" (4–5). The temporal aspect of this conception is key. Clarke distinguishes the online awareness of meaning from that arising upon reflection or in one's imagination in the absence of sound. Further, the relationship between an individual perceiver and the musical environment—what he calls "mutualism"—is a principal consideration in his approach, since, as Clarke notes, "sounds are often the sounds of all kinds of things at the same time" (3). To that end, he aims to consider musical materials in relation to the perceptual capacities of twenty-first-century listeners, using his own experiences as the starting point.

[3] Ecological perceptual theory serves as the framework for Clarke's project (more on this in a moment); the "information-processing" view of music perception serves as a foil. In the latter perspective, listeners confront an environment that is inherently messy and unstructured, and to make sense of this, they abstract various features from the stimulus material to organize and interpret the data. This view is hierarchical, whereby processing starts with (raw) environmental data at one end ("bottom-up" processing), and prior experiences and conceptions guide interpretations at the other end ("top-down"

processing). Clarke portrays the information-processing view as the “standard cognitive approach” (41) to perception and the dominant outlook in music psychology—a characterization that may strike some as overstated today.⁽³⁾ Nevertheless, his summary works well to set in relief the view he subsequently details: that the world is in fact a “highly structured environment subject to both the forces of nature . . . and the profound impact of human beings and their cultures; and that in a reciprocal fashion perceivers are highly structured organisms that are adapted to that environment” (17).

[4] The remaining six chapters loosely alternate between theoretical exposition and longer analytical illustrations. In the first chapter, Clarke introduces the bulk of the terminology he uses throughout the book, drawn from ecological psychology and the writings of James J. Gibson (1966, 1979) and Eleanor Gibson (1969; Gibson and Gibson 1955) in particular. Accordingly, Clarke maintains that objects and events in the environment *directly specify* information, for instance, about where they might come from, be for, or do. Organisms with perceptual systems that *resonate* with the environment will pick up on this information. Moreover, Clarke stresses, an organism is continually *adapting* to its environment, becoming more attuned to previously undetected environmental information through *perceptual learning*—not only in the form of explicit training but also through unsupervised exposure.⁽⁴⁾ In this way, the perceiver becomes familiar with *invariants* in the environment and the types of actions that objects and events *afford*. Physical properties of the stimulus and perceptual capacities of the individual determine affordances. Crucially, in Clarke’s view, so too do cultural norms and social usage. In what he describes as an extension of ecological theory into the cultural environment, Clarke proposes that the invariants of *music* directly specify “the material objects and practices that constitute culture” (47).

[5] The second chapter puts theory to practice with an extensive discussion of Jimi Hendrix’s live performance of “The Star Spangled Banner.” This is one of the most detailed and compelling analyses in the book. Clarke’s approach is primarily moment-to-moment as he documents sounds that, over the course of the performance, specify “instability” in cultural practices, musical material, and sound. So, for instance, guitar feedback, distortion, pitch bends, and the background drum kit together specify the generic context of “rock music.” Even further, these sounds specify youth counterculture alongside, and in opposition to, “nationalism”—a claim that some readers may find harder to accept as a case of perception.⁽⁵⁾

[6] The next two chapters consider ways in which specification and subjectivity interact. Chapter 3 addresses the relationship between music and motion. Drawing on a body of well-known empirical work, Clarke makes the case that “the sense of motion and gesture in music is a straightforwardly perceptual phenomenon” (89); like everyday sounds, musical sounds specify motion through changes in pitch, timbre, and loudness over time (75).⁽⁶⁾ To be sure, listeners can perceive the movements of performers and instruments,⁽⁷⁾ but they can also experience self-motion and the motion of other objects in a virtual environment.⁽⁸⁾ What aspects of music directly specify one type of motion or the other? This, he offers, is open to empirical investigation. And in one of many testable hypotheses interspersed throughout the book, Clarke contends, “music with complex polyphonic properties is likely to be heard . . . as the movement of external objects/agents in relation to one another and the listener; while monodic or homophonic music may more easily specify self-motion” (76).⁽⁹⁾ Then again, in his brief discussion of a passage from Mozart’s String Quintet in C Major, K. 515, Clarke notes that the experience of self-motion hinges on the listener “identifying” with a musical agent, thereby shifting his emphasis from musical materials to individual listener states. Despite Clarke’s repeated assurances that a single passage can afford many different meanings, I found myself wondering, what *choice* does a perceiver have in the matter?

[7] Some clarification emerges in Chapter 4, where Clarke adopts the term “subject-position” from film scholarship to discuss how characteristics of music can govern or demand a certain response from a listener. That is, though every listener will approach a piece of music from a unique perspective, the subject-position of the artwork, understood within a certain cultural context, will limit the “potentially infinite plurality” of interpretations (94). “Magdalena” by Frank Zappa and The Mothers of Invention and “Taut” by PJ Harvey and John Parish serve as complementary case studies, where the former projects a subject-position that is “shifting and ambiguous” (113) and the latter a subject-position that is “direct and ‘authentic’” (115). As in the Hendrix analysis, Clarke’s attention to detail, whether of the ambient sounds in the recording or changing vocal deliveries, pulls the reader in, inviting repeated listening and close contemplation, despite the songs’ uncomfortable subject matters.

[8] In the fifth and sixth chapters, Clarke turns his attention to the practice of structural listening and the factors (environmental, cultural, musical, personal) that foster it. From an ecological perspective, the notion of music as “autonomous,” divorced from wider contexts and environments, is unsupported. But as Clarke thoughtfully argues in Chapter 5, music can establish its own “virtual world”; peering into this microcosm, the ecological approach can consider “the ways in which musical sounds specify musical structures for listeners” (134). The first movement of Beethoven’s String Quartet in A minor, op. 132, serves as a test case in Chapter 6, with Kofi Agawu’s (1991) topical approach to the piece as a starting point. Clarke aims first to explicate the invariants that perceptually specify Agawu’s topics (learned style, gavotte, aria), which are culturally defined and “largely predicated on the kind of listening sensitivity and competence that an experienced listener of about 1825 might have had” (170). Twenty-first-century listeners, however, are more likely to hear “music as the expression or portrayal of emotions” (173)—I suspect that those who have taught analytical writing at the undergraduate level will feel a twinge of recognition—and to that end, he suggests a series of emotional “topics” specified by invariant properties.

[9] As I noted at the outset, one of the numerous strengths of *Ways of Listening* is its author's consideration of meaning in a variety of musical styles, with equal earnestness. So I was struck by the differences in Clarke's approach to popular music, which I found to be exceptionally detailed and vivid, and his approach to canonical "art-music," which is curiously conservative. Most notably, when it comes to Haydn (Chapter 4), Mozart (Chapter 3), and Beethoven (Chapter 6), he begins with the score, referring to bar numbers rather than timings.⁽¹⁰⁾ Perception is, of course, at the forefront of these discussions, and it is clear that Clarke is trying to push the boundaries of structuralist listening within its own confines. But why not step outside this environment? An extended example that took into account particular performers, venues, recording contexts, and so on, would demonstrate how an ecological approach could be used to dismantle autonomy altogether.

[10] Throughout the book, Clarke is careful to put himself at the center of the interpretations he presents, with the assumption that others who are similarly "enculturated in Western traditions with formal music training" will be in sympathy (192). He contrasts this approach to "most analysis," which only tacitly assumes a shared background between analyst and reader, and which is often directed at an "idealized or unrealistically expert" readership (209n3; see also 161). I applaud Clarke's desire to be explicit about who should or could hear the claims he makes (which is to say, many people) and to reach an audience beyond academic circles. I am less persuaded, however, that there is such a strong dichotomy between ecological and other approaches to analysis, or that, without the support of converging evidence, it is productive to suggest a limit to listening competence. After all, an interpretation can be convincing not only when it resonates with the reader's own immediate perceptions and intuitions but also—as Clarke does so well—when it points the reader to new ways of listening.⁽¹¹⁾

[11] On its back cover, *Ways of Listening* displays the high praise it received in 2005: as Nicholas Cook notes, it was "the first book to place an ecological approach to perception at the core of music theory," and Lawrence Zbikowski commends the "fresh perspective on music cognition" that it offered. Happily, historical distance has hardly diminished the significance of Eric Clarke's project. It has been and will continue to be a useful introduction to ecological psychology. Read as a historical document, this book contains interesting perspectives on the state of several research fields at the time, music cognition and music semiotics most prominently. Clarke provides useful suggestions for future empirical work, too, only some of which has been undertaken. But perhaps most significantly, *Ways of Listening* challenges us to examine closely—and share—the innumerable subjective experiences and meanings that music affords.

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Footnotes

1. Notably, Clarke (2005, 157–58) compares his approach to that found in Hatten 1994, but a comparison of *Ways of Listening* and Hatten 2004, particularly Chapters 5 and 6, is even more instructive given the similar terminology the two authors employ.

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2. Clarke emphasizes the differing agendas of psychology and musicology: the former is fundamentally concerned with general principles of human behavior and mental life, while the latter is more closely focused on particular manifestations that are historically and culturally determined (Clarke 2005, 8–9). For a more recent account of the histories of music cognition and music theory and the “future potential” of their collaboration, see Narmour 2011. Since the turn of the millennium, there have been several notable attempts to bridge the disciplinary divide. Among the varied perspectives from North America alone are: Zbikowski 2002, London 2004, Huron 2006, Temperley 2007, Larson 2012, and Margulis 2014.

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3. One of Clarke’s arguments against the information-processing account is that listeners are more immediately aware of supposedly “higher-level” features, like style, than “lower-level” features, like specific pitch intervals, meter, or instrumentation. Indeed, experiments by Gjerdingen and Perrott 2008 and Krumhansl 2010, published only after *Ways of Listening* appeared, provide evidence for Clarke’s claim. More recently, however, Windsor and de Bézenac (2012) have echoed Clarke’s sentiment that the cognitive view of music perception as passive decoding remains dominant and incommensurable with an ecological approach.

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4. Goldstone 1998 presents a comprehensive review of the field of perceptual learning and mechanisms thereof. The related suggestion that statistical regularities in music govern listener perceptions and expectation appears in the early writings of musicologist Leonard B. Meyer (1956, 1967), whom Clarke mentions in his Introduction. A close comparison of Meyer's perspective with the ecological approach is outside the scope of this review. It bears mentioning, however, that the idea of "statistical learning" as a form of implicit learning (following Meyer and research in language acquisition) has had a noticeable impact on the field of music cognition. For a few sample accounts see Huron 2006, Temperley and VanHandel 2013, and Margulis 2014.

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5. Nonken (2008, 287), for instance, criticizes Clarke for too often "drift[ing] toward conception: social construction, association, enculturation, and imagination," rather than adhering to a narrower and strict definition of "perception" as an engagement with sensory (rather than conceptual) information.

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6. Earlier in the book, Clarke insists that the experience of musical motion "is truly perceptual rather than metaphorical, symbolic, or analogical" (74). In response to this claim, however, Mark Johnson and Steve Larson (2003) suggest that Clarke's ecological perspective actually reinforces their own argument: "musical motion is just as real as temporal motion and just as completely defined by metaphor" (77); Larson (2012, 77) updates this assertion. Moore (2012, 246–48) presents a useful comparison of Clarke's ecological position and Johnson and Larson's approach, which employs the framework of embodied cognition; he contends that there is congruence between the two.

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7. Clarke points to Shove and Repp's (1995) survey of motion literature relating to musical performance.

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8. Clarke borrows the idea of a "virtual source" from McAdams 1984 and Bregman 1990.

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9. Though they do not test this suggestion directly, Eitan and Granot (2006) take Clarke's article version of this chapter (Clarke 2001) as a starting point for their experimental study. In particular, the researchers operationalize Clarke's hypothesis that "musical sounds will . . . specify the fictional movements and gestures of the virtual environment which they conjure up" (Eitan and Granot 2006, 222).

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10. Towards the end of Chapter 6, Clarke does mention that for the Beethoven string quartet movement (op. 132/I), he listened to a recording by the Borodin String Quartet (182).

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11. Clarke is rather dismissive of the suggestion that analytical statements about music can be understood as ways music *might be* heard on the grounds that it lacks empirical validity (161). But Clarke himself provides evidence in support of the argument, when he notes that his hearing of the Hendrix track changed after an American reader pointed out the quotation of "Taps" (57–58).

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