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Applied Musicology

In the context of music and the social sciences, applied musicology is a relatively new discipline that uses elements of music theory and analysis to gauge how the “black box” of music cognition processes musical stimuli. Applied musicological analysis affords evidence of how music is learned and remembered, the moment-to-moment expectations it arouses, and the nature of the interactions between performers. It can show how patterns of intentionality and influence characterize improvisation involving two or more participants in educational, therapeutic, and performative contexts.

This is in contrast to most discourse in music psychology, education, and therapy, which tends to concern itself with what people think about music, comprising accounts of what they perceive, of their feelings and preferences, and of how they learn, acquire, and share expertise. By common consent, these approaches are perfectly appropriate elements in a field of research that is a hybrid of the arts and social sciences; however, they cannot on their own provide a complete account. “Applied musicology” aims to fill this gap.

How Does Applied Musicology Work?

Although a number of music-theoretical and analytical approaches could conceivably serve applied musicological ends, a recent addition to the music-theoretical canon—zygonic theory—has proved particularly apposite. Zygonic theory holds that all musical structure stems from imitation: from the (typically nonconscious) sense that one sound, quality of sound, or group of sounds appears to

derive from another through being the same as or similar to the first. For example, when two people improvise music together, each will necessarily imitate some of the material offered by the other. If no ideas were shared through copying and transforming musical ideas, then the result would be incoherence—parallel conversations in sound. If imitation throughout were exact, then the result would not be a dialogue in sound but musical dictation. Through quantitative and qualitative analysis of the imitation that is present, applied musicology enables a detailed account of patterns of influence to be built up. Similar applied musicological principles can be used in the context of learning and recall: by ascertaining where imitation between the musical stimulus and the response breaks down (through a form of error analysis), psychologists can build up a picture of how musical processing and memory works.

Examples of Applied Musicology in Action

The most widely employed use of applied musicology is in the Sounds of Intent project (www.soundsofintent.org), which maps the musical development of children and young people with learning difficulties and provides practitioners with an online assessment tool and materials and ideas for pedagogical and therapeutic intervention appropriate to different levels of ability. Sounds of Intent is based on the notion that there are six identifiable stages in music-cognitive development, which tie in with different depths of music-structural abstraction, as predicted by zygonic theory.

The early stages recognize the relationships that may be perceived between local events that exist near the musical “surface”; later stages take into account the statistical probability of events occurring according to their context and existence of similar contexts that have been experienced in the past. The many thousands of assessments that have been made using the Sounds of Intent scheme, underpinned as it is with applied musicological thinking, suggests that concepts rooted in music theory and analysis can be recognized and utilized by practitioners who are not necessarily music specialists.

Applied musicology has also been used to explore expectation in music. Although a familiar concept in music psychology, just what listeners

expect as they listen to pieces in real time has proved difficult to ascertain. However, applied musicological research is helping to shed light on this issue, and it suggests that music generates three main sources of implication in the minds of listeners (which in turn evoke expectations). These are a general sense of what will follow, based on current events and listeners' intuitive knowledge of the frequency of occurrence of past, similar events; and a specific sense of what will occur next based on relationships between groups of notes. The balance between the two changes as pieces are heard for the first time, and then on subsequent occasions.

Applied musicology has also offered insights into the perception of atonal music. By attempting to teach musical "savants" (autistic people with learning difficulties who grasp music intuitively at a high level, have excellent memories, and are often able to play by ear) serial music, and undertaking an error analysis, it has been shown that musical textures that consciously shun repetition both locally and globally (in terms of tonal implications) are far more difficult to remember than sequences of notes and chords that conform to familiar structures. Listeners learn to expect a lack of repetition, but by its very nature, this approach means that they are unable to predict what will happen next. Moreover, it seems that there is a tendency for listeners mentally to "correct" what appear to be mistakes in atonal music, since over time, in long-term memory, atonal dissonances are transformed into more conventional harmonic combinations.

Applied musicology has been used to map how patterns of musical influence wax and wane over time as a musician improvises with a pupil in a music-therapeutic context, and how children influence each other in group improvisation. The findings are important for therapists and teachers alike. It is all too easy, it seems, for the adult in a music-therapeutic dyad with a child to imagine that he or she is largely if not entirely child-led, whereas zygonic analysis has shown that adults tend to exert the greater musical influence. And in the case of children working together to create a musical product, it is by no means the case that the most verbally extroverted child, who appears to be dominating proceedings, is actually exerting the greatest musical influence.

Relationship to Empirical Musicology

Empirical musicology is the nearest epistemological neighbor to applied musicology; both rely on an evidence-based approach to music analysis. However, applied musicology takes the further step of using findings pertaining to music making to inform thinking in the social and behavioral domains of inquiry.

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See Also: Atonality; Autism Spectrum Disorder; Empirical Musicology; Learning and Teaching; Memory; Music Therapy; Perception; Repetition; Structure; Theory.

Further Readings

- Farrell, H. "Book Review: 'Adam Ockelford, Applied Musicology: Using Zygonic Theory to Inform Music Education, Therapy, and Psychology Research.'" *Psychology of Music*, v.41/5 (2013)
- Ockelford, A. *Applied Musicology: Using Zygonic Theory to Inform Music Education, Therapy, and Psychology Research*. New York: Oxford University Press, 2012.
- Ockelford, A. *Repetition in Music: Theoretical and Metatheoretical Perspectives*. London: Ashgate, 2005.

Appraisal

Over the past 30 years, emotion research has shifted its emphasis from typical response patterns (basic emotion theory) or dimensional representation of emotional feeling to the mechanisms that determine the elicitation and patterning of an emotional response to an event. Appraisal theories of emotion provide a comprehensive theoretical framework for the exploration of such elicitation mechanisms. Appraisal processes furnish crucial evaluations of events and situations that continuously drive other emotion components during the course of an emotional episode (changes in bodily symptoms, action tendencies, expressive behavior, and subjective feelings). More recently, appraisal mechanisms are also discussed in the area of the