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The Challenges of Aurally Connecting Structurally Similar but Superficially Dissimilar Musical Events: Important Considerations in Analytical Listening

ABSTRACT

Background

One of the themes of this conference is the present century's challenges to music analysis. Within this general topic, two issues are directly related to our research and the act of analytical listening: 1) the relationship between the model and the musical reality that music analysis describes; 2) the dissemination of knowledge by making analytical listening more accessible without compromising the academic pursuit that music analysis sets out to produce.

Considering the implications of music analysis for music listening, however, can be a polarizing subject (Schachter 1976; Dubiel 2011). On the one hand, some analysts have proposed that music analysis should focus exclusively on aspects whose psychological reality can be empirically confirmed (Kerman 1980; Narmour 1978 and 2011). On the other hand, some have proposed a distinction between what they see as two equally valid options: *suggestive* analysis, which pursues new ways of hearing that do not require testable psychological reality; and *perceptual* analysis, whose goal is a deeper understanding of our current or prevalent way of hearing through introspection or testing of psychologically real aspects of music (DeBellis 2002; Temperley 1999 and 2011). Despite the lack of consensus regarding the ideal relationship between the model and the musical reality that music analysis describes, if one of the goals of analysts is to increase interest in music analysis among both musicians and non-musicians, then the psychological reality of analytical observations should be carefully considered.

Although one way to increase the appeal of music analysis is by offering listeners new ways of experiencing music (Cook 1990; Kivy 1989; Schachter 1976), it is not clear just how conducive different types of analysis are to new ways of hearing. Some analyses can change the listening experience at a conceptual level, for example, while having very little impact on the more perceptual aspects of listening. In this case, how does one determine the likelihood that listeners either will or will not experience the structures that analysis is trying to unveil, at both the conceptual as well as the perceptual level (Temperley 1999 and 2011)?

Here, we briefly report results from two recent experiments in music cognition. These experiments tested some of our general intuitions about the way different types of listeners tend to experience the relationship between structure and musical surface, two concepts central to many types of music analysis.

Aims and Repertoire Studied

Our research studies listeners' ability to establish aural associations between structurally similar but superficially dissimilar musical events. Specifically, we examined the effects of listeners' musical background and musical factors, such as melodic and rhythmic similarity, on listeners' ability to identify pieces of music from simplified successions of chords.

Methods

We asked listeners with different musical backgrounds to identify famous pieces of music from successions of isochronous long block-chords that preserved key elements of harmonic and melodic structure but omitted most rhythmic and melodic surface features. In the first experiment, we asked musicians and non-musicians to identify classical pieces and popular songs from their chords. In the second experiment, we asked jazz musicians with varying levels of training to identify jazz standards from their chords.

Implications

Our first experiment demonstrates, not surprisingly, that identifying pieces of music from successions of chords can be a challenging task that is significantly easier for listeners with extensive musical experience. In our second experiment, we collected detailed information about participants' musical background, including formal training and years of playing instruments as well as the modes of working with chords (playing chords, transcribing, improvising, etc.). Additionally, we collected information about participants' specialized familiarity with target pieces — i.e., having played the chords of the target piece of music and being able to write down its chords. We found that specialized familiarity had a significant effect on listeners' ability to identify the pieces from chords and that specialized familiarity was equally important for all listeners regardless of their musical background. One of the reasons this finding is important, is that it suggests that the traditional use of trained and non-trained participants as categories in empirical research might not be detailed enough if one wishes to deeply understand the processes by which different listeners perceive musical structure. Additionally, rhythmic similarity (exp. 1) and harmonic-rhythm similarity (exp. 1 and 2) were also found to have a significant influence on our experimental task.

Of particular importance is the fact that in these experiments we used an open-set identification task (i.e., without a list of pieces to choose from). Whereas previous studies on the psychological reality of musical structure have used closed-set identification tasks (Serafine Glassman and Overbeeke 1989;

Dibben 1994), to our knowledge, this is the first time that the perceived relationship between surface and structure has been studied using an open-set task. This is important because previous studies have shown that closed-set identification tasks (i.e., with a list of pieces to choose from) greatly facilitate identification because listeners have fewer options to choose from and because they are able to use top-down strategies, such as activating specific mental representations previous to hearing the stimuli (Hébert and Peretz 1997). Accordingly, using a closed-set identification task in our experiment would have allowed listeners to rely more on surface than structural factors, which in turn may have provided us with an inaccurate picture of listeners' perception of structure. This distinction between open- and closed-set identification tasks is related to the more general distinction between passive and active analytical listening. The amount of external guidance (e.g., a list of titles to choose from, teacher instructions, or a written analysis), as well as the perceptual salience of the structures and relationships targeted by the analysis, and the musical background of the listener are all important factors in determining the degree of activeness and engaging potential of a given analytical listening.

Our findings, both the general findings mentioned here as well as more specific details that will be shared during our presentation, provide a point of reference that analysts can use to predict the likelihood that listeners of varying levels of musical training will aurally experience the subtle connections that analysis aims to reveal and whether their experience will be both active and engaging. Along with analysts' intuitions regarding the accessibility of different analytical listening tasks, empirical testing can help ensure that those intuitions are not ironically clouded by analysts' very expertise. More precise knowledge about the aspects that increase the accessibility of a given analytical listening task for certain groups of listeners can in turn assist analysts in tailoring analytical listening tasks to maximize aural engagement in different contexts (e.g., classroom, specialized journals, music theory informal public forums, etc.).

Listening tasks that are neither too easy nor too difficult for the intended audience can also be used as a first step towards engaging listeners with more challenging types of analytical listening. Although suggestive analytical listening (i.e., pursuing new ways of hearing), by definition, tends to be more challenging than perceptual analytical listening (i.e., pursuing a deeper understanding of our current or prevalent way of hearing), the boundaries between these two types of analytical listening are often difficult to establish because they are dependent on the specific characteristics of the listener (DeBellis 2009; Rey 2013; Temperley 2009). Empirical research such as ours, can help analysts to distinguish between easier and harder as well as more perceptual and more suggestive analytical listening tasks for different types of listeners. This in turn can maximize the effectiveness of the scaffolding of listening tasks intended to engage different types of musicians and non-musicians in increasingly more challenging analytical listening.

Keywords

Musical Cognition, Harmony, Jazz, Musical Pedagogy.

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