

Why do listeners disagree about large-scale formal structure?

A case study

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While empirical studies of how listeners segment a piece of music naturally focus on listener agreements, we argue that it is equally important to focus on the differences: for example, where do listeners perceive divergent groupings of sections, and why do such disagreements arise? Probing deeper, we may ask: what factors can lead to differences in opinion among listeners, and how do these factors influence the analyses?

We conducted a case study in which we contrasted structural analyses given by two listeners, the first and second authors, of three performances. These performances were duets improvised by the second author and Mimi (Multimodal Interaction for Musical Improvisation), a system for human-machine interaction that allows the human user to briefly anticipate the machine's musical contribution. As listeners we also provided written justifications for the main features of our analyses. We then compared our analyses, exhaustively enumerating the differences between them and accounting for each.

We identified two proximate causes of most disagreements: paying attention to different musical features, and constructing different musical primitives—i.e., beliefs about the fundamental structural units of the piece—in the piece's opening moments. We posit that these disagreements in turn depended on two underlying differences between the listeners: our differing levels of familiarity with the performance, and our differing *a priori* expectations for the analyses.

We conclude that to better understand how listeners perceive the large-scale organization of a piece of music, we should study how a listener begins to form musical abstractions in a piece's opening moments, and how this process may be affected by the experience and expectations of the listener.