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PROCEEDINGS

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Perception of the Macroform in the Second of Babbitt's *Three Compositions for Piano* (1947)

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Abstract

The macroform in the second of Milton Babbitt's *Three Compositions for Piano* (1947) is defined by the twelve-tone set and its transformations. It is challenging to recognize these transformations aurally since the organization of the material is relatively complex. Moreover, in the context of the piece, it is challenging to determine the boundary between statements of two successive sets and, consequently, the boundaries between form sections. Therefore, this analysis focuses on aurally detectable surface details in Robert Taub's performance. The aim is to establish a connection between recognizable surface details and macroform, and to discover how performer approaches a form division and whether he signifies it. A comparison of auditive analysis and macroform reveals that memorable details are located exactly on boundaries of form sections. The overlapping of structural and auditive analyses could suggest the composer's intention of marking form division with surface details. The analysis is in line with the approach to post-tonal music which places overall sound in the center of analytical attention, with the emphasis on the possibility of different analyses and perception of different details in other performances.

Introduction

Milton Babbitt is a central figure of integral serialism in the USA. His compositional theory is influenced primarily by the combinatorial techniques of Schoenberg and Webern. The roots of all the innovations he presented throughout his long opus can be recognized in his early compositions. *Three Compositions for Piano* are an example of a complex organization of pitch, duration, register, and dynamics. According to George Perle (1977), this is the earliest work in which nonpitch components are serialized (p. 132). Although the piece is interesting for its compositional procedures and serial organization, the following analysis will focus on the overall sound of Second Composition and prominent details that can be extracted from it. A comparison of auditory analysis and score analysis of the underlying structure explores whether these details are somehow connected to the perception of form division. The analysis is based on Robert Taub's performance, since performer is the one who "(literally) makes music" (Leech-Wilkinson, 2009: 791) and the overall sound as an object of analysis is a result of specific performance. The analysis aims to find the causes of perceptual consequences in the performer's actions and procedures. Nevertheless, the possibility of different auditory analysis in different performances is not excluded.

Performance Analysis

At the beginning of the piece, the texture is traditional–melody in the right hand and accompaniment in the left hand. After measure four texture becomes more complex, and the opening melody is present only in melodic fragments. All these fragments resemble and can be connected to one part of the opening melody—first interval. The opening interval (ascending perfect fifth) and intervals in fragments that appear later in the piece are not the same, but they share some common features that make them similar (for example, fragments consist of short note followed by long note). These fragments can be found throughout the piece.

In more complex textures after the opening, the sound is distributed through different and sometimes extreme registers. The prominent melodic fragments seem to be located in the middle register. All sound events can be organized in three auditory areas: the middle one with important and noticeable melodic frag-

ments, surrounded by higher and lower ones, which sound more like an accompaniment to the middle one. Interestingly, this three-part division does not correspond to the organization of twelve-tone material into four registers with unique dynamic: the bass (piano), the tenor (mezzoforte), the alto (forte), and the soprano (pianissimo) (Figure 1). The reason why this type of division is not noticeable in sound is that the tenor and the bass often display overlappings in the register since they are in the same critical band

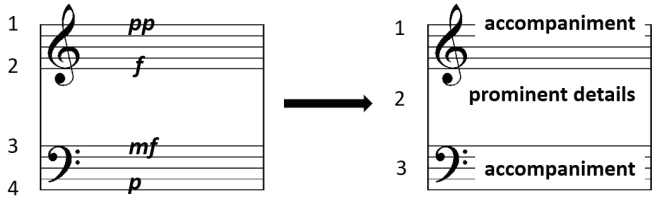

Figure 1. Organization of twelve-tone material into four registers with unique dynamic results in three auditory areas.

Perception of melodic fragments extracted from the overall sound can be explained by music psychology theories. According to Deliège's cue abstraction theory (1989, 2001, 2007; Deliège, Mélen, Stammers, & Cross, 1996), the cue represents a "salient element prominent at the musical surface" (Deliège, 2001: 237). It is something that captures listeners' attention while listening. Through repetitions, this cue is remembered, and this process is called imprint formation (Deliège, 2001: 238). Since the listener cannot remember all the ways in which cue is presented, he captures the main features through the process of simplification. The opening interval functions as a cue imprinted in memory as a consequence of repetition. Even if it is altered later through the piece, the similarity with the imprinted cue is significant enough that all melodic fragments can be recognized as related.

The principle of integration (Bregman, 1990) is responsible for the possibility of following different streams in the piece. Proximity in time and frequency proximity "compete" with one another in grouping tones in one stream (Bregman, 1990: 434). The gap between two pitches that could guarantee grouping in time or in pitch space is not precisely established. This gap is flexible; it depends on musical context, and possibly on performance. In the case of this composition, the winner is mostly frequency proximity which integrates pitches from the same register into one stream even if they are unsuccessive in time. The overall sound could be divided into three different streams already mentioned above. Perception of melodic fragments located in the middle auditory area could be justified by the toneness principle (Huron, 2001), according to which the pitch perception is at its highest in the middle of the auditory area. Besides already mentioned melodic fragments, tempo changes are also noticeable in the context of the whole piece.

Macroform

Since this is a twelve-tone piece, the form is defined by a twelve-tone set and its transformation. It is difficult to recognize these transformations aurally since the organization of the material is quite complex. Moreover, in the context of the piece, it is challenging to determine the boundary between statements of two successive sets and, consequently, the boundaries between form sections. Figure 2 shows the macroform or global form of the piece (Addessi, 2010; Addessi & Caterina, 2005; Baroni, 2003) based on the analysis of compositional procedures: three symmetric parts of 16 aggregates are divided with two-aggregate sections in a slower tempo. When the score analysis is compared with the auditory analysis of this performance, the result is the following: extracted cues are located at the beginnings of the new sections. Segmentation within the larger part is marked by texture change, pause or extreme dynamics. Repetition of the same cue within one section evokes similarity and connects parts of the section.

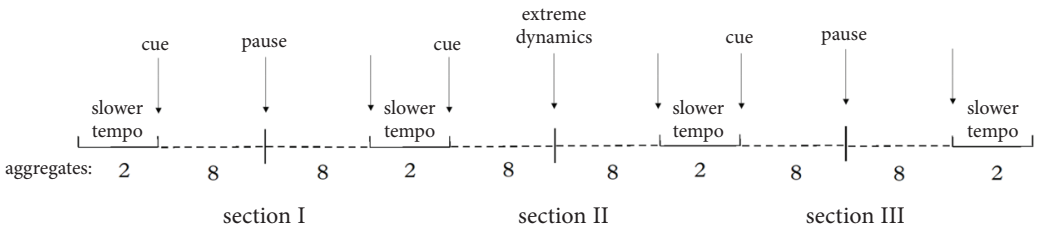

Figure 2. Macroform in Second Composition for Piano.

Conclusion

The overlapping of structural and auditive analyses could suggest the composer's intention of marking form division with surface details. Taub's performance contributes to this observation. If the performer's strategy results in a specific sound, the question is would different performance result in a different sound. The analysis is in line with the approach to post-tonal music which places overall sound in the center of analytical attention (Utz, 2013), with the emphasis on the possibility of different analyses and perception of different details in other performances.

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