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Timbre and Variations: Exploring Sound in Vivier's *Zipangu* (1980)

ABSTRACT

Background

Most studies led on the musical production of Claude Vivier (1948–1983) share a similar view: his musical characteristic features lie in the peculiar combination of different musical languages, be they serial, spectral or non-occidental. As a result, analytical insights focus on the melodic constructions — which often synthesize modal features with serial distribution — the generative harmonic principles — which echo to Messiaen's sonorities, ring modulator principles, and later, spectral harmonic synthesis — and the highly controlled formal structure, often ruled by numeric principles reminiscent of Stockhausen's formal conception. Such discoveries have significantly improved our understanding of Vivier's musical language, whose eclectic profile has sometimes led commenters to the conclusion that the composer was simply a follower (Celestin Deliège). However, for some of the late works, traditional analytical approaches focusing on the pitch and rhythmic material are not always able to render the reality of the listener experience, leaving out some crucial elements. It is particularly the case for *Zipangu*, one of the composer's late pieces written for an orchestra of 13 solo string instruments in 1980 and which the composer described in his program note as follows: 'Building around a melody, I explore different aspects of 'colour' in this piece. I have tried to veil my harmonic structures by using different bow techniques. A colourful sound is obtained by applying exaggerated bow pressure on the strings as opposed to pure harmonics when returning to normal technique. In this way melody becomes 'colour' (chords), grows lighter and slowly returns as though purified and solitary'.

From this description, we can retain two main aspects: one of pitch ('melody', 'harmonic structures'), but also a timbral one, which is activated through the use of different techniques. So far, the only extended study on this piece (Braes 2003) focused mainly on the first aspect, being the melodic structure and the harmonic distribution, referring to the second one, the use of specific playing techniques, as secondary events. The experience we have of the piece, however, is not fully reflected by such interpretation. Indeed, if we refer back to Vivier's quote, both the harmonic fields and the use of timbral variations are meant to bring different shades of colour to the main melody. Therefore, they should be given equal attention if not more. With such conception of musical composition, *Zipangu* displays characteristics of the paradigmatic shift described by the musicologist Makis Solomos: during the 20th and 21st centuries, art and popular western instrumental music departed from the romantic compositional paradigm (Solomos 2013). Both in North America and Europe, composers sought to broaden sonic possibilities, which led them to abolish the traditional hierarchy of parameters. Timbre, dynamics, extended techniques, and noise-like sonorities became as structurally determinant as pitch and rhythmic organisation. In light of this, music theorists and analysts have been called upon to develop new analytical tools that will allow us to discuss the structural importance of such sonic dimension.

Aims and Repertoire Studied

Drawing on the works of Smalley (1997), Thoresen (2007 and 2009), Dack (1998 and 2013) and Decroupet (2011, 2014 and 2015), the aims of this paper is to provide an analytical alternative for contemporary instrumental music based on Schaefferian analytical methods, developed for electronic music analysis.

Methods

First, with the help of Vivier's sketches and the work of Braes (2003), I demonstrate that *Zipangu* is based on varied readings of a melody and its harmonic field through register expansion, harmonic compression, and rhythmic manipulation. Following this, using spectromorphological analysis, I show how timbral hierarchies generate formal strategies culminating in the spatialization of the orchestra in two groups.

Implications

Following Vivier's compositional process observed in *Zipangu*'s sketches held at the Université de Montréal (Archives Claude Vivier, Special Collections Department), the first part of this investigation is mainly concerned with the principles behind the organisation of pitches. As noticed by Ross Braes, whose work is also based on the study of compositional process, the initial stage of the composition involves a careful crafting of a melody, which combines serial principles (equi-distribution of intervals from the semi-tone to the triton), modal influences (Raga-like construction) but also some diatonic features (leading tone motion, triadic grouping). Greatly influenced by Karlheinz Stockhausen, and most specifically the German master's *Mantra*, Vivier's main musical signature is the importance given to the melody as, along with its varied readings, it is the structural background of the whole piece. Accompanying this melodic skeleton, different harmonic fields have been added. Those are mainly derived from a process of 'intervalisation' of the melody, superposition of different transposition and inversion of it, and are deployed throughout the work through register expansion and harmonic compression. Therefore, one way to understand the formal structure of the whole piece would be a simple 'Theme and Variations'; variations which would not only be melodic but also harmonic. This is, indeed, the reading opted for by Braes.

At the time Vivier wrote *Zipangu*, he had developed a particular conception of the harmony which was not different from the research of spectral composers: in several of his writings and sketches, Vivier referred to the harmony as 'Jeux de timbre'. Following the path opened by a Debussy, Messiaen or Stockhausen, Vivier searched ways to modify timbre perception through harmonies. Also, having chosen to compose *Zipangu* for an orchestra of 13 solo string instruments, Vivier had to find ways to break this timbral homogeneity through specific sound research. Within this context, it appears evident that for the composer, harmonies and extended techniques share the same function: to colour and create variations around the structural melody. In order to give a full account of Vivier's compositional choices, I have adopted the position that has been encouraged by Smalley (1997), and strongly advocated by Thoresen (2007 and 2009), Dack (1998 and 2013) and Decroupet (2011 and 2015), which is to apply Schaefferian analytical methods, developed for electronic music analysis (Smalley 1997; Dack 1998; Thoresen 2007 and 2009) to instrumental music. By describing each sonority as a sound object and applying the principle of reduced listening, spectromorphological analysis offers a new perspective on sonorities involving sound spectra, energy articulation, dynamic profile, gait and granularity. Among the different tools, the one developed by Thoresen, which graphic notation allows a highly detailed rendering of the aural experience, has proven to be extremely useful. Applying such specific listening intention to *Zipangu* allowed to clearly identify different sonic continuums explored during the piece, among which the most important are the granularity, the sound spectra, brightness. Another important parameters that will be taken into account here is the spatialization of the orchestra, as *Zipangu* is meant to be played by an orchestra split in two groups (one group of 6, one group of 7).

More than showing the existence of such depth in the construction of the musical space, analysis of different excerpts show how timbral hierarchies and the use of space generate formal strategies. Indeed, when one applies to the piece the formal analysis of the Emergent Form prescribed by Thoresen, which is mainly based on the listening experience and the grouping of events through a sound-based approach, strong relationships between sonic events arise. For example, the two initial sections of the piece could be first thought of as totally estranged to each other. The opening one presents the main melody over a drone. This two-layer texture is then contrasted by a thick chordal one, to which a granular sonority has been added. Those two moments however share a common dynamic profile whose goal is forward oriented. The opening section unfolds both the melody and the different sonorities that will be used in the piece (harmonics, granular, tremolos, glissandi, etc.) in a quasi "sentential" manner: at the beginning, one unit based encompassed in the interval of semi-tone (G♯–A) is repeated, reaching out to the upper tone, B. Then, progressively, the melody expands its ambitus, the gesture paralleled by a rhythmic acceleration but also the insertion of more and more textural effects. The whole process pushes toward a rhythmic outburst closing the section. The same directionality is given to the next section, concerning, this time, the grain of the texture. As the row of chords unfolds, the granularity of the texture evolves from a very thin one to a larger one, reaching an end with another type of a rhythmic outburst. Therefore what would be judged as distinct on one level is grouped at a higher one. Also, such a formal approach of *Zipangu* now allows a logical inclusion of sections that were seemingly at odds with the formal principle mentioned earlier. Such is the case of in a later section where the main melody has no place, but whose main activity is the exploration of several sonorities, and layering of events (drone, harmonic glissandi, Bartok pizzicati). While maintaining some structural *points-de-rencontre* with the *Theme & Variation* background, such formal reading, which has been confirmed by one of the only formal draft found among the sketches, and creates a subtle formal counterpoint.

Keywords

Vivier, Melody and Harmonic Generation, Extended Techniques, Sound-Based Music, Post-Tonal Harmony, Spectral Music, Spectromorphological Analysis.

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