LUTOSLAWSKI'S APPROACH TO SOUND MASSES AND FORM IN LIVRE POUR ORCHESTRE

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Abstract: This paper deals with some of Lutoslawski's ideas and principles concerning the use of sound masses as agents of a musical discourse and a musical form essentially traditional and linear. Attention is given to the way the composer integrates the sound masses within what he calls 'closed form.' Throughout, the composer's poetics (his words about his own music) are taken as reference. It will also explore the way Lutoslawski materializes his ideas in the composition *Livre pour Orchestre* (1968).

Keywords: Witold Lutoslawski; Sound masses; Musical discourse; Closed form; *Livre pour Orchestre*; Edgard Varèse.

Resumo: Neste artigo são discutidos alguns dos princípios e idéias de Lutoslawski com relação ao uso de massas sonoras como agentes de um discurso musical e de uma forma musical essencialmente tradicionais e lineares. Atenção é dada ao modo como o compositor integra massas sonoras ao que ele chama de 'forma fechada'. Declarações de Lutoslawski acerca de seu próprio trabalho são tomadas como referências. São discutidos também alguns procedimentos utilizados pelo compositor para materializar suas idéias na composição *Livre pour Orchestre* (1968).

Palavras-chave: Witold Lutoslawski; massas sonoras; discurso musical; forma fechada; *Livre pour Orchestre*; Edgard Varèse.

I

A very conscious and methodical composer, Witold Lutoslawski (Polish, b. January 25, 1913/d. February 7, 1994) characteristically worked on his pieces and on the development of his musical language over extended periods of time, which may account for the relative smallness of his output. He achieved a mature musical language and style relatively late in his career, and only with the pieces written in the sixties, for which he is best known.

His earliest pieces exhibit the 'deformed' or 'violated tonality,' characteristic of the inter-war period, as in early Hindemith or the French *Six*: "tonal music with false notes," in the composer's own words (Lutoslawski, 1976. p. 22). His first attempt to go in other directions was in the *First Symphony* (1941-47), written in a post-tonal language but still

containing allusions to the music of Bartók and Prokofiev. Almost atonal, the language of the Symphony presents "the final stages of the dismantling of the tonal system, giving no prospects of development" (idem, p. 9). The next major step was the introduction of twelve-tone chords and rows, used not in an Schoenbergian but rather in a very personal way. The main result of this phase was the completely atonal piece *Funeral Music* for string orchestra (1954-58).

It is interesting to note that while developing his sound language, Lutoslawski also wrote pieces based on folk material. In these works diatonic tunes are combined with nontonal, chromatic counterpoints and harmonies. Examples are *Little Suite* for chamber orchestra (1950), *Dance Preludes* for clarinet and chamber orchestra (1954-55) and the *Concerto for Orchestra* (1950-54). The composer claimed that "the period which for the outsider appeared to be dedicated to folk music was in reality preparation for the future" (idem, p. 9). In a later interview he recognized that this kind of music was not the kind he "wanted to compose" but that which he "was able to compose," for he was not yet ready to write what he really wanted (Lutoslawski, 1987. p. 394).

The turning point in Lutoslawski's career came with the adoption of aleatory procedures in 1960, which in combination with the use of twelve-tone chords, resulted in the creation of sound mass pieces. These procedures remained a recurring feature of his work ever since.

According to the composer, his first contact with the chance element was a radio broadcast of John Cage's *Concerto for Piano and Orchestra* (1957-58). The aleatory elements in Cage's piece showed him the means to realize the sound vision he probably already had in mind: "While listening to it, I suddenly realized that… I could progress toward the whole not from the little detail but the other way around – I should start out from the chaos and create order in it, gradually. That is when I started to compose *Jeux Vénitiens*" (Lutoslawski, 1976. p. 12).

Although Lutoslawski did not acknowledge this, the sound image he had in mind was possibly derived from the music of the Greek composer Iannis Xenakis, who in the fifties was already in Paris composing sound mass pieces. Lutoslawski never lived abroad, but since the forties was traveling to France, and was in Rome in 1959 for the ISCM Festival,[1] where he probably had contact with Xenakis' music. However, Xenakis' "purely

mathematical" approach was alien to him (Lutoslawski, 1987. p. 398). So, he was not to find technical solutions for the realization of the music he wanted to compose until the breakthrough with chance.

Some of his previous pieces already hint at the kind of sound Lutoslawski was pursuing – the superposition of many different melodic fragments resulting in very thick textures in the *Concerto for Orchestra* is an example. However, the 'stochastic' feeling of the microrhythm which would later fill his textures was to be achieved only with the implementation of the techniques of *limited aleatorism* – or 'ensemble *Ad Libitum*' – in combination with *modally treated twelve-tone chords*. The first technique, in which chance plays a limited role, consists in the abolition of classical time division by having a certain number of performers playing *Ad Libitum* simultaneously – their parts do not have the same pulse and tempo, and cannot be conducted. *Twelve-tone chords* are essentially simple aggregates consisting of the twelve pitch-classes submitted to a *modal treatment*. That is, in establishing a twelve-tone chord, the composer assigns for each of the ensemble's instruments some tones to be played during a certain amount of time. Because of the technique of limited aleatorism, the individual parts – which can contain complicated rhythms – are not synchronized in time with each other. The result is a music in which the listener, due to the internal complexity of the passages, is led to focus on the global rather than on the internal dimension. Separate voices cannot be clearly discerned, but the shape of the sound *mass* that they generate is clear.

In a more or less degree, and with variations, these techniques are present in the pieces Lutoslawski wrote during the sixties: *Jeux Vénitiens* for chamber orchestra (1960-61); *Trois Poèmes d'Henru Michaux* for chorus and orchestra (1961-63); *String Quartet* (1964); *Paroles Tissées* for tenor and chamber orchestra (1965); *Symphony Nº 2* (1965-67); and *Livre pour Orchestre* (1968).

II

It is interesting to observe that Edgard Varèse was one of the first who talked about the possibility of writing pieces having sound masses as

units of the musical discourse. In a lecture entitled "New Instruments and New Music," given in 1936, Varèse expressed the following:

> When new instruments will allow me to write music as I conceive it, the movement of sound-masses, of shifting planes, will be clearly perceived in my works, taking the place of the linear counterpoint. When these sound-masses collide, the phenomena of penetration or repulsion will seem to occur. Certain transmutations taking place on certain planes will seem to be projected onto other planes, moving at different speeds and at different angles. In the moving masses you would be conscious of their transmutations when they pass over different layers, when they penetrate certain opacities, or are dilated in certain rarefactions (Varèse, 1967. p. 197).

However, it was only in the fifties that new techniques led music to embody what Varèse had aimed at decades before. As he foresaw, the emergence of "new instruments" (which resulted in electronic music) in fact played an important role in the materialization of his ideas, but that was not necessarily the determinant factor that led composers to conceive and accomplish sound mass music. In his turning away from serialism, György Ligeti was one among those who noticed that "the instrumental works of almost all serial composers show a tendency towards layer-composition." He observed in much of the serial music being written in the fifties what he called 'permeability' of structures, besides an increasing loss of sensitivity to intervals, and an increasing difficulty to achieve contrast. He concluded that it was no more the intervals, but the relations of density and distribution of registers which now primarily constituted the structure of music (Ligeti, 1965. p. 5-8).[2] As Bernard (1987, p. 208-9) points out, these observations led Ligeti to a key realization: "if the qualities he had noted were in fact the true determinants of aural shape in new music, why not engage them directly, instead of through compositional methods that could not control such qualities, except more or less serendipitously?" In order to do so various composers developed techniques that came to be applied to sound mass compositions. Among the first was Iannis Xenakis, using mathematical models (laws of probability such as Maxwell-Boltzmann's) to write stochastic music; then, among others, came Ligeti himself with both micropolyphony and sustained clusters; and Lutoslawski, using limited aleatorism in combination with modally treated twelve-tone chords.

III

A fundamental issue distinguishes the use of sound masses made by Lutoslawski from those made by other composers of the same period. Since their continuation does not depend on syntactical relationships but on blocks of density of various thickness degrees, sound masses arouse in the listener few expectations other than their own imminent extension. Barry (1990. p. 259) points out that "although the medium is, of course, time, …[their] predominant *perpetual quality* is not direction, but spatiality." So, for composers who in the sixties were looking for ways to break tradition by evoking new models of perception, sound masses represented a natural way of conveying music with minimized or no points of culmination, goals to move toward, expectation/implication. Composers who were influenced by eastern-oriented aesthetics also shared these objectives. They claimed that only by means of a motionless music could the listener deviate his attention from the 'manipulative' functional relationships and associations between sounds, and actually enjoy the sounds themselves or the *music* itself.

These principles were completely alien to Lutoslawski. Believing that music is an "occurrence" rather than a "state" (Lutoslawski, 1968b. p. 49; and 1970. p. 135), the composer was concerned with the writing of a teleological music based on the expectation-resolution or implication-realization model of perception. He also thought music as "the expression" of what he had "to communicate to others" (Lutoslawski, 1968b. p. 48). This idea was explained in the following way: "…all elaborate methods of organizing musical material can only be of value in that they produce a particular experience for the listener, as intended by the composer – even if this is only achieved after the work has been heard many times" (Lutoslawski, 1968a. p. 121).

Lutoslawski applied these traditional views to his sound mass pieces. Even though the units of his musical discourse were more appropriate to create non-linear music, he managed to make them propelling, moving identities directed to definite goals. This means that in his music the sound masses are not perceived as an end in themselves, but rather as the components of a musical discourse that is linear in its essence.

To give the sound masses definite identities, the composer applies to them specific textures (thin or dense, simple or complex, light or heavy) and colors (by means of orchestration, timbre). He also resorts to a varied range of *harmonic* colors to further characterize the sound masses and to define contrasting ones. This means that the way the composer organizes pitch is not only dependent on how thin or thick, light or heavy, the required texture should be, but also on what specific tonal colors result from the intervals between the pitches.

To implement movement he resorts to *assigned tones* – those pitches from a *modally treated* twelve-tone chord that are selected to be played by a determined instrument (Lutoslawski, 1986. p. 53). The way he organizes these elements controls some motion-related procedures to which the sound masses are submitted through a given span of time: expansion and contraction, displacement in register, transformation, and segmentation in bundles or strands. Yet another procedure is speed change, which is determined by the increase or decrease of internal activity.

Once the composer succeeds in characterizing and implementing motion, he applies some techniques involving recurrence and change in order to organize the sound masses in time: superposition, juxtaposition, alternation, overlapping, fusion, and varied repetition. Such approach is similar to the way individual voices are treated in traditional music, making it possible, as Stucky (1981. p. 123) points out, "to speak of textural (and timbral) homophony and polyphony." Lutoslawski (1968a. p. 109) referred to this particularity of his music using the expression "special kind of counterpoint which is not a counterpoint of melodic lines but of their ensembles." This idea implies a high level of textural and rhythmic organization (Lutoslawski calls 'macrorhythm') formed by the distribution in time of the sound masses as discrete musical identities. While the textural and rhythmic organization of this level materializes the musical discourse and, as an extension, the form of the work, the textural and rhythmic organization of the lower level ('microrhythm') gives shape and meaning to the sound masses.

Lutoslawski is generally considered 'modern' in his approach to sound, but 'conservative' in his approach to form. This is because his music is rooted in two traditions. The superior position given to sound is an attitude linked to a more recent musical current that includes Debussy, early

Stravinsky, Bartók and Varèse. On the other hand, the idea of a dramatic large-scale form generated by conflict, based on the dialectical notion of struggle and contrast, is linked to the Austro-German tradition that goes back to Haydn, Mozart and Beethoven.

The composer finds in this idea of form (he calls 'Closed Form') the practical expression of his principles:

> Everything I have written so far is inseparably bound with the closed form (Lutoslawski, 1970. p. 135). Composing closed forms, we… take large advantage of the fact that music is a form of art which does take place in time. Consequently, one of the reasons why we compose music is to evoke in the listener a series of specific reactions whose sequence and development in time is of essential importance to the final result, that is, to the perception of the composition as a whole. In other words, composing a closed form, we assume that in the course of its performance the listener is led, so to speak, by the composer through the various stages of the composition and to its final conclusion (idem, p. 133).

Some particularities are noticeable in the way Lutoslawski builds up the closed form in his compositions. The following are some constant features found in his instrumental compositions (the pieces which did not have to be shaped according to an external reference – a text, for example):

- Large Binary Form (producing a continuous two-movement work): a scheme in which the first movement is introductory and static, while the second is cumulative and ultimately climactic.
- Formal scheme of episodes and refrains in the introductory movement.
- One single overall climax instead of various climatic points or passages of dramatic weight distributed throughout the work.
- End-Accented Form[3], the placement of the overall climax very near the end of the composition.
- 'Macrorhythm Accelerando' in the final approach to the climax: discrete sections succeeding each other at closer and closer intervals, usually leading to a fast sequence of conventionally metered staccato chords.

IV

Livre pour Orchestre represents a particular case in the compositional output of Lutoslawski. The piece was a conscious effort made by Lutoslawski to move in a direction different from the formal archetype he had been using until then. Calling his work *Livre* (book) and its movements *Chapitres* (chapters), the composer aimed to write a collection of separate pieces rather than a unified cycle. In the event, however, Lutoslawski was unable to stray away from his underlying sense of form:

> My instinctive sense of form sometimes makes itself felt against my whishes. For example, I once had the idea of writing a cycle of independent pieces, several in number, different in character and length. I devised the title *Livre pour Orchestre*. When I finished it, it was much too organized, against my will, and the title no longer corresponded to the character of the piece. In this way, the composition had nothing to do with Couperin's *Livre pour clavecin* or Bach's *Orgelbüchlein*. I asked those who commissioned the work to change the title but it was too late – it was already printed (Lutoslawski, 1976. p. 27).

Lutoslawski's attempts to achieve the proposed design are quite evident in the piece. Differently from his two previous instrumental pieces – which were continuous two-movement works –, *Livre* has four movements, and the first three are indeed self-contained pieces. Each of them has its own gathering of momentum, as opposed, for example, to *Jeux Venétiens*, also a four-movement work, whose first three movements are fragmented, inconclusive and static in character.

Interestingly, the use of sound masses and aleatory procedures are not extensive – melodic and harmonic contours are quite clear in various points of these movements. This is probably due to their compactness and the desire of the composer to construct small-scale closed forms in each of them. Thus, conventional meter is used throughout in order to achieve pace and dramatic drive.

The fourth movement, however, leads the listener to perceive the work as a unified whole. For, in addition to presenting material from the previous movements, it is considerably more extended and drives the piece to a collective and overall climax near the end. In this way, the first movements are understood as preliminary stages in a large-scale form

leading to a final movement – effectively operating as three plus one. The whole design becomes a variation of Lutoslawski's 'end-accented form.'

Another feature that links *Livre* to the continuous two-movement pieces is the insertion of 'static' interludes between the movements (*Intermèdes*) in order to provide the listener opportunity to relax the level of concentration. This can be regarded as a variant of the formal scheme of episodes and refrains, which is the typical procedure for an introductory movement in Lutoslawski's works.

Being an extended movement, the final *Chapitre* is the most affected by aleatory principles and has sound masses as the main units of the musical discourse – a metered passage arrives only at the final approach to the climax. It is most typical of the way Lutoslawski applies his ideas and principles to music.

It contains four stages[4], Stage 1 (from rehearsal number 404), which merges with the piece's third interlude, is all written according to the technique of ensemble *Ad Libitum,* and serves to establish a sound mass (*Cantilena*) formed mostly by performers playing long tones in a *cantabile* mode*.* This sound mass expands gradually as it goes from only two tones played by two solo strings, to a whole twelve-tone chord played by tutti strings at 409, and joined by winds at 410. Significantly, from number 411, Lutoslawski superimposes on the cantilena a distinct sound mass formed by short tones played very quickly by the winds. As the cantilena gradually adopts the fast tones, it is as if it was being *invaded* and finally submitted to transformation by this new sound mass.

Two important factors are noticeable: a) by superimposing sound masses moving at different speeds, the composer sets up an initial tension which demands later resolution (found partially in the assimilation by the cantilena of the winds sound mass' lively character); b) later these two sound masses will turn out to be the music's most remarkable units at this hierarchical level, and as such will play the role of two conflicting polarities, not unlike contrasting themes in traditional music. Indeed, from Stage 2 (at number 419), the composer places a macrorhythm accelerando in which new sound masses succeeding each other are gradually replaced by the two referred ones. This accelerando is continued in such a way that at 439 – the beginning of Stage 3 – no more sound masses but staccato chords are played by the entire orchestra, now under a common metrical pulse. Finally, long pauses abruptly interrupt this chord sequence, and lead the music to

a first attempt at a climax (at number 443), and immediately after, at a second, more affirmative and satisfying one (at 445, the beginning of Stage 4). Interestingly, the tentative climax comes in the form of the fast tones sound mass, and the satisfying one in the form of the cantilena (*tutta forza ma cantabile*), both played *Ad Libitum*. The latter sound mass sums up the former instrumental colors and presents itself as the predominant unit reminding the role of the tonic in a sonata recapitulation.

Various factors help to convey the formal shape. For example, the sound masses are not reiterated simply by recurrence of all their parameters. The composer modifies them by combining recurrence and change of their internal components, without interfering in their basic identities. A sound mass which is already characterized by a certain kind of articulation or attack, for instance, can be restated presenting a different twelve-tone chord (thus, displaying a different harmonic color)[5], different motion-related procedures, and so on. This is not so different from melodic motives that are restated in a varied form (by means of transposition to different tonal areas, rhythmic and interval modifications, etc.). As the interplay of these motives can lead the listener to hear linearly, similarly the dialectical interplay of sound masses according to the procedures mentioned before can induce the listener to associate them contextually and, thus, not perceive them as discrete sensations but as points of orientation and articulation of a higher hierarchic level of musical structure. As such, they can imply later events or confirm earlier ones leading the listener to sense tension and release, to make some prediction, as well as to perceive direction and goals.

Other contextual factors reinforce the accumulation of momentum necessary to produce the climax in *Livre*. One of them is the macrorhythm accelerando in combination with the interrupting silences that appear just before the culminating point. The accelerando process is traditionally related to the arousal of tension because, in addition to the fact that it is kinetically associated to pulse beat and breathing acceleration caused by anxiety, it establishes a condition of instability and deviation of the normative (modification in the regularity of interval of attacks), as well as of complexity (informational overload). In the fourth *Chapitre*, the gathering of expectation caused by this process is still intensified by the interrupting pauses as they slightly delay the forthcoming restoration of stability and the return to the normative (a *long* sound mass). These arrive in the form of a recognized

structure (the predominant cantilena) and finally bring a sense of resolution as well as a climatic point to the piece.

All these factors make the listener *hear*, more than the musical events themselves, the relations between these events – musicsl events will have meaning in that they point to other musical events. This is a fundamental condition for the creation of a closed form, according to Lutoslawski's principles and ideas.

Notes

1   Between 1959 and 1965 he served as a member and then as vice-president of the ISCM.
2   Ligeti wrote the article under this reference, "Metamorphoses of Musical Form," in 1958. The reference indicates the date of publication in the *Die Reihe* periodical.
3   This is a term coined by Stucky (1981. p. 130).
4   According to a scheme drawn by Stucky (1981. p. 170-1).
5   The cantilena (from 404), for example, which initially presents a 12-note chord emphasizing interval class 2, reaches its culminating phase (after the winds have joined it) presenting a 12-note chord built primarily of interval classes 3 and 4. Later, at the successful climax, it reappears with a *consonant* 12-note chord formed by interval classes 3 and 5.

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