Aspects of the Rhythm in the Music of the 20th Century

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Abstract: - This study refers to the expression of rhythm phenomenon belonging to modern cultural stage, characterized by a mixture of styles where is emphasized the rhythms of brilliant neoclassical composers: Stravinsky, Enescu, Bartok, Messiaen, true innovators who created their own rhythms based on archaic national folklore, appealing to macro structural (as idea of movement) of all musical parameters.

Key-Words: mixture of styles, personal neomodal style, rhythmic asymmetries, graphic-novel, cumulative-accents, rhythmic-spatiality

1 Introduction
Modern cultural stage, considered a mixture of styles, will start, in the diachronism of the intonation phenomenon, with utterly giving up the gravitational functionalism, rendered unstable in the last post-Wagner stages, on the level of the „floating” tonalities.

On the rhythmic plane, the new non-gravitational system pertaining to Schoenberg (who revolutionized, as evolution, the art of composing) and to his students – brings no radical changes.

The elimination of the periodicity (of the metric accents) – a fact due to eliminating the functional successions (D-T) – is the argument for the apparition of novelties in the manner of manifestation of the rhythm:
- excessive use of the exceptional formulas in division and sub-division, in different combinations
- rhythmic sensation of instability through permanent impression of rubato, due to the melodic relations of the hexatone type, vertically replaced by specifically modal harmonic structures of superposed fourths and fifths.

The combination of styles, characteristic to the musical culture of the 20th century enhances the neomodal personal style of prominent composing figures, composers who, in their creations, brought innovations connected also to the manner of using rhythm: Stravinski, Bartok, Enescu, Messiaen.

The common source of inspiration of the neomodalists was the original national folklore. This way, Igor Stravinski revolutionized the rhythm based on primitive rhythmic systems (rubato and giusto), taken from the Russian folklore.

Stravinski, giving up the specific elements of the tonal-functional rhythm:
- periodicity of the accents
- construction of the formulas on times framed within measures
innovated the use of the rhythm through the diversified exploitation of the intensities (accents of different types).

From this diversified, combinative exploitation of accents, he obtained rhythmical asymmetries both on the horizontal and on the vertical coordinate, through an irregularity in their placement. Out of the combinations of accents: timbre, dynamic and metric in the framework of the simple rhythmical systems of the giusto type, specific to the Russian folklore – he achieved asymmetrical rhythmical groups framed within alternative measures, the composer not giving up the measure bar.

In his works based on the rubato-type rhythm, Stravinski brings innovations as regards his technique for approaching rhythm, through the ingenious manner of liberty in the relation of the durations, towards obtaining the discontinuity specific to him, not appealing to the imposition of diversified elements of agogic.

2 Innovation of the Rhythm
The innovation of the rhythm is surprised in Stravinski’s composition through the brusque alternation between different categories of rhythm: aksak followed by giusto or distributive, combinations realized concomitantly with frequent changes of tempo from one moment to another,
whence it ensues the rubato effect also on the vertical coordinate.

Concluding these innovations of the rhythm, surprised as personal style in the composer’s creation, the fact must be specified that Stravinski, despite having kept in his score the tonal-functional graphic function (framed within delimiting measures), in interpreting the works, in many situations, the metric accents are ignored, they only constituting a visual support in following the musical discourse.

Another representative of the modern musical culture, who revolutionized rhythm in his creation is the neomodalist Bela Bartok, composer, declared to be „founder of the folkloric musical science of the 20th century”.

Inspired by the folklore of different peoples, Bela Bartok pre-eminently approached the rhythms of the giusto, orchestral and aksak nature, in rapid tempos, from the peasant folklore, discovering new rhythmical formula, which cannot be framed in the metric principles, proceeding from the manner of repetition of the dynamic accents.

In the giusto-syllabic rhythm, approaching numerous Romanian carols, the composer resorted to rhythmical formula of 2,3 durations, framed within traditional measures of 2/4 and ¾, through the imposed dynamic accents, but in many situations the succession of the formula exceeded the frame of the measure bars.

The characteristic feature in Bartok’s creation is constituted by the frequent changes of measures in succession, associated with rapid tempos.

Often, in Bartok’s works, there is surprised the combination of the giusto-syllabic rhythm with the aksak rhythm, associated with rapid tempos, a combination also marked through the innovating graphics of the dotted measure bars, for delimiting the rhythmical formula of 2 and 3 durations. This way, from these combinations, the composer achieved different complementary rhythms on the superposition of the rhythms, in genuine rhythmical polyphonies.

Another characteristic in organizing the formulas or the giusto-syllabic rhythm consisted in the use by the composer (pre-eminently) of the asymmetrical alternative measures, utilization that raised the interest for the majority of the composers of the 20th century.

Becoming aware of the aksak rhythm, unlike the notation with regular durations of the irrational ratio 2/3 (eighth/eighth with point) in the brief pulsation of sixteenth (which through accumulation suggests the high speed in execution), B.Bartok notes the ratio with greater durations – fourths (fourth/fourth with point), thinking in his scoring the eighth as cumulated short pulsation.

The innovation brought by the composer in the aksak rhythm consists in speculations as regards the manner of graphical utilization of the rhythm, following the variety of the placement forms, of the cumulative accents characteristic to the rhythm.

This way, in different works, the particular aspect is surprised, consisting in framing the rhythmical units of aksak within a symmetric measure, exceeding the measure bars, Bartok’s typical procedure, also present under the aspect of the vertical motion, in the superposition of several instruments, a fact that entails a diversification of the accents in the performance of the whole.

These combinative elements among the three categories of rhythm pertaining to the peasant’s folklore emphasize the originality of Bartok’s rhythm, which places the composer among the great innovators of the 20th century music.

These rhythmical innovations in rapid tempos, achieved by Stravinski and Bartok are completed to an equal extent in the framework of the rhythm of the rubato-melismatic type, in rare tempos, by George Enescu and Olivier Messiaen.

This way, in his creation, the great neomodalist composer G.Enescu imprinted a permanent evolution both in the melodic structure and in the rhythmical one, from the simple use of the folkloric quotation, until the extraction of the essences of the popular creation, an evolution on multiple planes, especially exploiting the rubato-melismatic rhythm.

Ever since his first creation, “Romanian Poem”, in which he introduces the melody of doina from Oltenia, through the rhythmical graphics resorted to, despite being framed in the rhythmical measure, structure and character, he has predisposed the interpretation towards the specific rubato, creating the so-called „folkloric rubato”, differentiated from the agogic one, due to the direct provenience from the quoted melody.

In the 2nd Sonata for violin and piano, a first evolution is remarked in the rhythmical construction, in which the metric framing is annulled, the rhythm being achieved on the level of the cells and of the concatenations, creating instabilities in the time succession relation, the so-called rubato-figural.

This type of rubato, on monodic melodic line has become a characteristic for the rhythm of Enescu’s slow tempos.

To these two types of rubato: folkloric and figural, the doina-type rubato is added, too, surprised as working procedure in the famous “Prelude at Unison”. Despite being written in measure, the
prelude, through the diversified combinations of the metro-rhythmical formulas of syncope or contra tempo type, with diversification of divisions and sub-divisions, in the artistic execution, through supplementary elements of agogic: quasi-crowns, attacks of existing ornaments etc., lead to creating the impression of doina type rubato.

These three types of rubato, invented by Enescu, stand for rhythm transition stage, characteristic for the creation period in which the composer kept the influence of the tonal-functional music.

True originality in the thinking of Enescu’s rhythm is encountered in Sonata I for piano, in F # minor, a work that, from the rhythmical point of view, represents the synthesis of the rubato styles, comprising:
- romantic agogic
- impressionist rubato
- structural rubato

The structural rubato consists in the liberty of measuring the durations, both on horizontal and on vertical plane, a liberty obtained by the composer through the multitude of details used in the sonorous graphics towards minutely emphasizing the differentiations of: durations, intensities, tempos, timbre coloristics, dynamics etc., reaching to an annulment of the pulsation perception, to the creation of the spatiality impression.

Towards the finality of his creation, Enescu achieved an intimate fusion between the rubato and giusto rhythms, conferring to his work a stylistic feature of great originality – “Quintet for Piano op. 29” – comprising giusto type formulas, expressively diluted through rubato type variations.

Another neoclassic innovator in the field of the rhythm, outstanding in the middle of the 20th century, is Olivier Messiaen, who created particular modalities for constructing the rhythm, studying three sources:
- Gregorian chant
- Hindoo music
- birds’ twitter

6. serialization of all physiological qualities of the sound
7. birds’ rhythms

1. The rhythm on added values consists in the perturbation of the metric symmetry with the production of the asymmetry of aksak type
2. The augmentation and diminution with different numeric values is the typical procedure in the tonal-functional music applied through multiplying or dividing the durations, with other numbers, too, even fractional: for instance-
   - fourth-fourth-fourth = minim-minim-minim = augmentation;
   - fourth fourth-fourth = triol of fourths = diminution
3. The non-retrogradable rhythm meant for Messiaen- rhythm with the axis of symmetry (common duration), identical in recurrent. For instance: fourth, eighth (triolet), 4 sixteenths, eighth, fourth (triolet).
4. Messiaen took over the poly-rhythm and the rhythmic pedal existing in Baroque and renaissance, related to his own rhythms.
5. Through rhythmical character, Messiaen understood the structure of distinct rhythms, which would be subsequently superposed, every rhythm being likely to receive variation elements, without affecting the initial profile. In other words, rhythmical characters represent an exposition in different mathematical combinations of numbers \{(1,2,3),(1,3,2),(3,1,2),etc.\}, every number representing a distinct rhythm.
6. The serialization of all physiological qualities of the sound is Messiaen’s innovating characteristics. This way, the composer created the so-called modules of duration, intensities, heights or sonorous timbres.
7. Studying the birds’ twitter, Messiaen created the „oiseaux” rhythms, being characterized by:- irregularity non-metric nature, rhythms framed in the rubato-melismatic character, but different from the previously treated formulas.

4 Conclusions
These innovations of mathematic nature, brought, for the most part, by O.Messiaen, to which the others add themselves, starting with the Stravinski moment, stand for the re-launch of the rhythmic issue in the 20th century, as means of information and inspiration for contemporary composers.
References: