## ON RHYTHM, COMPLEX AND SIMPLE

## MARCELLE DE MANZIARLY

T HE rhythm of a musical work is easily understood when one is aware of the regular beats of the metric design. Simple means suffice for the notation of such a rhythm and, when the listener looks at the score, the ear and the eye will be in complete agreement. There will be no doubt about the rhythm conveyed to us.

A rhythm is easily felt when the rhythmic impulse is clearly emphasized. Even if we do not understand what actually takes place in the rhythmic unfolding of the strongly accentuated works of Igor Stravinsky's middle period (the *Sacre, Noces, Renard, L'Histoire du soldat*) we are nevertheless carried away by it. When we look at the scores, the notation, though it appears very complicated, is nevertheless clear and adequate. The ear and the eye are in agreement.

Today, for practical reasons, the notation of some of these works can be simplified. I wonder if this would have been possible at the time they were written. The new world of rhythm which they represented was unfamiliar; it needed to be firmly underlined by placing the beginning of each segment of phrase on the strong beat, regardless of the asymmetric succession of unequal measures. There could thus be no doubt about the rhythmic impulse, and hence no error of interpretation.

There is another form of rhythm whose notation is also very simple, but which may mislead the ear. It appears in a certain complexity in Beethoven's music. Here the conception of rhythm is new, though the means of notation are old. The beats of the measure are regular; but the phrase does not follow the beats. The contradiction of these two elements gives freedom to the rhythm. Looking at the score, the ear and the eye are not in agreement.

A rhythm can be easily understood, adequately written down, and still hide the real reason of its life, as occurs in the regular unfolding of timeunits used by Bach. Listening one day to Stravinsky's Sacre du printemps, to Beethoven's Quartet in  $B_{b}$ , Opus 18, and to Bach's Brandenburg Concerto Number 3, I felt between these works a certain similarity: freedom of rhythm.

If we analyze the periods of Bach's musical discourse we shall find that, though he confines himself to rhythmic means which might be expected to produce monotony, the interest aroused never falters.

The peculiarity of his writing consists in the repetition of figures containing the same number of equal time-units. The rhythm is always very simple. During the forty-eight measures of the last movement of this *Concerto*, an Allegro in 12/8, he will use, without a single exception, groups of sixteenths. (It is amusing to note that the only values employed in this *Concerto* are, with the exception of three half-notes, only quarters, eighths and sixteenths; and there are but eleven dotted notes in all.)

In the first movement, using equal groups of sixteenths, Bach builds phrases of different length. The tempo is Allegro, the time alla breve, the measure divided into two beats. The phrases cover three, four, five, or six of these beats; and the variety in this length of phrase, in contradiction with the square regularity of the groups of units unfolding within the two beats of the measure, will be registered by the ear, although the eye, looking at the score, will see only monotony and repetition of the same rhythmic formula.

The following example will illustrate my point:



The first period covers five beats. The next covers three, beginning on the last of the preceding period. This brings us to the re-entrance of the principal theme, covering four beats, and so on. If we were to mark down from the beginning to the end of the movement the number of beats included in the periods of each musical phrase, the succession of these numbers would speak for itself in disclosing the variety of the rhythmic structure.

Bach's melodic line achieves great freedom at times by the division of a measure into unequal parts, as, for example, eight units into five and three. Such divisions are quite frequent:



One of the secrets of Bach's invention lies in the variety obtained through these unequal divisions so frequently found in his work.

Very different is Beethoven's conception of rhythm. Though he often uses the classical eight-measure period divided into two equal parts, the one seeming to be the answer to the other, in dialogue form, the characteristic of his rhythmic impulse is an unexpected accentuation of weak beats, which displaces the strong beats, thus misleading the ear.

The lovely Scherzo of the  $B_b$  Quartet offers a perfect example of dualism between the freedom exercised by the melodic element and the regularity of the rhythmic design underlying it.

Such freshness and alertness of rhythm are achieved through accenting the syncopated note on the second half of the last beat, thus combining a different number of units in each of the groups which form the phrase. One admires the rhythmic invention and independence of the two voices:



The period of eight measures is divided equally into two parts; but the succession of these groups containing a different number of time-units produces an asymmetrical combination in a symmetrical form. In this case the eye will have to re-adjust what the ear registers.

The same remarks can be applied to the Scherzo of the Sonata in A major for 'cello and piano, which begins as follows:

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Though the notation is strictly correct for a 3/4 measure in which each strong beat is emphasized by the chords placed upon it, the ear is carried away from it and hears the chords as if placed on a second beat. During the first thirty measures of this Scherzo the chords will seem to follow the melodic line as if they were in syncopation. Here again the period is of eight measures divided into two similar groups, but the ear will hear a succession of 3/4, 3/4, 4/4, 2/4, instead of the regular 3/4.

One can find many such examples in Beethoven, mostly in his scherzi, or in his fast movements, where one feels his desire to be free of the limitations of a well-established and respected measure.

Who does not remember the last part of the Leonore Overture, Number 3, or the Scherzo of the Ninth Symphony in which the theme, written in a regular 3/4, presto, covers a period of four measures, and then is heard reduced to a period covering three measures with Beethoven's indication: "Ritmo di tre battute," and, finally, at the end, appears shortened to two measures, merging into alla breve so naturally and beautifully?

We are not far from Stravinsky's subjugation of the measure to the needs of rhythm.

Beethoven's indication here foreshadows one to be found in the score of Stravinsky's *Dumbarton Oaks Concerto*. In this work we find all the rhythmic elements characteristic of that composer. The notation is very clear and satisfying to the eye and the ear. The flexibility of the frequently changing measures is established (in contrast to the classical conception of measure, where the flexibility of the rhythm follows the inflexibility of the measure) in order to fulfill the needs of the rhythmic design of the musical phrase; this design being underlined, as I said before, by placing the first note of each section of the phrase mostly on a strong beat, thus bringing about a logical, though asymmetrical, succession of different measures.

In some measures, as for instance 6/8 or 9/8, the traditional binary or ternary subdivision may be cast aside to conform with the rhythmic needs. (This is mostly noticeable in Stravinsky's vocal works, where the syllabic unfolding of the words, following their irregular accentuation, gives to every unit the same independence with regard to the strong and weak beats.)

But what seems most important of all is (1) the association of binary and ternary groups containing units of the same time-value, and (2) the association of successive measures of different time-denominators, as for instance 4/4, 5/8, 2/4.

To illustrate, I will borrow, from the first movement of the *Dumbarton Oaks Concerto*, this very interesting example, with the supplementary instruction for beating:

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The similarity of these four measures lies in the lengthening of the last beat by the addition of one unit. If that last ternary group were a triplet, we would have regular measures of 3/8, 4/8, 5/8; but as it is, the

first note of the ternary group has to "carry over" two notes instead of one (as in the preceding binary groups) and since more time is needed for that carrying over, the regular balance of the beats is upset. The measure itself has to be extended in order to conform to that impulse. The ternary group may, of course, be placed on any chosen beat.

The association of the "extended measure" with regular measures of different time-denominators conveys to us the very pulse of Stravinsky's rhythm.

In the following example, also from the *Concerto*, we clearly see this association:



In the succession of sixteenths, assembled in groups of two or four units, the inclusion of a ternary group gives to the rhythmic design strength and flexibility at the same time. The division of 9/16 into four unequal beats deprives it of its ternary character. This recalls to our mind the asymmetrical division of eight units into five and three used by Bach (see example 2).

It is interesting to witness the reappearance of these binary and ternary groups combining units of the same time-value which had been predominant in the music of the Middle Ages and of the Renaissance, until they were put aside after the definitive establishment of the bar-line gave a new direction to the development of rhythm.

Each new rhythmic problem brings with it a problem of notation. From the complexity of *Sacre*, *Noces*, *Renard* or *L'Histoire du soldat*, through the simplification of notation noticeable in the *Octuor* or the works of that period, to the limpidity of *Ode*, we follow an evolution that tends constantly towards greater clarification.

In polyphonic music, rhythmic complexity cannot be carried beyond certain limits. Such music needs the co-operation of a great number of people for its performance. Rhythm is so closely connected with our physical reactions and the quickness of our ability to follow the change of timedivisions, that it makes great demands on the ability of the performer for its exact interpretation. An inexact representation of the rhythmic element in a work will distort its whole structure.

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The tendency of our day seems to be towards simpler rhythmic combinations, those within the scope of performer and listener alike.

This simplification however, does not demand a retreat to the formulas of the past, but lies, on the contrary, in the thorough assimilation of the new means of rhythmic expression.