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A performer unaccustomed to twelve-tone music will find the appearance of the note-scheme unusual: the great leaps from tone to tone are unmelodious in the sense that the player cannot conveniently sing them. And yet, all of Composition No.1, from the first to the last tone, is a simple melodic invention whose instrumental execution is entrusted to both hands alternately. It is not a singable melody but a pianistic melody, and large interval leaps of of this type are just as natural for it as the smaller leaps are for a song. It is therefore a melody like any other.

However, the tones do not here follow the inclination proper to them within the framework of a tone scale (e.g. C D E F G B C), for in such a tone-scale there is a basic tone - in this case C - from which the melody sets out, and to which it all sooner or later returns. Anyone accustomed to hearing and playing such music finds all combinations built around this basic tonal feeling comprehensible, and giving rise to pleasant and lively sensations. On the other hand, there are also different possibilities of arranging the tones sounding about us, in order to discover melodies and harmonies within such an arrangement as may awaken associations different from the basic tone or tonal melody. Such re-arrangements may sound astonishing and incomprehensible at first; indeed, they often have a confusing and therefore unpleasant effect upon us. But the player will admit that no-one was born with a knowledge of major or minor scales; Westerners have ~~learned~~ this musical arrangement, just as persons born and bred in the East follow different tone-systems, which sound foreign and incomprehensible to Western ears.

In time, a new tone-system has crystallized here, called the dodecaphonic or twelve-tone system, and formulated by Arnold Schoenberg (1874-1951). It is in this tone-order that all the

pieces in this book have been composed - namely in such a manner as both to make for ease in playing and to acquaint the performer with a new method of composition, which then progressively becomes more and more rich in content. I would like to enable those who are interested to share in the considerations governing the composer; this may help in answering many questions of interpretation.

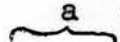
All the compositions in this book are based on the original tone-row - O' (O' = original)-and its permutations (as the linear variants of a tone row are called). The performer will find a table at the beginning of the book in which the 48 possible forms of the tone-row are set down synoptically. Column a features the original row (O') and its 11 transpositions, column b the inversion of the row (I' = Inversion) and its 11 transpositions, column c the retrograde of O' (R' = Retrograde) and its 11 transpositions, column d the retrograde inversion (RI' = Retrograde Inversion), and its 11 transpositions.

Before the performer begins to study the first piece, it is recommended that he read row O' (the original form) so carefully as to be able to sing it by heart. He should then do the same in respect of I' and R', for these three rows are the foundation of Composition No.1. Already while getting acquainted with these rows, the performer will notice that instead of the basic tone featured by the tonal scales there is another type of relationship between the tones here. At times he will hear a definite bias towards the neighbouring tone and sometimes inclinations over wider intervals; later he will find that the composer has endeavoured to create constantly new groupings and relationships among the tones of the row. A twelve-tone row is like a

and this is to be observed as closely as possible, though not slavishly.

What tones are to be played with greater or with smaller dynamic intensity will be shown by the relationships and inclinations of the tones within the phrase, and of the phrases among themselves. I have therefore included no dynamic notations - neither accents, nor crescendo or decrescendo, etc. The performer who has familiarized himself with the 12-tone row will doubtless be able to represent the time-space correlation in convincing dynamic proportions. It is important to note that the rests in this piece do not represent empty pauses, but within the beat they represent a correlation between the outgoing sound and the continuing inward sound. The intervals are therefore organic parts of the rhythmic row. The piece accordingly ends not with the last tone, but with the termination of its last measure.

ARCHITECTURE.

Symmetrical forms, sequences, repetitions of groups or other architectural elements of the tonal system are here replaced by different principles. The performer will quickly note that no phrase (marked by a slur) resembles any other. However, this is no random linking of variants - ~~for~~ for, while each phrase has its own relative climax, they all develop towards the climax of the whole composition. Wherever a repetition of the motif might hold up the development undesirably (marked )^a, the variant interpretation legato-staccato provides for the necessary current change.

The forms of the row are marked by the abbreviations O', R' and I'.

COMPOSITION NO.2

Music in two voices makes possible successive and simultaneous use of the row, also called "horizontal and vertical dodecaphony" by Hans Jelinek in his "Introduction to Twelve-Tone Composition" (Universal Edition). In order to permit a better general view, the ordinal numbers of tone-row O' have been added above the notes of the first four measures. The fourth measure features the end of row O' parallel to the beginning of row R' (not in the direction of the voice, but in the synchronism of the different ordinal numbers). Thus, in the fifth measure, row R', previously begun in the left hand, goes over to the right hand, while the continuation of the left hand goes over to row I'. The performer is here faced with an important characteristic of 12-tone composition: what has just happened in measures 4 and 5 is a decision by the composer who made his choice from among the numerous possible combinations of the 48 forms of the original row. The same thing also occurred earlier, in tonal music, where every thematic invention resulted from a personal selection among the melodic and harmonic possibilities of the major or minor scale. With the help of the table, the performer can now easily follow the structure of the composition.

The metric organization now follows, according to the example of Boris Blacher's "Variable Metres". In this case, a simple arithmetic progression is the metric foundation corresponding to the twelve tones of the row. The phrase-structure is here free of the obligation to stress the first note of the new metric unit, and this leads the continuation-technique of the "variable metres" to a syncopation within the context of music/syntax (measures 10-11). Within the units, accents are also frequently transferred, so that the traditional arrangement of bars is nothing but an organizational aid

I would like to draw the performer's attention to yet another important fact: ^{we} usually refer in the general sense to ~~the~~ the rhythm of a composition, and what is mostly meant is the metric unit (2/4, 3/4, 6/8, etc.) . In the style of the European folk-song, the rhythmic formulations follow the simple time-divisions of the metric unit; the melodic motif is simultaneously a rhythmic motif, and both return in repetitions and sequences. In this way, the rhythmic repetition exerts a very suggestive effect. In art-music, these simple repetitions are varied in manifold fashion by rhythmic changes in the basic time, by syncopation, by polyrhythmic ~~concealment~~ ^{disguises}, etc. However, we can only grasp these rhythmic variants with our musical intellect by combining them with the basic form stored in our memory. In tonal music, these basic forms are always given together with the melody. In the first composition in this book, such a basic rhythmic form is also advanced, - but it is characteristic of our style that sensually suggestive rhythmic repetitions are avoided; on the other hand, much higher demands are made on the performer's and listener's capacity for combination. They can no longer rely upon mechanically repeated events, and are obliged to concentrate and be ready for constantly new events, in order to recognize in each new part of the composition the connection with the remembered origin. In this respect, the second composition is more complex than the first, for it lacks a basic rhythmic form, and time is included as a dimension in its own right. All the rhythmic variants refer to the time-pulse of this composition, ~~no. 116~~ - 116, and this gives rise constantly to new, crystallising time-forms of the stored pulse-beat. The performer will notice that in this composition there is a kind of time-centre with which the piece begins and ends.

COMPOSITION NO.3

As regards the utilization of the row, the performer should be able to follow with the greatest of ease the combinations chosen by the composer, since he will be aided by the given symbols (O', I', R³, etc.),

Accordingly, in bars 7, 8, 9 and 12 - 18, this indication has been dropped as being obvious. The composition is written in horizontal dodecaphony with but few exceptions. Bars 4 and 11 carry notations in four systems, in order to make the row-filigree appear more clearly. It is to be particularly remarked that rows O', R³ and I² are represented in full, while rows RI' and I³ are represented only by their corresponding ordinal numbers 1 - 5.

Despite the considerable variations from the norm, there is strict order here, for otherwise licence would lead to anarchy, thus obviating the idea of the inner law. The performer should learn in time to distinguish between false freedom due to lack of any binding thought, and true freedom within the framework of a certain order. The complaint is often voiced nowadays that one can no longer distinguish between what is "good" and "bad" (or "right" and "wrong") in modern music: everything seems to be permitted. But, just as a false harmony is immediately recognizable in a tonal melody because it goes against the logic of the system, even so the performer here has a criterion for the measure of invention entailed by the 12-tone system.

As against Composition No.2, an important change is featured in Composition No.3. While new time-variants constantly effect new changes, it is no longer linked to the sequence of the row. It now strives towards outlined forms, to what is called

in music a motif, or in its more developed sense a theme. The motif - i.e. the briefest, tersest thought - was already represented in Composition No.2, where it arose from the interval-sequences selected from the tone-row achieving significant form through rhythmic structure. In both Compositions 1 and 2 there was, however, lacking an important element which might make it possible to recognize the outlined motif - repetition. This latter is nowadays frequently rejected, in an understandable reaction against its excessive and often misused application in tonal music as a conventional element of musical architecture. The performer must learn to distinguish between: a) well-established, unmistakable repetitions (to pin down the otherwise fleeting basic form); b) varied repetitions (giving the basic form a new sense); c) repetition of an idea at a later point in the composition (where the reminiscence points up the maturing process - for, after important developments and a certain distance in time, repetition placed in a certain relationship to past events gains a further degree of intensity by comparison). In all cases, it is important to decide whether what has been stated once is actually worth repeating. Here I would like to point back to the repetition of motif in Composition No.1, which all appeared in variant form due to the trivial content of the original form; only in this way can repetitions be justified within such a small framework. Of course, variant-forms can go so far as to make it almost impossible to recognize the basic form.

Composition No.3 begins with a motif of two crotchets:
from which a widely swinging melody is formed, abutting at the
end of the phrase once again in the two-crotchet form in a
different sequence:

Here it is already possible to speak of a theme developing from a motif. The third bar brings all three rows to a conclusion, creating out of the given material the transition to another form which, compared with the first theme, is less closely knit. At the seventh bar there begins the first repetition of the theme, with the changed crotchet motif. Separated by a crotchet-rest, the same motif now appears with the inversion of the two upper voices. There follows a variant of the rest of the theme, with the transition more closely linked to the main part of the theme. Bars 10 and 11 are a variant of the second form, with such far-reaching changes that it appears to be not so much a looser form as rather a marked contrast to the main theme. In bars 12 - 18, the contrasting of the two forms is suspended, and they now represent an extended whole, whose detailed variation-technique may be explored by the performer himself.

COMPOSITION NO. 4

As early as Composition No.1, we replaced the metric unit by an exact unit of time, all variants of which were obtained either by division or by multiplication with that same unit. The duration of each note was set by means of the metronome. It would even be possible to express the duration of each tone in terms of seconds (or fractions thereof), rather than use the conventional notation (c., d., q., s.). For instance, let us say that a quaver should last for one second - the sixtieth part of a minute. Accordingly, in the same composition, a crotchet lasts for 2 seconds, a minim - 4 seconds, a semibreve - 8 seconds, etc. If, however, we consider the greater length to be our unit - namely one semibreve - 60 - then we shall obtain

corresponding fractions, namely the $\frac{1}{2}$ second, $\frac{1}{4}$ second, etc. In this way, while playing, we are constantly measuring durations, though our measurement is fundamentally different from that of a metronome; for this latter will beat out a 1:2 relationship with the same objectivity as a ratio of 15-16 seconds. A person, however, never notes the exact difference between time-ratios, while the difference between 15 and 16 seconds is hardly noticeable. Therefore we can never make music with the help of a metronome, since this mechanical piece of clockwork cannot think proportionally. Rhythmic education should therefore develop a feeling for the most delicate nuances of proportion.

Composition No.4, like No.1, features no rhythmic units. Once again a metronome-figure is given as the mean duration, and there is no rhythmic row fundamental to the composition. The notation, ~~the notation~~ however, features both ordinary notes and grace-notes. This is nothing new in itself, for Chopin's music features this phenomenon quite frequently. This was, of course, no chance occurrence - for, together with the development of harmonic groups in the last period of tonal music (within which Chopin's life-span falls), metric proportions became more sophisticated, while the standard notation did not change, and could no longer represent anything more than simple arithmetical functions. Accordingly, Chopin had to rely on his interpreters' feeling for style and their ability to improvise. He wrote numerous smaller notes within the framework of a beat, for the exact execution of which (in point of time) our notation has no equivalent marks. It is left to the performers' sense

of proportion to decide how to form these phrases as intended. Later on in modern music, every effort was once again made to note everything down exactly, for it was not yet possible to rely on any established style-consciousness for this new art. There resulted an extraordinarily complex rhythmic pattern, of which Composition No.2 is a rather simple example. But, despite all the newly devised notation-methods, there are still leftovers which cannot be graphically represented in our system, together with time proportions that are more and more novel and typical of present-day style.

Composition No.4 places certain demands upon the player - namely that he should feel his way and familiarize himself with the world of these time-forms which are only hinted at graphically. The grace-notes are to be left to his interpretation, while the ordinary notes represent more exact time-ratios, which should not, however, be counted slavishly according to the metronome-indication. This composition is therefore an exercise in the improvisation of the time-proportions necessarily resulting from the inner rhythmic relationships of a twelve-tone row. Dynamic nuances are not even indicated; nor is there any indication of changes in the tempi.

COMPOSITION NO. 5

The architectural form of this composition is, to a certain extent, parallel to the "mobiles" of mid-twentieth century sculpture: just as these latter endeavour to loosen all fixed points by means of movement, so does this music attempt to change the fixed sequence of a written composition by improvised selection. This principle is not sensibly

different from that of the variations on a theme; "mobiles" are nothing but variations, though not on a theme changed in its dialectic character. They are variations upon changes in the relationships among the different parts of a whole composition. A "mobile" structure¹ in music is therefore divided into motif-"planes" which are so conceived that they can be placed in manifold sequential or tangential relationships, as is demonstrated by two of the many possible examples - 5 a) and 5 b). The technique is reminiscent of a composition planned in multiple counterpoint. The difference lies in the fact that, ~~whereas~~ whereas in the traditional contrapuntal technique it is the sequence of measures that is postulated, in the "mobiles" whole structures are conceived in advance with regard to the possibilities of combination. Traditional counterpoint signifies that all sequences of measures are thought out within the framework of the tonal system which determines their aesthetic evaluation as consonant or dissonant. In our Composition No.5, the motif-"planes" are developed in strict dodecaphonic technique, and this makes possible an extraordinarily varied choice of melodic and harmonic formulations (as may be seen from the previous composition), while pinning the composer down to certain ways of thought that are part of the nature of this system.

While we thus link the dodecaphonic "planes" among themselves, we consciously shatter the strict framework of the system, introducing licences already indicative of other aims.

Composition No.5 does not therefore conclude the representation of a technique of composition, but simultaneously points to a further aim lying in a direction totally different

from our hitherto grammatical thought in music. Accordingly, dodecaphony may possibly provide a dialectical bridge between two forms of expression, of which one always returns to a fixed starting point, according to the laws of gravitation. This starting point may be a basic tone or even - in a broader sense - a basic tone-row. As against this, there is the other idiom that strives to overcome the laws of gravitation by creating new energies through the contact between free "planes" - energies whose effects and significance we still have to learn about. For this new world we shall have to develop new sounds, and new instruments equivalent to the forces predominating there. In these circumstances, the aesthetic of music will no longer be based upon consonance and dissonance, but on whether we are on one side or the other of a plane of energy.

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