

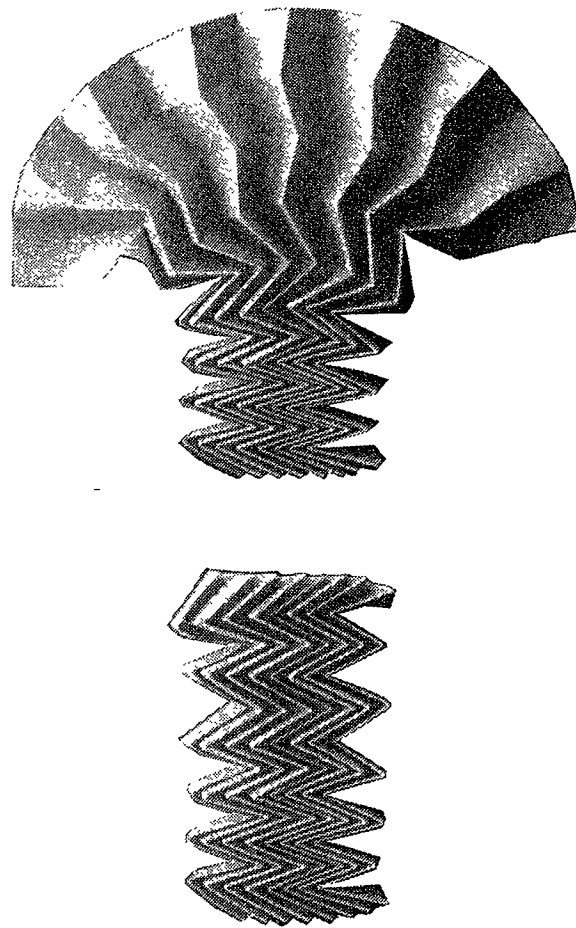
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In Memoriam
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The *Miura-ori*
opened out like a fan

PATTERNED TIME: BORIS BLACHER'S PLAY WITH VARIABLE METERS

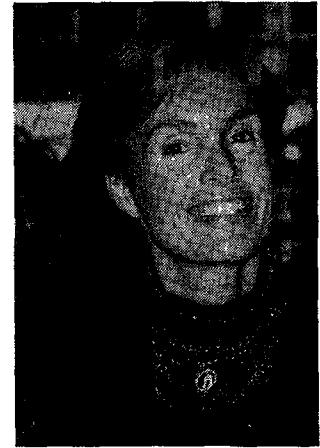
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Abstract: The German composer Boris Blacher wrote a number of compositions that explicitly play with measured time. He handles the organization of time in such a way that temporal units and time patterning itself are not only conspicuously placed in the foreground of the listener's perception; they actually constitute the generating factor of the entire composition, accountable for both form and content. To demonstrate my point in some detail, I have chosen one such composition, Blacher's 1950 composition for piano solo, *Ornaments: Seven Studies on Variable Meters*.

INTRODUCTION

Different "musics" are often contrasted on the basis of what is considered to be their principal constituting factor. Asian music is regarded as predominantly melodic, European art music as essentially dependent on harmony, and African music as characterized by rhythm.

While all melodic lines, harmonic progressions and rhythmic developments depend on time to take their course, the very perception of time is generally not rendered thematic. Time in music - time as it passes while music captures a listener's attention - does not differ in essence from time as it passes during other activities. Different listeners exposed to different kinds of music, asked to describe what role time plays with regard to the musical event, would probably agree that time is

- unremitting and irremittable;
- an enabling means rather than an active agent;
- subjectively perceived as passing more or less slowly, while objectively measurable in units of pre-defined constancy.

There are, however, musical ways in which time can be brought into awareness. In music determined by melodic and/or harmonic features, silences - unmeasured rests in particular - can be employed to suggest the impression that "time stands still". Or, to give an example from Chinese classical music, especially instrumental music of the nineteenth century: fading or incomplete phrases followed by suspenseful silences can invite the listener to "step out of time".

In the realm of rhythm, the nature and degree of conscious perception of time are more complex. For the purpose at hand, let us refer to rhythm not as it is conceived by composers and reproduced by performers (i.e. distributed across several independent voices and including rests, articulation etc.), but as it is perceived by listeners: as a pattern generated by consecutive points of attack. While rhythm is, of course, created - with or without particular plan or pattern - wherever there are consecutive sounds, it emerges into the foreground of perception only under certain conditions. Listeners are most likely to become aware of rhythm when it is either highly predictable or extremely unpredictable. In the first case, consecutive attacks are regularly patterned and perceived primarily on the visceral level; examples include short but frequently repeated rhythmic figures, called *ostinato* for their "obstinate" or stubborn effect, or completely monotonous sequences produced by way of protracted repetition of a single time value. In the second case, frustrated expectations draw the listeners' attention to the rhythmic aspect of music almost against their will. This happens especially if attack patterns are broken almost the very moment they seemed established, only to be replaced by other patterns that are then deliberately distorted. Reactions can be visceral (more often than not with uneasiness) or cerebral (more often than not with fascination). In both cases, the conscious perception of time as what shapes the musical "message" is inversely proportionate to the degree of stimulation from other parameters such as melody, harmony, articulation, dynamics etc.

A third case for bringing time to the foreground of a music listener's attention is by regulating not so much the local succession of sounds but rather the frame within which they occur. Meter (or, technically speaking, time signature) defines two qualities. As a pre-determined frame of reference it determines what time value (a quarter note or an eighth note, for example) is to be regarded as basic for a composition or passage, and

how many of these time values are needed to constitute a larger entity - a "measure". These determinants are implicit; they exist, and apply, regardless of the actual sequence of rhythmic events. Four-four time is four-four time whether or not the passage contains a single quarter note, and in fact whether or not any attack falls on any of the counts or beats. The second quality defined by meter is one of hierarchy. In all music that is or could be metrically notated, the designated time signature creates qualitative differences between counts or beats - we talk about strong and weak beats, sometimes even about "good" and "bad" ones.

It is in this realm of hierarchy that aspects of time can be brought to a listener's attention. I want to mention here only the two most significant phenomena: syncopation and *hemiola*. A syncopation results from an "improper" relationship between the duration of a musical event and the hierarchical position of its point of attack. Take for example a note that begins on a weak beat and extends passively into the time allotted to a stronger beat. The passive nature of the extension (in contrast to the active nature of the attack) thwarts due materialization of the stronger beat, transferring the unrealized emphasis backwards onto the beginning of the extended time value and thus upgrading a weak beat to a strong one. Similarly, a *hemiola* consists of a deliberate re-stressing of six consecutive counts or beats against the established hierarchical order.

In all cases discussed so far, conscious awareness of time, or of aspects of time, is the exception within a larger context not generally geared towards this goal. John Cage's famous composition of requested silence, 4'33" ("tacet for any instrument(s)") constitutes an unrepeatable exception. Now, some composers in the twentieth century have gone further in the attempt not only to shape music so as to focus on time, but also to manipulate time units so as to shape music. Performers of contemporary music often sigh and despair under the task of realizing a constantly changing number of counts to a measure, often alongside of changing values to be counted and irregular rhythms to be executed within any current framework. While these performers, in the best of cases, will enjoy the challenge and thus gain a heightened sense of how the traditional measuring of time is put into question, listeners are more likely to be either lost, or to enjoy the music only when disregarding time as a possible element of order - an attitude that may or may not do justice to what the composer intended.

The reason for the discomfort frequently experienced on occasion of metrically irregular music, as well as for the "solution" so often sought, is probably two-fold. On the one hand, there is a conflict of focus: in music that contains highly captivating elements of melody and rhythm, harmonic and structural layout, metric irregularity will at best be perceived as over-stimulating, at worst as an annoying distraction likely to obscure rather than illuminate the "message". On the other hand, the apparent randomness of metric irregularity, intended to sound "free from rules", "improvised" etc., fails to offer any pattern to which a listener might consciously or subconsciously relate, and is thus unlikely to create a lasting impression.

Boris Blacher was arguably the foremost composer to write a number of pieces that explicitly address the issue raised here. These compositions play with measured time, in such a way that time and the patterning of time are not only conspicuously placed in the foreground of the listener's perception; they actually constitute the generating factor of the entire composition, accountable for both form and content. To demonstrate my point in some detail, I have chosen Blacher's 1950 composition for piano solo, *Ornamente. Sieben Studien ueber variable Metren* (*Ornaments. Seven Studies on Variable Meters*, published in 1951 by Bote & Bock in Berlin).

Let me first introduce the composer. Boris Blacher was a German composer, born in 1903 in China as the son of a family of Baltic descent. He studied at the University and Hochschule in Berlin, first architecture and mathematics and later composition and musicology. Having worked for some years as a free-lance composer/arranger in Berlin, in 1938 he was appointed director of the composition class at Dresden Conservatory - a position he was forced to give up in 1939 because his teaching was considered not in accord with Nazi cultural policy. After 1945 he resumed his work as a teacher of composition, this time at the Hochschule der Künste in Berlin where he became a full professor in 1948 and served as Director in the years 1953-1970. He was also very active in the West Berlin Academy of Arts, which saw him as head of the music section since 1961, and as President of the Academy in 1968-1971. Among his many prizes and awards are the Bach Prize (Hamburg) and the Großer Kunstpreis North-Rhine Westphalia. Blacher died in 1975.

Blacher's music is known for its spirit of play and its sparse, transparent instrumentation. He often sets out from a single cell, clearly defined in its intervals and rhythm, and subjects it to a process of expansion and shrinking, considering music capable of plant-like growth and decline. His tonal language started out in traditional idioms, which by the late 1940s he had extended and decontextualized with dissonance and polytonality. After 1948 he turned to twelve-tone composition, and by 1950 had developed a fully serial technique. Never losing his basically playful approach, Blacher felt a strong affinity to dance and opera, both media for which he composed extensively. (See particularly his epic piece *Abstrakte Oper no. 1*, which instead of a dramatic plot thematizes basic human emotions: love, fear, pain, and panic. Blacher's compositional methods in this work include variable meters, a technique he also explored in two large orchestral works, the *Orchester-Ornamente* and the *Second Piano Concerto*, as well as in the piano cycle here presented.)

If you have the opportunity, it might be a good idea to first listen to the entire cycle, without any explanations regarding the structure or other features pertinent to each of the seven short pieces. If you do so, you are explicitly encouraged to concentrate on your visceral experience of the music. You may then want to take a look at the graphic depictions and the accompanying short verbal analyses. The graphs are intended to allow you to correlate invisible patterns with visible ones, and thus perceive large-scale symmetries. Finally, it would be ideal to listen to the entire cycle again. Equipped now

with analytical information and assisted by visual representations, you may choose to grasp consciously ongoing processes, or to abandon both the cerebral approach of the critical music listener and the emotional approach of the excited one. In the latter case, you would use the understanding gained to direct your instinctive responses to the experience of the phenomenon of patterned time.

1.

The first piece (see fig. 1) is in tempo *Vivace*. Its main body consists of one rhythmic value only: the quaver or eighth-note, requested “*sempre staccato*”. In the main body of the piece (i.e. excluding the “tail” or *coda*), the downbeat of each bar is marked by an accented interval or chord, and the metric pattern is thus very easily discernible. This pattern is based on the simple arithmetic row, where consecutive units increase by one increment each and then decrease again, in a series of identical palindromes. The remainder of the bars constitutes various pitch motions, all of which derive from the ascending chromatic scale.

Section I of the piece presents this design in a simple format, section II varies it with surprising octave displacements and thicker down-beat chords, while section III is distinguished from the preceding ones by its contrary motion in free vertical symmetry. As the graph indicates, the musical phrases correspond exactly with the metric pattern; only the very end of the third section shows an elision of the final unit (see the whitened box in the graph) and thus emphasizes a stronger structural closure. The fourth section restores the texture of the first but surpasses the ascending motion by reaching into the highest ranges of the keyboard. Its final unit comes as a rest and thus - for the first time in this piece in bar 59! - interrupts the continuous motion. The coda adds a new dimension to the play with the arithmetic row and the pitch motions so far associated with it. While it encompasses roughly one and a half of the same metric patterns that were heard before, all other parameters are changed:

- its rhythmic values now include irregular “long-short” patterns
- each pitch is presented as a slurred falling octave (no longer staccato)
- the chromatic lines proceed from one bar to the next (no longer from one attack to the next)
- the line is distorted with extreme octave displacements (see the “coda” window in the graph: the descent, though in clear chromatic sequence, is actually heard in six different octaves)
- the accompanying interval - the one that, in the main body of the piece, marked each metric unit with an accent - now partakes in the chromatic motion.

The final chord combines “the next logical step” in the treble with the original static interval F#/C# in the bass, thus epitomizing both a logical closure of the *coda* and a full-circle conclusion of the entire piece.

BORIS BLACHER: ORNAMENTS, No. 1

METRIC STRUCTURE

PHRASES

MATERIAL

I

Phrases I, II, III -
basic idea:

bars

(gradually expanding chromatic ascent,
structured by the same framing interval)

II

III

IV

(greatly expanded chromatic ascent,
framing interval also climbing 3 stages)

CODA

(slurred octaves,
moving in chromatic progression
veiled by octave displacements)

Figure 1: Boris Blacher, *Ornamente*, No. 1

2.

The second piece in Blacher's cycle is, in contrast to the first, very slow, soft and dreamy. Its metric pattern consists of two palindromes in arithmetic rows of incrementally increasing and decreasing units, expanded at the very end by two further bars. The horizontal structure pairs the full increase (from the smallest to the largest unit) with phrases *a* and *a'* respectively, while the shorter return-span of the pattern (from the second-largest to the second-smallest unit) is covered by phrase *b* and, with the expansion at the end, by the *coda*.

The vertical material employed consists of only three chord types (labelled *x*, *y*, *z* and transposed to the same root for easier comparison) as well as two cradling accompaniment patterns. All three chords are compounds of fourths (two perfect fourths for the main chord, interlocking perfect and augmented fourths for the two alternating chords), while the accompaniment patterns are intimately related in that the interval of the one (a perfect fifth) is the complement of that of the other (a perfect fourth). As a third and again related element in the pitch organization of the piece, the *coda* features an extended parallel descent in perfect fourths, under a repeated treble note D, the tonal centre of the piece.

3.

No. 3 of Blacher's *Ornaments*, a light *Allegro*, features patterns that are both more irregular and more intricate than those in the two preceding pieces. In terms of the metric design, it is based on a five-part sequence of three-unit groups. The size of the units increases both within each group and from one group to the next. This metric development corresponds with phrase *a* of the material. In the course of the mirror-symmetrical decrease, three groups are expanded by an extra unit each and, as a consequence, the fifth unit is dropped. This slightly irregular segment of the piece corresponds with phrase *b*.

The second section begins metrically as did the first. This time, however, the initial group is dedicated to a preparatory gesture, the phrase begins only with the second group and ends one unit short with an elision. After this multiple surprise, the following phrase *b* is an almost exact repetition of the earlier phrase *b*, metrically as well as in terms of the material.

The beginning of the abridged third section presents what seems like a logical continuation of the development from the first to the second sections. Again there is a preparatory group, but this time it appears in addition to the subsequent pattern - not subtracted from the phrase. The *coda*, a sudden outbreak of percussive note repetitions and reiterated open triads, constitutes the entire original five-part sequence, rounded off with a single extra bar.

BORIS BLACHER: ORNAMENTS, No. 2

METRIC DESIGN: [Pattern of shaded and unshaded boxes]

PHRASE: a b

CHORD: (x) (y) (x) (y) (x) [Z] (x) (x) (x) [Z] [Z] [Z] [Z]

PEDAL: A D D G D G

METRIC DESIGN: [Pattern of shaded and unshaded boxes]

PHRASE: a' coda

CHORD: (x) (y) (x) (y) [Z] (x) (y) [Z] (x) (y) D D D D D

PEDAL: G D G D

TONAL MATERIAL

chords,
for comparison
transposed to C

accompaniment
patterns

Figure 2: Boris Blacher, *Ornamente*, No. 2

4.

The fourth piece in the cycle relates to the third very much as the second did to the first. Marked *Allegretto* and *pesante* and thus considerably slower than no. 3, it is also based on evolving sequences of unit groups. The time pattern that might best be perceived in this piece is, for the first time in the cycle, not one of organic growth, but one of shifting inner membranes within cells of twenty beats each. Each group consists of five units. The basic group is not ordered, as were those in the preceding perceived in this

BORIS BLACHER: ORNAMENTS, No. 3

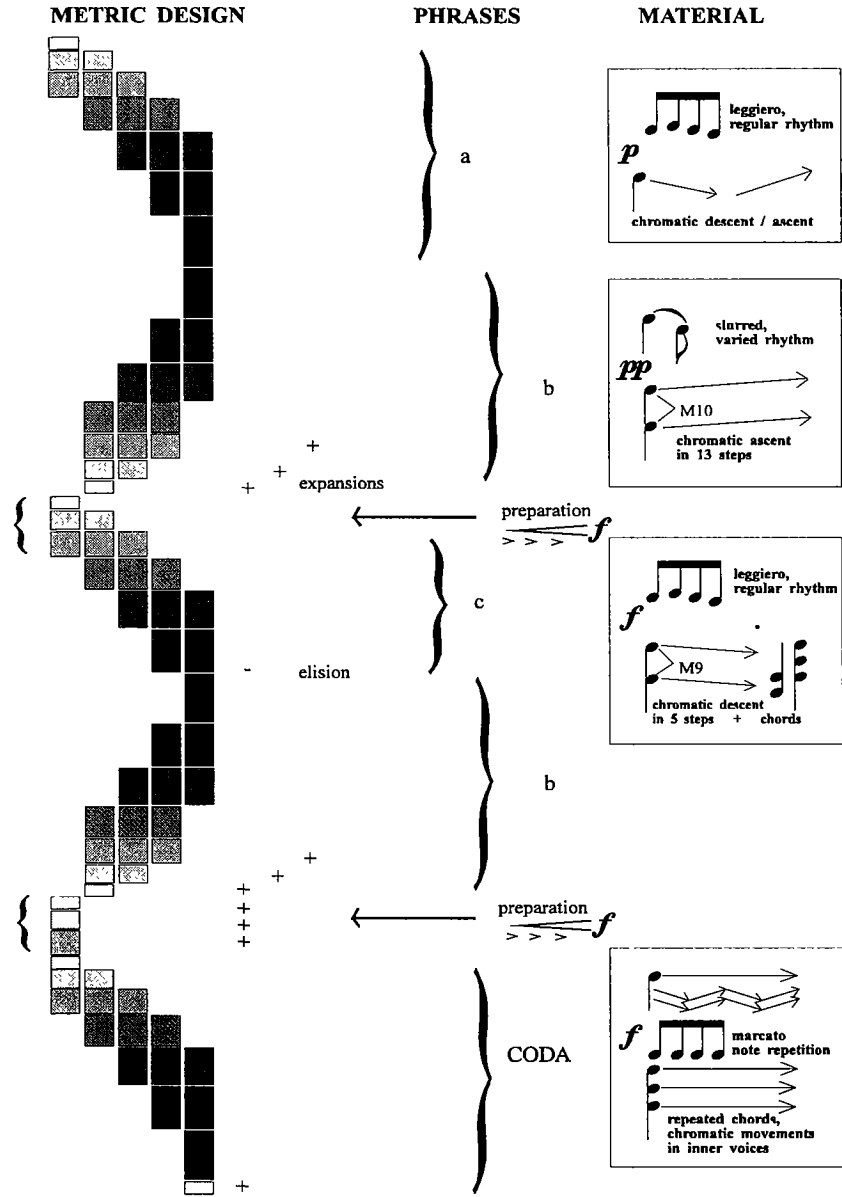


Figure 3: Boris Blacher, *Ornamente*, No. 3

pieces, in continuous increase or decrease of unit size, and subsequent groups evolve from the first by circular shift (placing the first unit from the beginning to the end, then the second one and so forth).

While the metric design rests here on a constant total duration of each group (in contrast to the growing and shrinking of groups in the previous pieces), it is the material that contributes the growth factor. (Figure 4)

Within the first four transformations of the group, the basic rhythm is joined consecutively by a double ninth, a slow broken ninth, and a broken ninth that is twice as fast. Only the fifth and last transformation abandons the ninth interval and uses instead three double sevenths. (This transformation also features a mid-group elision - although one wonders whether this somewhat strange irregularity is not the result of a simple error.)

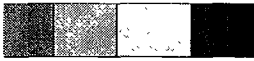
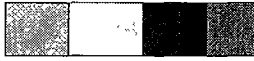

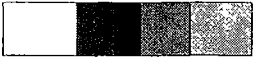


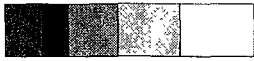



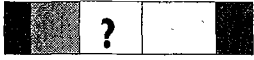


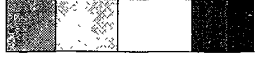



















As the sixth circular transformation restores the original design of the five-unit group and launches the mirror-symmetrical retraction of the transformative process, Blacher befittingly introduces new material. The ubiquitous rhythm is contrasted here with melodic note-pairs in long values that, in subsequent transformations, are joined by first the fast broken ninth and later the slow broken ninth. The tenth transformation - like its structural equivalent the fifth one departing from a by now firmly established pattern - abandons the melodic note-pairs and recalls the seventh interval employed in the final segment of the first transformative sequence. The final phrase returns once again to the order of the original group and, with broken and doubled ninths, brings the piece full circle.


5.


The fifth piece in Blacher's cycle is metrically built on fourteen identical palindromes. Each of them is arithmetically derived from the Fibonacci series and comprises horizontal symmetry whereby the mirroring last unit of one group melts with the equal-sized first unit of the next group. (As a result, only the final group is literally "complete", with 2 3 5 8 13 8 5 3 2.)


The design of the piece is binary. Both halves begin with the same two sections that are then complemented with slightly different ending phrases. The material comprises three layers. The lowest layer presents repeated pedal intervals (static in sections I and III, with a "deviating" upper part in sections II and IV). Their pitches, centered in the perfect fourth G[#]-C[#], are taken up in the highest layer that features scattered chromatic lines launched from either G[#] or C[#]. Wedged between these two outer layers as a strongly clashing element are the second-layer percussive thirds that center in G natural! The second ending with its powerful seven-note block chords reiterating the G[#]/G clash nine times brings this piece to an aggressive close. (Figure 5)

BORIS BLACHER: ORNAMENTS, No. 4

| METRIC DESIGN | PHRASE | MATERIAL |
|---|--------|--|
|  | 1 | RH alone |
|  | 2 | RH +  9 |
|  | 3 | RH +  +  > 9 |
|  | 4 | RH +  +  +  > 9 |
|  | 5 | RH +   > 7 |
|  | 6 | RH   |
|  | 7 | RH +   +  > 9 |
|  | 8 | RH +   +  > 9 |
|  | 9 | RH +   +  > 9 |
|  | 10 | RH +  > 9 +  > 7 |
|  | 11 | RH +  > 9 |

RH 

phrases 2-4/7-10  phrase 11 

phrases 6-9 


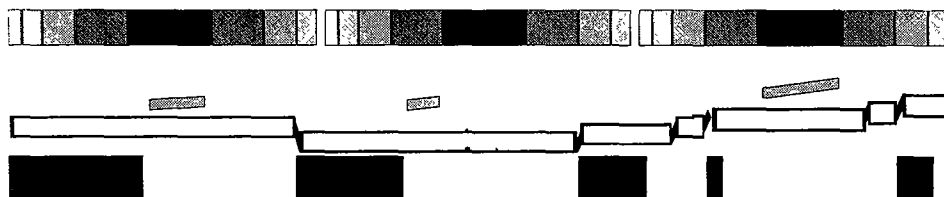
phrases 5 + 10 

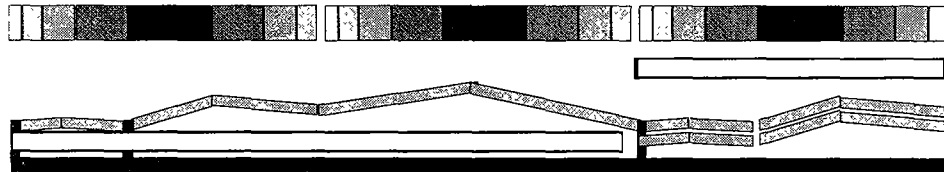
Figure 4: Boris Blacher, *Ornamente*, No. 4

BORIS BLACHER: ORNAMENTS, No. 5

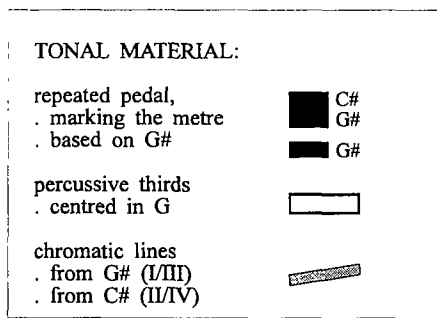
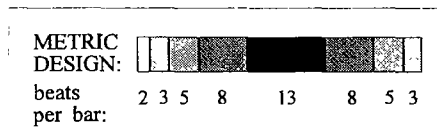
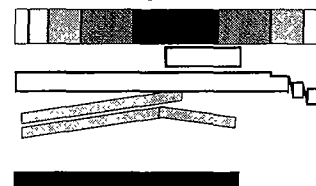
Sections I + III: bars 1-24 and bars 57-80



Sections II + IV: bars 25-48 and bars 81-104



First ending: bars 49-56



Second ending: bars 105-113

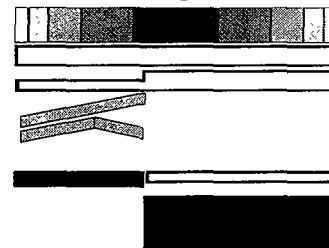


Figure 5: Boris Blacher, *Ornamente*, No. 5

6.

No. 6, while in structure binary like no. 5, with regard to color and mood presents a strong contrast to the previous piece, appearing like a meditation in soft hues.

The meditative quality is achieved primarily by what for want of a better term I call an “unusual *tremolo*”: In the treble of the A sections and in the bass of the B sections, protracted pitches appear in irregular octave oscillation, and a consistent avoidance of the strong beats further enhances the dreamlike impression. Meanwhile, middle voices move in chromatic descents, occasionally joined by the third textural layer (the bass in the A sections and the treble at the beginning of the B sections).

The metric patterning within the four sections corresponds with the intended emotive message. Twelve phrases, all identical in total duration, are built on four-unit groups in such a way as to embody both utmost “regularity” in the sense of a consistent adherence to a single law of transformation, and utmost irregularity - in that no group is ever repeated.

The three phrases within a section each begin with the same unit, thus allocating the four sections four different “initials”. Each phrase consists itself of two half-phrases launched from the same two-unit pair. As a result, the twenty-four half-phrases represent a complete transformational set, exhausting all possible combinations of four units.

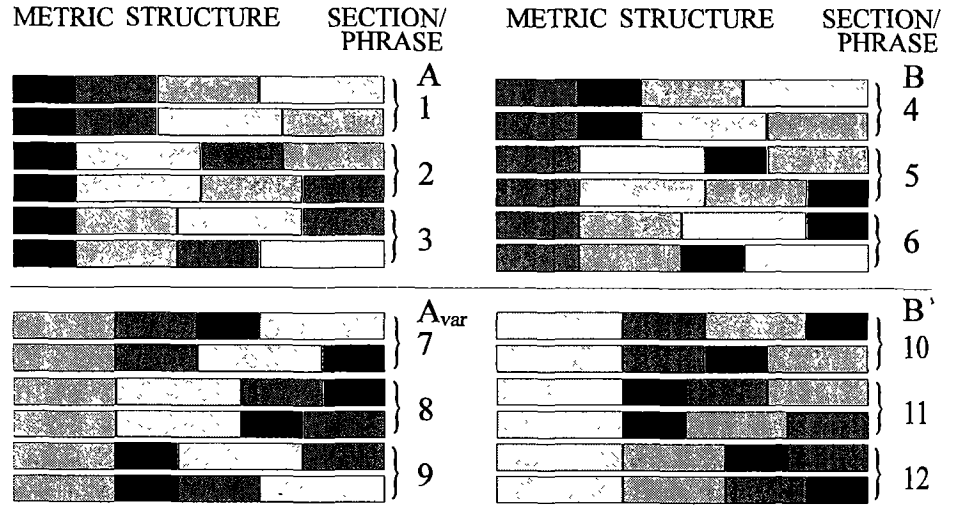
What the listener might perceive here is the awesome impression of a not quite logically comprehensible yet somehow reassuringly soothing “larger order”. (Figure 7)

7.

The seventh piece of Blacher’s cycle comports itself as a typical final movement. Surpassing everything before it in terms of tempo, it is built as an easy-to-grasp yet very intriguing bridge form. Two corresponding outer sections in *Presto* envelop a slower middle section that consists of three phrases in vectorial development of both unit size and dynamics.

The building blocks of the main section are two-fold. Each group begins with a unit of repeated four-octave C in quarter-note motion. Throughout the section, the size of this initial unit shrinks in what amounts to a fast forward (see the white rectangles in the graph): six four-beat initial units are followed by four three-beat and two two-beat launches. Concurrently the complementing tail, characterized by *staccato* eighth- notes with accented downbeat C[#]s, undergoes interesting processes of both growth and contraction. While the size of the unit decreases in each tail, the number of units in consecutive tails grows. To make things even more complex, the tails launched by the four three-beat initials are not only shorter in total extension because they have fewer repetitions during which to grow, but they are also contracted with regard to the size of

BORIS BLACHER: ORNAMENTS, No. 6



Sections A & A_{var}

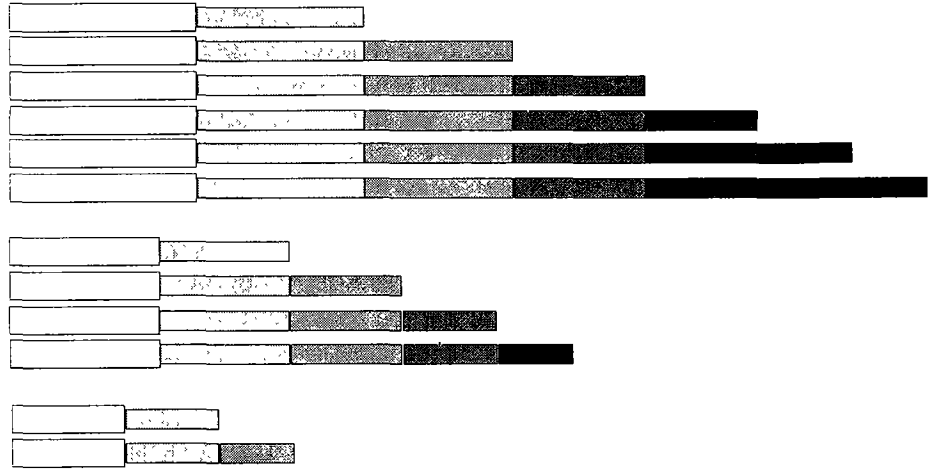
(♩ = 1 bar, regardless of its actual duration)

Section B

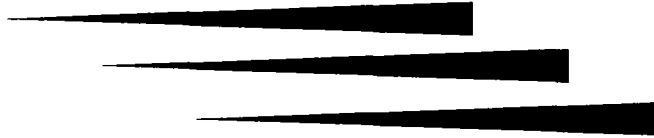
Section B'

Figure 6: Boris Blacher, *Ornamente*, No. 6

BORIS BLACHER: ORNAMENTS, No. 7



Meno mosso



Tempo I

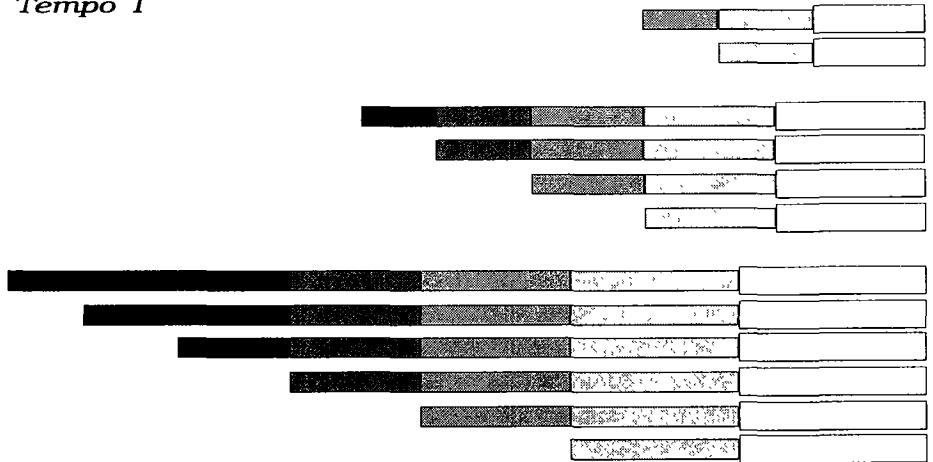


Figure 7: Boris Blacher, *Ornamente*, No. 7

each “tail” unit. This contraction continues in the very swift and compressed third component of the section.

After the interruption in *Meno mosso*, the bridge form is completed in the *Tempo I* of the third section. While the events within each unit remain unchanged and are not read backwards, with regard to the overall order of the units this third section recapitulates the first in perfect retrograde.

CONCLUSION

As this article has attempted to show, patterning and symmetrical structuring not only *in time* but also *of time* can lead to fascinating results - results that combine intricate artistic conception with utter playfulness on the composer’s side, cerebral puzzlement with immediate visceral “understanding” on the listener’s side. Blacher’s cycle *Ornaments: Seven Studies in Variable Meters* selects only a few of the many possible patterning operations, the way in which he characterizes each individual piece by means of dynamics, color and mood makes for an experience of surprise and variation. The way he links each piece to the preceding one creates a larger “Gestalt”, a consistent development that ties the seven miniatures together to a larger whole.