

## COMPOSITION

# Breadth of Topaz

*Martin Greet*

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*Breadths of Topaz* is a work for a single percussionist utilising vibraphone and four gongs (15" chao gong, 14" tiger gong with a descending pitch, 12" bao gong and 9" opera gong with an ascending pitch). Its minimum duration is approximately three minutes but can be extended beyond this if the performer chooses to repeat sections of the work, as described below. It was composed early in 2009. The title is taken from Emily Dickinson's poem *Day's Parlor*.<sup>1</sup> Dickinson uses the image of 'breadths of topaz' to describe the rising sun but the composition was not directly inspired by this idea and contains no programmatic reference to it. The title was simply chosen as an evocation of the sound quality and visual appearance of the percussion instruments involved in the work.

In its simplest form, *Breadths of Topaz* can be treated as a fully notated work. However, the piece has been conceived to allow the performer to improvise upon the written material presented in the score, as described below. Approached in this way, the work involves a highly structured form of improvisation in which the performer is guided as to the pitch content, tempo, metric structure, rhythmic character and textural style of their improvisations, to name some of the more obvious parameters. In the following article I seek to describe the technical basis of the work, outlining the reasoning behind the compositional choices I have made, and also to discuss the aesthetic stance implicit in the piece and how this relates to other views of improvisation, both historical and contemporary.

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<sup>1</sup> Emily Dickinson, *Selected Poems* (New York: Dover, 1990) 10–11.

The piece has eight sections, each matched to a rehearsal letter in the score. The exception to this is letter C which contains three separate sections. Each section of the work may be repeated at the percussionist's discretion. Repeats may be performed more than once. When and if the player repeats a section of the work, each repetition must be an improvisation on the notated music presented in the score. The tempo, metric structure and number of bars comprising each section must be strictly maintained during each improvised repeat. The performer must use only those pitch classes indicated in the score during their improvisations. These are shown in boxes above the staff, each box positioned at the start of the bar in which the group of pitch classes becomes 'available' to the performer. Improvised repeats must use the same instrumentation as found in the written material and follow the same approximate pattern of instrumental entrances and exits. There must be a stylistic similarity between the performer's improvisation and the notated material.

For example, the first section of the work, marked 'A' in the score, is from bars 1–12. It has a tempo of around 72 crotchet beats per minute and is in common time, apart from bars 3–4 and 9–10 which are in 3/4. An improvised repeat of this section must also be exactly twelve bars long, in common time except for two clear regions of 3/4 in bars 3–4 and 9–10 of the repeat, and must be played at the same tempo as the notated A region. The vibraphone part in bars 1–2 of the improvised repeat must use only the pitch classes B, C, D flat and E flat, shown in the box above the staff, but these may be played in any register of the instrument. For the remainder of this article it will be easier to refer to these simply as pitches or notes. In bars 3–4 the note choices become A flat, A, B flat and B, as shown in the box above bar 3, and so on. The number shown in each box before the set of pitches is shorthand for the meter of the bars in which the pitches are available as choices.

Section A utilises the vibraphone throughout and the bao gong in bars 5–6 and bars 9–12. The improvised repeat should also mainly feature the vibraphone, but introduce the bao gong (but no other gong) in approximately the same locations as found in the notated material (bars 5–6 and 9–12, shown by the circled gong name above the staff). In section A the vibraphone typically plays closely spaced chords of long duration. These mainly occur in the low register of the instrument and are typically followed by dyads or single notes in the middle and/or high registers. The texture is rhythmically straight forward, most of the vibraphone's notes falling on the beat. The bao gong is also used in a fairly simple manner, although with a greater tendency for quaver motion than the vibraphone part. The vibraphone tends to alternate between *mezzo-forte* and a softer dynamic, whereas the bao gong alternates between *mezzo-piano* and a louder dynamic. All of these characteristics should be maintained during an improvised repeat of section A.

As evidenced above, the score of *Breadths of Topaz* presents a highly detailed framework for the performer's improvisations within the piece. Each performance of the work, therefore, will have an immediately identifiable similarity to other performances of the work. The eight notated sections of the piece will always occur, and be heard in the same order. Performances will vary as to the number of times each section is repeated, but the character of each improvised repeat should be fairly consistent from one performance to another. The score of *Breadths of Topaz* can be imagined, therefore, as outlining a journey through a sequence of musical ideas. The path that one follows through the piece is in many ways always the same but the performer is free to linger in one place if they want, or to move quickly ahead. The musical ideas encountered

on this path will retain the same essential qualities each time the journey is made, but the performer is free to explore and play with these qualities in different ways as they proceed.

Before continuing with a discussion of how the type of improvisation found in *Breadths of Topaz* relates to other approaches to musical improvisation, it will be useful to examine the work's construction in a little more detail. This will help make clear the exact nature of the musical materials the performer has to work with and the influence the arrangement of these materials is likely to have on the performer's improvisations (and the likely relevance of this for listeners). It will also aid in a clearer understanding of the aesthetic notions informing the piece.

One of the most challenging aspects of the work for the performer is likely to be keeping track of the pitch structures shown in the score, so these will be discussed first. The vibraphone part in *Breadths of Topaz* is drawn entirely from six four-note pitch collections (see Fig. 1). Each of these tetrachords has a different intervallic structure to the others. This is shown in Figure 1 by the bracketed numbers below each pitch collection, indicating the distance in semitones between each note of a tetrachord and the initial note of that chord (designated zero, as per set theory convention). The first tetrachord shown in Figure 1 consists entirely of semitones (when written in its most closely spaced form). The following chords gradually expand the tight structure of the first tetrachord. Thus the second collection has two semitones and one tone, the third has two semitones and a minor third, the fourth has two semitones and a major third, the fifth has one semitone (in the centre of the collection) and two tones and the sixth collection has two tones and a major third.

**Figure 1.** Tetrachords of *Breadths of Topaz*



The predominance of semitones in these collections stems from a desire to match the sound of the vibraphone part with the rich harmonic structure of the gongs. The gongs used in this piece, with the possible exception of the *bao* at softer dynamics, tend to produce many complex overtones which somewhat mask the fundamental pitch of the gong. The result is effectively a thick shimmering cluster of notes rather than a single clear pitch. The clusters of semitones found in most of the vibraphone's pitch material provide a means for the instrument to emulate this effect, allowing the vibraphone to connect to the sound world created by the gongs.

The progression from chords comprised of small intervals to those with larger intervals, shown in Figure 1, is not entirely systematic for the pattern of expansion established by the first four collections does not continue with the fifth and sixth collections. Collection five is not (0127) and six is not (0128), as might be expected from the earlier sequence of chords. Thus a clear progression from small to larger intervals is evident in the succession of tetrachords

shown in Figure 1, but one which is not bound by a rigid formula. This reflects a principle underlying much of *Breadths of Topaz*: the compositional structures within the work are typically flexible and approximate rather than the result of a precise system applied in an unvarying, predictable manner.

Sections A, B and F of the work utilise the tetrachords shown in Figure 1 in the following order: 2-1-5-3-6-4. This arrangement is shown in Figure 2. It creates an overall progression from closely spaced chords to more open-sounding chords, but one which is not completely linear. There are frequent reversals within the progression, creating a 'two steps forward, one step back' effect. The arrangement also results in a small amount of overlapping pitch content between one tetrachord and the next in the progression (shown by connecting dotted lines in Figure 2), although, in keeping with the principle stated above, the amount of overlap is not consistent. Thus tetrachords 2 and 1 have one note in common (the B), as do 3 and 6 (F) and 6 and 4 (G). Tetrachords 5 and 3 have two notes in common (D and F) but 1 and 5 have no notes in common. The small amount of overlapping pitch content creates a connection between one chord and the next which allows for an overall sense of continuity in the succession of chords.

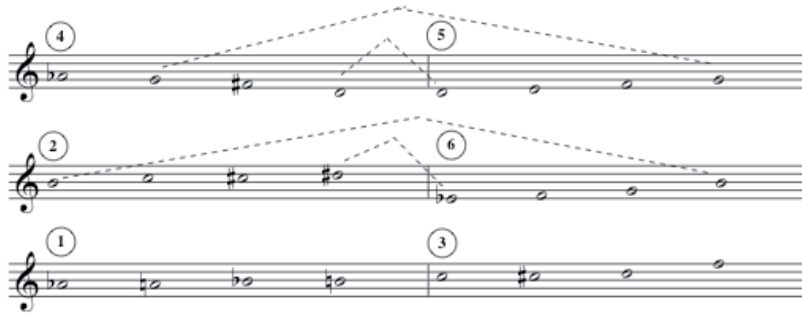
**Figure 2.** Tetrachords in sections A, B and F



Section E and the three sections grouped together as rehearsal letter C involve a different ordering of the tetrachords to that shown in Figure 2, one which tends to put greater emphasis on the notes in common between adjacent chords. This is shown in Figure 3. Thus chords 4 and 5 and chords 2 and 6 each have two notes in common. Once again, this overlapping relationship does not occur consistently between each pair of chords, for tetrachords 1 and 3 have no notes in common. The connections between chords 5 and 2 and between 6 and 1 are not considered in Figure 3 because, as can be seen in the score at letter C, there is a clear break in the texture at these points in the piece. This is not the case in section E, but this section can be regarded as a variation on C due to the obvious similarities in tempo and texture between the two regions. Thus the pitch relationships in E have a clear affinity with those in C.

The arrangement of tetrachords shown in Figure 3 functions to provide sections C and E with contrasting tonal characteristics to sections A, B and F. In addition to the differences already described, the arrangement of tetrachords in sections C and E also differs from that of sections A, B and F in that it does not involve an overall movement from closely spaced chords to more open ones.

**Figure 3.** Tetrachords in sections C and E



The derivation of the vibraphone part exclusively from six tetrachords that are used without transposition for the entire work is partly intended to facilitate the process of improvisation for the performer. If the performer's improvisations are to be fluent, the pitch content of the six tetrachords will have to be memorised. The indications of the tetrachords given in the score should serve only as prompts. Limiting the amount of memorization required of the performer to only six pitch collections makes the task of memorization more feasible than if a greater number of collections were used, while avoiding the potential monotony of sound that could occur if the piece were to be constructed from a smaller number. Limiting the content of each collection consistently to four notes also assists in the memorization process, while still permitting considerable variety in the improvised 'expression' of each pitch collection.

The limited pitch material of *Breadths of Topaz* will also aid in making the performer's choices during improvisation more intelligible to the audience. Listeners are more likely to be able to recognise the reoccurrence of specific tetrachords in the vibraphone part if there are only a small number of chords used in total during the work. Once listeners have formed an impression of the pitch repertoire of the work they will be in a position to judge the accuracy of the performer's improvisations (whether the correct notes are played). Listeners will also be able to compare the performer's treatment of a particular tetrachord at different times within the work. For example, the opening tetrachord B, C, D flat, E flat occurs in each section of the piece (apart from section D in which the vibraphone is silent). The continued restatement of this chord throughout the work makes it feasible for listeners to observe the various ways the improviser expresses the particular notes of the chord in the different textural contexts of the piece. In other words, the performer's creativity with the pitch material should be more transparent to the audience if the audience has a greater awareness of what that pitch material is.

The metric structures found in the piece reflect many of the same considerations as discussed above for the pitch structures. Sections A, B and F have the same metric structure, specifically, two bars of 4/4, two bars of 3/4 then another two bars of 4/4, then a repeat of this entire pattern. The sections of C and E are consistently in 3/4 while D is consistently 4/4. Each section of the work is given a clear tempo indication (with a slight leeway) which the performer must adhere to in order to create a definite sense of meter. In other words, excessive rubato which might obscure the meter is not appropriate for this piece. Thus it should be played with a generally steady sense of beat within each section.

The changes in meter that occur in sections A, B and F largely correspond to changes in the tetrachordal structure. For example, the opening chord (B, C, D flat, E flat) is expressed across two bars of 4/4 but the next chord (A flat, A, B flat, B) occupies two bars of 3/4. The introduction of the third chord (D, E, F, G) corresponds with a return to 4/4. The alignment between pitch and meter enhances the perceptibility of the structures governing each since a simultaneous change in two parameters is more likely to be noticed by a listener, and recognised as the start of something new, than change in a single parameter. In other words, the change to 3/4 at the introduction of the second tetrachord draws attention to this pitch change, and the pitch change draws attention to the new meter.

The metric structures of *Breadths of Topaz* are intended to facilitate the process and perception of improvisation within the work in a similar manner to that described for the pitch structures above. To achieve fluent improvisation, the performer will be required to memorise the meter of the bars which correspond to each pitch collection. The use of only two types of meter in the piece, both simple and familiar, will obviously assist in this, while still allowing some metric contrast between the various sections of the work to occur. The alternation between two time signatures, occurring within sections A, B and F and also between these sections and the remaining regions of the piece, creates fairly straight forward metric structures that should be readily grasped by most listeners. These structures provide another means by which the audience may judge the accuracy and creativity of the performer's improvisation, functioning in a similar way to that already described for the work's pitch structures.

The performer of *Breadths of Topaz* will also have to be quite familiar with the number of bars assigned to each tetrachord (and with the total number of bars in section D, which contains no tetrachords), as well as with the meter of the bars. This characteristic has also been designed to be fairly straight forward, to facilitate ease of improvisation for the performer and ease of intelligibility for listeners. Sections A, B and F contain tetrachords which are consistently of two bars duration whereas the chords of sections C and E are consistently one bar long. Furthermore the total number of bars in each section of the work, and the distribution of tetrachords and different meters within the section (where appropriate), allow for the creation of regular phrase lengths by the performer. Sections A, B and F are twelve bars long, easily inviting phrases of four or six bars length if the performer wishes. Section C is clearly divided into three four-bar phrases while D is eight bars long and E six. The performer may choose to divide section D into phrases of three and five bars, for example, but the work clearly provides for a more regular approach to phrasing.

The least quantifiable aspects of the work involve the general style or character of each section. This includes the sorts of rhythmic figures found in each section, the types of texture present, the instruments and playing techniques used, the relationships between the instruments and the details associated with things such as dynamics, pedaling and so forth. Although hard to quantify, many of these aspects of the piece are still fairly easy to discern from the score. They involve straight forward processes based on continuity or contrast which should be easily accommodated by the improviser.

For example, each section of the work involves a specific instrumentation. The different gongs are gradually introduced one by one as the piece unfolds, starting with the bao gong in section A. The chao gong joins the bao in section B and the opera gong appears at the end of this section. The tiger gong is not heard until the third of the C sections. This ordering moves

from the simplest gong sound (the bao) up to the most complex and arresting (the tiger). The vibraphone is silent in section D, whereas the sections of C and E feature only a single gong type in each region. These characteristics are clearly evident in the score and should be readily understood as aspects of the work to be maintained during improvisation.

Other, equally clear textural processes by which the improviser should be guided occur throughout the work. For example, sections A, B and F, taken together, involve an increasing integration between the vibraphone and the gongs. The gongs are used sparingly in A, sounding largely in alternation with the vibraphone phrases. A somewhat closer arrangement occurs in B, the gongs sounding within some of the vibraphone phrases (bars 20–23, for example). And in section F vibraphone and gongs frequently have a dovetailed relationship (bars 55–56, for example) and may be struck simultaneously (as in bars 59–60). Sections C, D and E provide contrast with the sections described above, D by way of omitting the vibraphone altogether and shifting the focus entirely to the gongs (including the introduction of scrapes and rolls as playing techniques), and C and E by emphasizing a faster, more linear type of vibraphone playing than occurs in other parts of the work.

All the parameters discussed so far, the pitch and metric structures, the bar-lengths of each section, the patterns of instrumentation and the general relationships between the instruments, may be said to concern background and middleground characteristics. The most variable parts of the work, as one would expect, lie in the foreground details. These are the small-scale melodic and rhythmic figures, and the phrases they combine to produce, that most listeners are likely to give greatest attention to. They are the focus of most listeners' moment-by-moment perception of the work, what is often simply regarded as 'the music.' It is this all-important foreground level of detail that the improviser creates through their choices of which vibraphone notes to play and which gong sounds to produce, and what duration and dynamic to give to each. The stylistic characteristics of the notated material should guide the performer in this, providing a series of musical ideas which may be repeated, varied, developed or manipulated in other ways during improvisation.

The compositional design of *Breadths of Topaz*, discussed above, embodies a particular approach to improvisation, one involving a specific attitude towards many of the key issues generally associated with improvisation. These include the importance of a shared musical language between performer and audience, the concept of skill in improvisation, the connection between improvisation and the idea of surprise, and the notions of risk and safety during improvisation and the implications these qualities have for the resulting performance (whether exciting or dull). The way these issues are treated in *Breadths of Topaz* constitutes the aesthetic of the work, as far as improvisation is concerned. To clarify this aesthetic it will be useful to compare the ideas found in *Breadths of Topaz* with some of the principal views on improvisation found in writings on the subject.

The issues described above are closely interrelated; it is difficult to raise one without immediately invoking all the others. But a convenient starting point might be the notion of a shared musical language between performer and audience. Some commentators on improvisation feel that without a shared language, improvisation becomes essentially meaningless. For example, Robin Moore, thinking mainly in terms of traditional Western art music, considers that improvisation 'is only an effective means of expression when incorporating a vocabulary, whether cognitively or intuitively understood, common to a

group of individuals.<sup>2</sup> Harold Budd, coming from a jazz background, agrees, saying that improvisation only ‘works’ when a shared musical language is involved.<sup>3</sup> Philip Alperson notes the importance of learned pitch and rhythmic structures as the basis of improvisation in the Carnatic music of southern India,<sup>4</sup> and Lee B. Brown observes a similar situation in Iranian classical improvisation.<sup>5</sup> Paul Griffiths suggests that a primary factor in the decline of improvisation within the Western classical tradition in the early twentieth century was the loss of a common musical language possessed by both composers and audience. He says that ‘the lapsing of improvisation is understandable in a musical culture that was rapidly losing those elements of common practice on which improvisation depends.’<sup>6</sup>

In contrast to this, Matthew Sanson notes that musicians such as Cornelius Cardew and Derek Bailey, to name two of the better-known ‘free’ improvisers who came to prominence in the 1960s, hold the opposite view to that expressed above. Improvisation as understood by Cardew and Bailey and their associates is a type of performance in which the process of sound production, that is, the improvised experiments in sound conducted by the performers, is the predominant justification for the activity.<sup>7</sup> In this view the point of improvisation is not to communicate with the audience via a shared musical language but to explore new, previously untried musical possibilities. One might say that for free improvisation of this type to be deemed successful, the audience must necessarily be unfamiliar with what they hear. In Bailey’s view, performers in an improvising ensemble should also be unfamiliar with each other’s approaches to improvisation, for this tends to produce the least predictable results. He says that once performers have rehearsed enough together to become familiar with each other’s playing styles, a sort of ‘deterioration’ occurs in their improvisations.<sup>8</sup>

For free improvisers such as Bailey, the notion of ‘skill’ in improvisation seems mainly connected to an improviser’s ability to explore new sounds on their instrument, to avoid lapsing into familiar playing styles and techniques, and to experiment with different ways of interacting with other members of an improvising group.<sup>9</sup> But the idea of skill in improvisation takes on a different meaning when the improviser is working with a musical language shared with the audience. The language will typically involve particular harmonic and melodic characteristics and will often contain specific structural requirements. In other words, the language will have a musical vocabulary and syntax. These qualities are evident, for example,

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<sup>2</sup> Robin Moore, ‘The Decline of Improvisation in Western Art Music: An Interpretation of Change,’ *International Review of Aesthetics and Sociology of Music* 23.1 (1992): 64.

<sup>3</sup> Quoted in Barney Childs, Christopher Hobbs, et al., ‘Forum: Improvisation,’ *Perspectives of New Music* 21.1 (Fall/Winter 1982): 53.

<sup>4</sup> Philip Alperson, ‘On Musical Improvisation,’ *Journal of Aesthetics and Art Criticism* 43.1 (Autumn 1984): 23.

<sup>5</sup> Lee B. Brown, ‘Musical Works, Improvisation, and the Principle of Continuity,’ *Journal of Aesthetics and Art Criticism* 54.4 (Autumn 1996): 354.

<sup>6</sup> See Bruno Nettl, et al., ‘Improvisation,’ *Grove Music Online*, Oxford Music Online [accessed 28 Sep. 2009] <<http://www.oxfordmusiconline.com.ezp.lib.unimelb.edu.au/subscriber/article/grove/music/13738pg2>>.

<sup>7</sup> Matthew Sanson, ‘Imaging Music: Abstract Expressionism and Free Improvisation,’ *Leonardo Music Journal* 11 (2001): 31.

<sup>8</sup> Quoted in Childs and Hobbs, ‘Forum: Improvisation’: 52.

<sup>9</sup> See for example, Derek Bailey, *Improvisation. Its Nature and Practice in Music* (London: British Library National Sound Archive, 1992) 95–98.



in the fugal improvisations attributed to J.S. Bach and the chord progressions of most jazz tunes.<sup>10</sup> An improviser's mastery of a musical language, their ability to fulfil the requirements of the language while also demonstrating creativity during performance, can be defined as their 'skill' in improvisation. When the audience is also familiar with the musical language they will be able to judge the extent of the improviser's skill.<sup>11</sup>

Alperson observes that musical improvisation can be viewed as both an act and a product.<sup>12</sup> Bailey and Cardew focus on the first of these possibilities, emphasizing the process of improvisation, whereas the other commentators mentioned above tend to focus on the musical product that results from improvisation. These two approaches are often characterised as the experimental and the avant-garde views of music, the latter maintaining a stronger connection to traditional musical practices.<sup>13</sup>

Despite the differences between these two approaches described above, there are aspects of musical improvisation upon which they tend to converge. One recurring idea, held by writers with otherwise quite opposing views, is summed up by Brown, who notes that 'with many genres of improvised music, there is a tacit assumption that players will try, if they can, to surprise us.'<sup>14</sup> The importance attached to unpredictability by free improvisers such as Bailey and Cardew clearly reflects this idea, for it equates to an avoidance of sounds or musical gestures that might be expected by the audience, and the avoidance of expectation is often felt to lead to a (perhaps mild) sense of surprise in listeners.<sup>15</sup>

Many representatives of a more traditional type of improvisation also regard 'surprise' as a central expressive concern for the improviser, as Brown indicates. For example, Carl Czerny, who learned the art of improvisation from Hummel and Beethoven, declares that improvisation should be like 'a beautiful English garden,' well planned but 'full of surprising variety.'<sup>16</sup> Lukas Foss echoes this sentiment. Foss is one of the few contemporary composers who has approached improvisation from an avant-garde point of view rather than an experimental one. His Improvisation Chamber Ensemble, active in the late 1950s and early 1960s, adhered to a specific musical language worked out by Foss, and improvised within pre-composed structures.<sup>17</sup> The group rehearsed extensively before performing, recording themselves so that they could judge where 'certain results are worthy of remembrance and where we ought to proceed in a different manner.'<sup>18</sup> Although Foss's approach is clearly at odds with the experimental view of free improvisers, he nonetheless felt that improvisation should be 'full of surprises for the listener and for the performer as well.'<sup>19</sup>

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<sup>10</sup> See Alperson, 'On Musical Improvisation' 20–22.

<sup>11</sup> Alperson, 'On Musical Improvisation' 22.

<sup>12</sup> Alperson, 'On Musical Improvisation' 17.

<sup>13</sup> In particular, see Michael Nyman, *Experimental Music: Cage and Beyond* (London: Macmillan, 1974) 4.

<sup>14</sup> Brown, 'Musical Works' 354.

<sup>15</sup> See, for example, Leonard B. Meyer, *Emotion and Meaning in Music* (Chicago: Chicago University Press, 1956) 29.

<sup>16</sup> Carl Czerny, *A Systematic Introduction to Improvisation on the Pianoforte*, transl. and ed. Alice L. Mitchell (New York: Longman, 1983) 1–2.

<sup>17</sup> See Lukas Foss, 'The Changing Composer-Performer Relationship: A Monologue and a Dialogue,' *Perspectives of New Music* 2.1 (Spring 1963): 47–48.

<sup>18</sup> Lukas Foss, 'Improvisation versus Composition,' *Musical Times* 103 (1962): 685.

<sup>19</sup> Foss, 'Improvisation versus Composition' 684.

Another idea often applied to all types of improvisation is that an improvised performance will involve a high degree of musical 'risk.' Ed Sarath, for example, notes that improvisers cannot stop and reflect on the music they have just created, the way a composer working on a score can, but must continually dwell in the musical present.<sup>20</sup> This puts the improviser in a 'precarious' position, according to Alperson, since the improviser cannot go back and revise what they have done. Alperson suggests that this quality occasions different listening habits wherein the improvisation is judged according to 'what has proven to be possible within the demands and constraints' of the activity.<sup>21</sup> Brown observes that the quality of risk is one of the factors that gives improvisation its distinctive 'presence' compared to other forms of music making.<sup>22</sup>

Some writers have suggested that if the risk element becomes diminished in improvisation through over familiarity with a particular improvising context (a product of too much rehearsal) then the resulting performance is likely to be dull. This seems to be what Bailey is referring to when he talks of the 'deterioration' that sets in as players get to know one another. Foss, at the opposite end of the spectrum to Bailey, came to the same conclusion. The extensive rehearsals undertaken by his ensemble tended to produce a very secure type of playing which Foss describes as 'safe.' Dissatisfaction with this development led Foss to abandon the group.<sup>23</sup>

The attitude to improvisation found in *Breadths of Topaz* accords more with an avant-garde aesthetic, as discussed above, than with an experimental one. This is not to imply that the experimental approach of free improvisers such as Bailey and Cardew lacks validity; far from it. It's simply that *Breadths of Topaz* reflects a different interest. In particular, the pitch and metric structures of the work, and the processes governing texture, instrumentation and so on, discussed in the first part of this article, attempt to create what can be considered a shared language between performer and audience. Even though the audience will initially be unfamiliar with the technical basis of the piece (unless they have heard it before), the relative 'transparency' of the compositional materials employed in *Breadths of Topaz* should be readily apprehended by listeners, allowing them to grasp the language of the piece as it unfolds. As previously discussed, the audience should be able to identify the constraints within which the improviser is working and thus be able to appreciate the skill and creativity with which the improviser incorporates these constraints into his or her playing.

Contrary to many commonly held views of improvisation, I do not feel that improvisation need be any more concerned with 'surprise' than any fully notated piece. The association between improvisation and surprised reactions in listeners seems one of convention rather than something stemming from the nature of improvisation itself. Improvisation within *Breadths of Topaz* is directed towards creative ways of realizing the compositional structures of the piece. Given that these structures are designed to be easily perceived by listeners, no valid 'solution' presented by the improviser will come as a complete surprise. Recognizing the language of the piece, listeners should always hold expectations as to the continuation of a phrase which the

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<sup>20</sup> Ed Sarath, 'A New Look at Improvisation,' *Journal of Music Theory* 40.1 (Spring 1996): 4–5.

<sup>21</sup> Alperson, 'On Musical Improvisation' 27.

<sup>22</sup> Brown, 'Musical Works' 365.

<sup>23</sup> Karen Perone, *Lukas Foss: A Bio-Bibliography* (New York: Greenwood, 1991) 6.

improviser should fulfil.<sup>24</sup> In other words, listeners will expect certain notes, meters, textures and instrumentation to follow what they have just heard, and these things will most likely follow. But this does not mean that listeners will be able to predict the specific details of what the improviser will play next, for there are virtually an unlimited number of different paths through the musical foreground of the work. So it might be best to say that improvisation in *Breadths of Topaz* should strive to be skilful and interesting (in the manner of a notated sonata for example) rather than involving Czerny's surprising variety.

This writer also cannot agree with the notion that improvisation necessarily involves greater risk (that is, the chance of some type of failure) than non-improvised music. In fact, the reverse often seems more accurate. For example, in a fully notated work, any deviation from the score is considered a mistake, but in a freely improvised piece where nothing is specified in advance, one can argue that mistakes of this sort are impossible. A performance in which mistakes are impossible is free of the main source of 'risk' (and anxiety) experienced by musicians.

Where a clear structure for improvisation exists, such as in *Breadths of Topaz*, some element of risk will be present for the performer since errors in the execution of the structure are possible. One can say that risk is the concomitant of skill; if it is possible to demonstrate skill in the manipulation of given compositional materials there must necessarily be a risk that the materials will be incorrectly handled in some way by the improviser. When the audience shares the language of the piece and is therefore capable of recognizing the improviser's skill it is also necessarily capable of recognizing any mistakes that are made. But, as noted by Alpers above, the audience is likely to be more forgiving of mistakes when they occur in an improvised context than if they occurred during the performance of a fully notated work. When technical short-comings are considered to be an acceptable part of performance the sense of risk associated with them diminishes.

If improvisation in *Breadths of Topaz* is mainly concerned with the foreground details of the piece, the various materials given to the performer in the score ensure that the improvisations within the work are governed by coherent, musically logical background and middleground structures. This in a sense frees the performer from the responsibility of having to create meaningful structures at these levels of organization. It allows the improviser to dwell fully in the perceptual present, experiencing the 'vertical' sense of time that Sarath suggests is the most natural realm of the improviser.<sup>25</sup>

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<sup>24</sup> These ideas stem mainly from the work of Meyer, *Emotion and Meaning in Music*, and Eugene Narmour, *The Analysis and Cognition of Basic Melodic Structures. The Implication-Realization Model* (Chicago: University of Chicago Press, 1990).

<sup>25</sup> Sarath, 'New Look at Improvisation' 1.

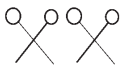
### Gong notation

centre rim edge

9" opera 12" bao 14" tiger 15" chao

scrape

### Score annotations



Four soft vibraphone mallets



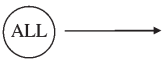
Three soft vibraphone mallets, one hard plastic glockenspiel mallet



Available pitches for improvisation, 4/4 meter

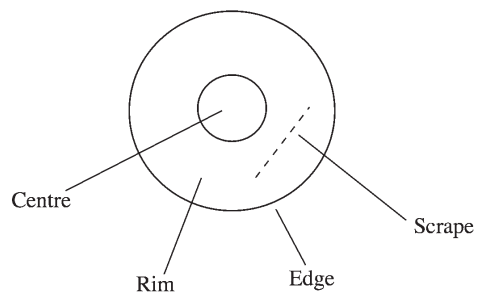


Indications of specific gongs



All gongs available throughout the section

### Gong playing positions



# Breadths of Topaz

For vibraphone and gongs

Martin Greet

*The purple could not keep the east,  
The sunrise shook from fold,  
Like breadths of topaz, packed a night,  
The lady just unrolled.*

*Day's Parlor*, Emily Dickinson

**A** Andante ♩ = c. 72 

4 B C D♭ E♭      3 A♭ A B♭ B      4 D E F G (bao)

7 4 C C♯ D F      3 E♭ F G B (bao)      4 A♭ G F♯ D (bao)

**B** Moderato ♩ = c. 100

13 4 B C D♭ E♭ (chao)      3 A♭ A B♭ B (chao)      4 D E F G (chao) (bao)

19 **4 C C# D F** (chao) **3 E♭ F G B** (bao) (chao) **4 A♭ G F# D** (chao) (bao) (op)

*mf* *p* *mf* *p* *mf* *mp* *mp* *mf*

**C** Allegro ♩ = c. 120

25 (chao) **3 A♭ G F# D** **3 D E F G** **3 A♭ G F# D** **3 D E F G**


*mf* *poco rit.* *mp*


29 (op) **3 B C D♭ E♭** **3 E♭ F G B** **3 B C D♭ E♭** **3 E♭ F G B**


*mf* *f* *mp*


33 (tiger) **3 A♭ A B♭ B** **3 C C# D F** (tiger) **3 A♭ A B♭ B** **3 C C# D F**





*f* *mf* *poco rit.* *mp*

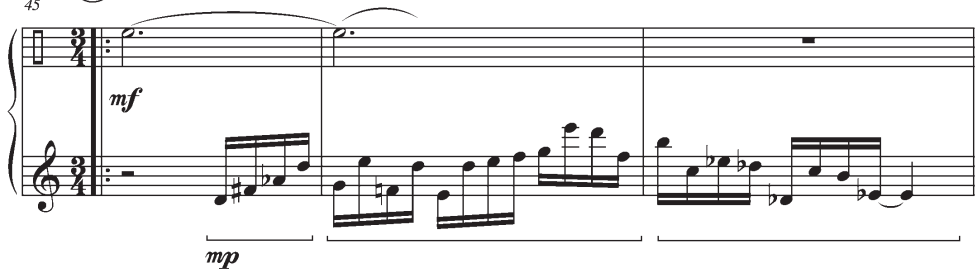
D Andante ♩ = c. 72 





37 

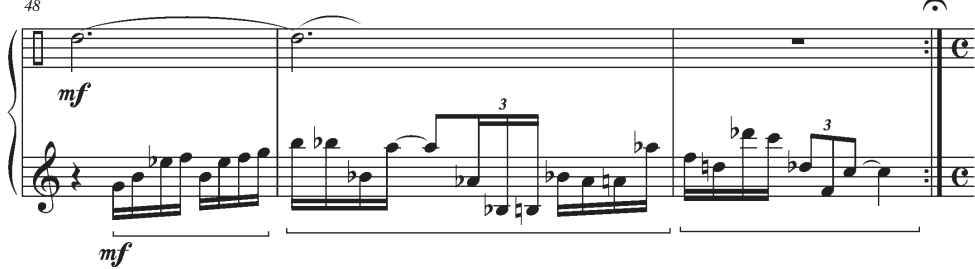


E Allegro ♩ = c. 120 

45    



48    



**F** Moderato ♩ = c. 100

4 B C D♭ E♭ (ALL) → 3 A♭ A B♭ B

51

*mf* *mp* *mp* *mf* *mp* *p*

55

4 D E F G 4 C C♯ D F

*mf* *mp* *f* *mf* *mp* *mf* *f*

59

3 E♭ F G B 4 A♭ G F♯ D

*f* *mp* *f* *mp* *p* *mf* *mp*

*rit.*