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M.Mus 07 Aug 1976
AN ANALYSIS
OF
MUSIC FOR JAPAN
BY
PETER SCULTHORPE.

by Diana Blom.

Submitted in partial fulfillment
to a Master of Music.
Sydney University.
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A capital letter (e.g. C) indicates a note of no specific octave.

Vl i and ii - First violins divided into two groups.
Vll i, ii and iii - Second violins divided into three groups.
Chapter One: Introduction.

Music for Japan was commissioned by the Australian Broadcasting Commission for the Australian Youth Orchestra to play at Osaka, Japan, during the 1970 Exposition. The world premiere of the work took place on May 25th, 1970, at a Melbourne Youth Concert, two months earlier than the first official Japanese performance in the Festival Plaza on July 18th, 1970, at Exposition '70, in Osaka.

A recording has recently been released by Electrical and Musical Industries (E.M.I.) of Music for Japan (Stereo SOELP 9721 - Series 259), performed by the Australian Youth Orchestra, and conducted by John Hopkins, together with works by Percy Grainger, Benjamin Britten, Ralph Vaughan Williams and Armas Jarnefelt. Of the work, Peter Sculthorpe writes on the record cover:

'...Written especially for the Australian Youth Orchestra, 'Music for Japan' is quite adventurous in its sonorities and in the means required to produce these. It might be called a 'sound piece', because, like my 'Sun Music' series, it's made up of sound-impressions. Much as I enjoy writing melodies, in this work I've used no conventional melodic shapes, in order to give more fully an abstraction of my feelings.

'Music for Japan' is scored for normal orchestra, with amplified percussion. Rather than provide a detailed programme note, I should like to say only that the work lasts for approximately twelve minutes; this may give the listener a sense of shape and flow within a certain period of time.'

1. Alan Bonds - jacket notes for Australian Youth Orchestra, conducted by John Hopkins. (E.M.I. Stereo SOELP 9721 - Series 259.)
Indeed, Music for Japan has no melodies in the conventional sense, but variety of texture, rhythmic variety and tone colour compensate for their absence. Rhythm in particular has a dominant role to play, culminating in the central section Feroce which revolves entirely around strong rhythm patterns. The following section, Feroce ma ben misurato, continues this rhythmic importance but in a different style — by the use of simultaneous and staggered blocks of rhythmic patterns.

While composing Music for Japan Sculthorpe was also engaged in writing an essay on the changing role of rhythm in Western music, to be delivered in Japan.² In this study he explains how music began with rhythmic subtlety, then, as harmonic interest developed rhythmic interest declined. He continues by saying that in the early twentieth century, Webern decided to destroy metre and did so totally. Meanwhile some other twentieth century composers were looking to the East for rhythmic impulses — e.g. Stravinsky to Russia, Messiaen to India, Bartok to Rumania and Hungary.³ Although some of Sculthorpe's statements are exaggerated his interest in both rhythm and metre can be realised.

The Japanese influence on Music for Japan is very small. When it appears it is an imitation of a particular sound rather than an assimilation of the essence of a specific Japanese musical genre. The accelerando timbale pattern at the beginning of the work, for

3. From a conversation with the composer in August, 1971.
example, used as a percussive punctuation figure between the smooth string 'liberamente' passages, is frequently used in Japanese percussion patterns and thus provides a strong aural link with Japanese music. Sculthorpe himself mentions three other such influences: (1) the high nōkan sound (a nōkan is a Japanese transverse flute) used in both no and kabuki theatres, which he adopts in the flute parts of the Lontano and Feroce misurato sections; (2) the two E major brass triads in the final Calmo section which represent the opening and closing bell; and (3) the chord at (20) representing the 'darkness of Japan'.

Although the influence of Japanese music is small, the Australian influence is wide and less obvious.

All my pieces since the Sonatina have a programme of some kind, an extra-musical idea or image. Sometimes, in some works, I don't want to give the ideas away, but certainly it will have been very important to me in the writing of it.

This statement was printed in 1969, but it may be considered valid for Music for Japan, written a year later, as well. The record notes of the E.N.I. recording give the following programme:

Perhaps I should have called this work 'Music for Japan from Australia', because I want the Australian Youth Orchestra to take to Japan music that says something of my own country. If the view of desert and sea, bush and city seems a personal one, it's because I want also to send music that says something about me. Some of the most memorable times of my life have been in Australia and Japan.

---

6. Australian Youth Orchestra recording. Liner notes by Alan Bonds.
In the same record notes Sculthorpe mentions *Music for Japan* being "quite adventurous in its sonorities, and in the means required to produce them". This may provide a link between *Music for Japan* and the works immediately before and after it, *Love 200* (for pop group and orchestra, first performed in February 14th, 1970) and *Dream* (first performed in September 22nd, 1970), as all three depart from the carefully detailed and precise written style he employed before, through the use of passages of controlled improvisation.

Before Sculthorpe left for England in November 1971, several copying mistakes were discovered in the score which have since been corrected. However, since his departure, more probable errors have been found which, due to time and distance, could not be verified by the composer. Wherever the latter occur they are indicated by a separate note in the text of this thesis.

Originally *Music for Japan* contained passages in sections three and four where the double bass players were required to stamp their feet. This foot stamping had to be deleted when the composition was performed by a professional orchestra because of a Musician's Union rule which specifies the payment of double rates to the double bass players for their brief transformation into percussionists during these short passages.
Chapter Two: Terminology and Notation.

In *Music for Japan* the terminology used is predominantly in Italian with some use of French and English, and many of the notation symbols are derived from those of the modern Polish school of composition.

Peter Sculthorpe's penchant for Italian words at the beginning of each section, for example Calmo, Lontano and Feroce, provides unusual and in most cases, suitable terms for the atmosphere created. The term Calmo is used for both the first and last sections of the work where the overall rhythm and pitch movement is small and subtle and the dynamic level generally low with few sudden changes apart from the punctuating percussion passages at (1) and (3). Lontano meaning distant, suits the small, tightly controlled sound of the second section; *Moon*, the second of the three piano pieces *Snow, Moon and Flowers* is also headed Lontano and achieves a similar sound. Feroce translates into English as ferocious¹, and this is defined in the *Oxford English Dictionary* as 'fierce, savage, savagely cruel or destructive'.² The third section of *Music for Japan* labelled Feroce, is not cruel, savage or fierce music and thus the term seems unsuitable - the word also contains a destructive or disordered implication which is quite unreconcilable with the carefully controlled style of Peter Sculthorpe's music. The term Deciso, 'decided, with decision, firmly not flabbily'¹, used in *Sun Music III* at (13) for a passage with-

a strong regular rhythm is a possible alternative heading for the third section of Music for Japan.

In Ketjak the term Feroce is used for the short opening ten measure passage which leads straight into the regular rhythm and strong impact of the amplified bongos in the following section, Feroce, ma molto misurato. This second section is more akin in style to Feroce than Feroce ma ben misurato in Music for Japan even though the latter section bears a similar title. The combination of amplified bongos, piccolo and grande, accents and strong dynamic markings suit the term Feroce, ma molto misurato in Ketjak but the similar traits in section three of Music for Japan have only the term Feroce to direct them which seems inadequate. The term Feroce ma ben misurato in Music for Japan however, describes well the strong simultaneous rhythms used in the fourth section.

'Liberamente' used as a direction for many passages in the work, always means 'that the given pattern should be continued to the end of the bracket or ligature; players should be quite independent.'

At (1a) and (3a) the word 'liberamente' is added to the timbale accelerando pattern but is not needed due to the clarity of the notation used.

```
\text{Timbales. (liberamente)}
```

The combining of the fraction $\frac{16}{6}$ with the word 'liberamente' creates two opposing meanings - the fraction gives an equal division of six gong strokes into sixteen seconds and 'liberamente'

3. Instructions given at the front of the score.
means the player is quite independent, but of what or whom? - perhaps of the \(\frac{16}{6}\) direction or of the other instruments being played simultaneously. Surely the symmetry of the timbale/bongo pattern at (7)a is not meant to be totally destroyed by application of the word 'liberamente' between the two players.

Ex. 2.

At (7)b however, the term is suitably applied to the cellos and double basses; in Feroce to the same pizzicato style of string playing used at (15)ms. 11-13; to the 'quasi guitar\'a' violin passages from (15) ms. 3-5; in (17) m.5 to the horns and violins and m.7 in the trombones, bass trombone and tuba; and at (20) the woodwind and timpani glissando 'liberamente' from 'any very high or low note'.

At (2),(4),(22), and (24) the term 'liberamente' is used to guide all the movement in the strings, woodwind and brass. For these sections the word 'liberamente' is further defined in the front of the score: 'In sections (2)-(5) and (22)-(25) players should proceed from note to note independently of each other; any player who completes the section before the right hand signal

4. Instructions given at the foot of the page. (Pages 7 and 9.)
should play from the beginning of the section until the signal is given. These notes should be sounded with the least possible attack. The notation used in these passages forms the notes visually, into evenly spaced parallel chords. Therefore, the combination of the term 'liberamente' and the notation gives the desired aural effect, but there are weaknesses. Firstly the visual chords formed are not aurally present and secondly the movement of each instrument within each instrumental group is not visible in the score. In Music of Rain, (first performed October 12th, 1970) written after Music for Japan, a similar method of notation is used with a few modifications - the notes are still written vertically as chords, and the word 'liberamente' is written above the passage, but a ligature is added, extending beyond the thirteen notes given which shows more clearly the idea of repeating notes until directed to stop. The following instructions are given at the front of the score of Music of Rain - 'Proceed from note to note independently of each other - any player completing the section before the right hand signal is given should play from the beginning of the section until the right hand signal is given.' The notation used on page 25 of Music of Rain, aurally similar to passages (2),(4),(22),(24) of Music for Japan, gives a clearer visual representation of the sound achieved.
By changing the words 'very rapidly' in the instructions to 'independently', the same sound as the 'liberamente' passages of (22) and (24) would result.

*Music of Rain* contains many of the other notation symbols used in *Music for Japan* but with modifications and improvements. The 'liberamente' pizzicato string style at (7), (10) and (15)ms. 3-5 in *Feroce of Music for Japan* is also used in the strings of *Music of Rain* but without the word 'liberamente' and with an explanation of the notation in the front of the score.

The term 'liberamente' is eliminated from many passages of *Music of Rain* through use of different notations and modification of those used in *Music for Japan*.

Many of the symbols used in *Music for Japan* are derived from those used by the modern Polish school of composers, others are
traditional or Peter Sculthorpe's own.

\[\hat{f}\] - 'play between bridge and tailpiece'. (e.g. (8) ms. 10-14 double basses). This is used also in Music of Rain, Sun Music III and Sun Music I (here it includes 'strings to be struck with back of bow between bridge and tailpiece.') by Sculthorpe and in Fluorescences and Anaklasis by Penderecki.

\[\hat{f}\] - 'play any very high note' (e.g. (9) ms. 11-12) and \[\hat{f}\] - 'play any very low note' (e.g. (15) brass) are used in Sun Music I, Sun Music III, and Ketjaks (in the woodwind and brass) to name only three works. In Penderecki's scores the symbol is used for 'highest (or lowest) tone of instrument'.

\[\hat{f}\] - The curved line placed after many percussion and all pizzicato double bass notes implies the direction 'allow tone to ring on' as used in Penderecki's scores (rephrased as 'allow tone to fade away'). In Music for Japan double bass and percussion notes without the line are part of a rhythm pattern, the curved line being placed on the last note of each pattern, although presumably the unmarked notes are also allowed to ring on.

\[\hat{f}\]

Ex. 6.

As no percussion notes are marked with a rapid cut-off sign, the use of this curved line seems superfluous.

5. Symbols written out in the front of the score.
At the end of Feroce (17) ms. 5-6 horns indicates a 'free continuous glissando covering a wide range' with a different symbol being used for a 'slow glissando to and from any very high or very low note' on the timpani at (20c). Penderecki uses a similar symbol for a 'very slow vibrato with a range of a quarter tone'.

Quick upward glissando. (e.g. (15)ms. 13 horns.) This is also used in Music of Rain and Sun Music III, and in Ketjak both this sign and written in Music for Japan as ('a number of quick upward glissandi - e.g. (17)ms. 9-10. horns) are used.

The foot stamping symbol (e.g. (18) double basses) appears to be Peter Sculthorpe's own, as are the visual signs for use of amplification (e.g. (1) Percussion 2 and 3) which are not used in the amplified passages of Ketjak.

- a ligature showing the duration of a note or notes is used in Music for Japan but for a style which is to continue to the end of the ligature rather than just one note, and usually in conjunction with the term 'liberamente'. (e.g. (15)ms. 3-4 strings.) The same sign and interpretation are used in Music of Rain minus the left side stroke.

Groups of notes joined across the bar line by a ligature as used in Lontano, are also found in the string section of Irkanda IV at (4).
The symbols used in *Music for Japan* therefore, are adapted by Peter Sculthorpe either from his own works or from other scores to suit his requirements and thus become an integral part of his style.
Chapter Three: Structure.

Music for Japan has five sections. The first and last marked Calmo use the same basic material and are similar aurally whereas sections two and four, based on similar material, do not sound related. This five part structure is similar to that used in Tabuh Tabuhan written before Music for Japan, where movements one and two are closely related by material and sound to movements five and four respectively.

Sculthorpe describes the structure of Tabuh Tabuhan as follows:

The five movements are planned according to the following symmetrical scheme:

\[
\begin{array}{cccccc}
1 & 11 & 111 & IV & V \\
A_1 & B_1 & C & B_2 & A_2
\end{array}
\]

$A_1$ and $A_2$ are basically quick movements, both stemming directly from music used to accompany the dance in classical Balinese theatre. In contrast with the outer movements, $B_1$ and $B_2$ are without melodic line and regular pulse, and are made up of a series of sound patterns not unlike my recent Sun Music series. $C$, the central and longest movement.

In Music for Japan the central section is also the longest.

Music of Rain written after Music for Japan is also made up of five movements but only parts one and five are related.

Each section of Music for Japan consists of a number of repeated patterns based on rhythm, pitch or loudness. When the three patterns combine and are repeated, a structural phrase is formed. The patterns varying from half a section to one or two measures in length, may be altered by expansion

1. Taken from the annotations on the record cover of 'Australian Composers', a series of recordings released by the Australian Broadcasting Corporation. The annotations were written by the A.B.C.
(augmentation), contraction (diminution), or inversion of material when repeated. Structural phrases may involve either the complete orchestra or a small group of two or more instruments.

Calmo (1) and (21).

Between or within Calmo (1) and (21), use of structural phrases usually involves the complete orchestra and is thus both aurally and visually well defined. There is often augmentation or diminution of the dynamic level from one part of the structural phrase to its repetition. At (21)a the distinctive sound of amplified bongos (used also in Ketjak) in Calmo (1)a, is replaced by a chord (the 'Sculthorpe' chord 2) whose structure is similar to those used in Irkanda IV and Sun Music 1.

Structural phrases in and between Calmo (1) and (21).

All instruments - (1)-(2),(3)-(4) Dynamic level augmented and in retrograde. Strings and woodwind - (2)-(3),(4)-(5).

Brass and timpani - (5)-(6),(6)-(7). Dynamic level diminished.

All instruments - (21)-(22),(23)-(24). Dynamic level diminished in percussion 1 and brass.


All instruments - (4)-(5),(24)-(25). Ex.(7)

2. See page 71.
Ex. 1(a).

Structural phrases in Calmo (1) formed by the combination of pitch/rhythm/loudness patterns.

Calmo (1). -(7).

<table>
<thead>
<tr>
<th>Pitch</th>
<th>12''</th>
<th>48''</th>
<th>12''</th>
<th>48''</th>
<th>16''</th>
<th>16''</th>
<th>8''</th>
<th>8''</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhythm, Wk &amp; Strings</td>
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<td>Rhythm, Double Bass</td>
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<tr>
<td>Loudness</td>
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<tr>
<td>Rhythm, Brass</td>
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<tr>
<td>Loudness</td>
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<tr>
<td>Rhythm, P1</td>
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<td>P2</td>
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<td>P3</td>
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<tr>
<td>Loudness</td>
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<tr>
<td>P1</td>
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<td>P2</td>
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</table>
**Ex. 7 (b)**

**Calmo (21) - (26).** Structural phrases in Calmo (21) formed by the combination of pitch/rhythm/loudness patterns.

<table>
<thead>
<tr>
<th>Rhythm (W/s strings)</th>
<th>Pitch</th>
<th>Loudness</th>
<th>Rhythm (Brass)</th>
<th>Pitch</th>
<th>Loudness</th>
<th>Rhythm (P1)</th>
<th>Pitch</th>
<th>Loudness</th>
<th>Rhythm (P2)</th>
<th>Pitch</th>
<th>Loudness</th>
<th>Rhythm (P3)</th>
<th>Timp.</th>
<th>Loudness</th>
<th>Timp.</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

(21) a' b' c' (22) 22'' a (23) a' b' c' (24) 16'' a' b' 16'' (25) a' b' c' d' e' f' (26)
Lontano.

Lontano has two structural phrases, two and fourteen measures long, each repeated once. Structural phrases involving small groups of instruments are contained within the large structural phrases.

Structural phrases in Lontano.

Lontano has five rhythm layers -
1. V.1 and 11, cellos.
2. Violas and woodwind.
3. Double basses.
4. Percussion 3.
5. Percussion 1,2 and timpani.

Two pitch layers -
1. V.1 and 11, violas, cellos and double basses, horns and trumpets.
2. Percussion.

Four dynamic layers -
1. V.1 and 11, cellos, woodwind, brass.
2. Percussion.
3. Double basses.
4. Violas.

Structural phrases.

Strings - (8)ms. 1-14,(9)ms. 1-14.
Brass - (9)ms. 11-12, 13-14.
Percussion 1,2,3 and timpani - (9)ms.3-6,7-10.
Woodwind, horns, timpani, Percussion 2 - (9) ms. 15-16,17-16.
Brass - (9)ms. 7 and 8.
Woodwind - (9) ms. 11-12,13-14. Ex.8.
Ex. 8. Lontano. Structural phrases in Lontano formed by the combination of pitch/rhythm/loudness patterns.

<table>
<thead>
<tr>
<th>Rhythm</th>
<th>P.1, 2, P.3</th>
<th>Tide</th>
<th>Pitch</th>
<th>Percuss.</th>
<th>Loudness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viol. I &amp; II Cello</td>
<td>Ulos</td>
<td>BB-Bb</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ulos, viol.</td>
<td>BB-Bb</td>
<td>BB-Bb</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DB's.</td>
<td>BB-Bb</td>
<td>BB-Bb</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pitch</td>
<td>Strings, Loudness</td>
<td>Ulos, viol.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOTE:</td>
<td></td>
<td>Cello, Bbs.</td>
<td></td>
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</tr>
<tr>
<td>DB's.</td>
<td>f</td>
<td>mf</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ulos.</td>
<td>f</td>
<td>mf</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhythm</td>
<td>P.3</td>
<td>P.3</td>
<td></td>
<td></td>
<td></td>
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Structural Phrases.
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**Structural Phrases:**

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Ex. 8. Lontano.

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Feroce.

Feroce uses structural phrases involving either a complete subdivision (e.g. (12)-(13)), the connecting six/eight measures or a part of these. In the percussion section and the timpani, pitch, rhythm, and dynamic patterns are rotated between instruments. For example at (13), the percussion 3 pitch and rhythm pattern occurring at (12) is used by percussion 2. From (12)-(13)-(14) the dynamic level increases from mf to f to ff. This section combines strong syncopated brass rhythms (similar to those of Feroce ma ben misurato), the free 'liberamente' string style (used also in Calmo (1) and (21) and the connecting passages at (7) and (10)), and a continuous driving percussion ostinato.

Feroce has nine rhythm layers -
1. Timpani
2. Percussion 1.
4. Percussion 3.
5. Trumpets.
6. Horns.
7. Trombones, Bass trombone and Tuba.
8. Strings.

Seven dynamic layers -
1. Timpani.
2. Percussion 1.
4. Percussion 3.
5. Brass
6. Strings.
7. Double basses.

Three pitch layers.
1. Brass.
2. Strings and double basses.
3. Percussion and timpani.
Structural phrases in Peroce.

Percussion and timpani - (12)-(15),(15)-(18).

Strings and brass - (15)-(16),(16)-(17).

Trumpets, trombones, bass trombone, tuba, percussion and strings
(17)ms. 7-8, 9-10

All instruments - (17)ms. 5, 6.

All instruments - (17)ms. 1-2, 3-4.

Percussion 2 and 3. - (12)-(13),(13)-(14). Inverted.

Ex. 9.
Ex. 9. Feroce.  

**Structural phrases in Feroce (17)-(18)**

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**Structural Phrases.**
Feroce ma ben misurato

Feroce ma ben misurato contains two structural phrases of two and eight measures each, repeated. The larger structural phrase is situated at the end of the section instead of at the beginning as in Lontano.

Feroce ma ben misurato has four rhythm layers -
1. Trumpets.
2. Horns.
3. Woodwind, strings, low brass.
4. Percussion 1, 2, 3, and timpani.

Eight Pitch layers -
1. Woodwind, strings.
2. Percussion 1.
4. Percussion 3.
5. Timpani.
6. Trombones, bass trombone and tuba.
7. Trumpets.
8. Horns.

Two dynamic layers -
1. All instruments.
2. Percussion 2 and 3.

Structural phrases in Feroce ma ben misurato.

All instruments - (18)ms. 1-2, 3-4.

All instruments - (18)ms. 5-12, (19)ms. 1-10. Pattern length augmented by two one/four measures, timpani triplet rhythm pattern augmented, and the dynamic level of percussion 2 and 3 diminished.

All instruments (except trumpets) - (18)ms. 5 and 6, 7 and 8. Percussion 2 and 3 interchange the pattern.

All instruments - (18) ms. 9-10, 11-12. Ex. 10
Ex. 10.

**Structural phrases in**

**Farce na ben**

**Farce na ben muzirodo.**

muzirodo.

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Ex. 10. Ferro ma ben musicato.

continued.

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There is very little growth in Music for Japan - each section is a short, non-developing piece. The formation of structural phrases limits the continuous development of material from one section or passage to the next. Instead, development results through use of similar or contrasting material from one pattern 'block' or structural phrase to the next. The general increase in dynamic level from Calmo (1) through to (20) and subsequent decrease to (26) is the only evidence of continuous growth in the work, but this too breaks down into a number of repeated dynamic patterns. The alteration of a dynamic marking by one level when repeated helps to give continuity to the dynamic direction. e.g. (25)a and d - mp-p to p-pp in the timpani.) At (26) the diminuendo begun at (20) is given a fresh attack before being allowed to die away completely, therefore forming a 'dynamic coda'.

The two outer Calmo sections form a cycle both aurally and structurally with the coda at (26).

Ex.11

\[
\begin{array}{cccccc}
A & B' & C & A^2 & A \\
\end{array}
\]

A similar cyclic structure occurs in Lontano due to the repetition of the opening material in a four measure coda. ((9)ms.15-18).

Ex.12

\[
\begin{array}{ccccccc}
& 2 & 4 & 2 & 6 & 6 & 17 & 18 \\
(5) & (9) & & & & & & \\
\end{array}
\]

Both Lontano and Feroce ma ben misurate can be split into two repeated halves of fourteen and eight measures respectively. Feroce may be described as a set of six variations or subdivisions.
on a rhythm pattern, the first three for percussion alone, the last three accompanied by the strings and brass. The last four measures of each subdivision have a cadential role and the two six/eight measures between subdivisions (11),(12),(13) and (14),and subdivisions (15),(16), and (17) are connecting measures. The two short passages at (7) and (10) link Lontano with Calmo and Feroce and also serve as a contrast between the three sections.

Each section contains a climax - Lontano and Feroce ma ben misurato build up to the eleventh and third measures of each half respectively. The insertion of two one/four measures at (19)ms. 7 and 10 in Feroce ma ben misurato provides a relaxation in tension before reaching chord (20). Feroce has a gradual build up which climaxes at the beginning of Feroce ma ben misurato.

There is a culminating point for each parameter used in Music for Japan. 1.Intensity - chord (20) is the loudest passage.

2. Rhythm - Feroce has the most regular and driving rhythm.

3. Pitch - The two Calmo sections and chord (20) use the complete tone-row.

4. Chord (21) is the most consonant chord and is also the climax in use of pitch E.

5. Chord structure - (20) is the most dissonant chord.

6. Feroce ma ben misurato has the greatest aural impact due to the combination of pitch,rhythm and loudness.
Chord (20) is the culminating point of three parameters and therefore forms the main climax point in the work. The complete Feroce ma ben misurato section, the E major chord at (21) and the chord at (20) have the greatest aural impact in the work, the first loud and percussive, the second consonant, soft and static, the third dissonant, loud and static.

The double basses open E string is used throughout the two Calmo sections as a structural pillar. It is never heard solo in these two sections. Their entries coincide with all the right hand duration markings and many of the left hand subdivision markings thus punctuating the beginnings and endings of the instrumental passages. The double basses pizzicato for a large part of the Calmo sections and change to arco only when a sustained passage in another instrument is about to be played. e.g. at (4)b and (24)b. In Lontano and Feroce, the double bass rhythm patterns are independent of the other string patterns.
Chapter Four: Rhythm.

Music for Japan uses four different rhythmic styles ranging from free and non metric to metric. The four types can be seen in the following sections: 1. Lontano - low dynamic level and metric; 2. Feroce ma ben misurato - loud and metric with a percussive rhythm; 3. Placed between these two sections, Feroce has an accented and regular rhythm; 4. The two Calmo sections alternate rhythm patterns with a free style and are both non metric.

Throughout Music for Japan the individual rhythmic motives combine to form rhythmic patterns usually of one or two measures length. These rhythm patterns are repeated and combine to form a rhythmic structure which may or may not combine with pitch and dynamic patterns to form a structural phrase.

Calmo.

The two Calmo sections are free and consist of alternating passages of sustained chords and 'liberamente' string movement, i.e. static and moving sound. Sculthorpe's penchant for even numbers, in particular use of two and four second duration markings between (25) and (26), imposes a slight regular pulse on the music.

Rhythmic patterns are repeated either within the section, (e.g. the accelerando timbale pattern (1)a and (3)a), between sections, (e.g. the gong strokes at (4)b and (24)b), or both.
(e.g. the gong and crotali (1)-(2),(3)-(4) and (20)g-(22),
(22)g-(24) - the gong trill is extended in length in Calmo (21).

The interlocking timbale/bongo pattern at (7)a is not repeated anywhere else in the work but instead contains two halves, the second half being the inversion or retrograde of the first.

This pattern forms the climax to the timbale accelerando pattern of (1)a and (3)a; firstly through the use of the same instrument in combination with another of similar timbre (i.e. bongos); secondly the increase in complexity of the rhythm patterns by the combination of inversion or retrograde within one pattern and the inversion of the appoggiatura of (1)b.

Within the Calmo sections four contrasting levels of rhythmic movement are heard; 1. the sustained brass and string chords and percussion rhythms of (1) and (3); 2. the 'liberamente' passages of (2) and (4); 3. the static brass chord at (5); 4. at (5)a the entry of rapidly repeated trumpet notes.

Between the symmetrical bongo/timbale pattern of (7)a, the assymmetrical pizzicato cello and double bass pattern of (7)b and the unaccented trills on maracas, bass drum and bongos beginning at (7), a similar contrast in rhythmic movement is used.
Lontano.

Lontano consists of a fourteen measure phrase (8)-(9) which is repeated with a four measure coda from (9)-(10). In the second half of the section (9)-(10), the woodwind (flutes and clarinets), timpani and Percussion 1 each add another rhythmic layer and thus increase the intensity of the rhythm. The coda, made up of a two measure pattern repeated once, forms a double arch structure due to the return of the unison $g$ duplets of (8)ms. 1-2 and (9)ms. 1-2.

\[
\begin{align*}
(8) & \quad 2 \quad 3 \quad 4 \\
(9) & \quad 2 \quad 3 \quad 4 \\
15 & \quad 16 & \quad 17 & \quad 18
\end{align*}
\]

Coda.

Ex. 14.

In the first four measures of Lontano three types of rhythmic repetition are used: 1. between the two notes of the first measure; 2. the repetition of the first measure in the second; and 3. the repetition of the first two measures in the following two.

Ex. 15.

\[
\begin{align*}
(8) & \quad 2 \quad 3 \quad 4 \\
\text{Violin 1} & \quad 2 \quad 2 \quad 2 \quad 2
\end{align*}
\]
Expansion and contraction in the number of notes of each instrument can be seen in the following instruments: 1. violas alternate between one and two chords per measure (e.g. (8)ms. 12-13); 2. flutes between two and one notes per measure (e.g. (9)ms. 11-12); 3. double basses between one, three, (or two as the motive $\begin{array}{c} \hline 1 \\ \hline \end{array}$ is closely related to the appoggiatura of Percussion 2 at (1)a and is thus basically one note) one, three (two) and one notes per measure (e.g. (8)ms. 10-14); 4. in the final four measures the flutes have one note per two measures; 5. the horns combined, have two notes per measure in the coda; and 6. no percussion instrument has more than one attack per measure. In the final four measures, therefore, the number of notes per measure diminishes. Nowhere in the section does any instrument have more than two attacks per measure. The one possible exception is the double bass appoggiatura motive (8)ms. 11, used also in the flutes at (9) m. 11 which is the only quick movement in the whole section.

The percussion and timpani patterns are all repeated and form a balanced rhythmic structure.

Ex.16. (8)

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<tbody>
<tr>
<td>P.2</td>
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<tr>
<td>P.3</td>
<td></td>
<td>D</td>
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</tbody>
</table>

The three percussion groups are all written in triple meter.

Only the guiro, bass drum and timpani (the latter playing duplets) play on beats other than the first of each measure and none of these, with the exception of (9) ms. 15-17 in the timpani, are played by any other instrument simultaneously. The sandblock, maracas and cymbals always trill in Lontano. At (9) ms. 15-16 (timpani and bass drum), the pattern of (9) ms. 4-5 (timpani and guiro) is reversed.

Ex. 17.

Together the viola and double bass patterns at (8) ms. 11 and 13 form the only triple measure complete with three attacks, in the section; a hemiola rhythm results as this triple measure combines with the duplets in the rest of the string group.
The second violins, cellos and brass double the first violin rhythm to (9) m. 14. In the coda however, the brass return alone to the opening unison g duplets.

The rhythmic motives and patterns used in Lontano are of three types; duplets, three quaver beat rhythms or combinations of the two. When these are taken over two measures, six basic triplet patterns, two duplet patterns and one combination pattern emerges. Ex.19. Combined vertically, three more rhythm patterns are formed, duplets and triple beat patterns being kept separate. In all of these only one measure per pair is new material.

Ex. 20

\[
\begin{array}{c}
\text{(8) ms. 9-10} \\
\text{Triplets.} \\
\text{(9) ms. 11-12}
\end{array}
\]
Ex. 19.

Rhythm Patterns & Motives used in Lenkano.

Triple Rhythms.

P.2. 3
(8) mm. 5-6.

Unh. 1
mm. 5-6.

Ulas.
mm. 11-12.

Double Bass
mm. 10-12.

P.1.
(9) mm. 3-5.

W.W.
mm. 11-12.

P.2.
mm. 15-16.

Unh. 1
(8) mm. 1-2.

Timpani
(9) mm. 5-6.

Horns
mm. 15-16.

Horns
mm. 15-16.

Duple.

1.

2. 2a.

3. 2b.

4. 5. 1a.

1a. 3. 1a.

6. 2b.

3.

7. 7.

8.

7a.

8. 7a.

9. 1a.

8. 1a.
Feroce.

Feroce can be described as a set of six variations on a rhythm pattern (11)-(12). The first three variations for percussion instruments alone are repeated in the following three, accompanied by string and brass instruments.

Ex.21

\[
\begin{align*}
A' & [12 \times \frac{3}{8} + 2 \times \frac{6}{8}] \\
B' & [12 \times \frac{3}{8} + 2 \times \frac{6}{8}] \\
C' & [10 \times \frac{3}{8}] \\
D' & [10 \times \frac{3}{8}] \\
& \text{Percussion + Timpani.} \\
B^2 & [12 \times \frac{3}{8} + 2 \times \frac{6}{8}] \\
C^2 & [12 \times \frac{3}{8} + 2 \times \frac{6}{8}] \\
D^2 & [10 \times \frac{3}{8}] \\
& \text{Brass and Strings.}
\end{align*}
\]

This addition of instruments in variations four to six ensures a continual expansion of sound throughout the section.

The three rhythm patterns between (11)-(12) all have four measures, use the same twelve note pattern of two pitches with three notes per measure and are derived from the inter-
locking bongo/timbale pattern at (7)a. The third and fourth measures of each four measure pitch pattern are derived from the first and second: measure one is measure three in inversion; measure two is measure four in retrograde.

In these four measure patterns the usual western divisive rhythmic groupings of eight/eight (e.g. 4+4, or 2+2+2+2) are discarded in favour of the three additive groupings 3+3+2, 3+2+3 and 2+3+3. All three are derived from the first and are varied by rotating the duple beat one place to the left. These divisions are used in the music of many countries:

3+3+2 - 1. the South American **rumba**,

2. the Mexican **son**,

3. Rumanian folk music,(also used in Six Dances in Bulgarian rhythm No. 6 for piano, from Mikrokosmos Vol. VI and Rumanian Folk Dances for Orchestra by Béla Bartók).

4. Rice pounding music of Indonesia.

5. African drumming.
6. The Greek Heterogeneous Polypodies of which the
dochmaic or oblique meter is 123, 456, 78.2.
3+2+3 - Found in Macedonian music.3 (also in Six Dances in
Bulgarian Rhythm, No. 4, Mikrokosmos Vol. VI by Bartók).
2+3+3 - 1. Bulgarian music.3

2. Rumanian music. (and also in Music for Strings,
Percussion and Celeste by Bartók, combined with 3+3+2.)

Peter Sculthorpe suggested the influence of an Indian tāla
on his choice of rhythm patterns in Feroce.4 The tāla
Kehārvā, used in film and popular music, always has eight 'beats'
and can be any combination of the 3+3+2 grouping.5 As this is
not a classic Indian tāla and therefore not well known, Scul-
thorpe must have heard it sometime and retained the patterns
in his memory.

Similar regular and repeated rhythm patterns are used also
in Rain, the Opening Music and Water Cupping Music, in How
the Stars were Made, Seashore and in Feroce ma molto misurato
of Ketjek. All these passages involve the timbales and/or
bongos plus the tabla in How the Stars were Made.

The two connecting six/eight measures at the end of

New York. P. 90, Ex. 27; P. 136; Pp. 40-41, Ex. 8.
5. From Rebecca Adriaensz own study on the subject.
subdivisions (variations) (11), (12), (13), (15) and (16) form a five arch structure which links up the subdivisions of the section.

<table>
<thead>
<tr>
<th>(11)</th>
<th>(12)</th>
<th>(13)</th>
<th>(14)</th>
<th>(15)</th>
<th>(16)</th>
<th>(17)</th>
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</thead>
<tbody>
<tr>
<td>$\frac{6}{8}$</td>
<td>$\frac{3}{8}$</td>
<td>$\frac{3}{8}$</td>
<td>$\frac{6}{8}$</td>
<td>$\frac{6}{8}$</td>
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<td>$\frac{3}{8}$</td>
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<td>$\frac{6}{8}$</td>
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</tr>
</tbody>
</table>

Ex.23.

The quaver duplets of the six/eight measures (similar to those in Lontano) change the divisive grouping of the previous twelve measures by placing an additive rhythm of four quaver beats (only three are struck) across a measure of six quaver beats, thus cancelling the triple metre inherent in six/eight time.

Ex.24.

\[
\begin{array}{ccccccc}
\frac{6}{8} & \frac{2}{8} & \frac{2}{8} & \frac{2}{8} & \frac{2}{8} & \frac{2}{8} & \frac{2}{8} \\
\end{array}
\]

There are three divisions of six in each six/eight measure:

1. the trumpets \( \frac{6}{8} \) i.e. a three/four grouping.

2. the horns, trombones and percussion 1 and 2 \( \frac{6}{8} \) i.e. duplets.

3. double basses and percussion 3 \( \frac{6}{8} \) i.e. duplets.

Above the first twelve measures of the bongos (11)-(12) the claves have a four measure pattern repeated once and a two measure pattern repeated once. Ex.25.
This arrangement of (eight/eight) 4+4+2+2 (six/eight) 2+2 measures is retained in all instruments in all subdivisions except from (14)-(15) and (17)-(18). In these two subdivisions however, the ten measures are similarly arranged - a two measure pattern repeated once, a one measure pattern repeated once and another repeated two measure pattern.

Ex.26.

The final four eight/eight measures in each subdivision have a cadential role due to the change to two two measure patterns.

The bongo pattern of subdivision (11)-(12) is retained in Percussion 2 from (12)-(13) and inverted in the timbales (Percussion 3) from (13)-(14). From (13)-(14) the timbale pattern of (12)-(13) is played in the bongos.

Ex.27. (11) (12) (13) (14)

<table>
<thead>
<tr>
<th>Bongos</th>
<th>Timbales</th>
</tr>
</thead>
<tbody>
<tr>
<td>A'</td>
<td>A^2</td>
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<tr>
<td></td>
<td>A'</td>
</tr>
</tbody>
</table>
The rhythmic 'theme' of the variations (11)-(12) is therefore developed in Percussion 3 (12)-(13); the accented notes form the same rhythm pattern (but a different pitch pattern) as the 'theme' and material is rotated on from one subdivision and instrument to the next.

(12) m. 3 - 4.

\[
\begin{array}{c|cccc|c}
\hline \\
\text{P.3.} & \text{Ex. 28.} & \text{Ex. 29.} \\
\hline \\
\text{There is a close relationship between the Percussion 1 patterns of each subdivision. From (11)-(15) the second beat of each pattern rotates from the second, fifth, second, fifth, fourth, to sixth quaver in the measure.} \\
\end{array}
\]

<table>
<thead>
<tr>
<th>(11)</th>
<th>(12)</th>
<th>(13)</th>
<th>(14)</th>
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<tbody>
<tr>
<td>1</td>
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<td>1</td>
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<td>1</td>
<td>4</td>
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<tr>
<td>1</td>
<td>6</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>
The two timpani subdivisions (13) and (14) are also based on related material—

\[(13)\text{ ms.1} \quad 2 \quad 3 \quad 4\]

\[\text{Rhythm motives } A+D \text{ are rotated from } A\text{DA (13) ms.1.}\]

\[\text{Ex.30.}\]

As the importance of Percussion 2 and 3 decreases the role of the timpani increases.

Feroce builds in rhythmic intensity and complexity by the development of rhythm patterns in each instrumental part.

(12)-(15) of the percussion and timpani are repeated from (15)-(18) with strings and brass added and with side drum and timpani tremelos in the final four measures. The string and brass material of (15)-(16) is repeated from (1b)-(17) with dynamic changes, and the gradual build up in sound is retained.
by the addition of the timpani patterns at (16). In these three subdivisions, the brass and strings retain the (eight/eight) 4+4+2+2 (six/eight) 2+2 measure grouping of the percussion instruments, with (eight/eight) 2+2+1+1+2+2 remaining in the final subdivision.

All rhythmic patterns in the brass and strings are repeated either within themselves (e.g. (16)ms. 1-2 trombone, bass trombone and tuba), in the following measures (e.g. (16)ms. 9-10, 11-12 horns), or both (e.g. (16)ms. 1-2 5-6, trombone, bass trombone and tuba). (17)ms. 7 and 9 in the trumpets is an extension of the appoggiatura from Percussion 2, (1)b. (17) ma. H.

Ex. 31.

A gradual forward rotation is seen in the position of the notes in each measure.

Ex. 32. Quaver beads from (16)-(18) in brass + strings on which rhythm patterns begin and end.
The numbers eight and twelve are used consistently in Feroce; 1. in the time signatures eight/eight and two measures of six/eight; 2. the division of twelve eight/eight measures per subdivision into eight plus four measures and from (17)-(18) into four plus two plus four measures.

The following pitch patterns emerge in the rhythm/pitch patterns of the percussion.

Ex. 33.
Feroce ma ben misurato.

Feroce ma ben misurato combines the
methods of repetition used throughout *Music for Japan*:

1. the two part structure of a whole section (e.g. (18)ms. 1-2, 3-4, 5-12, (19)ms. 1-10).

2. repetition of rhythmic patterns (e.g. (18)ms. 7-8 trumpets).

3. repetition of notes within one pattern (e.g. (18)ms. 4 horns).

Many of the rhythm patterns of Lontano are used in Feroce ma ben misurato. Ex. 34.

At (19)ms. 6 and 9, hemiola results from the triplet patterns in the trumpets and timpani.

Ex. 35.

(19)ms. 5

\[\begin{array}{c}
\text{Brass.} \\
\text{Timpani} \\
P. 2+3
\end{array}\]

\[\begin{array}{c}
\begin{array}{c}
\frac{3}{4} \quad \frac{3}{4} \quad \frac{3}{4} \\
\frac{3}{4} \quad \frac{3}{4} \quad \frac{3}{4}
\end{array}
\end{array}\]
Ex. 34. Rhythm motives and patterns of *Faroce ma bein misurato.*

\[(18)\]

1a. 

1b. 

1c. 8.

9. 6.

10. 8a.

11. 12.

13. 1b.

12a.
Feroce ma ben misurato is made up of four rhythmic layers, three of which begin simultaneously, the fourth entering in (18)m. 7. The intensity and complexity of rhythm in this section is therefore increased by the entry of each instrumental group - 1. trumpets, 2. horns, 3. strings and woodwind combined, 4. timpani and percussion - and also by the development of rhythm within each part. All instruments develop their rhythm patterns and motives from the opening appogiatura or single note motive:

1. At (18)m.7 the trumpets have a one note extension -  
   a diminished quicker version based on the appogiatura -  
   and a two note extension forming a triplet pattern -  
2. the horn has a four note extension  
3. woodwind, strings, trombones, bass trombone and tuba, percussion 1 and the timpani continue with either the appogiatura or single note from the opening measure simultaneously.
4. at (19)ms. 5-7 the timpani pattern of (18)ms. 9-11 is augmented into a triplet figure -

\[ \text{Timpani.} \]

\[ \text{Ex. 36} \]

5. Percussion 2 and 3 combine these two motives, the appogiatura and the single note, into an interchanging five measure pattern.
Throughout Feroce ma ben misurato the trumpet rhythm patterns never occur simultaneously with the appoggiatura or single note rhythm pattern in the woodwind, strings, timpani, trombone, bass trombone and tuba.

The augmentation of the second half of Feroce ma ben misurato by inserting two one/four measures at (19)ms 7 and 10, provides a break in the metric regularity before reaching the climax at (20).

There are two rhythmic climax areas in Music for Japan: firstly Feroce has an accented and driving rhythm; secondly, Feroce ma ben misurato is the loudest and naturally the strongest section due to use of simultaneous and staggered blocks of rhythm in a percussive style.

Two methods of increasing rhythmic complexity are used in Music for Japan - 1. each instrument adds a different layer of rhythm e.g. Lontano; 2. the rhythmic complexity of each instrumental part is developed e.g. Feroce. A combination of both methods is used in Feroce ma ben misurato.
Every rhythmic pattern in *Music for Japan* is repeated. The one exception, the Percussion 2 and 3 rhythmic pattern at (7)ab contains repetition within itself - one half is the inversion or retrograde of the other.

Intensity of rhythmic drive increases towards Feroce ma ben misurato and from there decreases to the end. *Calmo* (1) and (21) provide a free and relaxed beginning and end to the work, in contrast to the regular and percussive rhythms of the third and fourth sections.
Chapter Five: Duration and numbers.

The linking together of the duration markings and numbers used in *Music for Japan* seems to yield a pattern, as they are closely associated with the numbers twelve and eight. Twelve is the number of notes in the original tone row. In *Ferocious* the two numbers are used consistently. (see Chapter Four)

In the score two sets of duration markings are given, one set for the right hand signals for important structural divisions, the other set for left hand signals for all attacks in the unmeasured passages. These right and left hand signals and the system of second markings are also used in *Music of Rain*.

Repetition, expansion and contraction used in the overall structure of *Music for Japan* are also applied to the duration marking patterns in the two Calmo sections, and form a duration structure. In many of the repeated duration patterns the material used is the same; for example:

(4)-(5): 48" 16" 16" 16" and at (24)-(25): 48" 16" 16" 16".

Calmo. Ex. 38.

\[
\begin{array}{cccccccc}
Q'' & 48'' & 12'' & 64'' & 8'' & 8'' & 20'' \\
\end{array}
\]

Different Subdivisions.

\[
\begin{array}{cccc}
20'' \\
(10) & 2'' & 6'' & 2'' & 4'' & \phi & 6' \ (11) \\
\end{array}
\]

Different Subdivisions.
The duration of the complete work is circa 12 minutes. All
right hand markings are divisible by four. The metronome mark-
ings for Lontano (c. 48), Feroce (c. 60) and Feroce ma ben misurato
(c. 96) are all divisible by twelve and expand at the ratio of
four to five to eight. The metred sections each contain an even
number of measures - Lontano 32ms, Feroce 90ms and Feroce ma ben
misurato 22ms.

The opening of Calmo (1) uses expansion by four, from (1)
12" - (2) 48" repeated from (3)-(4). In Calmo (21) the second
part of the pattern is contracted by 24" - (21) 12" - (22) 24",
(23) 12" - (24) 48". The total duration of Calmo (21), 112",
is smaller than the total of Calmo (1), 136", both totals being
divisible by eight. At (26) the difference between the minimum
and maximum time allowed is eight seconds.
In Calmo (1) and (21) the duration markings of the double basses between one pizzicato note and the next, and the length of each arco pédal form a balanced duration structure. Ex. 39.

```
(1) 12" (2) 24" (2a) 24" (3) 12" (4) 16" (4a) 16" (4b) 16"
(5) 8" (6) 8" (4)
(21a) 8" (22) 28" (23) 8" (24) 16" (24a) 16" (24b) 16"
(25) 6" (28) 6"
```

Talking about his music Peter Sculthorpe says -

The piano Sonatina was the first piece that I wrote in which the bars are arranged in symmetrical patterns. For example, one never finds an isolated bar-pattern of 4/8 + 2/8; the arrangement is always 4/8 + 2/8 + 4/8 + 2/8. All the bar-patterns are symmetrical in this piece (the Sonatina), and have been since that time.1

These symmetrical measure patterns and the 'expansion' and 'contraction' of time signatures is found also in Music for Japan in Feroce (6/8, 6/8, 8/8, 8/8) and Feroce ma ben misurato ((19)ms. 7-10, 1/4, 2/4, 2/4, 1/4).

The codas of Lontano and Feroce and the introduction of Feroce ma ben misurato are all four measures long.

At (4)b and (24)b the gong fraction \( \frac{16}{6} \) contains twice eight as the top figure and half twelve as the lower figure, i.e. augmentation and diminution of the dominant numbers.

Chapter Six: Pitch and Chord Structure.

A symmetrical tone row containing all intervals is the source of all pitch patterns in *Music for Japan*. Many chords in the work are constructed from the tone row used vertically. Chords not formed this way use the intervals of the tone row, in particular the minor second, in a chord construction which Sculthorpe has used in many of his works since the piano Sonatina.

Pitch.

Calma (1) and (21).

The tone row used in *Music for Japan* is the 'symmetrical all-interval series'\(^1\) used by Luigi Nono in his choral work *Canto Sospeso* where it is pitched initially on A.

Ex. 40

\[
\begin{align*}
\text{Nono - Canto Sospeso.}
\end{align*}
\]

'The second half of this type of series is symmetrical with the first half...... the second half is therefore a transposed retrograde of the first half. In this kind of series the tritone interval always occurs between notes six and seven and between the first and last notes.'\(^1\).

In *Music for Japan* the tone row, found in its original form in VII.ii, is pitched on e'\(^2\). Sculthorpe has raised:

2. Movement of each instrumental part which is indiscernible on the score, has been checked on the parts held by Boosey and Hawkes.
the seventh and ninth notes in the second half of the tone row by an octave, so that the intervals form the same visual pattern in retrograde, as the first half. The eleventh note however, remains lowered as in the tone row used by Nono.

Ex. 4.1.

This results in the elimination of all major and minor sixths and major sevenths - the tenth interval remains an augmented sixth.

The notes of the tone row ascend and descend outwards by semi-tone giving qualities of expansion, symmetry and repetition.

Three versions of the tone row are used in the Calmo sections:
1. the original tone row on E (in four instruments),
2. the transposed inverted tone row on C (in four instruments),
3. the transposed original tone row on E flat (in two instruments).

These three pitches are a minor third and minor second apart, intervals which are contained within the tone row.

In Calmo (1) the tone rows begin on the 1, 4, 7 and 10th notes and in Calmo (21) on the 3, 6, 9 and 12th notes. In each section the starting notes are three places apart. All other appearances of the complete tone row in Music for Japan begin on either the 4, 7 or 10th notes.

The halves of the tone rows beginning on the first and
seventh notes are the retrograde of each other; the halves of tone rows beginning on the fourth and tenth notes are each symmetrical from the two outer notes in to an augmented fourth (or diminished fifth).

At (2) in VII, the original tone row on e' beginning on the first note, is combined with the inverted tone row on c' beginning on the first note and the transposed original on e flat' beginning on the seventh note. The inversion on c' and the original on e' are aurally the same (in inversion) but many of the notes are enharmonically altered.

Ex. 42.

Ex. 43.
Similar enharmonic changes occur in all versions of the tone row. Each group of instruments has an original version of the tone row pitched on \( E \) coupled with the inversion on \( C \) both beginning on a note at the same position in the row. This forms a visual expansion and contraction in the pairs of instruments clearly seen in the notation of the 'liberamente' Calma passages. The cellos and second violins divide into three parts, the third instrument having an original transposed tone row pitched on \( E \) flat beginning on the fourth and seventh notes respectively.

The combination of the different starting notes of each tone row, the different pitch of each tone row and the freedom of playing allowed by each player systematically guards against any recognisable melodic or harmonic pattern emerging.

(technically - however the element of chance in the 'liberamente' passages of Calma means that the possibility of a series of simultaneous chords being played is not to be rejected)

In Calma (1) the only note altered completely in any tone row is the \( d \) flat" of \( \text{VII i} \), which doubles the same pitch in \( \text{Vl i} \). This change is needed to strengthen the sound of the minor ninth \( c'-d \) flat" discord in the opening chord.

The correct starting note of \( \text{VII i} \), \( c' \) is heard in \( \text{VII iii} \).
The altered d flat" is retained in VII i in Calmo (22) although its doubling function is now non-existent.

At (21)c the strings form a chord which involves the alteration of the first two notes in the tone rows of VI and VII.

Many of the correct notes of the tone rows of VI and VII are played in the violas and cellos and thus a partial completion of the rows is theoretically possible.

Ex.45.

The d flat' of the tone row of bassoon 1 has been changed to b flat at (4) note 4 and (24) note 8 possibly to ensure a pleasant sound when played by a member of the Australian Youth Orchestra. However the original d flat' is retained as note 4 (2).

In both Calmo sections notes of the tone row are altered:

at (1) to strengthen a discord, at (22) to form two chords.

The minor ninth c' to d flat" in the opening chord is contracted in the timpani to become the minor second C' to D flat' at (5).

The pitches of chord (26) form a six note scale symmetrical
from the two outer notes in to a central diminished third.

\[
\begin{align*}
\text{Ex. 46.} &\quad \text{\includegraphics[width=0.5\textwidth]{example1.png}} \\
&\quad (26)
\end{align*}
\]

Lontano.

Lontano uses a seven note tone row pitched on \( g \). The first and second violins ascend to \( b \) flat and descend to \( e \) and thus cover the complete range of the tone row.

\[
\begin{align*}
\text{Ex. 47.} &\quad \text{\includegraphics[width=0.5\textwidth]{example2.png}} \\
&\quad \text{\includegraphics[width=0.5\textwidth]{example3.png}}
\end{align*}
\]

The cellos and all but one of the double bass pitches are included in this range. Open string \( D' \) on the double bass and pitches \( C \) and \( D \) flat of the timpani and violas (\( \delta \) minor), are not a consecutive part of the tone row but form their own three note cluster.

\[
\begin{align*}
\text{Ex. 48.} &\quad \text{\includegraphics[width=0.5\textwidth]{example4.png}}
\end{align*}
\]
Throughout Lontano all instruments of definite pitch play in pairs of pitches - minor seconds (violins, violas and cellos), minor ninths (violas), perfect unisons (violins and horns 1 and 2 combined at (9)ms. 15-18), and perfect fourths (double basses double stopped). The brass, entering at (9)m.7 double the violin pitches and the woodwind (9)m.11 play 'any very high note'.

Lontano has therefore three pitch layers: 1. very high - woodwind.
2. middle range - e to b flat, violins, violas, brass and cellos.
3. low - E² A² D' G', double basses; C' D flat', timpani; percussion.

The narrow tessitura of the section covers a diminished fifth, e to b flat.

The C' D flat' tuning of the timpani in Calmo and Lontano is extended to form a minor ninth in the violas. By playing pizzicato the violas imitate the percussive quality of the timpani. The minor second C D flat is also used in Movement 11, Es.1-2 of the piano Sonatina in the left hand, 'imitating a percussive sound'.

Use of accidentals in b double flat and e sharp at (8)m.6 in the first violins indicates an ascending and descending direction from the opening g, of two semi-tones. Since each player views e sharp and b double flat differently, a close-pitched, dissonant 'insect-like' sound is created in the section.

At (7)b and (10) the cellos and double basses each have half of the inverted tone row on C beginning at the fourth and tenth notes respectively.

Feroce.

The combined pitches used in Feroce form two short tone row beginnings - one four semi-tones from $A$, the other three semi-tones from $E$.

All pitches used in the section are included in these two row beginnings. Each instrumental group however, uses a separate pitch layer:

1. Strings have two semi-tone cells.
The open strings of the double bass are included in these two cells. At (15)ms. 11-12 the first violins, and cellos each have half of the original tone row transposed to E flat beginning on the seventh note, and the second violins and violas begin simultaneously on the fourth and tenth notes of the same version of the row. The inclusion of the complete tone row at this point and at (16)ms. 11-12, forms a triple arch structure in use of the complete tone row throughout Music for Japan.

Ex. 52.

2. In the six/eight measures at (15) and (16) ms. 13-14, the trumpets have a semi-tone cluster C flat', B flat', A' which is a transposition, a major sixth higher, of the cluster C', D flat', D' formed by the timpani and double basses in Lontano. Ex. 53.

3. At (13)ms. 1-8 and (14) ms. 1-6 the timpani play a three pitch pattern of F", A", and E'. In (13)ms. 9-12 and the final four measure of the subdivision (14)-(15) the major seventh F"-E' is used without the A". This is the inversion of the previous minor second timpani tuning C'D flat' transposed up a major third. Ex. 54.
4. The brass always play 'any very low note' in the eight/eight measures of Feroce.

In Feroce therefore, the tone row is used in its complete form and also divided into small semi-tone clusters of from two to five notes.

Feroce ma ben misurato.

Feroce ma ben misurato is built entirely from semi-tone clusters. The horns and trumpets combine clusters of three and two semi-tones respectively, into the seven note tone row of Lontano pitched on G.

Ex. 55. (18) ms. 9.
The semi-tone cluster at (18)ms, 9 and 11 in the horns is the same as that used by the trumpets in Feroce, (15) and (16) ms, 13 and 14. In the trombones and bass trombone and tuba the two semi-tone clusters $E^2, F^2$ and $B\ flat^3, C\ flat^3$, respectively, extend the tone row by one note.

Ex. 56.

![Ex. 56](image)

The minor second $E^2, F^2$ in the trombones is inverted to form a major seventh $F^2, E'$ in the timpani.

B double flat and E sharp are used again in this section but are changed to A natural and F sharp in the same instrument in the consecutive measure. ((18)ms, 8-9 trumpets). The indication of a pitch direction as seen in Lontano does not apply in this section but the close sound resulting from the subtle difference in interpretation of the two note names increases the dissonance of the clusters.

Throughout Feroce ma ben misurato the woodwind and strings play any very high note, and the double basses foot stamp.

At (20) all notes of the tone row are placed vertically. The strings form a chromatic scale from $E^2$ to $A\ flat$ and from $E'$ to $B'$ thus outlining an $E$ major triad.
The brass have a chromatic scale from A sharp\(^2\) to E flat\(^1\), G sharp\(^1\) to B\(^1\) plus an E\(^2\) in the tuba.

Combined, the two instrumental groups form an almost complete chromatic run from E\(^2\) to B\(^1\) - only pitch A\(^2\) is missing.

All woodwind and the timpani have 'slow glissandi to and from any very high or very low note'. The open G\(^\prime\) string of the second violins played between the bridge and tailpiece is inaudible in performance due to the ffff dynamic marking in all instruments.
The complete tone row is used in the two Calmo sections and the central section Feroce. Small semi-tone scales or cells are used in Lontano and Feroce ma ben misurato (pitched on G) and in Feroce. Consistent use of the complete tone-row therefore, decreases from Calmo (1) to Feroce and increases from there to Calmo (21). Ex.60.

Wherever the complete tone row appears in Music for Japan it is either in its original form pitched on E, transposed original on E flat or inverted on C, and beginning on either the 1, 3, 4, 6, 7, 9, 10 or 12th notes.

Lontano and Feroce ma ben misurato use a shortened seven note version of the tone row pitched on g; the latter section adds on pitch E to form an eight note row. Both sections utilise the expanding (and contracting) qualities of the tone row by increasing the pitch range through addition of instruments. That is, each instrumental group has its own pitch cluster which is added and subtracted to the total sound, causing an increase and decrease in the intensity of pitch.

At (1) in Sun Music 1 a five semi-tone cluster c to e, is
similarly used.

The relationship between the minor second C', D flat' in the timpani and the minor ninth c', d flat'' in the violas of Lontano, is found also in Feroce ma ben misurato between the minor second E^2, F^2 of the bass trombone and tuba and the major seventh F^2, E' of the timpani.

E is the original pitch of the tone row, the bass note of chords at (1), (5), (20), (21)a and (26), the pitch of the 'structural pillars' in Calmo (1) and (21), the lowest note of the open string double bass patterns in Lontano and Feroce, and the bass note of the trombone semi-tone cluster at (18). C, E flat and C are pitches on which the tone row either complete, or shortened, begins.
Chord Structure.

Two chord types are used in *Music for Japan*. In the first type the tone row is placed vertically, or horizontal versions are superimposed. The second type is a chord structure used in many of Sculthorpe's works since the piano *Sonatina*. A triad plus two or more intervals of the same size are played simultaneously with discords resulting from the combination of the two components.

The intervals of the tone row i.e. minor and major second, minor and major third, perfect fourth, diminished fifth and minor and major seventh are the important intervals in the construction of all chords in *Music for Japan*. The minor second, the interval by which each consecutive note in the row ascends or descends, and its extension (the minor ninth) and inversion (major seventh) are the dominant intervals in the work.

Chords in which triads and intervals of a perfect fourth, perfect fifth or major and minor thirds predominate are classed as consonant chords. Those which use other intervals in particular the major seventh and minor second, or which consist of more than three consonant intervals of the same size superimposed, are dissonant chords.

Calmo (1) and (21).

The beginning of each tone row forms a chord at (1) with the following components: three major sevenths each a minor
third apart, a major seventh and a minor ninth a perfect fifth apart plus an E flat minor triad in second inversion, an A minor triad and a b flat minor triad in root position.

\[
\text{Ex. 61.}
\]

This chord structure consisting basically of a triad plus superimposed intervals of the same size combining to form discords, is the basis of many chords in *Music for Japan* and other works by Peter Sculthorpe from the piano *Sonatina* onwards. It is hereafter called the 'Sculthorpe' construction.

Peter Sculthorpe says of the *Sonatina* for piano:

> The very opening four-note chord of the *Sonatina* is made up of two pairs of major sevenths superimposed at the interval of a third. A similar chord structure is used in the opening bar of *Irkand* IV and in the 6th String Quartet and *Sun Music 1.4*.

Michael Hannan adds that 'chords of this kind... may be described in relation to traditional harmony. For example, the chord cited above is a major 3rd with major 7th decorating tones. In its complete form (with the E flat bass tone) it may be considered as an E flat minor triad with g and b functioning

---

as double appoggiatura. 5.

Sonatina for Piano.

Chord 1.

Ex.62.

(1) is also the point from which each tone row begins and as both the tone row and the chord form its own complete pattern, it is impossible to say which is developed from which.

Chord (1) is dissonant. It contains nine different pitches which can be contracted into two symmetrical scales.

Ex.63.

Two of the major sevenths in the chord are pitched on E and G, the pitches on which the tone row begins in Calmo and Lontano respectively. Chord (1) is built from E and contains collectively, four minor thirds, one major third, one perfect fourth, one minor second and a diminished seventh. With the exception of the highest interval the diminished seventh, all the intervals are narrow (a perfect fourth or smaller) and

thus give a close texture to the chord. This arrangement of many close intervals plus a wider interval at the top is characteristic of all chords in *Music for Japan*.

Chord (5) consists of two major sevenths superimposed at the interval of a perfect fourth plus $E^2$ in the double basses.

\[ (5) \]

\[ \text{Trombones} \quad \begin{array}{c}
\text{Trombone} \\
\text{Tuba} \\
\text{Double bass}
\end{array} \]

At (5)a the addition of a minor third in the trumpets forms a chord with a 'Sculthorpe' construction: two major sevenths superimposed at a perfect fourth (or two perfect fourths superimposed at a major seventh) plus a major triad.

\[ (5) \]

\[ \text{Trumpets} \quad \begin{array}{c}
\text{Tuba} \\
\text{Double bass}
\end{array} \]

At (21)a the same pitches are rearranged to form a similar chord structure to that used in the opening bar of *Ikanda IV* and in the 6th String Quartet and *Sun Music 1*. 
The components of the chord at (21)a can be described in three ways:

1. an E major triad plus a perfect fifth c' to g' which, with the first and fifth notes of the triad, form perfect fifths superimposed at a minor sixth. Semi-tone discords result between the perfect fifth c' to g' and the third and fifth notes of the triad.

2. an E major triad plus two minor sixths superimposed at the distance of a perfect fifth.

3. an E major triad plus a minor ninth and a diminished octave.

The first description is perhaps the most acceptable to the analyst and possibly the composer as it follows the layout of
the opening \textit{Sonatina} chord given by the composer himself.

At (25)a the chord of (5)a is repeated without the double bass $E^2$ and therefore without the major triad.

\begin{align*}
(25)a
\end{align*}

Ex.67.

This, plus the difference in dynamic level, ensures a subtle change in sound between the two passages. Another alteration between the two passages is the change from C flat in the trumpets at (5)a to B at (25).

The notation used by Peter Sculthorpe in the 'liberamente' passages of the two Calmo sections displays clear visual chord patterns. The starting notes of each tone row and the grouping of instruments in twos and threes, each group containing one inverted row, one original row, plus in the second violins and cellos a transposed original tone row, allows the formation of identical two and three part chords within each instrumental group. For example, chord 1 in the first violins is the same as chord 4 in the violas; chord seven violin two and chord ten cellos are also the same as the previous two but with a third note added.
Ex. 68. (2)

In the whole orchestra the following visual chords are also identical; chords one and seven, two and eight, three and nine and so on. Another connection between two chords is the major sixth E flat to C at the top of chord three which is placed at the bottom of chord four; similarly with chords nine and ten.

Ex. 69.
Chord (21)c and the visual chords at (22) and (22)+1 consist of a series of superimposed minor seconds and ninths and major sevenths with a triad in root position at (22) and (22)+1.

Ex. 70.

Because of the 'liberamente' style of playing used in the Calmo passages, chords between (2)-(3), (4)-(5), (22)-(23) and (24)-(25) are aurally non-existent. However, because of their similarity in construction to other chords in the work, mention of them is of interest.

Chord (26) consists of a widely spaced major triad plus seven perfect fifths, six of which are conjunct. Ex. 71 In a contracted form the six pitches of the chord form a scale which is symmetrical from the outer notes E flat and B into a central diminished third. Ex. 72.
Lontano.

Chords in Lontano are formed by addition and subtraction of semi-tones of the tone row. The central g emphasised by repetition, begins and ends the section and is the 'thread' onto which the other pitches are added and subtracted.
This causes a continual changing in the size and density of the chords and thus an expansion and contraction in the total sound.

The term semi-tone cluster is often associated with a loud and percussive sound as in Feroce ma ben misurato. In Lontano the semi-tone clusters are played sul ponticello, pizzicato, col legno or as harmonics and thus remain at a low dynamic level.

The cello chords interlock the violin semi-tone clusters.

The double basses use of the open E² string in Calmo is extended into a pattern involving all four open strings in pairs.
These perfect fourths are derived from those in the trombone, bass trombone and tuba chord at (5). Chords made up of pairs of double bass open strings are used also in Irkanda IV.

In the piano Sonatina, Movement III, the same pitches occur as a repeated left hand pattern.

Ex. 76

The six woodwind instruments (three flutes and three clarinets) play 'any very high note' and form a small pitch cluster high above the rest of the orchestra.

Feroce.

Most of the rhythm patterns in Feroce are played by unspecifically pitched brass and percussion instruments. Only the strings, timpani and trumpets are specifically pitched and then not continuously. The pitched notes are all used to form textual effects: 1. violins, violas and cellos have 'quasi guitara' strumming style and pizzicato;

Ex. 77

(15) m. 3-5.
2. double basses continue the paired open string chords of
Lontano played col legno between bridge and tailpiece;
3. the trumpets have accented semi-tone clusters in the six/eight
measures;

\[ (15) \text{ ms. 13.} \]

Ex. 18. Trumpets

4. the timpani have a rhythm pattern of three pitches, \( F^2 A^2 E^1 \)
against the Percussion 1, 2, and 3 rhythm patterns.

At (15)ms.3-5 the violin and viola 'quasi guitara',

passages consist of two chord series - conjunct and disjunct
perfect fifths interlocked between instruments. The two series
are a semi-tone apart.

Ex. 19

The open string series built from G' uses the same four pitches
as the double bass patterns of Feroce and Lontano. The quasi

5. The correct Italian for quasi guitara is quasi chitarra.
gui the chords are dissonant as the pitches contract to form four
minor seconds.

As in Lontano the instruments playing 'any very low note'
form small pitch clusters.

Feroce ma ben misurato.

As the same seven note row of Lontano is used in this
section, chords formed in the trumpets and horns (e.g. (18)
m.9) are the same as those in the violins at (8)m.7.

Expansion and contraction of the total sound occurs also
in this section due to the subtraction and addition of notes
in the trumpets and horns and thus the continual changing of
the size and density of chords.
Ex. 82.

(18) m31-12.

Pitch pattern of horns + trumpets.

The central g of Lontano is both aurally and structurally important. In Feroce ma ben misurato however, the aural importance of g is lost as it is always heard surrounded by a number of semi-tones.

Where all instruments (except the trumpets) play a chord simultaneously, for example at (19), four distinct pitch layers are heard.

Ex. 83. 1. Woodwind, ohs, violas, cellos— any very high note.

2. Horns.

3. Percussion 1, 2, 3.

4. Trombones, bass trombone, tuba. Timpani, double basses.
The chord at (20) uses a complex version of the 'Sculthorpe' construction. It consists of eleven minor seconds conjunct between the cellos and double basses and disjunct between the upper strings, trumpets 3 and 4, horns and trombones. The second violins play a sustained open G string between the bridge and tailpiece which is inaudible in performance. An E major triad is present in the bass trombone, tuba and trumpets 1 and 2, but it is notaurally discernible until its second attack at (20)g and subsequent solo appearance at (21).

The emergence of the E major chord at (21) forms a climax to the use of pitch E throughout Music for Japan. In Feroce, all open strings of the double bass and violin and three open strings of the viola, G', d, a, are used. The perfect fifth c'-g' in the first violins at (21)a serves to complete this pattern of open string use by providing the final perfect fifth C-G on the viola, although at a different octave.

There is a progression in use of consonant and dissonant chords through Music for Japan. Dissonant chords: from chord (1) containing nine different pitches, to the smaller semi-tone clusters of Lontano, Feroce and Feroce ma ben misurato to the climax at (20) where the complete tone row (or chromatic scale) is used vertically in pairs of minor seconds. From here the strength of dissonance decreases from chord (21)c to the final chord of (26).
Consonant chords: from chords at (5) and (5)a consisting of perfect fourths plus a triad, to a climax in the E major chord at (21), to chord (21)a where a perfect fifth is superimposed on the E major triad, and finally a return to the superimposed perfect fourths at (25)a. Chord (20) contains the climax of both dissonant and consonant chords as the E major chord of (21) is incorporated in it, although not audible at this point.

The intervals in the tone row are those used most frequently in Music for Japan. Minor second - major seventh.

- Perfect fourth.
- Diminished fifth,
- Minor third - major third.

The minor second, the interval by which each note ascends and descends consecutively, has the major role.

Writing about his piano Sonatina, Peter Sculthorpe says:

The falling minor 2nd and the falling minor 3rd are very important intervals in the Sonatina. Also there is a complete absence of the interval of the 6th.

One may find many instances of the use of the falling minor 2nd and the falling minor 3rd in all of my later pieces, and I don't think that I've written the interval of a 6th in a melody since that time, 1954. '

Although Music for Japan has no melodies in the conventional sense, there are no sixths in the horizontal pitch movement of the work. All sixths in the tone row have been eliminated by raising the ninth note an octave. Only three sixths

7. Sculthorpe on Sculthorpe. Music Now.
appear in *Music for Japan* and all are in a vertical position:

1. as the highest interval in chord (1) - written as a diminished seventh.

2. the chord at (21)a can be analysed as two pairs of superimposed minor thirteenths.

3. as the highest interval, e flat' to c" of chord (22) which becomes the lowest interval of the following chord. This last example is somewhat dubious due to the freedom of rhythm allowed in playing 'liberamente' passages.

All chords in *Music for Japan* have one or more pitches considerably higher than the rest of the chord. The high unspecifically pitched woodwind in Lontano and Feroce ma ben misurato fulfill this function.
Chapter Seven: Loudness.

Although the dynamic range of Music for Japan extends from ppp to ffff, there are few sudden changes in the dynamic level either between sections, or within a section. The general dynamic direction of the whole work is a gradual crescendo from (1) to (20) with a diminuendo from this point to (26). This diminuendo is repeated from (26) to the end. In all sections, repetition of dynamic markings is linked with rhythm and pitch patterns. Calmo (1) and (21).

Calmo (1) and (21) consist of a number of graded (crescendo and diminuendo) and static dynamic markings. These may be repeated between the two Calmo sections or within one section, and when repeated may involve a decrease or increase of the dynamic level. Ex. 84.

Repetition of a rhythm and/or pitch pattern involving the alteration of the dynamic marking by one or more levels.

Increase by one level:
- Percussion 2 - (1)a, (3)a.
- Percussion 1 - (20)g, (22)a.

Decrease by one level:
- Trombones, bass trombone and tuba - (5), (6).
- Brass - (25)a, (25)d.
- Timpani - (25)a, (25)d.
- Percussion 3 - (4)b, (24)b.
- Percussion 3 - (2)a, (4)a.

Decrease by more than one level:
- Trumpets - (5)a, (6)a.
- Percussion 1 - (25)b, (25)f.

Repetition involving retrograde of the dynamic markings.
- Percussion 3 - (1), (3), decreasing two and one levels.

Repetition using the same dynamic level:
- Strings and woodwind - (2), (4).
Strings and woodwind - (22),(24).
Strings and woodwind - (2),(4),(22),(24).
Brass - (4),(24).
Percussion 1 and 2 - (2),(4).
Percussion 2 - (22),(24),(2),(4).
Percussion 3 - (21)b, (23)b.
Percussion 3 - (1),(21), trill longer.
Percussion 3 - (4)a, (24)a.
Double basses - (21)a-(22),(23)a-(24),(1)-(2),(3)-(4).
Double basses - (4)b,(24)b.
Brass - (20)g,(22)a. continuing the same dynamic level.
Ex. 84. Calmo (1) + (21) dynamic patterns.

(1) a (2) mf (3) a (4) mf

WW
Bass
Timp.
P1
P2
P3
Strings
Db's

(21) a b c (22) a (23) a b c

WW
Bass
Timp.
P1
P2
P3
Strings
Db's
Ex. 84. continued.

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Lontano.

The diminuendo from (7)d to (8) in Percussion 2 and 3 decreases the level of loudness from mf in readiness for the opening pp measures of Lontano.

In the string group Lontano consists of a crescendo to measure 11 (f and ff) and subsequent diminuendo to (9), repeated from (9) to (9)m.14. The final four measures return the dynamic level to pp and provide a preparation into the short connecting passage of (10). This passage in turn, leads into Feroce.

In Lontano repetition of dynamic markings may involve an alteration of one level.

The rhythm patterns in the percussion between (9)ms. 3-11 and the combined pitch and rhythm patterns of the strings and double basses (8)-(9), (9)-m.14 retain the same dynamic level when repeated. Only the timpani and bass drum, plus horns and woodwind, in the last four measures, decrease the loudness by one level. Throughout the section, the timpani and Percussion 1 have static dynamic markings and Percussion 2 and 3 have graded markings. The dynamic markings of the woodwind and brass in the section, with the exception of the final four measures, double those of the strings. Ex. 85.

Repetition of a rhythm and/or pitch pattern involving the dynamic level being altered by one level.

Violins, violas and cellos - (8)m.11,13.
Woodwind - (9)m.11,13.
Woodwind, horns, timpani, Percussion 2 - (9)ms. 15-16, 17-18.
Repetition using the same dynamic level.

Percussion 3 - (8) ms. 11- (9) ms. l, (9) ms. 11-15.
Percussion 2 - (8)m. 5, m. 9.
Strings - (8)m. l-14, (9) ms. l-14.
All percussion and timpani - repeated patterns from (9)m3 to 11.
Ex. 85.  Lontano dynamic patterns.

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| P2 | \( \text{f} \) | \( \text{mf} \) | \( \text{f} \) | \( \text{mp} \) | \( \text{mf} \) | \( \text{f} \) | \( \text{mp} \) | \( \text{mf} \) | \( \text{f} \) | \( \text{mp} \) | \( \text{mf} \) | \( \text{f} \) | \( \text{mp} \) | \( \text{mf} \) | \( \text{f} \) | \( \text{mp} \) | \( \text{mf} \) |
| P3 | \( \text{mp} \) | \( \text{f} \) | \( \text{mp} \) | \( \text{mf} \) | \( \text{f} \) | \( \text{mp} \) | \( \text{mf} \) | \( \text{f} \) | \( \text{mp} \) | \( \text{mf} \) | \( \text{f} \) | \( \text{mp} \) | \( \text{mf} \) | \( \text{f} \) | \( \text{mp} \) | \( \text{mf} \) | \( \text{f} 
| String | \( \text{mf} \) | \( \text{f} \) | \( \text{mp} \) | \( \text{mf} \) | \( \text{f} \) | \( \text{mp} \) | \( \text{mf} \) | \( \text{f} \) | \( \text{mp} \) | \( \text{mf} \) | \( \text{f} \) | \( \text{mp} \) | \( \text{mf} \) | \( \text{f} \) | \( \text{mp} \) | \( \text{mf} \) | \( \text{f} 
| Dbs | \( \text{mp} \) | \( \text{f} \) | \( \text{mp} \) | \( \text{mf} \) | \( \text{f} \) | \( \text{mp} \) | \( \text{mf} \) | \( \text{f} \) | \( \text{mp} \) | \( \text{mf} \) | \( \text{f} \) | \( \text{mp} \) | \( \text{mf} \) | \( \text{f} \) | \( \text{mp} \) | \( \text{mf} \) | \( \text{f} |

* \( f \) missing from the score. 
The two short connecting passages at (7) and (10) use similar material but the dynamic level is decreased at (10) in all instruments. Only the whip remains on the same dynamic marking - mf. Although both passages are twenty second long, the proportion of seconds from (7)-(8) and from (10)-(11) is allotted thus:

Ex. 86.  

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<tr>
<td>Strings</td>
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</tbody>
</table>

(7) longer loud part (12")
(10) longer soft part (12")

Feroces consists of seven subdivisions each consecutively increasing in loudness. Although the dynamic level ff in the percussion group at (14)-(15) is lowered to mf at (15) because of the repetition of the three subdivisions (15)-(18), addition of the strings and brass at (15) allows the continual build up in loudness to continue through to the end of the section. Ex. 87.

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(11) Longer loud part (12")
(12) Longer soft part (12")

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Brass + Strings
Percussion
The dynamic markings in the brass and strings at (15)-(16) are increased from (16)-(17). Dynamic patterns retain the eight plus four measure grouping of the rhythm and pitch patterns. This is taken to the stage where the marking is repeated even if the dynamic level remains constant. (13) Percussion

Ex. 88.

The dynamic markings of the brass are static; the strings are graded; the percussion group use both static and graded markings, the latter always occurring in either the final four measures of each twelve measure passage, or the connecting six/eight measures. The six/eight measures either continue the dynamic level of the previous measure or use a crescendo to link the dynamic level of one subdivision with that of the next.

In Feroce, repetition may involve the alteration of a dynamic marking by one or more level. In the final subdivision (17)-(18) all instruments are at ff in readiness for the fff of Feroce ma ben misurato. Ex. 89.

Repetition of a rhythm and/or pitch pattern involving the alteration of the dynamic marking by one or more levels.

All percussion - (11),(12),(13),(14),(between (11)-(12) there is an increase of three levels)
Brass and double basses - (15)-(16), (16)-(17).
Strings - (15)ms.3-9,(16)ms. 3-9.
Strings - (17)ms1 and 5.
Double basses - (17)m.1,5,(an increase of two levels)
Percussion 1 - (11)ms. 1-2, 5-6. (an increase of two levels)

Repetition using the same dynamic level.

Strings - (15)ms. 11-12, (16)ms. 11-12
Percussion - (12)-(15), (15)-(18).
Brass and strings, percussion - (17)ms. 1-2, 3-4, 5 and 6.
Horns - (17)ms. 7 and 8.
Percussion 2 and 3, trumpets - (17)ms. 7 and 8, 9 and 10.

Ex. 89. Force dynamic patterns.

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Feroce ma ben misurato.

Feroce ma ben misurato remains constantly on fff with a crescendo in Percussion 2 and 3 to ffff at (19)ms. 6-7 and another from ff to ffff at (19)ms. 9-10. These two crescendos serve as a preparation for the fffff of chord (20). From (20)-(21) is heard as a series of ffff waves because of the entry of the woodwind at (20)a and c.

Throughout Music for Japan the placing and choice of the dynamic levels is done with precision; for example, the crotali shake at (26)a marks the exact point for the beginning of the final diminuendo in all instruments. At (4)b the six gong notes begin mp with a molto crescendo to ff. At (24)b the marking is mp crescendo f, thus emphasising the difference between the final ff to be reached at (5) and the f to be reached at (25), both in sixteen seconds. In the same two passages, the double basses have mp molto crescendo f from (4)b - (5) and the same dynamic markings for (24)b-(25).
Chapter Eight: Use of Instruments and Registers.

*Music for Japan* is predominantly a work for strings, brass and percussion, with the woodwind usually doubling one of these groups. In Lontano the strings are the dominant group, in Feroce the percussion instruments, in Feroce ma ben misurato the brass and in the two Calmo sections the brass, strings and percussion all play dominant roles.

Calmo (1) and (21).

In Calmo (1) the role of the woodwind, brass and double basses as used either continuously or intermittently throughout *Music for Japan* is established. The woodwind at (2) double the strings in dynamic level as well as rhythm and pitch patterns. The brass are used as a pure consort at (5) and in Calmo (1) and (21) the double basses E string is used as a structural pillar.

Strong contrast of sound results from use of the following three groups of instruments: 1. at (1) the clear sound of amplified timbale (unfortunately, the impact of the amplified timbale and bongos is lost on a recording); 2. the small movements of the woodwind, string and brass "litteramente" passages at (2) and (4); 3. at (5)a the static brass chord and its minor third trumpet addition at (5)a. At (7)a, a fourth contrast results from the more complex timbale/bongo pattern.
The range of the 'liberamente' passages is from E flat' to d flat' - the double bass E string, E₂, is the only pitch below this range. From (1) the range of the section drops gradually to the cello and double bass pizzicato phrases at (7)b, F sharp₂ to F' - an octave lower than the range of the 'liberamente' passages.

Lontano.

The complete orchestra of Calmo (1) is reduced in Lontano. All instrumental genre are represented but in the woodwind and brass by only two members - flutes, clarinets, trumpets and horns - the upper instruments of each group. The instruments used are thus a chamber orchestra, or contracted version of the full contingency.

In Lontano the brass always double the strings, except for the final four measures. The woodwind are completely independent of all other instruments in use of pitch and rhythm patterns. This is the only time in Music for Japan (also possibly chord (20)) where the woodwind pitch and rhythm patterns are not doubled in any other instrument simultaneously.

Four different effects are made by the strings in Lontano:
1. sul ponticello in the violins,
2. the cellos play harmonics,
3. the violas alternate between pizzicato and sul ponticello.
4. the double basses play col legno between the bridge and tailpiece.

With the exception of the timpani and bass drum, all percussion instruments play either trilled or sustained notes thus imitating the sustained sound (although made up of individual bows) in the strings. In Lontano Sculthorpe has chosen percussion instruments which are capable of making a sustained sound.

The subtle contrast between the open and stopped horn 1 and 2 notes at (9)ms. 15-18 is used also in Sun Music III Lento Calmo (9)-(13).

Feroces.

Feroces is a set of six variations on a rhythm pattern. The roles of percussion and melodic instruments (i.e. brass and strings) in this section are exchanged as the percussion group provide the melody or 'theme' and the rest of the orchestra have accompanying accented, syncopated rhythms.

The sound of the percussion is imitated in the strings and brass by the use of percussive techniques: 1. the brass have the instruction 'any very low note' and play short accented notes;
2. the strings pizzicato;
3. quasi guitarra for the strings.
4. the double basses continue the col legno between the bridge
and tailpiece style used in Lontano,
5. foot stamping by double bass players,
6. The semi-tone cluster in the trumpets at (15)m.13 is percussive in sound due to the small interval between the three pitches, and the accent.

From (17)-(18) the brass and strings are all unspecifically pitched. Unlike Lontano, the percussion instruments in Feroce are used in a loud accented style. Trills occur only in the six/eight measures and from (17)-(18).

Throughout this section the brass use their low register playing either low semi-tone clusters (e.g. the trumpets (15)m.13) or following the instruction to 'play any very low note'. The strings range covers the open strings of a violin plus a diminished fifth higher from e' to b flat'. The double basses continue playing their open strings.

There are three different register layers in Feroce:
1. low - the brass and double basses; 2. high - the strings; 3. the percussion are between the two.

Feroce ma ben misurato.

Feroce ma ben misurato contains the foot stamping, appoggiatura motives and semi-tone clusters of Feroce.

The strings and woodwind play 'any very high note' throughout the section with the oboe and bassoon blowing through mouthpieces only. This provides a contrast with the normal
method of playing in the flute and clarinet, although the
difference is virtually inaudible in performance due to the loud
dynamic level. At (19)ms. 5 and 8 a contrast occurs in the
alternating stopped and open notes of the horns.

There are three register layers in Feroce ma ben misurato:
1. high - unspecifically pitched woodwind and strings;
2. low - timpani and double basses, trombones, bass trombone
   and tuba;
3. trumpets and horns play in the middle area.

The chord at (20) retains a similar use of registers -
high woodwind, low brass and strings and percussion in the middle.

Distinctive instrumental techniques and sounds used in Music
for Japan.

Percussive: Foot stamping in the double basses (Feroce)
Quasi guitera violin strumming (Feroce)
Col legno between the bridge and tailpiece of the
double bass (Lontano)
Bowing between bridge and tailpiece in VII (chord (20))
Amplification of timbales and bongos (Calmo (1))
The appoggiatura motive - $P$ (Feroce ma ben misurato)

Pitch: Strings and woodwind 'any very high note'. (Feroce
ma ben misurato)
Brass 'any very low note'. (Feroce)
Strings unspecifically pitched and playing trills -
(Feroce)
Upward glissandi in the brass (Feroce)
Undulating glissandi in the brass (Feroce)
Undulating glissandi in woodwind and timpani (Feroce)
Blowing through the mouthpiece of the oboe and
bassoon (Feroce ma ben misurato)
Alternating stopped and open notes on the horn. (Lontano)

The use of each instrumental group as a pure consort
provides both a vertical and horizontal contrast in timbre.
For example, woodwind and strings, percussion and brass alternate in vertical passages between (3), (4) and (5). In Feroce the instrumental groups are used in horizontal strata, each with a different pitch and rhythm pattern.

The pitched range of Music for Japan is from B flat to d flat. Due to the important role of the string instruments however, the tessitura would be contained within the range of a violin, plus the open string E on a double bass. Use of the two instructions 'play any very high or low note' gives the work the widest range possible for the instruments used.

Thirteen percussion instruments are used in Music for Japan: bass drum, gong, cymbal, side drum, timbales, bongos, whip, guiro, maracas, sand-block, crotali, timpani and claves. With the exception of the whip, claves and crotali all of these percussion instruments are capable of producing a soft, sustained or a loud repetitive sound. Both types of sound are used throughout Music for Japan.

A similar number and similar types of instruments are used in other works by Peter Sculthorpe - Sun Music contains thirteen percussion instruments, with only the whip, bongos and timbales of the percussion instruments used in Music for Japan not being present; Katjäk has nine percussion instruments, with four of those used in Music for Japan not being present - guiro, side drum, sand-block and crotali; in Music of Rain, of the fourteen percussion instruments used, only the whip and guiro of Music for Japan are not included. Instruments not
included in the above works are those required for a distinctive sound such as the whip, sand block, guiro, crotali, bongo/timbae combination or the side drum.
Chapter Nine: Use of Material.

Throughout *Music for Japan* distinctive material and sounds from other works by Peter Sculthorpe or from Japanese music are introduced. Material from earlier sections is varied and used in later sections.

Calmo (1) and (21).

Apart from the obvious repetition of material in the Calmo section at (21) the opening Calmo introduces material which is used throughout the work.

The accelerando timbale pattern at (1)a and (3)a is similar to a drum pattern used in Japanese music, Japan being a country in which Peter Sculthorpe has a particular interest.

Using the 'Sculthorpe' chord construction, chord (21)a is both aurally and structurally similar to the chord at (4) in *Sun Music I* and the final chord of *Irkanda IV*.

Lontano.

The high unspecifically pitched woodwind sound of Lontano is derived from the sound made by the Japanese *nōkan* (a transverse flute).

The two short connecting passages at (7) and (10) are closely related through use of material, instruments and function.

1. Also in chords of *Sonata for Viola and Percussion*, *The Sturs Turn*, *Hetjak*, *String Quartet No* *6*, *Yasun Tawashen* and other works.
Feroce.

The amplified bongo pattern of (11)-(12) and the timbale pattern of (12)-(13) are developed from the symmetrical bongo/timbale pattern at (7)a.

The duplets in the six/eight measures are similar to those used in Lontano. The grouping of the eight/eight measures into 4+4+2+2 measures is similar to the 14+14+2+2 measures structure of Lontano.

The direction 'any very high note' for flutes and clarinets in Lontano is reversed in the brass of Feroce to 'any very low note'. The pairs of open string perfect fourths in the double basses played col legno between bridge and tailpiece introduced in Lontano, are used in Feroce using a different rhythm and pitch pattern.

The pizzicato halves of the tone row in the double basses and cellos at (7) and (10) are used in four layers from (15)-(16) in the violins, violas and cellos.

Feroce ma ben misurato.

The woodwind are unspecifically pitched as in Lontano and the strings continue playing 'any very high note' from the final subdivision of Feroce.

The semi-tone cluster A', B flat', C flat' at (18)m.9 is that of the trumpets in Feroce, (15)m. 13.
Footstamping in the double basses at (17)-(18) and the six/eight measures of Feroce are used in Feroce ma ben misurato.

The motive at (18) in the woodwind and strings, and at (15)m.9 in the trumpets in Feroce is derived from the appoggiatura of Percussion 2, (1)b.

The semi-tone cluster of (8)m.7 in Lontano is used in the horns and trumpets at (18)m.7.

The structure of Feroce ma ben misurato, two plus two plus eight plus ten (eight extended by two one/four measures) is similar to the structure of Lontano and to a lesser extent, Feroce.

Many of the rhythm patterns of Lontano are used in Feroce ma ben misurato.

Chord (20).

In chord (20) the second violins derive their method of playing between bridge and tailpiece, from the double basses in both Lontano and Feroce.

Alternation of the open and stopped horn notes is used by the horns in the four measure coda of Lontano and also at (19)ms. 5 and 8 in Feroce ma ben misurato.
Conclusion.

The symmetrical all-interval tone row used in *Music for Japan* contains the qualities of expansion, symmetry and repetition which are used in the parameters of pitch, chord structure, time, loudness and structure. The ninth note of the tone row is raised an octave, thus consciously eliminating all major and minor sixths vertically, and making their appearance horizontally, incidental. The intervals of the tone row - minor second, major second, major seventh, major third, minor third, perfect fourth and diminished fifth are the important intervals in horizontal pitch movement and chord structure. The semi-tone, its inversion and extension to a major seventh and minor ninth have the dominant roles both structurally and aurally.

There are no conventional melodies in the work, i.e. melodies stated in isolation, but rather the combination of a number of horizontal melodies to produce a complete contrapuntal texture. Chords formed from the semi-tone clusters of the tone row tend to have little feeling of key or pitch centre due to the density of pitch.

All sections in *Music for Japan* use the tone row in some form, although not necessarily consistently or continually. The use of the complete tone row diminishes towards the central section *Feroce*, and increases again towards the final Calmo section.
Linked with the appearance of the tone row in its various forms is the use of certain pitches. Pitch E is the most important in the work because it is the original pitch of the tone row in Calmo, and because the E² string of the double basses is used throughout the work as a structural pillar and as the bass of many chords. The E major chord at (21) is the climax to the use of pitch E in Music for Japan. Pitch G is the centre of the shortened tone rows used in Lontano and Feroce ma ben misurato. C and E flat, used in conjunction with E in the tone rows of the Calmo sections, are also the pitches on which other occurrences of the complete tone row in Music for Japan are used.

Chord (1) is the source from which the three versions of the tone row used in Calmo (1) (original, transposed original, transposed inversion) begin. It also has a chord construction which is derived from that used in the Sonatina for piano; a triad, plus a pair of superimposed intervals of the same size causing minor second, minor ninth or major seventh discords. The chord at (21) a has a similar sound and structure to chords in many of Peter Sculthorpe's other works - e.g. Irkanda IV, String Quartet No. 6, Sun Music I.

Chords in which a triad plus the intervals of a major and minor third, perfect fourth and perfect fifth predominate are consonant. Chords made up of semi-tone clusters, major sevenths, or which contain three or more superimposed intervals of the
same size are dissonant. Both dissonant and consonant chords have a line of development which follows through the whole work.

All chords have one or more pitches considerably higher than the other notes of the chord.

In the absence of conventional melodies in Music for Japan there is compensating variety in use of texture, rhythm and tone colour.

In Feroce the twelve measure bongo pattern (11)-(12) becomes a 'theme' on which three subdivisions are developed. Many of the rhythm patterns of Lontano are used in Feroce ma ben misurato. The appoggiature from the opening of Music for Japan is used throughout the work. In Feroce ma ben misurato it is used as $\frac{\text{B}}{2}$ in woodwind and strings, and extended to form three and four note rhythm patterns in the trumpets and horns.

The structure of Music for Japan is based entirely on rhythm, pitch and dynamic patterns varying from one note to a number of measures in length. These patterns are repeated and form phrases which in turn combine to form a total structure. The rhythm and pitch phrases may or may not move simultaneously with one another. The use of repetition in structure can be traced back to the Sonatina.

The repetition of rhythmic and melodic patterns is one of the most marked characteristics of the Sonatina. Until I composed the Sonatina, I had never used repetition. Indeed I thought that repetition was bad, but I suddenly felt that if I opened myself to what is around me in this time of industrial progress and mass production,
then I would see repetition everywhere....

Repetition either within a measure or involving one or a number of measures is used extensively in all sections. In the two unmetred Calmo sections the duration markings form a structure through repetition.

The dynamic patterns are always linked to the rhythm and/or pitch patterns and may be altered when repeated by increase or decrease of the dynamic level.

The numbers twelve and eight and divisions four and two have an important structural role in *Music for Japan*. By overlapping the pitch and rhythm patterns and use of augmentation and diminution in the repetition of the patterns, the regular four square feeling which could eventuate from this importance of even numbers is avoided, or, as in *Feroce*, exaggerated through the juxtaposition of additive and divisive rhythms.

*Music for Japan* forms a cycle both aurally and structurally due to the placing of the Calmo sections at either end of the work.

The double basses are for the most part, independent of the violin, viola and cello pitch and rhythm patterns throughout *Music for Japan*. Throughout the Calmo sections the double bass E strings act as a structural pillar marking the beginning and end of instrumental passages.

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The weakest aspect of *Music for Japan* is the notation in the 'liberamente' string passages of the Calmo sections and an inconsistent use of the word 'liberamente' in relation to the explanation given at the front of the score. Notation and terms however, are not the most important parts of a composition and they do not in any way detract from the total musical effect and interesting and absorbing world of sound achieved by Peter Sculthorpe in this work.
Appendix.

Use of pitch E in selected works by Peter Sculthorpe.

Sun Music 1.

Double basses are either pitched on E or use a pattern developed from E throughout the work, except for four measures from (16) to (16)m.4.

The tone row used in the Haiku section is pitched on E.

String Quartet No. 6.

An ostinato E/F in the cello is used from the beginning of movement 11 to (7) and again from (9) to (10).

Cello.

At (13) a pedal of the perfect fifth E to B is used to (13)m.6.

Sea Chant.

This choral work uses the transposed dorian mode on E. A left hand E pedal occurs throughout the work.

Morning Song of the Christ Child.

This work is built around a pentatonic scale pitched on E - E F# C# B C#
The Stars Turn from Love 200, Piano reduction by Michael Hannan.

A pedal E to A, a perfect fourth, is used continuously in the first half of the third verse.

Ketjak.

A semi-tone cluster E/F is used in the double basses intermittently through the work, and is used consistently from (18) to the end.

Irkanda IV.

Although the double bass E string is used extensively in this work it does not dominate the sound.

Pitch E and in particular the double bass E² string will probably continue to pervade works of Peter Sculthorpe while E remains the lowest pitch available on orchestral string instruments.¹

¹ A random comment from the composer during a conversation in September, 1971.
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Michael Hannan kindly allowed me to consult the original manuscripts of many of Peter Sculthorpe's compositions.

I am grateful for the facilities made available to me in the Music Department of Sydney University.
MEMORANDUM TO  Head
Department of Music  J09

As I have received no reply to my request from
the candidate to collect a copy of the thesis
submitted for examination, I am enclosing the
copy for lodgement in the Departmental Library.

[Signature]

for
Kenneth W. Knight
Registrar

HWW:ss
3 June 1982

Enclosure