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FIVE RITUALS
FOR WOODWIND QUINTET AND TWO PERCUSSIONISTS

by



ALLAN BELL

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF MUSIC

DEPARTMENT OF MUSIC

EDMONTON, ALBERTA

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THE UNIVERSITY OF ALBERTA
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The undersigned certify that they have read, and
recommend to the Faculty of Graduate Studies and Research
for acceptance, a thesis entitled "Five Rituals for Wood-
wind Quintet and Two Percussionists" submitted by Allan
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degree of Master of Music.

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APRIL 21, 1980
Date

ABSTRACT

Five Rituals for woodwind quintet and two percussionists is a five movement work with the total duration of circa twenty-two minutes and forty-five seconds. It is music which is intended for the celebration of man's encounter with the known and the unknowable.

The first movement, "macrocosmos," has an aggressive character and a rapid tempo; "solitude," the second movement, has an introspective character and a slow tempo; the third movement, "vulnerability & communion," begins with a violent character and a fast tempo and ends with a lyric character and a slow tempo; "awakening," the fourth movement, has an introspective character and a slow tempo; and the last movement, "microcosmos," has a dynamic character and a rapid tempo.

An analysis of the formal structure and the pitch organisation is included.

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Introduction

As the title suggests, Five Rituals is music which is intended for the celebration of man's encounter with the known and the unknowable. It is a five movement work which is scored for woodwind quintet and two percussionists, and it has the total duration of circa twenty-two minutes and forty-five seconds.

With respect to the instrumentation of the piece, the standard woodwind quintet (flute, oboe, clarinet, horn, and bassoon) is supplemented by the following doublings: flute and alto flute; oboe and cor anglais; and clarinet and bass clarinet. As well, each of the percussionists performs on a large battery of instruments. The first percussionist makes use of the following instruments: suspended cymbals, tam-tam, temple blocks, piccolo and ordinary wood blocks, slit drum, crystal wine glasses, glass chimes, bongos, snare drum, tenor drums, bass drum, boobams, crotales, vibraphone, and metal sheet. The second percussionist makes use of the following instruments: suspended cymbals, gongs; wood-plate drums, log drum, plastic mixing bowls, tom-toms, bass drum, timpani, glockenspiel, marimba, lujon, tubular bells, and vibraphone. Both players share the same bass drum and vibraphone.

The analysis which introduces the work will not be addressed to the poetics behind the music. It will be restricted to an investigation of the elements which make the piece a unified musical experience. These elements are the

formal structures and the pitch organisation. An investigation of the former will elucidate relationships within the music and penetrate the elements which render the structure audible. As for the latter, the analysis will reveal the germinal intervallic materials and will demonstrate the flexibility and unifying capacity of the vocabulary.

Following the analysis will be the score itself. There the listener will encounter music which will explore both the standard and the more extended resources of the instruments. As well, the writing creates opportunities for the ensemble to explore music-making within both metric and improvisatory passages. However, all of the choices have been made for the purpose of expressing the emotional and spiritual content of an encounter with the process of life. It is ultimately to that issue that the listener and performer must address himself if an understanding of the piece is to be complete.

Formal Structure

Prelude

The analysis of the formal structure of Five Rituals will consist of a breakdown of the structural relationships within each of the movements preceeded by a discussion of the relationship that each movement has with the whole. Each intra-movement investigation will contain a formal schematic diagram which relates sections to measures within the score and, as well, a series of remarks about the salient structural features of the movement.

In order to facilitate a cogent discussion of these features with easy reference to the score, the following conventions will be used within the analysis:

- (a) Upper and lower case letters will indicate respectively the large sections and periods within those sections. Any time that a section bears a primary relationship to a previous section but has undergone some variation, superscript Arabic numerals will be used. A superscript "x" indicates that a shortened version of the material has been used. Sections which are developments of previous material will include letters in parenthesis which indicate the derivation of the material.
- (b) Measures within the movements will be indicated through reference to the rehearsal numbers found within the score. Numbers which occur before

the colon refer to the rehearsal number and those which occur after refer to the measure. Measures found before rehearsal number 1 will be referred to through the use of the number "0." Hence, the first measure of each movement will be referred to as 0:1. The numbering of measures within each rehearsal section begins with the number "1"; therefore, 7:1 refers to the first measure of rehearsal section 7 and 7:3 to the third measure of that same section. Movements 2 and 4 have a rehearsal number for each "measure" and are referred to accordingly.

- (c) The numbers in the right hand column indicate the number of measures involved in each of the sections.

The unifying element of the entire piece is the motivic and harmonic material shared by all of the movements. Since this will be dealt with in a separate section, the discussion of the formal structure of Five Rituals will restrict itself to an investigation of the sectional and periodic demarcations, how they are achieved, and how their relationships generate the structure of the whole.

Five Rituals: Inter-movement Form

A brief outline of the formal features of the five movements will reveal the basic structure of the entire piece. If form, character, and tempo are used as determining factors, the following scheme arises:

- 1: Five part arch form (ABCB¹A¹), aggressive character,
rapid tempo
- 2: Sectional fantasia, introspective character, slow
tempo
- 3: Bipartite form, polarity in character between vio-
lence and lyricism, fast tempo in A section and
slow tempo in B section
- 4: Sectional fantasia, introspective character, slow
tempo
- 5: Rondo form (ABACABA), dynamic character, rapid
tempo

The first and the fifth movements are closely related with respect to character and tempo. As well, the rondo form of the last movement has the arch form principle of the first movement with the additional interpolations of the A section. With respect to their form, character, and tempo, the second and fourth movements also bear a primary relationship to one another. From this outline it can be seen that the entire piece has the five part arch form (ABCB¹A¹). Hence the formal structure of the first movement is the same formal principle by which the whole piece is organised.

1. macrocosmos

The following is the structural scheme of the first movement:

A	0:1 - 7:9	75
a	0:1 - 2:7	22
b	3:1 - 3:13	13
a ^x	4:1 - 4:5	5
b ¹	5:1 - 5:13	13
a	6:1 - 7:9	22
B	8:1 - 9:11	19
a	8:1 - 8:8	8
a ¹	9:1 - 9:11	11
C	10:1 - 14:12	38
a	10:1 - 11:7	14
b	12:1 - 12:5	5
a ¹	13:1 - 14:12	19
B ¹	15:1 - 16:11	19
a	15:1 - 15:8	8
a ¹	16:1 - 16:11	11
A ¹	17:1 - 26:7	91
a	17:1 - 18:9	21
b	19:1 - 19:13	13
a ^x	20:1 - 20:5	5
c	21:1 - 24:12	32
Ba	21:1 - 21:7	7
Cb	22:1 - 22:7	7
Ba	23:1 - 23:6	6
Ca	24:1 - 24:12	12
a	25:1 - 26:7	20
Coda	27:1 - 27:8	8

The first movement is a five part arch form (ABCB¹A¹) which ends with a short coda. Each of the sections exhibits a different internal structure: the A section has a five part arch form; the B section has the form of a period followed by a slight variation; and the C section has ternary (aba) form. The internal structure of A¹ has been altered from A in that A¹b has been replaced by a section (A¹c) which recapitulates material from sections B and C. This formal modification allows the A¹ section to act as a culminating peroration for the movement.

Since the tempo remains constant, sectional demarcations are achieved through changes in texture and metre. With regard to texture, the scheme of the movement is as follows: Aa is a tutti passage, Ab is a wind solo accompanied by the percussion, Ba is a duo which culminates in a tutti, Ca is a solo line with harmonic and rhythmic amplification, and Cb is an accompanied percussion solo. The rest of the sections (those with superscripts) are variations upon this basic, albeit simplified, textural scheme. The clarity of sectional demarcation is also established through the use of a different metric organisation for each main section. The use of duple, triple and quintuple metres reflects the movement's preoccupation with the number "5" in that the sum of the first two, without considering the unit of pulse, equals the third. Section C, the formal fulcrum of the movement, is in five-eight time which is the halfway mark between two-four and three-four when the unit of pulse is

taken into consideration.

2. solitude

The second movement, a sectional fantasia, has the following formal scheme:

Section 1	0 - 6
Section 2	7 - 13
Section 3	14 - 17
Section 4	18 - 22
Section 5	23 - 33

The factor which determines the structural demarcations within this movement is timbre. Section 1 is characterised by the use of percussion timbre only, section 2 by the introduction of breathy, unpitched sounds in the woodwinds, section 3 by the introduction of primitive and pitched lines in the woodwinds, section 4 by the reintroduction of the breathy woodwind sounds, and section 5 by the reintroduction of the percussion sonority from the beginning of the movement. The quarter tone inflections found in the woodwinds do not have a structural relationship with any of the other movements and have been chosen for the evocative character of the expression which they give to the melodic line.

3. vulnerability & communion

The formal scheme of the bipartite third movement is as follows:

A	0:1 - 6:9	54
a	0:1 - 2:11	23
a ¹	3:1 - 4:8	16
b	5:1 - 6:9	15
B	7:1 - 13:7	45
Coda (ab)	14:1 - 14:6	6

The first section of this movement is designed to express a maximum amount of violence to the listener. Aa and Aa¹ are both broad crescendi which exploit the percussion section and the shrill and raucous sonorities available from the quintet. The climax of Aa, the first crescendo, occurs when the quintet sounds a "g" in three octaves. The beginning of Aa¹ is indicated by the return of the timpani thumb-glissando which opened the movement. The second and louder climax of the section, at the end of Aa¹, is followed by a single "d" in the oboe. This same pitch, as it undergoes a timbral transformation when it is passed around the instruments of the quintet, acts as a transition (Ab) to the B section. Hence it can be seen that timbre, dynamic, and the use of a single pitch are the factors which delineate structure in the opening section.

The B section involves the use of an imitative, contrapuntal texture. Although it is continuous in its motion, this section can be divided with regard to the number of musical lines which are present. The texture is as follows: two-part (7:1-6), three-part (8:1-6), four-part (9:1-6), five-part (10:1-6), three-part (11:1-6), four-part (12:1-8), and

two-part (13:1-7). The climax of the section occurs where the texture is most dense (10:1-6). The approach to the climax is achieved by the cumulative addition of contrapuntal lines, whereas the peroration involves the subtraction of two lines, the addition of one line and the subtraction again of two lines. The manipulation of texture is therefore the determining factor in the shaping of this B section.

The apparently extreme dissimilarity of A and B is reconciled in the Coda through the use of the timbric transformation found in Ab and the chordal elements (the result of contrapuntal activity) from the end of B (13:5-7).

4. awakening

Although the fourth movement is heard as an unified whole, it will be divided into two simultaneously sounding formal schemes for the purpose of analysis. The percussion material has the form of a slow, upwardly rising melodic line which consists of three elements: single repeated pitches, chords, and arabesque figures resulting in chords. On the other hand, the quintet material involves the use of the following five elements:

- a: alto flute pitch bend
- b: woodwind multiphonics
- c: single melodic line
- d: timbric variations upon pitch
- e: melodic line in fifths

Bearing in mind that the two schematic diagrams indicate material which is heard simultaneously, the following is the formal scheme of the fourth movement:

Percussion material

Section 1	0 - 9
Section 2	10 - 18
Section 3	19 - 22
Section 4	23 - 26

Quintet material

a	0 - 3
b	4
c	5
d	6
e	8
b ¹ +c ¹	13 - 14
e ¹	15
c ²	16
d ¹	17
c ³	19 - 20
e ²	21
a	22 - 23
a+b ²	24

Within the percussion material, the formal structure is delineated through the introduction of a different instrument which continues the upward thrust of the line. The structure of the quintet material is achieved through the successive introduction of five recognisably different

musical elements which are reordered and developed while maintaining their timbral or melodic identity. As with the second movement, timbre is the fundamental factor determining structure within the fourth movement.

5. microcosmos

The final movement is a rondo which has the following formal scheme:

A	0:1 - 1:6	10
a	0:1 - 0:4	4
b	1:1 - 1:6	6
B	2:1 - 4:5	16
A ¹	5:1 - 6:8	12
a	5:1 - 5:4	4
b	6:1 - 6:8	8
C	7:1 - 9:7	20
a	7:1 - 7:10	10
b (Ax)	8:1 - 8:3	3
a ¹	9:1 - 9:7	7
A ²	10:1 - 12:7	17
a	10:1 - 10:4	4
a ¹	11:1 - 11:6	6
b	12:1 - 12:7	7
B ¹	13:1 - 15:6	16
A ³	16:1 - 17:7	11
a	16:1 - 16:4	4
b	17:1 - 17:7	7

Coda	18:1 - 23:4	32
a(A ² a ¹)	18:1 - 18:6	6
b(Aa)	19:1 - 19:3	3
c(B)	20:1 - 20:6	6
d(Ca)	21:1 - 21:8	8
e(ABC)	22:1 - 23:4	9

The rondo theme (A) is in two parts. It opens with a frenetic mass of sound, in constant sixteenth-note motion, which is treated antiphonally between the quintet and the percussionists. The second part of the theme is played only by the quintet. In this case, a melodic line surfaces above the mass of sound through the accentuation and octave reinforcement of the pitches involved in the melody. With each entry of the rondo theme, the instruments used by the percussionists are changed creating a new sonority for the antiphonal first section. The quintet part is modified by extending the melodic line of the second part of the theme.

Episodes B and C bear a primary relationship to one another. The material in C is a development of the rhythmic motives found in B. As well, B features melodic material in the woodwinds accompanied by the percussion whereas C features melodic material in the percussion accompanied by the woodwinds. In both cases the accompaniments are characterised by constant sixteenth-note rhythmic patterns.

The Coda recapitulates material from the rest of the movement (a and b) and further develops earlier material (mini-fugato of c, new accompaniment found in d). This

provides a culmination for the movement, and because of the length of the Coda with respect to the rest of the movement, a culmination for the entire piece.

Although the entire movement is a moto perpetuo and the sections move smoothly from one to the next, the formal divisions are audible. This is because of the distinctive character of each of the sections.

Pitch Organisation

Five Rituals makes use of an harmonic and melodic vocabulary which is based upon the intervals of the minor second and the perfect fourth and their inversions, the major seventh and the perfect fifth. Each movement, and the melodic and harmonic materials therein, functions as a development of these germinal intervals.

A series of examples chosen from the score will demonstrate the means through which the germinal intervals are transformed into motives and therefore into manipulable musical materials. The following system will be used to refer to the intervals that are found in the examples:

x: perfect fourth

z: minor second

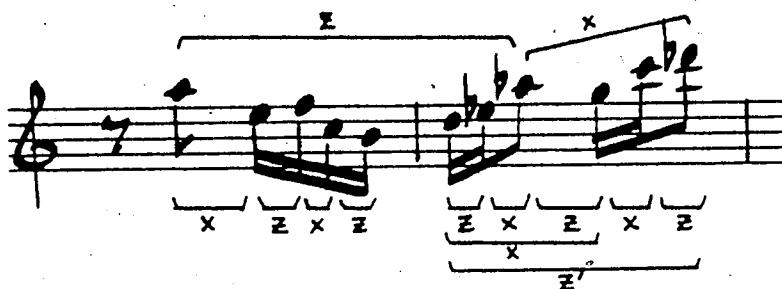
x¹: perfect fifth

z¹: major seventh

Ex. 1, Mov't 1 0:1-2



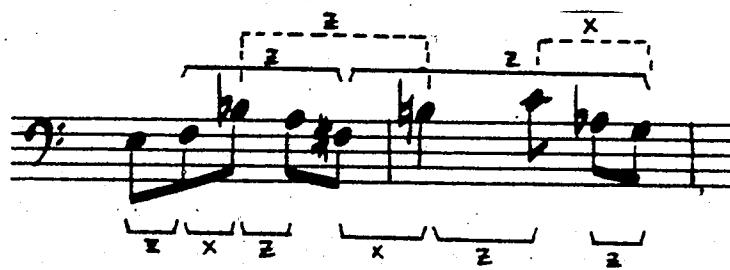
Ex. 2, Mov't 1, 1:6-7



Ex. 3, Mov't 1, 8:1-2



Ex. 4, Mov't 1, 10:1-2



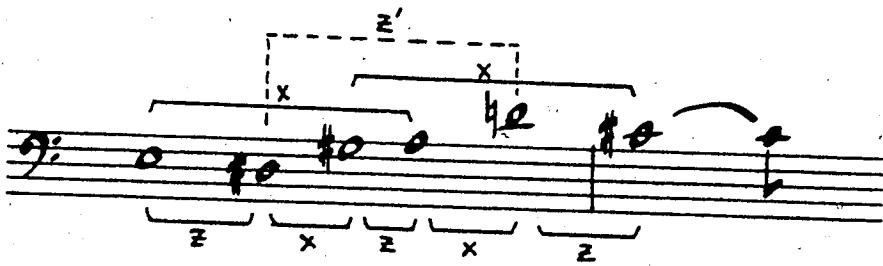
Ex. 5, Mov't 3, 7:1-3



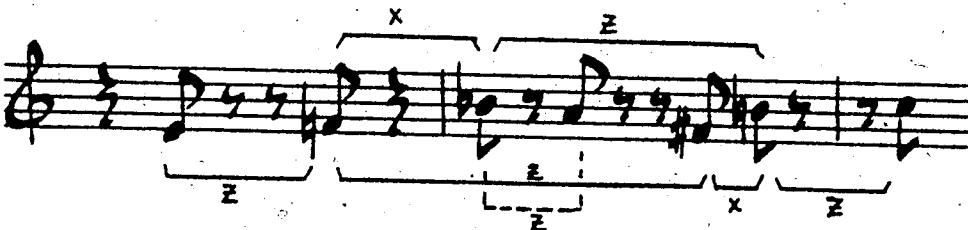
Ex. 6, Mov't 4, 3



Ex. 7, Mov't 4, 5



Ex. 8, Mov't 5, 1:1-3



As well as the germinal intervals, other intervals occur within the musical fabric as a result of the various levels of interaction between the germinal intervals. For example: the tritone "b-flat" to "e" in Ex. 1, the major second "e" to "d" in Ex. 3, the minor third "a" down to "f-sharp" in Ex. 4, the minor seventh "a" to "g" in Ex. 5, and the major sixth "e" down to "g" in Ex. 6. These are all intervals which occur because of the flexible means through which the germinal intervals are manipulated.

Harmonically, the piece makes consistent use of sonorities which are created through the superimposition of the germinal intervals. The following chords form the basis of the harmonic language:

Ex. 9 Harmonic vocabulary



These basic chords, which are arranged from left to right in increasing levels of relative tension, can be transposed and revoiced depending upon the voice-leading considerations of the passage involved. As well, the chords may be expanded to five or more voices by the addition of any of the

germinal intervals. They may also be contracted by the reverse process. In every case, the choice of chords is dependent upon the intensity of the sonority required by the musical passage.

The vocabulary is flexible in that it can generate large numbers of melodic possibilities and harmonic structures that have varying degrees of inherent acoustical tension. It is also the primary unifying element of the piece because it provides an aural framework of recurring intervals which ground the music in an audible intelligibility.

FIVE RITUALS

For Woodwind Quintet

For the celebration of

- 1. macrocosmos**
- 2. solitude**
- 3. vulnerability & communion**
- 4. awakening**
- 5. microcosmos**

FIVE RITUALS

Instrumentation

flute (& alto flute)

oboe (& cor anglais)

clarinet in b flat (& bass clarinet)

horn

bassoon

percussion 1: 3 suspended cymbals, tam tam,
temple blocks, piccolo & 3 wood blocks, slit
drum, 2 crystal wine glasses, glass chimes,
bongos, snare & 2 tenor drums, bass drum,
boobans, crotales, vibraphone, xylophone,
metal sheet

percussion 2: 3 suspended cymbals, 3 gongs,
3 wood plate drums, 4 plastic mixing bowls,
4 tom toms, bass drum, timpani, glockenspiel,
marimba, tujon, tubular bells, vibraphone

Duration

1 4:00

2 4:30

3 4:30

4 4:45

5 5:00

Total 22:45

Score in C

1 macrocosmos

Xylophone
 Percussion I
 Percussion II
 4 Tomtoms
 Timpani sticks
 mp
 2
 4 Accentedly
 Flute
 Alto
 Clarinet
 Horn stopped cresc
 Bassoon
 f

mf

ad
 mf = express

2

cresc
 mp
 cresc
 ff

Musical score page 3, measures 1-4. The score consists of six staves. Measures 1-2 show eighth-note patterns with dynamics *mf*. Measure 3 begins with a forte dynamic *f*, followed by eighth-note patterns with dynamics *mf*. Measure 4 ends with a dynamic *mf* and a crescendo dynamic *cresc.*

Musical score page 3, measure 5. The first two staves are blank. The third staff contains eighth-note patterns with dynamics *mf*. The fourth staff contains eighth-note patterns with dynamics *f*. The fifth staff contains eighth-note patterns with dynamics *mf*. The sixth staff contains eighth-note patterns with dynamics *f*.

Musical score page 3, measure 6. The first two staves are blank. The third staff contains eighth-note patterns with dynamics *mf*. The fourth staff contains eighth-note patterns with dynamics *mp*. The fifth staff contains eighth-note patterns with dynamics *p* *a poco cresc.* The sixth staff contains eighth-note patterns with dynamics *p*.

Musical score page 3, measure 7. The first two staves are blank. The third staff contains eighth-note patterns with dynamics *f* *submf*. The fourth staff contains eighth-note patterns with dynamics *f* *mf*. The fifth staff contains eighth-note patterns with dynamics *f*. The sixth staff contains eighth-note patterns with dynamics *f*.

Musical score page 3, measure 8. The first two staves are blank. The third staff contains eighth-note patterns with dynamics *f*. The fourth staff contains eighth-note patterns with dynamics *f*. The fifth staff contains eighth-note patterns with dynamics *f*. The sixth staff contains eighth-note patterns with dynamics *f*.

Handwritten musical score for two staves, measures 4 and 5.

Measure 4: The first staff begins with a dynamic of $\text{f} \text{ f}$. The second staff begins with a dynamic of mf . The score includes various dynamics such as f , mf , cresc. , and decresc. with crescendo and decrescendo markings. Measure 4 concludes with a repeat sign and a double bar line.

Measure 5: The first staff begins with a dynamic of f . The second staff begins with a dynamic of mf . The score includes dynamics such as f , mf , cresc. , and decresc. with crescendo and decrescendo markings. The measure ends with a dynamic of mf followed by a fermata over the last note.

A handwritten musical score for orchestra and xylophone. The score consists of six systems of music, each with multiple staves. The instruments include strings, woodwinds, brass, and percussion (xylophone). The score is written in 2/4 time, with various key signatures and dynamic markings such as *f*, *mf*, *mp*, *pp*, and *cresc*. The xylophone part is explicitly labeled in the first system. The score shows a mix of rhythmic patterns, including eighth and sixteenth notes, and various rests. There are also some circled and bracketed sections, particularly in the third system, which includes a performance instruction "mf express". The handwriting is in black ink on white paper.

Handwritten musical score page 8-4. The score includes parts for Timpani, Bassoon, Trombone, and Tuba. The Timpani part features dynamic markings like *f*, *mf*, and *p*. The Bassoon part has dynamics *mf* and *p*. The Trombone part includes a dynamic *mf*. The Tuba part has dynamics *mf* and *p*. The score also includes performance instructions such as "snare off, rubber mallets" and crescendo markings like "poco a poco cresc" and "cresc". Measure numbers 8-3 and 8-4 are indicated at the top right.

B=8 scmpc
 Sus cym choke
 ff cresc
 ff

10 5 8

Boobams
 3 Sus cym mf f choke
 Damp

11

Temple blocks
 mf f Boobams
 Timpani ff gliss

12

13

Temple blocks *2020 & 2020 crash*

Sus cym choke

Bassoon

mf solo

14

Boobams

Sus cym choke choke choke

mf solo

mf solo

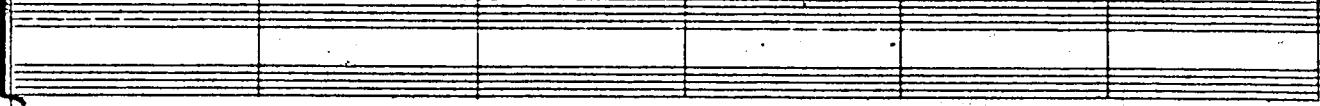
Boobams

mf — f

Handwritten musical score for orchestra. Measure 3 starts with a dynamic *f*. Measure 4 begins with a dynamic *mf*, followed by *mf* and *cresc* markings. The score includes multiple staves for various instruments. Measure 4 ends with a dynamic *mf*.

Continuation of the score. A instruction above the marimba part reads "Rubber mallets, snare off". The marimba part is labeled "Marimba". The score continues with measure 5.

Handwritten musical score for orchestra, page 16. Measures 1 through 4 are shown. Dynamics include *mf*, *cresc*, *f*, and *cresc* again. Measure 4 ends with a dynamic *mf*.



Handwritten musical score for orchestra, page 16. Measures 5 through 8 are shown. Dynamics include *cresc*, *f*, *cresc*, and *cresc* again. Measure 8 ends with a dynamic *cresc*.

Handwritten musical score for orchestra. The score consists of six systems of music, each with multiple staves. Measure 2 starts with dynamic *mf*. Measure 3 begins with dynamic *ff*, followed by *mf* and *f*. Measure 4 begins with dynamic *ff*, followed by *mf* and *f*. The score includes various dynamics such as *molto cresc.* and *molto decresc.* Measures 2-4 are enclosed in a large bracket labeled "17".

Continuation of the handwritten musical score. The first system shows measures 5 and 6. Measure 5 has dynamic *mf*. Measure 6 has dynamic *mp*. The second system shows measures 5 and 6. Measure 5 has dynamic *mf*. Measure 6 has dynamic *mp*. The third system shows measures 5 and 6. Measure 5 has dynamic *mf*. Measure 6 has dynamic *mp*. The fourth system shows measures 5 and 6. Measure 5 has dynamic *mf*. Measure 6 has dynamic *mp*. The fifth system shows measures 5 and 6. Measure 5 has dynamic *mf*. Measure 6 has dynamic *mp*. The sixth system shows measure 1 of page 18, starting with dynamic *mf express.*

Handwritten musical score for orchestra, page 18. The score consists of four systems of music. Measure 1 starts with dynamic *mf*. Measure 2 starts with dynamic *cresc.* Measure 3 starts with dynamic *cresc.* Measure 4 starts with dynamic *mp*. The score includes various dynamics such as *cresc.* and *decresc.*

ff

mp

f

ff

19

mp

poco a poco cresc.

f sub mf

f mf

Musical score page 20. The score consists of ten staves. The first staff has dynamic markings *mf* and *f*. The second staff has dynamic markings *mf* and *ff*. The third staff has dynamic markings *mf* and *ff*. The fourth staff has dynamic markings *mf* and *ff*. The fifth staff has dynamic markings *mf* and *ff*. The sixth staff has dynamic markings *mf* and *ff*. The seventh staff has dynamic markings *mf* and *ff*. The eighth staff has dynamic markings *mf* and *ff*. The ninth staff has dynamic markings *mf* and *ff*. The tenth staff has dynamic markings *mf* and *ff*.

20

Musical score page 20. The score consists of ten staves. The first staff has dynamic markings *mf* and *ff*. The second staff has dynamic markings *mf* and *ff*. The third staff has dynamic markings *mf* and *ff*. The fourth staff has dynamic markings *mf* and *ff*. The fifth staff has dynamic markings *mf* and *ff*. The sixth staff has dynamic markings *mf* and *ff*. The seventh staff has dynamic markings *mf* and *ff*. The eighth staff has dynamic markings *mf* and *ff*. The ninth staff has dynamic markings *mf* and *ff*. The tenth staff has dynamic markings *mf* and *ff*.

Musical score page 21. The score consists of ten staves. The first staff has dynamic markings *mf* and *ff*. The second staff has dynamic markings *mf* and *ff*. The third staff has dynamic markings *mf* and *ff*. The fourth staff has dynamic markings *mf* and *ff*. The fifth staff has dynamic markings *mf* and *ff*. The sixth staff has dynamic markings *mf* and *ff*. The seventh staff has dynamic markings *mf* and *ff*. The eighth staff has dynamic markings *mf* and *ff*. The ninth staff has dynamic markings *mf* and *ff*. The tenth staff has dynamic markings *mf* and *ff*.

21 3
4

Musical score page 21. The score consists of ten staves. The first staff has dynamic markings *mf* and *ff*. The second staff has dynamic markings *mf* and *ff*. The third staff has dynamic markings *mf* and *ff*. The fourth staff has dynamic markings *mf* and *ff*. The fifth staff has dynamic markings *mf* and *ff*. The sixth staff has dynamic markings *mf* and *ff*. The seventh staff has dynamic markings *mf* and *ff*. The eighth staff has dynamic markings *mf* and *ff*. The ninth staff has dynamic markings *mf* and *ff*. The tenth staff has dynamic markings *mf* and *ff*.

22 5
8

Musical score page 22. The score consists of ten staves. The first staff has dynamic markings *poco a poco cresc*. The second staff has dynamic markings *poco a poco cresc*. The third staff has dynamic markings *poco a poco cresc*. The fourth staff has dynamic markings *poco a poco cresc*. The fifth staff has dynamic markings *poco a poco cresc*. The sixth staff has dynamic markings *poco a poco cresc*. The seventh staff has dynamic markings *poco a poco cresc*. The eighth staff has dynamic markings *poco a poco cresc*. The ninth staff has dynamic markings *poco a poco cresc*. The tenth staff has dynamic markings *poco a poco cresc*.

Tempo blocks

Bassoon

Timp sticks

mf solo

mp

cresc

cresc

cresc

cresc

cresc

13

23 3
4

cresc moto

24 5

8

cresc

cresc

cresc

cresc

mf solo

mf solo

mf solo

Bassoon



Xylophone

25

This page contains six staves of handwritten musical notation. The first staff includes dynamic markings like *f*, *mp*, and *f*. The second staff features a large number '25' enclosed in a square. The third staff has a dynamic *f*. The fourth staff includes a dynamic *f* and a tempo marking '4'. The fifth staff has a dynamic *f*. The sixth staff has a dynamic *f*.

This page contains six staves of handwritten musical notation. The first staff has a dynamic *mf*. The second staff includes dynamic markings *mf* and *mp*. The third staff has a dynamic *mf*. The fourth staff includes dynamic markings *mf* and *express.* The fifth staff has a dynamic *mf*. The sixth staff has a dynamic *mf*.

26

This page contains six staves of handwritten musical notation. The first staff includes dynamic markings *f* and *cresc.* The second staff includes dynamic markings *f* and *mp*. The third staff includes dynamic markings *f* and *mp*. The fourth staff includes dynamic markings *f* and *mp*. The fifth staff includes dynamic markings *f* and *mf cresc.* The sixth staff includes dynamic markings *f* and *mp*.

A handwritten musical score for orchestra, page 16, featuring two staves of music. The top staff begins with a dynamic of *mf*, followed by *ff*. The bottom staff begins with *mf*, followed by *ff*. Measure 27 is indicated in the top staff. The score includes various dynamics such as *f*, *mf*, *ff*, and *fp*, along with performance instructions like "flutter". The music consists of multiple staves for different instruments.

2 solitude

2 Crystal wine glasses **pp**

Vibraphone

mp Arco

10" **1** **8'** **2** **15'**

Alto flute

* Repeat pattern until broken line ends. Instrumentalist moves up to the ensemble & turns a major second apart.

Bass drum **stir with brushes** **pp**

3 **5"** **4** **10"** **5** **5"** **6** **4'** **7** **6'**

* Blow air into instrument without creating a pitch.

Cymbal suspended over timpani

8 **3"** **9** **12"** **10** **5"** **11** **6'** **12** **5"**

Glass with temp pedal

3 Sus cym. Arco

→ 8 Draw each symbol on 2 max. B.
Change symbol on休息→ semibreve
→ 9 Change duration and range of 2nd
of rhythm by microtunes vibrato

13. 3' 14. 5' 15. 7" 16.

quasi-legato → Divide notes evenly within one breath

mp gliss → mp tempo

→ ♫ quarter-tone sharp → quarter-tone flat

c.70°

with mute → *mp* → *p* → *mp*

quasi-legato → Divide notes evenly within one breath

17. 5' 18. 4" 19. 7" 20. 5'

Timpani → *mp* → *p* → *mp* → *p* → *mf*

p → *p* → *mp* → *p* → *pp* → *mp* → *p* → *pp* → *mp* → *p* → *mf*

p → *p* → *mp* → *p* → *pp* → *mp* → *p* → *pp* → *mp* → *p* → *mf*

p → *p* → *mp* → *p* → *pp* → *mp* → *p* → *pp* → *mp* → *p* → *mf*

Wine glasses

21 3 22 7" 23 5" 24 5" 25 8"

niente

p mp

niente

niente

niente

niente

niente

mp

mp

mp

Vibraphone $\underline{\underline{z}}$ Acco $\underline{\underline{z}}$

26 10" 27 3" 28 4" 29 8" 30 5"

diminuendo

p mp

p mp

p mp

p mp

p mp

Crotolas

31 5" 32 10" 33 2"

mp

mp

mp

ppp

ppp

ppp

ppp

3 vulnerability & communion

Bass Drum

Timpani

Flute

Bass clarinet

Tamtam

L.V.

B.D.

cresc molto

Flutter grain

cresc molto

cresc molto

cresc molto
f with timp sticks *cresc.*
ff
Damp
Damp

Damp
p
imp
p
chole
Timpani
L.V.
Timpani
Thruab
ff
L.V.
mp
ff
mp

4

poco a poco cresc.

(mf)

Metal sheet

cresc.

(f)

cresc sempre

5

L.v.

(ffff)

cresc.

(ffff)

L.v.

mp express.

flutter ground

flutter ground

flutter ground

mf

L.v.

L.v.

to cor anglais

mente

mp express.

5
mp
mp
6
mp. espress.
mp. espress.
niente
niente
7
Timpani
p
p
p
pp
Subito adagio
Cor anglais
niente
niente
mp solo intonabile depresso
mp en dedans

Handwritten musical score for orchestra. The page contains three staves of music. The first staff has a dynamic of p . The second staff has a dynamic of mp . The third staff has a dynamic of f . The score includes various musical markings such as slurs, grace notes, and performance instructions.

Handwritten musical score for orchestra. The page contains three staves of music. The first staff has a dynamic of mp . The second staff has a dynamic of mp . The third staff has a dynamic of mp . The score includes various musical markings such as slurs, grace notes, and performance instructions. A note on the second staff is marked "en dehors".

Handwritten musical score for orchestra. The page contains three staves of music. The first staff has a dynamic of mf . The second staff has a dynamic of mf . The third staff has a dynamic of mf . The score includes various musical markings such as slurs, grace notes, and performance instructions. A note on the third staff is marked "en dehors".

A handwritten musical score for orchestra, page 25, featuring two staves of music.

Measure 11: The score consists of six staves. The top staff has a treble clef, a key signature of one sharp, and a common time signature. The second staff has a bass clef, a key signature of one flat, and a common time signature. The third staff has a bass clef, a key signature of one sharp, and a common time signature. The fourth staff has a bass clef, a key signature of one sharp, and a common time signature. The fifth staff has a bass clef, a key signature of one sharp, and a common time signature. The sixth staff has a bass clef, a key signature of one sharp, and a common time signature. Measure 11 concludes with a repeat sign and a double bar line.

Measure 12: The score continues with six staves. The top staff has a treble clef, a key signature of one sharp, and a common time signature. The second staff has a bass clef, a key signature of one flat, and a common time signature. The third staff has a bass clef, a key signature of one sharp, and a common time signature. The fourth staff has a bass clef, a key signature of one sharp, and a common time signature. The fifth staff has a bass clef, a key signature of one sharp, and a common time signature. The sixth staff has a bass clef, a key signature of one sharp, and a common time signature. Measure 12 concludes with a repeat sign and a double bar line.

13

Handwritten musical score for orchestra. The score consists of ten staves. Measures 1-10 are mostly blank. Measure 11 starts with a bassoon entry (B.C.) at dynamic *p*. Measures 12-13 show woodwind entries (oboe, flute, clarinet) with dynamics *mp*, *mf*, and *mp*. Measures 14-15 feature woodwind entries (clarinet, oboe, flute) at *p*. Measures 16-17 show woodwind entries (clarinet, oboe, flute) at *pp*. Measures 18-19 feature woodwind entries (clarinet, oboe, flute) at *p*. Measures 20-21 show woodwind entries (clarinet, oboe, flute) at *pp*. Measures 22-23 feature woodwind entries (clarinet, oboe, flute) at *p*. Measures 24-25 show woodwind entries (clarinet, oboe, flute) at *pp*.

B.C.

14

15

16

17

18

19

20

21

22

23

24

25

4 awakening

Vibraphone
Lujon
Alto flute (head joint)
Oboe
Clarinet

Lower and raise pitch by progressively turning and moving the end of the instrument with the right hand.

soft melts Ped
Flute
to Flute

Play the notes in the figure (A) rapidly, without accent, in the manner of an arpeggio.

Ped
Flute
5
6
15' 15'

Lontano (ad libitum, quasi legato, within one breath)

27

Ped

Ped

16

17

15''

pp

15''

Ped

Bra

Glockenspiel

soft mallets, mire with cloth

18

19

10"

12"

20

8"

Arithmetical harm
Fundamental

Arithmetical harm
fundamental

Ped

Bra

Bra

Cratiles

21

10"

22

10"

23

10"

Alto Flute / head vowel

mp (bend)

A handwritten musical score page featuring three staves of music. The top staff uses soprano, alto, tenor, and bass clefs. Measure 24 starts with a dynamic p . Measure 25 begins with a dynamic f , followed by a dynamic p . Measure 26 begins with a dynamic p . Various dynamics and performance instructions are scattered throughout the measures. The middle staff consists of six lines of music, with measure 24 containing a single note on the first line and measure 25 containing a single note on the second line. The bottom staff consists of six lines of music, with measure 24 containing a single note on the first line and measure 25 containing a single note on the second line. The page is filled with numerous blank horizontal lines for additional musical notation.

5 microcosmos

Piccolo wood block (8)
 Bassoon
 Snare drum
 Steel drum

Flute

4" 5" 6"

* Alternate breaking 8th notes under 8th may be omitted if necessary

14

2

mp — mf mp

3

mf solo express

mf — mf

poco a poco cresc

4

mf cresc

ff

5 6' 5" 4"

Bassoon
 2 Tenor drums
 Trombones

Snare off

$\frac{6}{4}$

7

mp

sempre staccato e mp

Press

mp

Press

3

mp

f

8

mf

b

mf

b

mf

b

mf

b

mf

b

9
4

Handwritten musical score for orchestra. The score consists of ten staves. Measures 4-5 show woodwind parts with dynamics *mf*, *mp*, *f*, and *mf*. Measure 6 features a bassoon part with dynamic *f* and instruction *Press*. Measures 7-8 show woodwind parts with dynamics *mf*, *f*, and *mf*. Measure 9 shows woodwind parts with dynamics *mp* and instruction *sempre staccato e mp*. Measures 10-11 show woodwind parts with dynamics *mp* and instruction *sempre staccato e mp*.

10

6"

Handwritten musical score for orchestra. Measures 6-7 show woodwind parts with dynamics *mf*, *ff*, and *mf*. Measures 8-9 show woodwind parts with dynamics *ff* and *mf*. Measure 10 shows woodwind parts with dynamics *ff* and *mf*.

Xylophone

Handwritten musical score for orchestra. Measures 4-5 show woodwind parts with dynamics *mf* and *ff*. Measures 6-7 show woodwind parts with dynamics *ff* and *mf*. Measures 8-9 show woodwind parts with dynamics *ff* and *mf*. Measures 10-11 show woodwind parts with dynamics *ff* and *mf*.

Bassoon
mf

11 4" 5" 6"
 left hand right hand both hands

Musette
mp

3" 4" 5" 6"

12 4

Musical score page 13. The score consists of six staves. The first staff has a dynamic of mp . The second staff has a dynamic of mf and is labeled "solo express". The third staff has a dynamic of f . The fourth staff has a dynamic of mf . The fifth staff has a dynamic of mp . The sixth staff has a dynamic of mp .

13

Musical score page 14. The score consists of six staves. The first staff has a dynamic of mf . The second staff has a dynamic of mp . The third staff has a dynamic of mp . The fourth staff has a dynamic of mp . The fifth staff has a dynamic of mp . The sixth staff has a dynamic of mp .

14

Musical score page 15. The score consists of six staves. The first staff has a dynamic of mf and is labeled "solo express". The second staff has a dynamic of mf . The third staff has a dynamic of mf . The fourth staff has a dynamic of mf . The fifth staff has a dynamic of mf . The sixth staff has a dynamic of mf .

15

Musical score page 16. The score consists of six staves. The first staff has a dynamic of mf and is labeled "mf cresc". The second staff has a dynamic of mf and is labeled "mf cresc". The third staff has a dynamic of mf and is labeled "mf cresc". The fourth staff has a dynamic of mf and is labeled "mf cresc". The fifth staff has a dynamic of mf and is labeled "mf cresc". The sixth staff has a dynamic of mf and is labeled "mf cresc".

f *ff*
Puccini *etc.* *etc.*

16 *6"*
flutter *flutter* *flutter* *flutter* *flutter* *flutter* *mf*

snares off
Tom toms

5' *5'* *5"*
pizzicato *pizzicato* *pizzicato*

Piccolo wood block
Maracas
Shrill drum

17 *4*

18

6"

Miming Bass

5"

5"

19

3"

3"

19

5"

mf

mf

mf

mf

mf

mf

Xylophone
mf Marimba

204

mf express

21

shakes off

snare drums

rimo

mf f

A handwritten musical score for orchestra, page 41, featuring two systems of music. Measure 22 starts with a dynamic of f and includes a tempo marking of $\frac{1}{2}$. The score consists of ten staves, with various instruments like strings, woodwinds, and brass indicated by their respective clefs and stems. Measure 23 begins with a dynamic of p , followed by pp . The instrumentation remains consistent, with specific dynamics and performance instructions such as "ff marcato" and "flutter" written in the score. The score is dated "Calgary 1980" at the bottom.

Percussion Layout

Audience

Quintet

