

An Acoustic Mandala for the Fourteenth
[Tibet for Tibet]

Elements of Analysis and Synopsis
First Movement

The majority of the first movement is distinguished by its energetic use of reiteration, ostinato and syncopated accents, with overpowering percussion and bass-heavy chords. Chant 1 (bars 4-93) contains a rhythmic representation of the mandala; a percussion mandala composed within theoretical numerical symmetry:

| Instrument | Amount of Attacks | Multiplication |
|----------------------------|-------------------|----------------|
| Bass drum | 196 attacks | 14 x 14 |
| Cabaça | 539 attacks | 77 x 7 |
| Maracas | 770 attacks | 55 x 14 |
| Paired cymbals | 112 attacks | 8 x 14 |
| Suspended hand cymbals | 56 attacks | 4 x 14 |
| Suspended China cymbal | 42 attacks | 3 x 14 |
| Suspended ride-bell cymbal | 616 attacks | 44 x 14 |
| Tambourine | 56 attacks | 4 x 14 |
| Tam-tam | 63 attacks | 9 x 7 |

The bass drum, paired cymbals, suspended ride-bell cymbal and tam-tam each play seven distinct performance techniques. The ride-bell cymbal in the example below frames the percussion mandala with a phrase originally composed within numerical symmetry. The tam-tam is a near omnipresent resonance.



Although Chant 1 was initially conceived just for percussion, the orchestral texture emerged naturally. One wanted a low-pitched solo line to lead the chant and required more material than the seven notes offered by Upper Chant 1. As the following examples illustrate, the lowest pitch register of Upper Chant 1 (G3) was used as a pivot and the chant matrix was manipulated in order to extend the pitch palette available:

Acoustic Mandala: Chant 1 Additional Material A

| Low | L2 | L3 | L4 | L5 | L6 | L7 | L8 | H9 | H10 | H11 | H12 | H13 | H14 | H15 | High |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|
| Chant 1 | | | | | | | | G3 | G#3 | A3 | Bb3 | B3 | C4 | C#4 | Chant 1 |
| Chant 2 | A0 | Bb0 | B0 | C1 | C#1 | D1 | Eb1 | G#3 | A3 | Bb3 | B3 | C4 | C#4 | D4 | Chant 2 |
| Chant 3 | E1 | F1 | F#1 | G1 | G#1 | A1 | Bb1 | A3 | Bb3 | B3 | C4 | C#4 | D4 | Eb4 | Chant 3 |
| Chant 4 | A1 | Bb1 | B1 | C2 | C#2 | D2 | Eb2 | B3 | C4 | C#4 | D4 | Eb4 | E4 | F4 | Chant 4 |
| Chant 5 | C#2 | D2 | Eb2 | E2 | F2 | F#2 | G2 | C#4 | D4 | Eb4 | E4 | F4 | F#4 | G4 | Chant 5 |
| Chant 6 | E2 | F2 | F#2 | G2 | G#2 | A2 | Bb2 | G#4 | A4 | Bb4 | B4 | C5 | C#5 | D5 | Chant 6 |
| Chant 7 | G2 | G#2 | A2 | Bb2 | B2 | C3 | C#3 | Bb4 | B4 | C5 | C#5 | D5 | Eb5 | E5 | Chant 7 |
| Chant 8 | A2 | Bb2 | B2 | C3 | C#3 | D3 | Eb3 | B4 | C5 | C#5 | D5 | Eb5 | E5 | F5 | Chant 8 |
| Chant 9 | B2 | C3 | C#3 | D3 | Eb3 | E3 | F3 | C5 | C#5 | D5 | Eb5 | E5 | F5 | F#5 | Chant 9 |
| Chant10 | C#3 | D3 | Eb3 | E3 | F3 | F#3 | G3 | C#5 | D5 | Eb5 | E5 | F5 | F#5 | G5 | Chant10 |
| Chant11 | Eb3 | E3 | F3 | F#3 | G3 | G#3 | A3 | Eb5 | E5 | F5 | F#5 | G5 | G#5 | A5 | Chant11 |
| Chant12 | E3 | F3 | F#3 | G3 | G#3 | A3 | Bb3 | G5 | G#5 | A5 | Bb5 | B5 | C6 | C#6 | Chant12 |
| Chant13 | F#3 | G3 | G#3 | A3 | Bb3 | B3 | C4 | A5 | Bb5 | B5 | C6 | C#6 | D6 | Eb6 | Chant13 |
| Chant14 | G3 | G#3 | A3 | Bb3 | B3 | C4 | C#4 | C#6 | D6 | Eb6 | E6 | F6 | F#6 | G6 | Chant14 |
| Chant15 | G#3 | A3 | Bb3 | B3 | C4 | C#4 | D4 | E6 | F6 | F#6 | G6 | G#6 | A6 | Bb6 | Chant15 |
| Low | L2 | L3 | L4 | L5 | L6 | L7 | L8 | H9 | H10 | H11 | H12 | H13 | H14 | H15 | High |

Acoustic Mandala: Chant 1 Additional Material B

| Low | L2 | L3 | L4 | L5 | L6 | L7 | L8 | H9 | H10 | H11 | H12 | H13 | H14 | H15 | High |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|
| Chant 1 | | | | | | | | G3 | G#3 | A3 | Bb3 | B3 | C4 | C#4 | Chant 1 |
| Chant 2 | A0 | Bb0 | B0 | C1 | C#1 | D1 | Eb1 | G#3 | A3 | Bb3 | B3 | C4 | C#4 | D4 | Chant 2 |
| Chant 3 | E1 | F1 | F#1 | G1 | G#1 | A1 | Bb1 | A3 | Bb3 | B3 | C4 | C#4 | D4 | Eb4 | Chant 3 |
| Chant 4 | A1 | Bb1 | B1 | C2 | C#2 | D2 | Eb2 | B3 | C4 | C#4 | D4 | Eb4 | E4 | F4 | Chant 4 |
| Chant 5 | C#2 | D2 | Eb2 | E2 | F2 | F#2 | G2 | C#4 | D4 | Eb4 | E4 | F4 | F#4 | G4 | Chant 5 |
| Chant 6 | E2 | F2 | F#2 | G2 | G#2 | A2 | Bb2 | G#4 | A4 | Bb4 | B4 | C5 | C#5 | D5 | Chant 6 |
| Chant 7 | G2 | G#2 | A2 | Bb2 | B2 | C3 | C#3 | Bb4 | B4 | C5 | C#5 | D5 | Eb5 | E5 | Chant 7 |
| Chant 8 | A2 | Bb2 | B2 | C3 | C#3 | D3 | Eb3 | B4 | C5 | C#5 | D5 | Eb5 | E5 | F5 | Chant 8 |
| Chant 9 | B2 | C3 | C#3 | D3 | Eb3 | E3 | F3 | C5 | C#5 | D5 | Eb5 | E5 | F5 | F#5 | Chant 9 |
| Chant10 | C#3 | D3 | Eb3 | E3 | F3 | F#3 | G3 | C#5 | D5 | Eb5 | E5 | F5 | F#5 | G5 | Chant10 |
| Chant11 | Eb3 | E3 | F3 | F#3 | G3 | G#3 | A3 | Eb5 | E5 | F5 | F#5 | G5 | G#5 | A5 | Chant11 |
| Chant12 | E3 | F3 | F#3 | G3 | G#3 | A3 | Bb3 | G5 | G#5 | A5 | Bb5 | B5 | C6 | C#6 | Chant12 |
| Chant13 | F#3 | G3 | G#3 | A3 | Bb3 | B3 | C4 | A5 | Bb5 | B5 | C6 | C#6 | D6 | Eb6 | Chant13 |
| Chant14 | G3 | G#3 | A3 | Bb3 | B3 | C4 | C#4 | C#6 | D6 | Eb6 | E6 | F6 | F#6 | G6 | Chant14 |
| Chant15 | G#3 | A3 | Bb3 | B3 | C4 | C#4 | D4 | E6 | F6 | F#6 | G6 | G#6 | A6 | Bb6 | Chant15 |
| Low | L2 | L3 | L4 | L5 | L6 | L7 | L8 | H9 | H10 | H11 | H12 | H13 | H14 | H15 | High |

This additional material produced a total of 21 pitches that could be used within Chant 1:

Acoustic Mandala Chant 1 Material

[21 notes in specific register: contains upper chant 1 and additional materials matrix a/b]

Eb1 A1 C#2 E2 F#2 G#2 A2 B2 D3 F3 G3 G#3 A3 Bb3 B3 C4 C#4 D4 F4 C#5 E5

If one reads through the first seventy bars of the score, no instrument plays above E5 and the example above accounts for 99% of all material. The only notable exception is in bars 33-35, where a Bb4 is present (see Acoustic Mandala Score PDF).

The preconceived pitch material was applied conscientiously throughout (in specific register), but if scrutinised, the score would disclose a handful of exceptions like this, compromised only with consideration to balancing orchestral harmony, density and timbre.

Bar 70 marks the start of Transition 1:2 (See Final Form Chart PDF), during transitions, one could utilise combined materials, therefore, as illustrated in the following example, Transition 1:2 (bars 70-93) can use all Chant 1 and Chant 2 materials:

Acoustic Mandala Transition 1:2 Combined Pitches

[contains all chant 1 material plus chant & chord 2 and matrix column L2]

A0 B0 B0 C1 C#1 D1 Eb1 E1 F1 A1 B1 C#2 E2 F#2 G2 G#2 A2 B2 C3 C#3 D3 Eb3 E3 F3

F#3 G3 G#3 A3 Bb3 B3 C4 C#4 D4 F4 C5 C#5 D5 E5 F5 Bb5 C#6 F#6 Bb6

From this point, the matrices provided all of the pitch material: Chant 2 (bars 94-131) uses its relative Upper and Lower Chants, the notes of Chord 2 and Matrix column L2.

Accented syncopation and reiteration is a primary characteristic of this first movement. A syncopated accent unison ostinato on F, first seen at Figure C is treated as a recurring idea:

C ♩ = 60 a tempo

11

Fl. 1. *p* *mf*

Ob. 1. *p* *mf*

Cl. 1. *p* *mf*

Vln.I 1. *p* *mf*

Vln.II 1. *p* *mf*

Vla. 1. *p* *mf*

The ostinato develops elements of expanding harmony, gathering more instruments with each statement and extending into a multi-timbral 'harmonic ostinato':

E A statement of intent... poco accel.

The musical score for Figure I illustrates a multi-timbral 'harmonic ostinato' across various instruments. The score is divided into two systems. The first system includes Flute (Fl.), Oboe (Ob.), Clarinet (Cl.), Contrabassoon (Cbsn.), Horn (Hn.), Baritone Trombone (B.Tbn.), Tuba (Tba.), and Piano (Pno.). The second system includes Violin I (Vln.I), Violin II (Vln.II), and Viola (Vla.). Each instrument part features a rhythmic ostinato pattern that evolves over time, with dynamic markings (mp, mf, f) and articulation (accents, slurs) indicating the development of the harmonic texture. The tempo is marked 'poco accel.' and the time signature changes from 2/4 to 3/4.

The final appearance of the F ostinato at Figure I, blends into Transition 1:2 (bars 70-93). The idea is passed throughout the orchestra. Harmonic ostinato (as described above), play with and against the rhythms of the percussion mandala discussed earlier to create a combined sound mass of syncopated accents and timbres.

Chant 2 (bars 94-131) is led by the piano. The syncopated unison ostinato remains, but adopts a supporting role, outlining the piano phrases. As illustrated in the following example, it is composed around a C pedal tone and produces passages of textural crescendo and harmony:

poco rit.

The musical score is for Chant 2, bars 94-131. It features a variety of instruments: Flute (Fl.), Oboe (Ob.), Clarinet (Cl.), Bass Clarinet (B.Cl.), Horns (Hn.), Trumpet (Tpt.), Trombone (Tbn.), Tuba (Tba.), Violin II (Vln.II), Viola (Vla.), and Cello (Vc.). The score is written in 2/4 time and includes a tempo marking of 'poco rit.' at the top right. The music is characterized by complex rhythmic patterns, including triplets and sextuplets, and dynamic markings ranging from *pp* (pianissimo) to *f* (forte). The piano part (Vc.) is the central element, with other instruments providing harmonic support and texture. The score is divided into measures, with bar numbers 112, 113, 114, 115, and 116 indicated at the top of the first staff.

After a melodic transition, the brass leads Chant 3 (bars 153-168) with a D pedal tone in constant reiteration and dynamic momentum towards an aggressive orchestral crescendo. The varying timbres of the brass instruments accentuate the syncopation, but the combined effect eventually blurs into one meta-colour within the orchestra.

156 $\text{♩} = 60$ a tempo A renewed sense of vigour & purpose...

The score for Chant 3 (bars 153-168) shows a D pedal tone in the brass instruments. The Horns (Hn.) part starts with a ppp dynamic and a 3/4 time signature. The Trumpets (Tpt.) and Trombones (Tbn.) parts enter in bar 154 with a p dynamic. The dynamics increase to mf and then f by bar 168. The tempo is 60 beats per minute.

The brass ostinato drifts away within the dissipation of the crescendo (bars 190-210) and Chant 4 effectively divides the two musical characters of the movement. As the following example illustrates, bass strings in near soli distinguish the divide:

210 A sense of solitary meditation and a hint of anger... AA $\text{♩} = 60$ a tempo poco rit. $\text{♩} = 52$ poco accel. $\text{♩} = 60$

The score for Chant 4 (bars 190-210) shows a bass string ostinato. The Oboe (Ob.) part starts with a ppp dynamic and a 3/4 time signature. The Trumpets (Tpt.) and Bass Trombone (B. Tbn.) parts enter in bar 192 with a ppp dynamic. The dynamics increase to mp and then f by bar 210. The tempo is 60 beats per minute.

The latter parts of the first movement (Transitions 4:5 and 5:6) employ a reduced texture of chant-like melodies and orchestral resonances. The opening percussion gesture returns to conclude the movement.

Second Movement

The second movement is far less complicated to explain analytically and can be clearly divided into two distinct musical characters. The first and most prominent is the processional development towards orchestral crescendo composed upon varied repetition of an expanding bass phrase. This is first introduced by the contrabasses five bars into the movement and is repeated for the second time with some alterations at Figure JJ:

JJ ♩ = 60 With polite impatience..!

290 div. *mf* *f*

As shown in the following example, this phrase is split between the contrabasses and cellos and harmonised by the violin at Figure KK as it continues to underpin the movement:

KK The procession begins..!

297 *mp* *mp* *mp* *f*

More instruments join with each repetition, playing in harmony and unison, until it is eventually shared by most of the orchestra and then played in tutti during the crescendo at Figure RR (see Acoustic Mandala Score PDF).

At Figure MM the wind and strings play an accented rhythm coloured by the snare drum. This brittle multi-timbre syncopation contrasts against the fluid processional phrase as the two combine within accumulative dynamics and textures to maintain impetus towards the resulting crescendo. All notes are doubled for combined sonorities:

MM Gradual & consistent growth in texture & dynamic...

310 1.

The score is written for a full orchestra and includes the following parts and markings:

- Fl.**: *mf*, measures 310-312 with triplets and slurs.
- Ob.**: *mp*, measures 310-312 with triplets and slurs.
- Cl.**: *mp*, measures 310-312 with triplets and slurs.
- B.Cl.**: *mp*, measures 310-312 with triplets and slurs.
- Cbsn.**: *mf*, measures 310-312 with triplets and slurs.
- Hn.**: *mf*, measures 310-312 with triplets and slurs.
- B.Tbn.**: *mf*, measures 310-312 with triplets and slurs.
- Tba.**: *mf*, measures 310-312 with triplets and slurs.
- Perc.**: *mp*, measures 310-312 with triplets and slurs.
- Vln.I**: *tutti*, *mf*, measures 310-312 with triplets and slurs.
- Vln.II**: *pizz.*, *mf*, measures 310-312 with triplets and slurs.
- Vla.**: *tutti*, *mf*, measures 310-312 with triplets and slurs.
- Vc.**: *pizz.*, *mf*, measures 310-312 with triplets and slurs.
- Cb.**: *mf*, measures 310-312 with triplets and slurs.

The score is in 4/4 time, with a key signature of one sharp (F#). The dynamics range from *mp* (mezzo-piano) to *mf* (mezzo-forte). The texture grows as more instruments enter and play more complex figures.

The second distinct character of this movement follows the crescendo at Figure UU. This marks the halfway point of the preconceived form (see Final Form Chart PDF). The texture from here on is dramatically reduced and the piece closes with a collection of solo, duet and trio melodic chants. To use an analogy in relation to external stimuli, the mandala is brushed away and scattered into running water.

AAA ♩ = 60 Chant in trio for mind, body & spirit... poco rit. [♩ = 52]

398

Cl. *ppp* *p* *ppp*

B.Cl. *mp* *p* *pp*

Cbsn. *mp* *p*

Perc. 2 *p* *pp* l.v.

Vln.I *ppp* *p* *ppp*

Vln.II *mp* *p* *pp*

Vla. *ppp* *p* *ppp*

Vc. *mp* *p* *pp*

Cb. *mp* *ppp* *p* *ppp*

After a resonant final cadence (B^bMaj9/E^b – E^b6/9) composed from Transition 10:11 materials, the opening percussion gesture returns to conclude this *Acoustic Mandala for the Fourteenth*.