

Cue From Cage: Designing ‘Ragaslendo’

Valerie Ross

Universiti Teknologi MARA

Abstract

Asian cultures and aesthetics of music and music making were significant influences on Cage’s ideas on indeterminacy and chance-controlled music. His interest in Indian philosophy and Zen Buddhism in the late 1940s paved the way for his creative output a decade later. It also changed the way in which music composition is perceived, constructed and received, influencing the direction and craft of new music. Drawing common ground with Cage, this paper reflects on how the author embraces oriental philosophies in her compositional approach. Applying practice-led methodology, it extrapolates the manner in which elements of Hindustani and gamelan music have been applied in the creation of ‘Ragaslendo’, a work which has lent itself to multiple transformations in different performance settings in (re)presenting time, space and musical shape.

Keywords John Cage, ragaslendo, oriental philosophies, raga, gamelan

Chance Encounter: Meeting John Cage

I begin this article with a personal anecdote. In 1990, I met Cage at the renowned *Darmstadt International Institute for New Music*. I clearly recall the excitement listening to John Cage speak about his work. He was 78 years old and his visit to Darmstadt was a historic return to the place where he first lectured in 1958. Shortly after, I remember the editor of *Musiktexte*, tapping me on the shoulder saying, ‘Valerie, I saw you taking photographs with John, could you send copies to me?’ I sent the original photographs upon my return to Kuala Lumpur. Two years later, I heard the news of Cage’s demise on 12 August 1992 at the age of 80. The impact of Cage’s creations remains strong. When John Cage turned 100 in 2012, musical celebrations took place worldwide. In this article, I extrapolate some common ground in Cage’s aesthetical and philosophical approaches to musical creation with those that I personally hold.

Cage’s works were influenced by East and South Asian cultures. The idea of aleatoric or chance-controlled music became a compositional tool for Cage, propelling him to be lauded as one of the most influential American composers of the 20th century.

Cage’s interest in Hindu philosophy and Zen Buddhism had significant influence on his far reaching ideas regarding indeterminacy, chance, silence and motion in composition and performance. His fascination with the *I Ching*, an ancient Chinese classic text on the concept of changing events was manifested in his approach to creative expression. His ‘Autobiographical Statement’, written for the Inamori Foundation and

delivered in Kyoto as a commemorative lecture in response to having received the Kyoto Prize in November 1989, provided valuable insights into his inner thoughts and approach to music, silence and sound. Cage (1991) declared:

It was also at the Cornish School that I became aware of Zen Buddhism, which later, as part of oriental philosophy, took the place for me of psychoanalysis ... I was disturbed both in my private life and in my public life as a composer. I could not accept the academic idea that the purpose of music was communication because I noticed that when I conscientiously wrote something sad, people and critics were often apt to laugh. I determined to give up composition unless I could find a better reason for doing it than communication. I found this answer from Gira Sarabhai, an Indian singer and tabla player [who said], ‘the purpose of music is to sober and quiet the mind, thus making it susceptible to divine influences’. I also found in the writings of Ananda K. Coomaraswamy that the responsibility of the artist is to imitate nature in her manner of operation. I became less disturbed and went back to work.

Cox (2011) studied Cage’s interpretative approach that encompassed the interdisciplinary elements of Credo within its historical and social context. Its focus on the interrelationship between the dance, script and music, and the collaborative process informed Cage about collage aesthetics. It influenced Cage’s aesthetic engagement with the European avant-garde and his collaborative work with choreographers. Regarded as one of the most influential composers of the post-war avant-garde, Cage was instrumental in the development of modern dance through his collaboration with choreographer, Merce Cunningham. The John Cage Trust maintains a sizable collection of Cage’s music, text and visual art works. The influence of oriental philosophy on Cage was significant. His autobiographical statement says,

I felt that Zen changes in different times and places and what it has become here and now, I am not certain. Whatever it is it gives me delight and most recently by means of Stephen Addiss book *The Art of Zen*... As part of the source material for my Norton lectures at Harvard, I thought of Buddhist texts. I remembered hearing of an Indian philosopher who was very uncompromising. I asked Dick Higgins, “Who is the Malevich of Buddhist philosophy?” He laughed. Reading *Emptiness -- a Study in Religious Meaning* by Frederick J. Streng, I found out. He is Nagarjuna... And there is another good book, *Wittgenstein and Buddhism*, by Chris Gudmundsen, which I shall be reading off and on into the future. My music now makes use of time-brackets, sometimes flexible, sometimes not. There are no scores, no fixed relation of parts. Sometimes the parts are fully written out, sometimes not (Cage, 1991).

Drawing Common Ground

Like Cage, I am interested in the notion of timelessness, of structure to process, from music as a tangible object having distinct parts, to music as an amoebic entity ready to be shaped in and through movement. Constructed using raga motives and slendro

scales, I draw upon my work, entitled ‘Ragaslendra’ as the focus of discussion. This set of eight pieces illuminate the influence of oriental philosophy in creating time, space and musical shape through its realisation in multiple settings. The creation of music which encapsulates the essence of different performance practices, ranging from musical representations that are highly structured to those which are adequately flexible and expandable, afford the portrayal of intended expressions.

Here, I adopt a practice-led approach in deconstructing musical meaning. I note that my creative practice has led-to and at the same time, stems from research (Dean, 2010; Freeman, 2010). I examine the extent to which Western and non-Western musical theories have influenced my creativity and I reflect upon the manner in which my compositional aesthetics has continued to provide me with valued inspiration and reference.

Indian Classical Music: Raga Scales

Indian Classical Music encompasses two distinct but related traditions, namely, the Northern Indian Hindustani tradition and the Southern Indian Carnatic tradition. Both traditions feature similar approaches to musical theory, but the terms used are often different. Unlike the major-minor tonal systems of Western classical music, the music of India does not emphasise ‘harmony’ and much of Indian classical music features a single voice or instrument on the melody, accompanied by drone and percussion. Interest and complexity of Indian classical music lie in its melodies (‘ragas’) and its rhythms (‘talas’) (Clayton, 2000). *Ragaslendra* was created premised on such compositional ethos.

The Sanskrit word ‘raga’, is defined as “the act of colouring or dyeing” in the context of the mind, mood and emotions and refers metaphorically to the passion of the soul (Encyclopaedia Britannica, 2013). The seven notes of a ‘scale’ are known as ‘thats’ in Hindustani music and ‘melas’ in Carnatic music. The interval pattern varies from one ‘that’ to the next, and so the relationships between the notes are also different. Although the first note of an Indian scale is often given as C, Indian ‘thats’ are not fixed in pitch. Any raga may actually begin on any pitch (movable ‘do’ concept in *solfege*). It is the pattern of intervals and the (relative) relationship between the notes that create the raga rather than the absolute frequencies. Specific degrees of the raga are accentuated and embellished, giving each raga its own unique characteristic. Their peculiarities are created by the use of subtle differences in the order of notes, an omission of a dissonant note, an emphasis on a particular note, the slide from one note to another, and the use of microtones together with other nuance which differentiate one raga from the other. Hence, a ‘raga’ is more than just a ‘scale’. It encompasses (i) solfege, (ii) modal structure, (iii) peculiar numbers of notes and (iv) special emphases on certain notes and the (v) use of particular ascending and descending patterns. In this sense, the essence of beauty in raga-inspired music is in its melodic embellishment and musical inflections.

Indian music, like Western music, recognizes seven notes that can be sharpened or flattened to get 12 notes within each octave. A flattened note is called komal (signified by a line underneath its Indian ‘swara’). A sharpened note is called teevra (signified by a line above its Indian ‘swara’). Table 1 compares the solfege and ‘swara’ to the letter

names of the Western scale, although it is to be noted that they are not equivalent by any means but used as a symbolic representation Western and non-Western of systems of musical representation and communication.

Table 1 Comparing Systems of Musical Representation

Letter name	C	D	E	F	G	A	B
Solfège (movable 'do')	Do	Re	Mi	Fa	So	La	Ti
Indian 'swara' / 'sargam' (movable 'sa')	Sa (Shaja)	Re (Rishab)	Ga (Gandhar)	Ma (Madhyam)	Pa (Pancham)	Dha (Dhaivat)	Ni (Nishad)

‘Laras’ of Gamelan Music

‘Ragaslendro’ is inspired by scales or ‘laras’ used in gamelan music. The Indonesian gamelan is a generic name for various types of orchestras found in Java, Bali and Madura. Gamelan instruments, regardless of the materials of which they are constructed, are tuned to one of two scale systems, namely the seven-note pelog scale (1, 2, 3, 4, 5, 6, 7) and the five-note slendro scale (1, 2, 3, 5, 6, 1). Yet, because each gamelan scale system is tuned differently from one another, they are not compatible, and thus, gamelan orchestras with their unique tunings are not combined in performances. The following figures compare the approximate pitch relationships of slendro and pelog scales in relation to the Western scale followed by a comparison of the slendro scale to the whole tone scale.

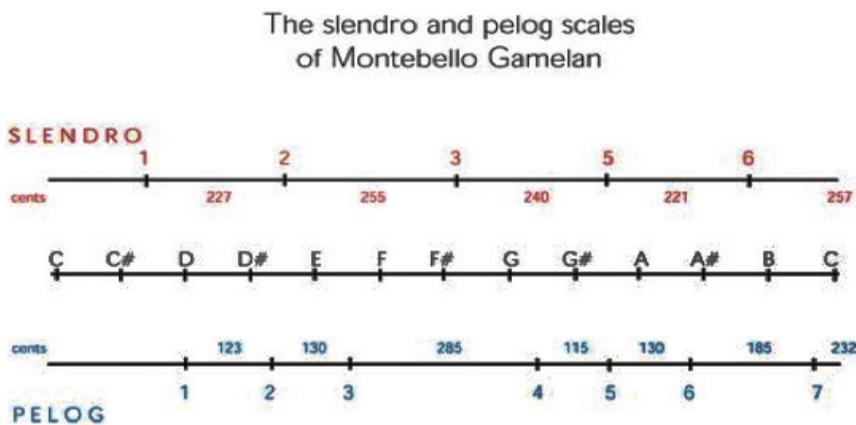


Figure 1 Comparing pelog, slendro and chromatic scales (Source: Manis, 2006)



Figure 2 Slendro versus whole tone scale on C (Source: Leeuw, 2005)

Metamorphosis of ‘Ragaslendro’

Ragaslendo is inspired by the ‘rag’, a Hindi word derived from Sanskrit to mean ‘colour’ or ‘passion’ and the ‘slendro laras’ (pentatonic scale) of gamelan music. It comprises 8 pieces named after the ragas commonly played at different times of the day-night according to Hindustani music tradition (Deepak Raja, 2013). ‘Ragaslendro’ manipulates time, drawing upon the differing notions of pitch, rhythm, temperament and artistic purpose in Western and non-Western musical theory.

The eight pieces in ‘Ragaslendro’ are (i) Bhairav, (ii) Todi, (iii) Gaud, (iv) Madhuvandi, (v) Kalyan, (vi) Durga, (vii) Abhogi and (viii) Malkauns. Each piece was created using the ‘swara’ or ‘scale’ of an Indian raga, designed to highlight the beauty of the peculiar ‘raga- swara’ (scale) juxtaposed over subtle traces of slendro melodic unit. The performer may begin with any of the pieces to commence the time-cycles, embedded in different rhythmic patterns.

The interpretation of each piece is guided by the ‘traditional’ character of raga-types as reflected by the descriptors at the beginning of each piece, its inherent melodic qualities, expression marks and writing styles. For example, while the first two pieces, *Bhairav* and *Todi* depict the ‘rasa’ (feel) of compassion, devotion and adoration as dawn rises, the next two pieces, *Gaud* and *Madhuvani* explores the joys of life. *Kalyan* exudes contentment and celebration, soon to be contrasted by *Durga*, known for her power, patience and fearlessness. *Abhogi* slumbers and introvert *Malkauns* connects the daily cycle of time.



Figure 3 Eight Raga-Swaras of 'Ragaslendo'

At the most concise level, 'Ragaslendo' is played as a solo work with the melodist (pianist) playing the drone part with specific strings of tambura or the bass notes of the keyboard if a tambura is unavailable. The piece is written for a 'melodist' in order that other melodic instruments might be used, particularly when performed in extended forms. Commissioned as part of the 'Shadows and Silhouettes' international project, CD published by Wirripang (2011), 'Ragaslendo' has since been premiered in three different forms, namely as a:

- (i) solo work for piano (Shadows and Silhouettes, 2011)
- (ii) music-movement piece for pianist cum dancer and percussionist with computer (Soundscapes, 2011)
- (iii) full evening music-dance theatre production with multimedia (Sounds, Sights and Senses, 2012).

Bhairav, the opening piece in 'Ragaslendo' is illustrated in Figure 4.

RAGASLENDRO
(BHAIRAV)
for Melodist and Tambura

Valerie Ross

Compassion and devotion

Tambura Tuning: $B\flat$ C E F

Melodist
(without key signature)

Tambura
pluck $B\flat$ string once at any point

Melodist
mf *p*

Tambura
simile

Melodist
f *pp* *pp* *mp*

Tambura
soto voce

Melodist

Tambura

Melodist
(*5th*)

Tambura

Figure 4 Excerpt of ‘Ragaslendro’ (Piece 1: *Bhairav*)

Designing and Mapping Scales

The following section extrapolates the fundamental construct and design of *Ragaslendro*, as influenced by East-West musical traditions and practice. The composer explored how different pieces would emerge when creating raga-svara melodies, juxtaposed against the ‘slendro-laras’ (gamelan pentatonic scale) that underlie each melodic creation. Two forms of the slendro-pentatonic scale are used, one starting on $B\flat$ and another on C. The following maps the ‘swara’ (Indian raga scales) and ‘laras’ (gamelan slendro scale) against the Western chromatic scale together with the ‘drone’ notes of each piece in ‘Ragaslendro’

Table 2 Swaras & Laras Scales used in ‘Ragaslendro’

Letter Names/ Raga Swaras	C Sa	Db Re Komel	D Re	Eb Ga Komel	E Ga	F Ma	F# Ma Tee SFA	G Pa	Ab Dha Komel	A Dha	Bb Ni Komel	B Ni	Drone- Note
Bhairav (*)	X	X			X	X		X	x			x	Bb
Todi (**)	X	X		X			X		x			x	C
Gaudi (**)	X		X		X	X	X	X		x			C
Madhuvandana (**)	X	X	X				X	X		x		x	C
Kalyan (**)	X		X		X		X	X		x		x	E
Durga (*)	X		X			X		X		x			Bb
Abhogi (*)	X		X	X		X				x			Bb
Malikauns (**)	X			X		X			x		x		F
<i>The above pieces are juxtaposed with Slendro Scales marked by * (Bb slendro) or ** (C slendro)</i>													
Slendro scale (starting on Bb *)	X		X			X		X			x		
Slendro scale (starting on C **)	X		X		X			X		X			

Concepts of Pitch and Tuning: 22 ‘Shrutis’ versus 24 Semitones

The concept of pitch and tuning systems (as well as time) in Indian musical theory is fundamentally different from Western music theory. Whilst there is no ‘equivalency’ some comparisons are permissible.

Like the Western chromatic scale, Indian music also has an octave divided into 12 notes. These 12 notes are called ‘swaras’ but they are not tuned like the notes of the chromatic scale. Also, just as only seven of the chromatic notes are available in a major or minor scale, only seven notes are available in each ‘that’ (scale). But because just intonation is used, these notes are tuned differently from Western scales. For example, in Western music, the interval between C and D is the same (one whole tone) as the interval between D and E. In Indian tuning, the interval between C and D is larger than the interval between D and E. Using the simpler ratios of the harmonic series, the frequency ratio of the larger interval is about 9/8 (1.125); the ratio of the smaller interval is 10/9 (1.111). (For comparison, an equal temperament whole tone is about 1.122.) Western music theory terms the larger interval a major whole tone and the smaller one a minor whole tone. Indian music theory uses the concept of a *shruti*, which is an interval smaller than the intervals normally found between notes, similar

to the concept of cents in Western music. The major whole tone interval between C and D would be four shrutis; the minor whole tone between D and E would be three shrutis (Schmidt-Jones, 2013)

In some ragas, some notes may be flattened or sharpened by one shruti, in order to better suit the mood and effect of that raga. So, for tuning purposes, the octave is divided into 22 ‘shrutis’. This is only for tuning, however; for any given ‘that’ or raga, only 12 specifically-tuned notes are available.

Premised on such understandings, experience and exposure to multiple ‘tuning practices’, the composer works within microtonal scale divisions which has enabled her to ‘weave in and out’ of different tuning systems when designing works for Western and non-Western instruments.

Accompanist and Harmonist: Tambura

In India, the most common accompaniment instrument is the ‘Tambura’. This instrument is a chordophone in the lute family. It has four very long strings. The strings are gently plucked, one after the other. It takes about five seconds to go through the four-string cycle, and the cycle is repeated continuously throughout the music. The long strings continue to vibrate for several seconds after being plucked, and the harmonics of the strings interact with each other in complex ways throughout the cycle. The effect for the listener is not of individually-plucked strings. It is more of a shimmering and buzzing drone that is constant in pitch but varying in timbre.

Hindustani music is essentially solo music and invariably performed with a drone, usually provided by the *Tambura*. The *tambura* player does not participate in either the exposition of the raga or in maintaining the rhythm, but keeps the drone going independently. Usually the two middle strings of this unfretted long lute are tuned to the tonic and the outer strings to the low fifth and the low tonic (P S S S). Instead of Pa, the first string can be tuned to the natural fourth (M S S S) when Pa is omitted or weak; or to the natural seventh (N S S S). The following figure illustrates the instrument and its conventional tuning scheme.



Figure 5 Tambura: Indian lute

In 'Ragaslendo' the tambura plays the role of the 'accompanist' and 'harmonist'. The tambura, being the most common accompaniment instrument used in Indian music, is also played by the melodist in solo performances. Here the four strings of the tambura (unconventionally) tuned to four different pitches, namely, Bb, C, E, F (see Figure 4). This corresponds to the different 'drone-like' notes that are to be sounded in each piece. The melodist plucks one of the specified strings once per line of music of each piece, except for one piece where three strings are plucked one after the other, also once per line of music. This creates 'harmonic' sonorities that permeate in each piece, and in keeping with the 'background' role of the instrument. The melodist plucks the respective strings intermittently, once during each line of the score, allowing its harmonies to meld fluidly with the sonorities of the melody played. The following illustrates the tambura's intermittent 'drone-like' notes for each of the pieces.

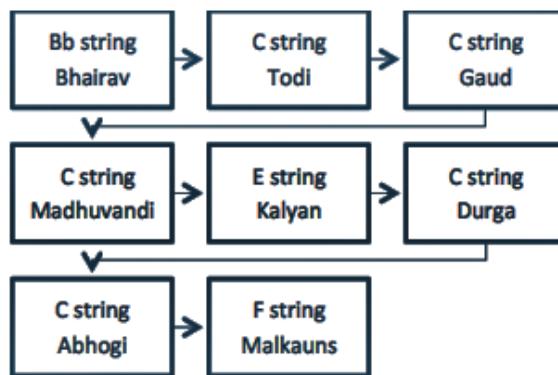


Figure 6 Tambura 'drone' note for each piece in Ragaslendo

As an alternative to the tambura, a pianist may also play the relevant note/s of the bass register, using the pedal to create the overlapping sonorities. In cases where the work was expanded to larger forms, each of the pieces was developed using a combination of Western and traditional instruments, dance movement and electronics, and always in keeping with its conceptual framework, compositional structure while embracing the *rasa* or feel of time, space and aesthetics in accordance to the oriental philosophies upon which the work was originally created.

Conclusion and Reflection

This article elucidates some common ground between the oriental philosophies embraced by John Cage and that of the composer-writer. She tells of her meeting with Cage at an earlier stage of her creative life and ponders if this encounter has had a covert (or overt) influence on her works. A John Cage 101 Conference (2013) at Universiti Pendidikan Sultan Idris provided a 'Cue from Cage' and stimulus for reflection, resulting in the deconstruction of 'Ragaslendo' as it journeyed through its metamorphosis in time, space, form and construct.

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Biography

Valerie Ross is an established composer with works premiered in major cities in Europe and the Asia Pacific. She has received compositional awards from the Rockefeller Foundation, Commonwealth Foundation and Japan Foundations and she has held residencies at Darmstadt International Institute for New Music, Germany, Bellagio Study and Conference Centre, Italy and Centre for Intercultural Musical Arts, UK. Valerie serves on the editorial board of international music journals and has various publications. Research grants include interdisciplinary studies in music-neuroscience. In 2010, she was a Visiting Research Fellow at Institute for Musical Research, University of London. Valerie is an Associate Professor of Music at Universiti Teknologi MARA and Director of the Centre of Intercultural Musicology at Churchill College, University of Cambridge.

Email: dr.valerie.ross@gmail.com