Utilizing Indian Ragas in the Symphonic Poem
"The Ramayana"

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ABSTRACT—The symphonic poem "The Ramayana" is an original composition for symphony orchestra, inspired by the ancient *Ramayana* of the Indian poet Valmiki. The work is presented as a symphonic poem in seven movements. My compositional process was an exposition of musical themes based on the Indian Hindustani ragas (traditional melodic frameworks for improvisation) that were created with a combination of the raga notes and the English letters of each movement title. The story was told using ragas (which imply certain moods) along with polyphonics and other Western compositional techniques. This article focuses on the novel compositional techniques behind the work that I, as a composer educated in both philosophy and the musical procedures, used to create the piece.

Introduction

The *Ramayana* is one of the oldest and most beloved ancient Indian tales. The best-known version is believed to have been written by the poet Valmiki circa 300-100 BC, according to modern scholars. However, devout Hindus believe it was composed several hundred millennia ago, in the Treta Yuga[1] called the Adi Kavya, or the first poem of the world. (Ramesh, 2016). The epic has reached modern times through countless masters and disciples, as they relayed it through the ages in ancient oral traditions and in many languages. The original literature comprised 24,000 verses written in Sanskrit. The epic, divided into seven books and 500 chapters, narrates the adventures of Prince Rama from northern India to Sri Lanka.

Rama is an avatar of Lord Vishnu in human form. The epic relates Rama's life from birth to death, focusing on the war between good and evil which erupts when Ravana abducts Rama's wife Sita to his island and Rama and his brother Lakshmana set out to rescue her. During the journey, they go to Kishkindha to ask Vanaras's army of apes to help them find her and fight against Ravana's army. By the end of the story, Rama rescues his wife and becomes king. The story provides a philosophy for human duties that follow Hindu dogma, and in each book Rama had to solve problems, teach people, and defeat enemies using dharma or the right way of living. The character of King Rama spreads the doctrine of the world's origin and the duties of humanity, for example the

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[1] The Treta Yuga is the Sanskrit name given to the second of the four Yugas, meaning "three collections". The four Yukas' respective periods are 1,728,000, 1,296,000, 864,000, and 432,000 years.

behavior of an ideal king, an ideal father, an ideal mother, an ideal son, an ideal brother, an ideal servant, etc. (Ramesh, 2016).

The story and characters of the Ramayana have become an essential component of art and culture in India and several Southeast Asian countries, including *Ramakien* in Thailand, *Reamker* or *Ramakerti* in Cambodia, *Kakawin Ramayana*, *Ramakavaca* and *Ramayana Swarnadwipa* in Bali and Sumatra, *Maharadia Lawan* in the Philippines, *Hikayat Seri Rama* in Malaysia, *Phra Lak Phra Rama* in Laos, the Kings of Annam and Champa in Vietnam and the Rama story *Yama Zatdaw* in Myanmar (Goss, 2017). The Ramayana epic was first transmitted from ancient India to Southeast Asia through shadow puppetry in various forms, called *Wayang Kulit* in Java, in which sculpted shadow puppets are projected onto the screen.

Later adaptions include *Nang Yai*, *Nang Talung* of Thailand and *Wayang Siam* of Malaysia (Lim, 2011). In Malaysia, Java and Bali, *Wayang Kulit* was developed into various art forms such as drama, painting, carving, literature, voice, instrumental music, and mimicry. In Thailand and Cambodia two forms of shadow puppetry developed, including a variety using small puppets called *Nang Talung* and *Nang Yai*, which used large puppets held by dancers.

In ancient Thailand, the Ramayana story also influenced the system of government, and there is a long history of the relationship between the Ramayana and political symbology in Thailand (Pollock, 2016). The best-known version of the Ramayana in Thailand (called *Ramakien*) was adapted to Thai from the Sanskrit by King Rama I (1736-1809) and conveyed through various local art forms, including *Khon* (masked dance drama), *Nang Talung and Nang Yai* (shadow puppetry), dances, and painting (Poolthupya, 2006). Stage performances of the Ramayana in Thailand used traditional native instruments and melodies and were later adapted to use a Western style symphonic band during the reign of King Rama VI (1881-1925).

The symphonic poem "The Ramayana" was composed by the author in 2016 and premiered in 2017 for the 250 Years of Ayutthaya-Thonburi Memorial Concerts performed by the Thailand Philharmonic Orchestra.[2] The piece is a composition for full orchestra that portrays that story of the Ramayana and utilizes elements from Indian traditional music. According to Mendl (1932), a symphonic poem is an orchestral composition inspired by a literary, historical, or pictorial subject, or anything which exists outside music (a natural scene, for instance) and derives its structure from the events or incidents or objects which it seeks to portray rather than from the inherited forms of the art of music itself.

The composition contains seven sections that follow the stories from the seven books of Valmiki's epic. This article will discuss the creation of the work, and explain the form and design as well as creation of the melodic content derived from Indian ragas (melodic frameworks for improvisation in traditional Indian music) and harmonies.

There are two musical works that served as inspiration for *The Ramayana*. The first is *Symphonie Fantastique*, written by Hector Berlioz. This composition is an excellent early Romantic example of program music, in which every movement portrays the

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[2] The Ramayana: https://www.youtube.com/watch?v=fxONEdAw_lM

story of a man obsessed with a woman with whom he could not live. As Berlioz wrote: "the program should be regarded in the same way as the spoken word of an opera, serving to introduce the musical numbers by describing the situation that evokes the particular mood and expression of each character" (Grout & Palisca, 1996). The second is a masterpiece of orchestral composition by Igor Stravinsky, *The Rite of Spring*, which was written to follow the story of the ballet it accompanied. In addition to the interesting program, it also featured irregular rhythms, exposed dissonant harmonies,[3] hitherto unheard orchestral effects and chord combinations, as well as a ruthless logic and elemental power in which all these were combined (Grout & Palisca, 1996). These pieces served as inspiration for *The Ramayana* in various ways, but above all, how they could portray a story.

Methodology

The symphonic poem *The Ramayana* was composed with melodic materials from Indian ragas and set in a neo-romantic Western music style. The work is divided into seven linked sections following the seven books of the original story.

This discussion of the symphonic poem will examine the methods that the musical elements were implemented into each section of the piece in three stages of composition, as follows: 1) form and design: discussion of the function of the form in macro and micro structures in terms of themes and key relationships; 2) theme invention: the method of theme creation from titles of the books and based on Indian ragas; and 3) harmonies: the keys and chords, including the direction of the key schemes and the procedures of overlapping chords. Polychords (different chords and scales resound simultaneously) were used throughout the work to achieve the desired mood and atmosphere.

Form and design

The composition contains seven sections in the overall form of A – B – C – D - C´ - B´ - A´ following the seven books of the Ramayana and each section is divided into three subsections following the main story contents. All the subsections are in rounded-binary form (a-b- a´) with the principal concept of this form being fundamentally one of the statement, contrast, and restatement (Spencer & Temko, 1994).

Table 1 presents the entire structure of the piece. The overall movements, or macro form, can be seen under the "Book" column, which also shares the name of each book. The subsections of each movement, or the macro form, can be seen under the "Part" column. Other elements of each movement and section can be seen in the following columns, including the time on the video recording, meter, tempo, story contents and link to view the video at the precise moment it takes place.

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[3] Dissonant harmonies are a combination of the chords which are relatively harsh and grating. The sounds are often difficult to listen to and so the ear will seek out the resolution in the chords.

Table 1. Form, meter, tempo and story contents of The Ramayana

Book	Part	Time	Meter	Tempo	Story Contents
A: Bala	a	00'23	3/4	Slow	The fire ritual and birth of Rama
	b	02'34	7/8	Fast	The contest for Shiva's bow
	a′	03'18	3/4	Fast-Slow	Rama's Triumph.
B: Ayodhya	c	04'10	5/8	Medium	The wedding dances
	d	04'51	6/8	Fast	Chaos in the palace
	c′	05'58	5/8	Medium	Leaving Ayodhya
C: Aranya	e	07'07	4/4	Slow	Walking in the forest and deer hunting
	f	10'02	4/4	Fast	Abduction
	e′	10'17	4/4	Slow	Lament of Rama
D: Kishkindha	g	10'35	3/4	Medium	The Simian kingdom
	h	11'25	4/4	Fast	The Simian's war
	g′	12'18	3/4	Medium	Finding Sita
C′: Sundara	e″	12'56	4/4	Fast	Hanuman's adventure
	f̃	13'48	3/4	Fast	In Lanka kingdom
	e‴	14'27	4/4	Slow	Hanuman burns the Lanka
B′: Yuddha	c″	15'03	5/4	Slow	War Preparation
	d′	16'15	6/8	Fast	Battles
	c‴	17'15	5/8	Medium	Victory of Rama
A′: Uttara	a″	17'57	3/4	Fast	Return of the king
	b′	18'38	7/8	Faster	Birth of the king's heirs
	a‴	19'57	3/4	Slow	Journey to heaven

Theme invention

In program music, the themes are written to portray certain characters or things and are heard when that particular character or thing appears. These melodies form the basis or starting point for a composition or a major section of one (Randel, 2003). The Ramayana utilizes this concept for portraying characters in the piece.

Raga is the fundamental melodic structure for the traditional music of India, Pakistan and Bangladesh, and means "color" or "mood." For Indian music, there are two different traditions for ragas, including the *Hindustani* (North Indian) and *Carnatic* (South Indian) traditions. Indian *Hindustani* music has primarily been for voice and instrument and is called Sangeet,[4] which literally means singing in a correct way. The forms were suited for voice performance and the instruments were designed to emulate the human voice (NIOS, 2019). The *Hindustani* raga has certain moods associated

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[4] Sangeet is formed by the combination of two words sam+geet. 'Sam' means complete in all respects or proper while 'geet' means to sing. By joining the two it means to sing in a proper manner.

with it, and has specific times of day and seasons which are meant to be performed (Gangoly, 1935). *Carnatic* music differs greatly in many aspects, such as its melody and microtone[5] concepts, as well as the importance of embellishment between two notes, its potential for improvisation and its serene nature. The Carnatic raga has fascinated the West with its infinite creative potential as well as the sophistication of its tala[6] system (NIOS, 2019).

Ragas were used in Indian music mainly in two systems. Firstly, Swara[7] can be thought of as the sequential arrangement of notes that can invoke the emotion of a song with a series of seven notes in ascending and descending order. The various notes are Sa, Re, Ga, Ma, Pa, Dha, Ni which can be thought of as analogous to C, D, E, F, G, B, A (Sridhar, 2009). The pitches can be described as a "super scale" and use a hierarchy of important notes including tonic[8] and subdominant[9] or dominant[10] and includes a key phrase that shows the heart of the movement of the raga. Secondly, Shruti[11] uses microtones between the main pitches (similar to Swara) for the decoration of the melodies.

The octave is divided into twenty-two notes. The division is not precisely equal, but the microtonal units may be compared to Western quarter tones (Jairazbhoy, 2018). Eventually, the Swara was built with a seven-tone scale (Western major scale) upon the Shruti twenty-two microtones in an octave which compares to the Western chromatic scale. (See Table 2)

Table 2. Comparison between Shruti, Swara, Western Major scale and Western Chromatic scale

Shruti	1	2	3	4	5	6	7	8	9	10	11
Swara	Sa				Re			Ga		Ma	
Major Scale	C				D			E		F	
Chromatic	C		C#		D		D#	E		F	

Shruti	12	13	14	15	16	17	18	19	20	21	22
Swara			Pa				Dha			Ni	
Major Scale			G				A			B	
Chromatic	F#		G		G#		A		A#	B	

[5] A microtone is a note that exists in-between the keys on a piano.

[6] Tala is a rhythmic cycle made up of a number of beats. In the *Carnatic* or South Indian rhythmic system, the shortest cycle is made up of three beats whereas the longest cycle has twenty-nine beats.

[7] Swara is a Sanskrit word that connotes simultaneously a breath, a vowel, and the sound of a musical note corresponding to its name.

[8] Tonic is the first note of the scale also called the first scale degree.

[9] Subdominant is the fourth note of the scale and also called the fourth scale degree.

[10] Dominant is the fifth note of the scale and also called the fifth scale degree.

[11] Shruti means lyrics and "what is heard" in general. In Indian music it means the smallest interval of pitch that the human ear can detect.

In both traditions the collection of notes in the ragas is the same, however the method of improvising melodies is different. Unlike the north, in the south there is more of a link with religion. In Sikh traditions ragas were set with the primary scripture. Also, in the north the Indian ragas are symbolistic of human beliefs, and the raga system introduces a particular time of the day or a season that was affected by cycles of the daily biology and rhythms of nature (Gangoly, 1935). In the Sangita-Makaranda (Chapter III, 10-23), we find a list of which groups separate the ragas into the morning, noon, afternoon and night ragas (Kaufmann, 2016).

Ragas are made up of a set of typically seven-eight pitches in a typical order that appear as musical themes and explain a particular emotion or idea. This series of notes is used in both the composition of melodies and in improvisation. For conveying any certain emotions or ideas, the set of notes must be carefully selected from twenty-two intervals of the Shruti scale and grouped to form a mode (Danielou, 1949). Moreover, certain scale degrees are emphasized to create a unique mood or atmosphere, then the group of seven-eight notes, or alternately five/six intervals, literally becomes the name of the raga. Nowadays a few hundred ragas are used commonly, and thousands can be used in theory.

The themes in the symphonic poem *The Ramayana* were created by first assigning the letters of the Roman alphabet to the scale degrees 1-7, as can be seen in Table 3.

Table 3. Rule of pitch from alphabet order

Scale degree	Original Row	1	2	3	4	5	6	7
	Inversion Row	1	7	6	5	4	3	2
Alphabets Sequence		a	b	c	d	e	f	g
		h	i	j	k	l	m	n
		o	p	q	r	s	t	u
		v	w	x	y	z		

The titles of each movement were then used to create a series of pitches based on the above table, with each letter of the movement title corresponding to one pitch. The theme was created by first using the "original row," but in the case of a short movement title, for example "Bala," the melody was continued using the "inversion row." For example the movement title for "Bala" would create the scale degrees 2-1-5-1. Due to this melody being short, the title was then done using the "inversion row" which resulted in 7-1-4-1. These two sections combined into scale degrees 2-1-5-1-7-1-4-1 which constitute the final scale degree content of the "Bala" movement.

Following the creation of the scale degree series, the actual melodies were created by using the melodic series found in ragas, which were selected based on their portrayal of mood appropriate for each section of the Ramayana story. The resulting "pitch group" was a combination of the scale degree from the movement title combined with the specific notes of the ragas—as can be seen in Table 4.

Table 4. The process of the pitch group construction

Book	Scale degree	Ragas	Time	Mood	Pitch Group
Bala	2-1-5-1-7-1-4-1	Kalyan: 1,2,3,#4,5,6,7	Evening	Good luck	D,C,G,C,B,C,F#,C
Ayodhya	1-4-1-5-1-4-1	Todi: 1,b2,b3,#4,5,b6,7	Late Morning	Delighting	C,F#,C, G,C,F#,C
Aranya	1-7-1-3-2-4-7	Kafi: 1,2,3b,4,5,6,b7	Late Evening	Spring time	C,Bb,C,Eb,D,F#,B
Kishkindha	5-3-7-2-5-3-1-4-2-1	Khamaj: 1,2,3,4,5,6,b7	Late night	Teasing	G,E,Bb,D,G,E,C,F,D,C
Sundara	7-2-1-4-1-6-1	Charukeshi: 1,2,3,4,5,6,b7	Day and night	Pathos and devotion	Bb,D,C,F,C,A,C
Yuddha	3-5-7-7-5-4	Marwa: 1,b2,3,(#)4,5,6,7	Sunset	Contemplative and gentle	E,G,B,B,G,F#
Uttara	2-1-1-3-6-3	Puravi: 1,b2,3,#4,5,b6,7	After noon	Mystical and serious	G#,F,F,A,D#,A

Movement A, *Bala Kanda* (the beginning), is the first section of the symphonic poem "The Ramayana." This section is in ternary form with the parts a, b, and a′, and each subsection depicts a part of the story through compositional components: a) the fire ritual and birth of Rama; b) the contest for Shiva's bow; and a′) Rama's Triumph.

In Part a, "The Fire Ritual," inspiration comes from the text of book one when the hermits started to pray to the gods:

> *Rishyashringa* began to perform the intricate *putrakama* ritual at the holy fire, exactly as it is prescribed in the secret passage of the *Atharva Veda*. The devas gathered above the fire for their share of the *havis*: these offerings are ambrosial to them, like sipping the sweetest currents of the human heart (Menon, 2003).

The theme invention for "Bala" can be seen in Figure 1. Here it demonstrates how the scale degrees from the title of "Bala" were added to the specific notes of the Kaylan (evening raga) in steps 1-3. Step 4 shows the newly composed rhythm and step 5 shows the final melody of this process. It should also be noted that the choice of octave in step 3 was done by the composer.

The themes that resulted from this process were often transformed throughout each of the movements. For example the below figure shows the original Bala theme and two of its transformations.

Movement A begins with low woodwind ostinato chromatic passages in a slow tempo (Adagio ♩=60) and in 3/4 meter as an introduction. In measure 4, the first theme *a* played by English horn presents a collection of selected eight-notes from the Kalyan raga, which is an evening raga. It creates a feeling of the closing of an evening and means good luck. Theme *a* reappears in measure 14, in a transformed state with filled out notes from Kalyan raga. Theme *a′* "Born of Rama" starts in measure 25, is developing by

Figure 1. Invention of theme a
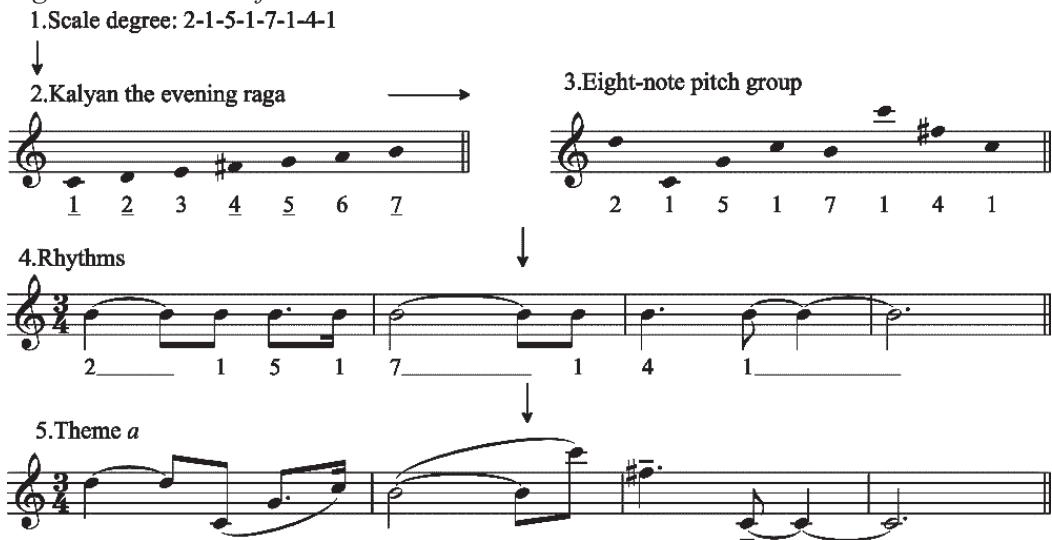
diminution,[12] and becomes a fanfare to present the birth of King Dasaratha's sons. It is a celebration of hope and victory as follows:

> *Ayodhya* was more festive than *Devaloka* on high. The Devas were jubilant at the thought that *Ravana* would die as soon as *Dasaratha*'s eldest son was a man (Menon, 2003).

In the music the fanfare creates a mood of celebration, in which the trumpet presents theme *a´*, and plays parallel melodic lines in three keys: C, A-flat, and E-flat, which create the effect of the parallel major chords (see Figure 2).

Subsection b of the first movement portrays a contest scene in which Prince Rama must fight for his future spouse. "The contest for Shiva's bow" was the contest for the princes or any man who could raise the bow to marry King Janaka's daughter Sita. A hundred brave princes came, but none of them could pick up the bow, except for Prince Rama:

> A great intuition of destiny swept the people. The crowd was on its feet, ready for a miracle. Effortlessly, as if it was his own weapon that he carried at his back every day, Rama picked up Shiva's bow from its casket (Menon, 2003).

Theme b was inspired from the letters of "Sita = 5-2-6-1" and "Rama = 4-1-6-2." The two groups were combined to create the identity of a couple of destiny, becoming 5-2-6-1-4, with the final three scale degrees omitted for musical preference. These notes

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[12] The statement of a theme in uniformly shorter note-values, respectively, than those originally associated with it.

Figure 2. Theme transformation

theme *a* in m.4
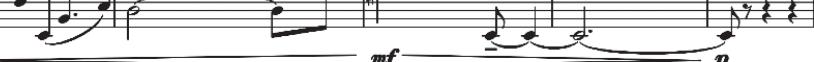
http://www.youtube.com/watch?v=fxONEdAw_lM&t=0m36s

theme *a* with extended in m.14

http://www.youtube.com/watch?v=fxONEdAw_lM&t=1m17s

theme *a* with developing (fanfare) in the key of C, A♭ and E♭ in m.25
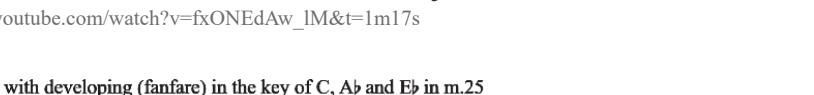
http://www.youtube.com/watch?v=fxONEdAw_lM&t=1m57s

from the Biaval morning raga were used with a new rhythm to create this theme. The five-note theme was then extended to create a longer structural unit using the same notes of the Biaval raga. The resulting extended musical phrases are different size or asymmetrical and the pitch and rhythm of the extension is also backwards or in retrograde (see Figure 3).

Figure 3. Invention of theme b

1. Scale degree: 5-2-6-1-4

2. Biaval the morning raga   3. Five-note pitch group

4. New Rhythm

5. "Sita - Rama" + Extension
asymmetrical period

phrase a1   phrase a2

This part of the music depicts the mood of the contest. Theme b using the five-note theme conveys the idea of vitality during the presentation of candidates. The image of the contest is therefore exciting and cheerful, and this section contains an energizing rhythm, with heroic melodies and powerful poly keys, or more than one key played at the same time. Theme b takes the five-note theme from the Indian raga Biaval, which is a morning raga and means the creation of riches. It begins in an exciting mood with a hunting horn style in 7/8 and then continues with a canonic style in three keys based on Biaval as follows: bassoon and flute in C major; horn in E-flat major; and clarinet in A major. This can be seen in Figure 4 or heard at the supplied link.

Figure 4. Canonic melodies from the five-note theme

http://www.youtube.com/watch?v=fxONEdAw_lM&t=2m56s

A fast 7/8 drum pattern with dancing loops based on the Anapaest rhythm (short-short-long) conveys the drummers during the bow contest and occurs when each candidate tries to raise the bow. The pattern consists of three parts: 1) the timpani on all downbeats; 2) the tom-toms decorate the texture with a combination of eighth notes and sixteenth notes; and 3) the tambourine plays upbeats to fill in the 7/8 time signature (see Figure 5).

Figure 5. Drum pattern with dancing loop in 7/8

http://www.youtube.com/watch?v=fxONEdAw_lM&t=2m134s

Subsection a′, called "Rama's triumph," is the climax section of the first movement. It includes a trumpet fanfare with augmentation in theme a′ in 3/4 time and has parallel melodies in three keys from the Kalyan raga in C, A-flat, and E-flat, and concludes with woodwinds with a diminution of theme a′ in Kalyan in C (see Figure 6).

Figure 6. Theme a with diminution.

http://www.youtube.com/watch?v=fxONEdAw_lM&t=3m18s

http://www.youtube.com/watch?v=fxONEdAw_lM&t=3m29s

The ending theme which is taken from the ending notes of theme a reappears again with augmentation in the strings as a closing theme and is in three parallel keys with soft dynamics becoming parallel minor triads to return to the tonic chord (see Figure 7).

Figure 7. The ending themes

http://www.youtube.com/watch?v=fxONEdAw_lM&t=3m47s

The above discussion about the first movement explains the concept for creating the melodic content in The Ramayana. It is a sample of the novel methods in which melody was derived from letters of the alphabet and the melodic content of Indian ragas. The remaining six movements were composed in a similar fashion.

Harmonies

The composition utilized two different techniques to create the harmony. The first is polytonality, or the simultaneous use of two or more chords or keys. According to Rendel (2003) this may occur briefly or over an extended span. This was done in

different combinations of conflicting chords to create periods of drama and excitement. Figure 8 demonstrates conflicting chords in the musical score (in boxes).

Figure 8. The superimposition of four chords created the counter-melody

http://www.youtube.com/watch?v=fxONEdAw_lM&t=0m52s

Secondly, the drone of a perfect fifth is found in various forms Indian traditional music, originally played by tanpura[13] to accompany the melody. This drone was added to The Ramayana in several places and creates a feeling of chanting. The example below is from the sixth movement and conveys a scene of war preparation (see Figure 9).

In summary, the harmony in The Ramayana was created with traditional Western harmonies using polytonality to create various moods and was combined with the drone typical of traditional Indian music to give a more authentic feeling to the music.

Conclusion

The goal of this composition was to create a cross-cultural work by combining elements of Western music with that of traditional Indian music, with the final desire to create a work that serves as a faithful program to the story of the Ramayana. This was done using a new method for creating melodies based on letter substitution of the book's titles combined with melodic content of Indian traditional ragas. The ragas were selected because of their mood and were matched with the events of the program being told in each section. The use of the perfect fifth drone was used to give the music an

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[13] A long-necked plucked string instrument from India. It plays support and sustains a continuous harmonic drone during the melody of other instruments or singers.

Figure 9. Use of the Indian drone

http://www.youtube.com/watch?v=fxONEdAw_lM&t=15m03s

authentic feeling. Finally, the music was put into a neo-Romantic style, meaning that traditional harmony was used, but combined in a modern way via polytonality.

In Southeast Asia this composition can be performed as a concert piece or separated to accompany other modern visual art works by the orchestra based on the story of the Ramayana. There are several types of performances currently staged, such as *Khon* (masked dance drama), *Nang Talung and Nang Yai* (shadow puppetry), and other forms of traditional dances. It is also possible to use the composition in modern screen shows including movie or animation, as there is currently no other such work of this type.

Finally, the composition also aims to be a pioneer piece in connecting the peoples of East and the West to interact with culturally unique musical idioms and history. I hope that this work allows me to play a humble role in contributing to the enhancement of the composition process in utilizing Indian ragas in orchestral music.

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