

Music of the Whole World
- presentation # 1: October 26, 2005

Indian-Western Fusions

- study materials

by Moshe Denburg

Indian-Western Fusions - study materials

by Moshe Denburg

Copyright and Fair Use Notification

The author does not object to the use of these materials for personal educational purposes or for any fair use, such as quoting or citing these materials, as long as his authorship is credited by the user. Making copies of these materials as part of any commercial venture, or for any monetary reward, requires the written consent of the author.

© **Moshe Denburg, 2005.**

The following study materials are being made available to participants in the educational series, **Music of the Whole World**, presented by the Vancouver Inter-Cultural Orchestra (VICO) at the Vancouver Public Library. The presentation **Indian-Western Fusions** took place on October 26, 2005.

These materials form part of a larger work in progress (as of October 2005) entitled ***Orchestrating the World - a Manual of Intercultural Music Making*** by Moshe Denburg. Portions of this work will be made available for downloading on the VICO website from time to time. Go to:

www.vi-co.org
and click on 'VICO Instruments'.

Music of the Whole World - presentation # 1 - October 26, 2005

Indian Western Fusions - study materials

by Moshe Denburg

Comparative Aesthetics between Indian and Western music

Indian classical music is:

non-written
 melodic and modal, i.e. non-harmonic
 rhythmically complex, and utilizes compound meters extensively
 mostly just intonation (except for some microtones) and tempo giusto (except for alap)

Western classical music is:

written to a large degree
 harmonic and scalar
 rhythmically sophisticated but generally avoids too much complexity or compound meters
 utilizes equal temperament and much flexibility in rhythm (rubato)

Discussion of Aural and Written Traditions

There are two main approaches to music making in the world: aural and written. There is no telling which is the greater which the lesser, these two approaches each have their strengths and weaknesses. The issue of significance, with regard to our present discussion, is how to transmit composed materials to aural musicians and bring them together with reading musicians in performance.

Ideas on how to transmit composed materials to aural musicians

- Provide a taped vocalized rendition.
- Provide a midi rendition of the piece, with rehearsal letters overspoken.
- In a percussion part, provide a solkattu (spoken rhythms) type rendition.
- Write holding patterns (ostinati) - a cue needs to be given by the conductor to begin and end.
- Cueing them in and out is important, and needs to be clear from the context.
- Make the aural musician's part 'continuous', that is, not dependent upon counting empty measures; give him a specific melody that he can memorize.
- Provide a conductor or leader or desk mate who can read. Put together a reader and a non-reader on a part whenever possible.
- Use improvisation techniques:
 - Embellishments ad lib: keep the main accents
 - Variations ad lib: accents may be altered
 - Solo: free improvisation; or structured improvisation (based on a mode or scale)
 - Call and answer in imitation: if the first player reads, the second can try to catch it by ear; if neither reads then improvisation can be used, but for a set number of measures.
 - A specific technique of development, applied to several musical phrases, resulting in longer sections.

After all is said and done, the composer who wishes to call for specific musical utterances, and not only improvised elements, must find aural musicians who are willing to work on written materials to some small extent. This is not so much to ask, since most musicians have a musical language that they speak, if not read, and preparing a written musical part, if combined with aural aids, can work. In the experience of this author, many aural musicians are willing to work on acquiring a modicum of skill in reading.

Indian-Western Fusions - study materials...continued

Indian Notation

General Considerations

In general, Indian music is an aural tradition, thus notation does not play as big a role in it as it does in the Western musical system. The intricacies of the music, with all its ornaments and nuances, have been handed down aurally from teacher to disciple for centuries. Actually, notating some of these nuances would be extremely tedious at best, and the desired effect would be undoubtedly lost - there is simply too much ornamental detail to allow for an authentic rendition from written materials. Also, the improvisational element, learned by internalizing structures of melody and rhythm over many years, is of necessity taught aurally. Structured improvisation is after all an aural art.

This said, there are systems of notation in India which, while not meant to replace the aural tradition, can be utilised to preserve and transmit basic musical ideas. Notation can also be used as a mnemonic device, to remind the music practitioner of certain melodies and rhythms that might otherwise be forgotten without the presence of the teacher. As well, written materials can easily be used as a teaching tool - written exercises are very useful and do not interrupt the aural flow of musical ideas.

Interestingly, Indian notation is very useful as a musical shorthand, and in this regard western notation is not as efficient. This may become clear from the discussion below.

In writing for Indian instruments there are 3 ways to go: 1. we may use Western notation together with certain markings to indicate the specific techniques; 2. we may use Indian notation throughout; 3. we may use both Western and Indian notation in combination.

History

Many systems of notation have been proposed by different scholars and musicologists over the years. The idea of notation in India goes back to pre-historic times, though the modern usage stems from the end of the nineteenth century. One of the most important, if not the most important, innovator in the field of Indian music notation is a scholar by the name of Vishnu Narayan Bhatkhande. In North India today, it is his system which has become the standard. Systems of Indian notation vary somewhat between North Indian (Hindustani) and South Indian (Carnatic) music. These systems are not static but evolving, though all have certain commonalities.

The Basics

We are proposing here certain elements that will be quite complete in themselves, and are in wide use in India. We shall take some elements from North Indian (Hindustani) and others from South Indian (Carnatic) music. However, all these elements will be easily understood by musicians of both traditions. Where it is considered to be helpful, we shall point out the variations between the 2 systems.

Note Names - Sargam

To begin with, Indian musical language is conceived as a 'movable do' system. For the sake of elaboration we will take the tonic of the system as equivalent to the note 'C'.

The gamut is represented by the following syllables:

Sa	ri	Ri	ga	Ga	ma	Ma	Pa	da	Da	ni	Ni
C	C#	D	D#	E	F	F#	G	G#	A	A#	B
	Db		Eb			Gb		Ab		Bb	

Indian-Western Fusions - study materials...continued

These syllables, collectively referred to as **Sargam** can be further reduced to letters as follows:

S	r	R	g	G	m	M	P	d	D	n	N
C	C#	D	D#	E	F	F#	G	G#	A	A#	B
	Db		Eb			Gb		Ab		Bb	

Thus, in this system, a gamut of 12 notes is assumed. The tonic is always Sa, the dominant is always Pa, and the other 5 degrees of the scale have both lowered and raised versions, represented by lower and upper case letters respectively.

Though Western equal temperament is **not** assumed, the 12 note gamut is the proper representation of Indian melodic music.

Lower octave notes are indicated by placing a dot \cdot below the letter; higher octave notes are indicated by placing a dot \cdot above the letter; 2nd lower octave utilizes double dots $\cdot\cdot$ below; and 2nd higher octave by double dots $\cdot\cdot$ above. And so on.

A six octave range would be represented thus:

S	S	S	S	S \cdot	S $\cdot\cdot$	S $\cdot\cdot\cdot$
$\cdot\cdot\cdot$	$\cdot\cdot$	\cdot				

Durational Elements

Melodic Notation

1. Note letters on their own take on the value of the denominator of the time signature.

4/4 | S R G m | P D N S \cdot ||

Here each letter is of 1/4 note duration.

2. In order to create notes of longer duration, a "durational extender" (aka. **virama**) is utilized. This takes the form of a dash, as follows.

4/4 | S - R - | G - m - | P - D - | N - S \cdot - ||

Here each letter is of 1/2 note duration.

3. Other variations are as follows.

4/4 | S - R G | m P m P | D - N - | S \cdot - - - ||

Indian-Western Fusions - study materials...continued

4. To make note durations of less than denominator values, a "beat line" (aka. a **matra line**) is placed beneath all those notes that together make up one beat (or **matra**).

4/4 | S R G m P - | m P D N S - ||

Here, in each measure, four 1/8 notes are followed by a 1/2 note.

5. In this manner, highly complex rhythmic figures can be represented. Triplets for example would simply have 3 letters over a **matra line**, as follows.

4/4 | S R G S R G m P | P D N P D N S - ||

6. To notate ornaments, the ornamental notes are written in smaller superscript, as follows (see sample notations below).

3/4 | P ^DP ^{DPD}P | ^PM G ^MG R G || or 4/4 | S N D ^{PD}P m G | ^SR G m P P - ||

In the second example, the accent mark over the first note of the ornament ^{PD} indicates that the ornament is played on the beat rather than preceding it.

P ^DP ^{DPD}P ^PM G ^MG R G

S N D ^{PD}P m G ^SR G m P P

Rythmic Notation

Rhythmic notation is written utilizing "sound words" (called '**bols**'), one-syllable words which are meant to enable the musician to speak the rhythms. The art of these sound words is not the topic of this discussion, but will be dealt with in a separate article. Here are the rules of rhythmic notation.

<u>Symbol</u>	<u>Meaning</u>
---------------	----------------

_____	A straight line beneath a bol or bols indicates the duration of 1 matra or beat. In a measure of 16/4 for instance, there will be 16 matras . In the phrase: <u>dha dhin dhin</u> dha lasts for 1 matra, and each dhin for 1/2 a matra.
-------	--

S or .	These indicate a rest, but not really in the western sense of silence, but rather in the sense of an extension in time of a sound. In India it is called a virama , and with its help phrases of almost any rhythmic complexity can be notated. Durationally it is treated as any other bol within a
--------	---

Indian-Western Fusions - study materials...continued

given **matra**. The **s** ought not be confused with the **S (sa)** of melodic notation; as long as it is clear the writing is for a rhythmic instrument, it is unlikely that such confusion will arise. The dot **.** can be used instead if the composer prefers.

For example, in the phrase: **ta ra s na** ta is 1/2 a matra, ra is 1/2 a matra plus an extension of 1/2 a matra, and na is 1/2 a matra. Another example will illustrate the indispensability of the virama: **ta ki ta ta ki ta ta s ki s ta s** . Here each matra is divided into 3 parts, and with the help of the virama we can divide the last 2 matras into 3 equal parts quite easily.

Utilizing dots as virama, the above will be rendered:

ta ra .na ta ki ta ta ki ta ta .ki .ta .

Commas are used to divide a matra into two or more equal parts. It helps where too many viramas would have to be written. **s , te re te re** is the same as **s s s s te re te re** but is more concise. In some cases, for added clarity, the comma and the virama may be used together, thus: **s s , te re , te re** or **ta s , ki ta** .

Addition of Western Stems, Rests, and other markings

Ex. 1 1 matra = 1/8 note

ta . . dha . . ta ta . dha dha .

Ex. 2 1 matra = 1/4 note

ta ra s na ta ki ta ta ki ta ta s ki s ta s dha s

Ex. 3 1 matra = 1/4 note

s , te re te re dha s te re te re , dha s , te re te re dha s s s

To clarify the Indian notations western stems and rests may be placed above the bols or sargam to give added clarity to the durational values. Other markings, such as accents and dynamics may also be added. Markings for techniques specific to various instruments are also added, and to make sure that there will be no misunderstanding, the composer should provide explanatory notes for the performer.

If the performer is comfortable with reading western notational values, the matra lines may be omitted. Again, this should be decided in consultation between the composer and performer.

Indian-Western Fusions - study materials...continued

Descriptions of selected Indian Instruments

Bansuri - A transverse bamboo flute from North India, it comes in many sizes to accommodate various ragas (modes). It has a range of about 2 1/2 octaves, and is capable of microtonal variations, sliding pitches and tremendous flexibility. It is a featured solo instrument in the North Indian (Hindustani) classical tradition.

Mrdangam - The Mrdangam is the South Indian classical drum, parallel in its importance to the Tabla in the North. It is a log drum, with two heads, the right one somewhat smaller and higher pitched and the left one a bit larger and lower pitched. The right head especially sounds a fixed pitch, in Carnatic music (S. Indian classical music) it normally is tuned to the tonic note of the raga (mode) being played.

Nagaswaram - Also known as Nadaswaram, it is a seven-holed double-reeded instrument of South India. It is played in temples, processions, festivals and auspicious occasions like marriages. It is made of a kind of ebony and has a conical bore which gradually flares toward the lower end. It has a range of two and a half octaves and semi and quarter tones are produced by adjusting the pressure and strength of the air-flow into the pipe. Due to its intense volume and strength it is basically an outdoor instrument and much more suited for open spaces than for closed indoor concert situations.

Sarangi - The sarangi is a bowed string instrument carved from a single piece of wood. Its strings are traditionally made of gut and its neck is fretless. The strings are fingered with the cuticles of the index and middle fingers of the left hand. The sarangi commonly has 3 gut playing strings, 1 bronze rhythm string tuned to the upper tonic, 11 sympathetic strings tuned to the notes of the raga (mode), and at last 25 sympathetic strings tuned to the entire gamut of two octaves. The bow used is different from the violin bow, it is shorter and its wood is more convex.

Sarod - A plucked lute of the North Indian classical tradition, it is made of one piece of carved wood. The neck is fretless and the bridge is seated on a skin stretched on the body of the instrument. Generally it has 4 playing strings, 2 rhythm strings tuned to the upper octave tonic, 4 strings placed on a flat bridge near the neck, and at least 13 sympathetic strings tuned to the notes of the raga (mode). The musician uses the end of the nails of the left hand fingers to stop the strings while the right hand plucks the playing strings with a plectrum.

Shehnai - A six-holed double-reeded instrument of the North Indian tradition, it is the counterpart to the Nagaswaram of the South though its tone is soft by comparison. Like the latter, it is made of a dark-grained black wood, and it has a conical bore which widens towards the bottom. Semi and quarter tones are produced by adjusting the pressure and strength of the air-flow into the pipe.

Sitar - A North Indian long-necked plucked lute, the Sitar is fashioned from a seasoned gourd and teakwood. It has a track of twenty metal frets, with six or seven main playing strings above them and thirteen sympathetic resonating strings placed below. The instrument is generally tuned to the raga (mode) being played, and the main strings are plucked by a plectrum worn on the index finger of the right hand. Its uniqueness of tone is characterised by a long decay, due both to the resonance of the sympathetic strings and other structural features.

Tabla - A set of 2 pitched kettledrums from North India. The right drum has a ringing definite pitch, usually the fundamental tone of the raga (mode) being accompanied, while the left drum is lower and more indefinite in pitch. A staple of North Indian classical music and already very well known all over the world, it is capable of an enormous degree of rhythmic precision, complexity, speed, and pitch inflection.

Tambura - The tambura is a 4 stringed instrument which gives an essential drone background to all E. Indian music. Generally it emphasizes the tonic and dominant of the mode being played. The tone has a long decay, and the technique of playing is quite simple - with a little instruction even non-professionals can handle it.

Indian-Western Fusions - study materials...continued

Venu - A transverse bamboo flute from South India, in most respects it is just like the North Indian Bansuri. However, it has 8 finger holes plus one hole for blowing, rather than the bansuri's 6 finger holes. It is generally smaller than the bansuri and may have a wider bore as well. Its fingered holes are large enough to permit half (or partial) holing, thus facilitating the playing of all ragas (modes) on one venu. It is very agile and, due to the open holed and unkeyed nature of its construction, all manner of glissandi and microtonal ornaments are possible.

Vina - A South Indian long-necked plucked lute, the vina is usually made of jackwood. It has a large resonating bowl called the Kudam, held across the lap by the player. There is also a smaller gourd called the Kudukkai, which hangs from the neck and which serves as a rest. There are generally 24 metallic frets and 7 strings - 4 playing strings and 3 drone strings. Only the index and middle fingers activate the playing strings while the little finger is used to keep time on the drone strings. The Vina is associated with Saraswati, the Goddess of Learning in Hindu mythology.

Violin - The Indian violin is in fact the bowed string instrument imported from the western world. However, its mode of play and tuning differs significantly. In Indian classical music the musician is seated crosslegged with the end of the violin's pegbox resting on his right foot. Its strings are tuned to the tonic and dominant of the raga (mode) being played. It has been especially integrated into Carnatic music (South Indian classical tradition), where it is used extensively to accompany classical vocal performances and as a solo instrument as well.

Selected Bibliography

The Ragas of South India by Walter Kaufmann
- Bloomington : Indiana University Press, c1976.

Musical Notations of the Orient: Notational Systems of Continental East, South, and Central Asia
by Walter Kaufman.
- Publisher: P. Smith, 1972

Music in India: The Classical Traditions by Bonnie Wade
- Revised edition. 1999, xx, 262 p., map, figs., ISBN 81-85054-25-8.
- Web Store: <https://www.vedamsbooks.com/no14885.htm>

Sitar Music in Calcutta by James Hamilton
- University of Calgary Press, 1989

My Music My Life by Ravi Shankar
- Simon and Schuster, 1968

South Indian Drumming by Trichy Sankaran
- Lalith Publishers, 1994 (contact the author at: tsank@yorku.ca)

Internet Resource pages:

- Indian Music: http://chandrakantha.com/articles/indian_music/
- Indian instruments: <http://makar-records.com/siteus/frameinstrument.html>
- Books on and recordings of Indian Music: <http://aacm.org/shop/index.html>
- Orchestration materials (time limited downloads): www.vi-co.org (the VICO website)

Indian-Western Fusions - study materials...continued

General Study Leads

1. Ali Akbar College of Music Store
215 West End Avenue
San Rafael, CA 94901
Tel. 415-454-6264
2. UBC music library
3. Vancouver Public Library, main branch

Selected Discography of Indian-Western Fusions

The Incredible String Band

- a 60's band that utilized Sitar and other non-western instruments

The Beatles

- recordings from 1966 on (especially "Rubber Soul", "Revolver", and "Seargent Pepper's... ")

Paul Horn

- Paul Horn in India

Ravi Shankar

- Sitar Concerto #1
- Sitar Concerto #2

Codona

- Colin Walcott, Don Cherry, and Nana Vasconcelos; sitar, tabla, pitched percussion, flutes, trumpet, hammered dulcimer; a jazz based indo-western fusion ensemble.

Shakti

- John McLaughlin, L. Shankar, Zakir Hussein, and T. H. Vinayakram; a great group, making authentic jazz based indo-western fusion since the mid 70's.

Trichy Sankaran

- master mrdangamist, teacher at York University since 1970, and inter-cultural composer; (unsure whether or where recordings are available; contact the composer at: tsank@yorku.ca)

Moshe Denburg

- several scored large ensemble works utilizing the instruments, rhythms, and modal ideas of India together with western instruments and ideas; some excerpts are at: www.vi-co.org; listen to other VICO repertoire as well, esp. *Kusumamaya* by **Niel Golden**; for more materials contact the composer: moshe@vi-co.org

For more information on intercultural events, music, and study

The Vancouver Inter-Cultural Orchestra (VICO), #12 - 719 East 31st Avenue Vancouver, BC V5V 2W9
Tel. 604-879-8415 Fax 604-873-0501 mailto: info@vi-co.org web: www.vi-co.org

Copyright and Fair Use Notification

The author does not object to the use of these materials for personal educational purposes or for any fair use, such as quoting or citing these materials, as long as his authorship is credited by the user. Making copies of these materials as part of any commercial venture, or for any monetary reward, requires the written consent of the author.

© **Moshe Denburg, 2005.**