

# Comparative Study of Indian Semi Classical and Western Music Forms

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## Aim of the Project

Our aim for this project is to understand the differences between Indian and Western Music. Before this course, most of us loved to hear western songs and we ignored Indian classical songs considering them as boring stuff. But after taking this course we came to realise the importance and beauty of classical songs and our perspective to judge a song changed entirely. This is the main reason for us choosing this topic of the project to know more about differences in Classical and Western Music. In this project we will see Indian Semi Classical music and Western music in detail and will then understand differences and similarities between them both theoretically and graphically.

## What is Music ?

Music is an art form, and a cultural activity, whose medium is sound. General definitions of music include common elements such as pitch , rhythm , dynamics. Different types of music may emphasize, de-emphasize or omit some of these elements. Music is performed with a vast range of instruments and vocal techniques ranging from singing to rapping; there are solely instrumental pieces, solely vocal pieces and pieces that combine singing and instruments.



## Indian Music

Indian music consists of folk, classical (Hindustani and Carnatic) and pop music. The Classical music is characterized by microtones (shruti), notes (swara), ornamentations (alankar), melodies improvised from grammar (raga) and rhythmic patterns used in percussion (tala). Indian music has played a significant role in the development of patriotism through songs like “Jan Gan man...” (national anthem) and “vande mataram” (national song). The music has positively influenced national integration and feelings of unity within diversity. Indian music has also played a key role in sustaining and developing religious practices and is a part of India’s socio-religious life.



### Music Instruments commonly used in Indian Music

A large number of instruments are used in Indian music and some of the key ones are the Sitar, Veena, Dhol, Tabla, Harmonium, Shehnai, Bansuri, etc.



## Famous Indian Musicians

Some of the famous traditional/classical musicians of India include Tyagaraja, MS Subbulakshmi, Zakir Hussain, Bismillah Khan, etc.

Some of the popular crossover Indian musicians include A R Rehman, Bally Sagoo, Malkit Singh, Ravishankar, Anoushka Shankar, etc.

## Indian Classical Music

The two main traditions of Indian classical music are **Carnatic music** and **Hindustani music**. The basic concepts of this music includes Shruti, Swaras (notes), Alankar (ornamentations), Raga (melodies improvised from basic grammars), and Tala (rhythmic patterns used in percussion). Both the classical music are standing on the fundamentals of The seven notes of Indian Classical music. These seven notes are also called as **Sapta swara** or **SaptaSur**. These seven swaras are **Sa, Re, Ga, Ma, Pa, Dha** and **Ni** respectively. These Sapta Swaras are short forms of Shadja, Rishabha, Gandhara, Madhyama, Panchama, Dhaivata and Nishada. Only these seven swaras built up the Hindustani classical music and the Carnatic classical

music. These seven swaras are the fundamentals of a raga. These seven swaras without any variations in them, are called as **Shuddha swaras**. Variations in these swaras cause them to be **Komal** and **Tivra** swaras. All the other swaras except Sadj(Sa) and Pancham (Pa) can be Komal or Tivra swaras but Sa and Pa are always Shuddha swaras. And hence swaras Sa and Pa are called **Achal Swaras** , since these swaras don't move from their original position while swaras Ra, Ga, Ma, Dha, Ni are called **Chal Swaras**, since these swaras move from their original position.

- ❖ Sa, Re, Ga, Ma, Pa, Dha, Ni - Shuddha Swaras
- ❖ Re, Ga, Dha, Ni - Komal Swaras
- ❖ Ma - Tivra Swaras



## Difference between Classical and Semi Classical Forms of Indian Music

Broadly, the difference is attributed to how closely the compositions/music can be represented according to a raga structure. Classical compositions are swara based. They conform to the structure of ragas in other words, you can represent the song in notes. Semi-classical compositions are also swara

based. They may slightly deviate from the standard structure of the raga in the following ways:

- Lighter version of ragas : Bhoopali or Malkauns
- Pick ragas which have very different arohana and avarohana. For example: Kedar or Desh or Pahadi
- May have a mix of multiple ragas. For example: Part of the song in Sindhubhairavi and partly in Malkauns.
- Employ lighter version of tal. For example, dadra is a great pick because of the simple structure and flowing feel. (dha da ti | ta dha ti || instead of dha dhin na | dha think na ||)
- Employ unconventional accompaniments. For example, loud clapping in Qawwalis or harmonium in ghazals

Finally, Light classical compositions may not conform to any raga. They can be hummed and passed through the word of mouth for generations.

Hailessa or Yelo yelalo type of songs. They may not have any notation though we can associate them to any ragas we know already.

## Foundational Elements of Indian Classical Music


**Raga** and **Tala** are two foundational elements of classical music. Some of the popular crossover Indian musicians include A R Rehman, Bally Sagoo, Malkit Singh, Ravishankar, Anoushka Shankar, etc. forms the fabric of a melodic structure, and the tala keeps the time cycle. Both raga and tala are open frameworks for creativity and allow a very large number of possibilities, however, the tradition considers some ragas and talas as basic.

## Raga

A raga is a central concept of Indian music, predominant in its expression. Raga may be roughly described as a musical entity that includes note intonation, relative duration and order, in a manner similar to how words flexibly form phrases to create an atmosphere of expression. The raga allows flexibility, where the artist may rely on simple expression, or may add ornamentations yet express the same essential message but evoke a different intensity of mood.

A raga has a given set of notes, on a scale, ordered in melodies with musical motifs. The Indian tradition suggests a certain sequencing of how the musician moves from note to note for each raga, in order for the performance to create a rasa (mood) that is unique to each raga. A raga can be written on a scale. Theoretically, thousands of raga are possible given 5 or more notes, but in practical use, the classical Indian tradition has refined and typically relies on several hundred.

**Bilāwal**



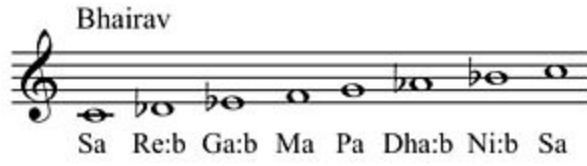
Sa Re Ga Ma Pa Dha Ni Sa

**Kalyan**




Sa Re Ga Ma: # Pa Dha Ni Sa

**Bhairav**



Sa Re: b Ga: b Ma Pa Dha: b Ni: b Sa

**Purvi**



Sa Re: b Ga Ma: # Pa Dha: b Ni Sa

## Tala

Tala in Indian music covers "the whole subject of musical meter". Indian music is composed and performed in a metrical framework, a structure of beats that is a tala. A tala measures musical time in Indian music. However, it does not imply a regular repeating accent pattern, instead its hierarchical arrangement depends on how the musical piece is supposed to be performed. The tala forms the metrical structure that repeats, in a cyclical harmony, from the start to end of any particular song or dance segment, making it conceptually analogous to meters in Western music. However, talas have certain qualitative features that classical European musical meters do not. For example, some talas are much longer than any classical Western meter, such as a framework based on 29 beats whose cycle takes about 45 seconds to complete when performed. Another sophistication in talas is the lack of "strong, weak" beat composition typical of the traditional European meter.

<p>Tin Tin Na 0 2 3 Dhi Na 4 5 Dhi Na 6 7</p> <p><b>Rupaktal</b></p>	<p>Dha Dhin Dhin Dha X 2 3 4 Dha Dhin Dhin Dha 5 6 7 8 Dha Tin Tin Ta 0 10 11 12 Ta Dhin Dhin Dha 13 14 15 16</p> <p><b>Teental</b></p>	<p>Ka Dhi Te Dhi Te X 1 2 3 4 Dha -- 5 6 Ga Ti Te 7 8 9 Ti Te Ka/2 10 11 1/2</p> <p><b>Dharamital</b></p>
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**Bol and Tal**



## Semi Classical forms of Indian Music

**Bhajan** covers devotional forms of music. The word bhajan is derived from the Sanskrit word “bhaj” that means "to render service," and these songs typically describe a saint's devotion toward the object of his or her faith. Many saints and poets have written well-known bhajans that are sung widely throughout India like Sri Ram Chandra. Amongst the most popular are those composed by the legendary saints Meerabai, Kabir. Many of Meerabai's bhajans, like “Aisi lagi lagan Meera ho gayi magan,” reflect complete surrender to Lord Krishna. Kabir's philosophy about oneness of gods is apparent in his bhajans like “Koi kahe Ram, koi Khudai”.

Example: [http://www.youtube.com/watch?v=\\_buuncAm9Ts](http://www.youtube.com/watch?v=_buuncAm9Ts)

**Qawwali**, the most well-known form of Sufi music. Amir Khusro Dehelvi, a famous Indian poet and musician, is credited with fusing Persian and Indian musical traditions to create Qawwali as we know it today. Qawwalis are often sung by groups and their central themes are love, devotion, and longing. Qawwalis tend to begin gently and build steadily to a very high energy level in order to induce hypnotic states both among the musicians and the audience.

Example: <http://www.youtube.com/watch?v=03jJPLzZphw>

**Thumri** are narratives about love and are composed in particular ragas that have a light or romantic mood and are set to simple taals, often with a slow tempo. Many eminent personalities of Indian classical music, like Bade Ghulam Ali Khan, Gauhar Jan, Begum Akhtar, Shobha Gurtu, and Noor Jahan, have embraced and performed this art form.

Example : <https://www.youtube.com/watch?v=Dd7Yhj9Opds>

**Dadra's** lyrics are also about love like thumri. However dadras are usually shorter compositions, faster in tempo, and are thought to allow the artist more freedom in performance than thumris.

Example: <http://www.youtube.com/watch?v=oHmMnAuDpWg>

**Tappa** with short compositions and lyrics that are usually written in Punjabi about love, the signature of tappa is rapid, unevenly-spaced taans. Pandita Malini Rajurkar is among the contemporary artists who popularized this art, though many prominent classical singers such as Raja Bhaiya Poonchwale, Girija Devi Pandit, and Krishnarao Shankar Pandit have also embraced and performed it.

Example: <http://www.youtube.com/watch?v=mh2EjoqtPn8>

## The 72 Melakarta System

**Melakarta** is a collection of fundamental musical scales in Carnatic music (South Indian classical music). 72 Melakartas System is the system of arranging ragas among 72 parents in a definite manner. The term Melakartha means parent. This scheme is mathematically and logically correct. It is based on universally recognized 12 semitones of the gamut. Parent ragas are called Janaka raagas. A parent raga can have any number of children.

**Characteristics of Melakarta ragas are:**

- Both arohana and avarohana are sampoorana.
- Ashtaka character - Both ascent and descent must have eight notes.
- Krama sampoorana - In both ascent and descent, the notes must be regular and there should be no repetition.

- Homogenous - In both arohana and avarohana, the swara sthanas of the same notes are the same. For example, Nishadam in arohana and Nishadam in avarohana are the same type of nishadam.

We know about 12 swara sthanas. But Venkatamakhi expanded the idea of 12 swara sthanas to 16 swara sthanas. There are no new swara-sthanas, but creation of new ones from previous 12 swara-sthanas.

	12 Swara Sthanas	16 Swara Sthanas
Sa	No variety	No variety
Pa	No variety	No variety
Ri	<ul style="list-style-type: none"> <li>• Shuddha Ri</li> <li>• Chatussruti Ri</li> </ul>	<ul style="list-style-type: none"> <li>• Shuddha Ri</li> <li>• Chatussruti Ri</li> <li>• Shat Sruthi Ri</li> </ul>
Ga	<ul style="list-style-type: none"> <li>• Sadharana Ga</li> <li>• Anthara Ga</li> </ul>	<ul style="list-style-type: none"> <li>• Sadharana Ga</li> <li>• Anthara Ga</li> <li>• Shuddha Ga</li> </ul>
Ma	<ul style="list-style-type: none"> <li>• Shuddha Ma</li> <li>• Prati Ma</li> </ul>	<ul style="list-style-type: none"> <li>• Shuddha Ma</li> <li>• Prati Ma</li> </ul>
Da	<ul style="list-style-type: none"> <li>• Shuddha Da</li> <li>• Chatussruti Da</li> </ul>	<ul style="list-style-type: none"> <li>• Shuddha Da</li> <li>• Chatussruti Da</li> <li>• Shat Sruthi Da</li> </ul>
Ni	<ul style="list-style-type: none"> <li>• Kaishiki Ni</li> <li>• Kakali Ni</li> </ul>	<ul style="list-style-type: none"> <li>• Shuddha Ni</li> <li>• Kaishiki Ni</li> <li>• Kakali Ni</li> </ul>

This scheme gives us 12 chakras each having 6 mela ragas. This scheme is very good as one can find swaras of raga from the serial number of melakarta raga. The serial number of melakarta raga can be found out using ka ta pa ya di sutra. First two syllables are found from the name of raga and

their column numbers are found using the table given below. Then the column numbers are taken together and reversed which gives us the serial number.

TABLE VIII

Katapayādi formula	1	2	3	4	5	6	7	8	9	0
<i>Kādi nava</i> (a series of 9 letters from <i>ka</i> )	K क	KH ख	G ग	GH घ	NG ङ	CH च	CHH छ	J ज	JH झ	JN ञ
<i>Tādi nava</i> (a series of 9 letters from <i>ta</i> )	T ट	TH ठ	D ड	DH ढ	N ण	T त	TH थ	D द	DH ध	N न
<i>Pādi pancha</i> (a series of 5 letters from <i>pa</i> )	P प	PH फ	B ब	BH भ	M म					
<i>Yādyashta</i> (a series of 8 letters from <i>ya</i> )	Y य	R र	L ल	V व	S श	SH ष	S स	H ह		

## Western Music

The term 'Western' refers to European traditions and societies that were established by European immigrants, such as those in the Americas. and shaped primarily Thus, Western music may be defined as organized instrumentation and sound created and produced in Europe, the United States, and other societies established and shaped by European immigrants. This includes a wide assortment of musical genres, from classical music and jazz to rock and roll and country-western music.



## Music Instruments commonly used in Western Music

Some of the common instruments used in Western music are flute, violin, trumpet, drums, piano, etc.



## Famous Western Musicians

Some of the famous musicians in the Western system are Marty Robbins, Johnny Cash, Hank Williams, Bob Wills, Ian Tyson, Patsy Montana.



## Genres of Western Music

The American Music form includes two regional styles, a) one originating in South-east, the Country Music and b) another in South-west and West, the Western Music.

### Country Music

It has its roots in the countryside and is highly influenced by European. A straightforward three chord progression, resonating chorus and a memorable story supported by a guitar, banjo or a harmonica are all characteristics of typical country music.

### Western Music

Western music is vast and has several subgenres as follows.



## - Classical Music

This form is often categorised by the period it originated baroque, Romantic, Medieval, Renaissance and modern. It is mainly focused on Opera singing and Classical Symphonies.



## - Pop Music

Pop music as a genre began in the late 90s and derived its style largely from Rap and R&B and Michael Jackson. The notes harmoniously follow the previous note, rarely use lower keys as they generally are set in an upbeat mood and rarely use modulations. Pop music is divided further into sub genres

### 1. Blues

The Blues mostly derives its influence from African music when Africans were brought into America as slaves because of which this genre is often slow and sad and was sung in form of hymns by some

immigrants. It led to development of various styles like Jazz, Soul, Hip Hop, also R&B.

## 2. Jazz

Jazz is an amalgamation Renaissance of African music, Western Classical, European harmony and the scales of Blues. It is probably the only form of music in the west that shares a number of qualities with the Indian Classical music as both forms of music emphasize on the combination of rhythms.

## 3. R&B(Rhythm and Blues)

This genre is derived from Blues with more emphasis on the rhythm. The R&B is soulful and melodious quite contrary to how it started loud, lively, played on electric guitar.

## 4. Rock

It is a fusion of Blues and Country Music with elements of Jazz. Rock is an umbrella term involving music ranging from the melodious ones produced by the Beatles to the aggressive Carcass and Deicide.

## 5. Rock and Roll

This form was created by combining Western swing, country dance music and R&B. It has the same beats of Blues and R&B style but has the melody of Country Music.

## 6. Hip Hop

It is the most popular kind in today's music scenario. It is heavily rhythmic; the rhythmic singing which normally takes on an edgy, at times nasal quality, has become synonymous with rapping and beatboxing.



## Western Jazz Music

Jazz, musical form, often improvisational, developed by African Americans and influenced by both European harmonic structure and African rhythms. It was developed partially from ragtime and blues and is often characterized by rhythms, polyphonic, has varying degrees of improvisation, often deliberate deviations of pitch, and the use of original timbres. Any attempt to arrive at a precise, all-encompassing definition of jazz is probably futile.

Jazz has been, from its very beginnings at the turn of the 20th century, a constantly evolving, expanding, changing music, passing through several distinctive phases of development; a definition that might apply to one phase—for instance, to New Orleans style or swing—becomes inappropriate when applied to another segment of its history, say, to free jazz.

Early attempts to define jazz as a music whose chief characteristic was improvisation, for example, turned out to be too restrictive and largely untrue, since composition, arrangement, and ensemble have also been essential components of jazz for most of its history. Similarly, syncopation and swing, often considered essential and unique to jazz, are in fact lacking in much authentic jazz, whether of the 1920s or of later decades. Again, the long-held notion that swing could not occur without syncopation was roundly disproved when trumpeters Louis Armstrong and Bunny Berigan (among others) frequently generated enormous swing while playing repeated, unsyncopated quarter notes.



## Differences between Indian semi classical and Western music forms

### Harmony and Melody

This is one of the main differences between Indian semi classical and western music. Western music is polyphonic, meaning different notes are sounded at the same time. Western music is based on the harmony created by different notes. Indian music system is monophonic, meaning only a single note sung at a time. Indian semi classical forms focus on the emotional aspect and expressing the melody aspect. The listeners accustomed to western initially find Indian music as static, strange.

### Chord progressions

Western music is based on chord progression within a scale. Indian music system has no such chord progressions but has phrases that define the expandability of a raga.

### Drone Shift

Drone shift is a common phenomenon in Western music whereas such shifts are not allowed in Indian music as the main concern in Indian music is maintaining the shruti.



## Scale and Mode

The western music assigns no special mood to a scale. Moods are achieved by harmony, modulation and so on. The Indian music, however, is mode based, and has a clear conception of what emotion the mode shall invoke. Indian listeners often describe western as so dynamic that one can't enjoy a mood peacefully. The voice modulation aspect has little or no effect on Indian listeners, who expect a depth in a particular mood. The western listeners find Indian music so limited in using a mode, and are bored.

## Pitch


Western music uses major and minor scales and equal temperament notes, while the Indian Classical music uses a much more complex system of scales, with parent scales and descendant families that sound very different from each other. In the Western music, there are only two sets of pitch ratios between the notes, one for the major scales and the other for the minor scales. Indian Classical music, on the other hand, does not follow an equi-tempered division of notes; instead uses different pitch ratio for the notes in different scales.

## Rhythm

Indian semi classical forms experiment with rhythms. Such an ordered rhythmic structure is not reciprocated in the western system.

## Creativity

Western music system is rigid, with all performers playing at correct times and in a sequence. The Indian music system is quite different in this sense. Since the Indian system is a modal system, the written music is only an



outline, and the performance is so filled with spontaneous improvisations and creativity, which the Indian listeners enjoy.

## Spirituality

Indian semi classical forms are more spiritual and associated with nature. Some ragas in the Indian system have specific times or seasons associated with them, which is not the case in the Western system.

## Similarities between Indian semi classical and Western music forms

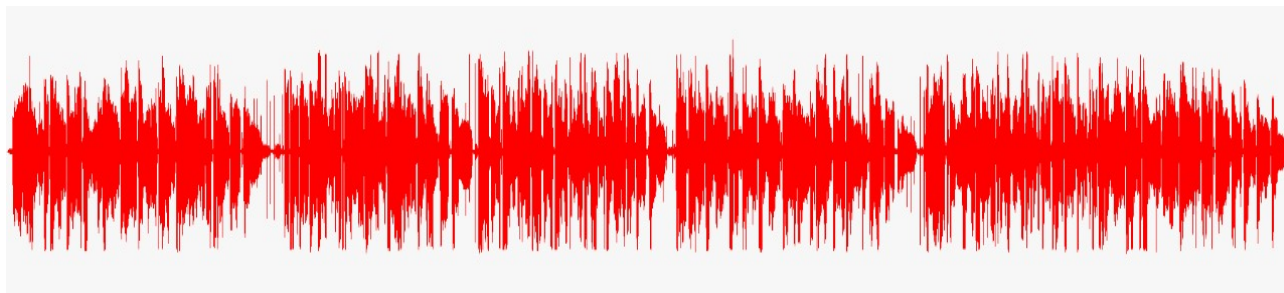
Music, in general, is a medium to convey a story or a message, which is done both in Indian as well as Western music systems. The modes, scales and keys in the Western music are similar to the Ragas and Thaats in Indian semi classical forms. Mixolydian form in the Western system is similar to the Khamas or Khamaj raga in the Indian system. These systems are just different implementations and have grown or evolved according to the people in the particular regions.

## Comparison using Audio Waveforms

We created audio waveforms of the bhajan “Sri Ram Chandra” and a jazz song from here

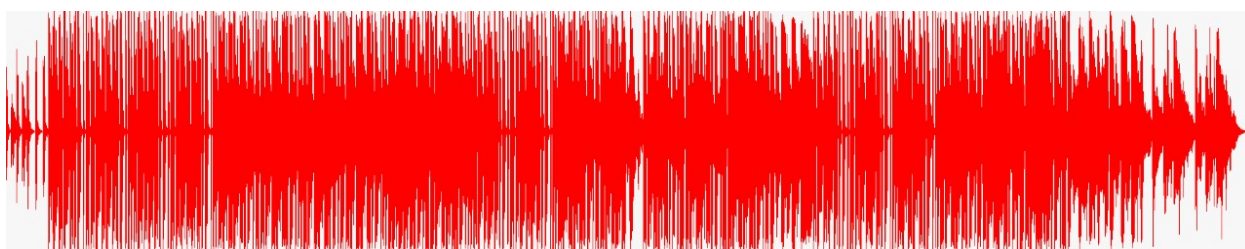
<https://convert.ing-now.com/generate-a-waveform-image-from-an-audio-file/>

## Bhajan Waveform



The above graph shows the bhajan. We can see structured ascents and descents which is not the case in the jazz waveform.


## Jazz Waveform



The above graph shows the waveform for a jazz piece. We can see irregularities in the structure, ascents and descents. Also as western music is polyphonic, we can see very little gaps of silence/low amplitude in the above graph.

## Conclusion

Though western and Indian music seems hardly comparable, they both have quite an influence on each others' music. The influence of Western classical music on Hindustani music does not seem to extend significantly beyond the harmonium - an instrument of European origin. Harmonium is easily the most popular accompanying instrument in India among singers of Hindustani classical as well as light music. More Western instruments have



been adapted in Carnatic music like Violin. Baluswami Dikshitar (1786 - 1858), brother of Muthuswami Dikshitar, trained by a foreign tutor, was among the first Indian musicians to play trained by a foreign tutor, was among the first Indian musicians to play the violin. Today, it is hard to imagine Carnatic music without the Violin. There is a great influence of Indian music on western music also. Indian Music gained success in the West in the 60s when leading Indian classical music exponents such as sitar player Pandit Ravi Shankar and Ali Akbar Khan on sarod was played. The famous western music band “The Beatles” has many of its songs influenced by Indian music like “Love You Too” and “Tomorrow Never Knows” in 1966. The Byrds’ 1966 released “Eight Miles High” and on Traffic’s 1967 “Mr Fantasy” are some more. This shows that Music of West and that of India are undoubtedly two branches of the same tree.

So in this report we saw the details about Indian classical music and its structure. We saw how it is different from semi classical forms and we saw how ragas are classified using the 72 melakarta system. We then saw some examples for semi-classical forms and as we had done some of those in the class, it was easy to understand the details behind the forms. Then we understood the history and details about Western music. We always felt the difference between Indian and Western music, but with this project we understood what exactly was different. Also because of the course, we understood the correct way to appreciate a song with its meaning, history and structure. Also we graphically verified some of the details and we realized the other differences by hearing some examples in both the forms. By taking this course and project, our attitude towards each song changed and the experience was very satisfying.

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