



HISTORY, CLASSIFICATION, STRUCTURE AND PLAYING TECHNIQUES OF DIFFERENT INDIAN INSTRUMENTS

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Abstract:

This paper briefly discusses the history, classification, and structure and playing techniques of various Indian instruments. Information outfitted here is drawn from various sources like ancient musical texts, treatises and furthermore current deals with music. This paper gives the key information, which help to appreciate all the important mechanical changes that have occurred really taking shape just as the playing techniques of instruments till today. It likewise discusses the elective materials, which are utilized for making the instruments.

Keywords: *Indian, music, instrument, technological, musical, etc.*

1. INTRODUCTION

A musical instrument is a device made to produce musical sounds. In India 'vadya' is the term utilized for a musical instrument. The word is a subsidiary of the Sanskrit word 'vad' which signifies 'to speak'. Musical instruments in India differ in their shape, structure, tonal quality, timbre, form and furthermore the material used to manufacture them. The history of musical instruments goes back to the start of human culture. The history and evolution of the musical instruments is an important social aspect of a general public. The instruments in each culture and musical kind are unique. They have advanced by time, accessibility of material, changes in the music and convictions inside that culture and furthermore because of the influence and association with different cultures. The Vedas, myths, legends, historical texts, literature, temples, visual representations like sculptures, paintings, seals, coins, anthropological investigations and others give us abundant material to develop the history of musical instruments in India. There are in any event 500 instruments known. They incorporate every one of the instruments utilized in

classical, folk and tribal music. In perspective on the requirements of research the section essentially concentrates on the instruments utilized in South Indian Karnatak music.

"The Sanskrit musicological works contain valuable material on the historical

advancement of the tone system, musical temperament, mode, melody, musical meter, composition and style just as information on the organology and playing techniques of the musical instruments of India".

2. OBJECTIVES

- To discuss the history, classification, and structure and playing techniques of different Indian instruments
- To provide the fundamental information, about technological changes taken place in the making as well as the playing techniques of instruments



3. CLASSIFICATION OF MUSICAL INSTRUMENTS IN MUSICAL TREATISES

Bharata's Natyashastra classifies the musical instruments broadly into four categories:

1. "Tata" (chordophones): The word is gotten from the Sanskrit word "tan." It intends to extend in pressure. These instruments have some form of gut, wire or something of the sort which are extended to produce sound.
2. "Sushira" (aerophones) : The word signifies "hollow." The instruments that are grouped in this classification have empty reverberating bodies wherein the air that vibrates in the segment produces musical sound. Woodwind and Nadaswaram fall under this class.
3. "Avanaddha" (membraphones): It intends to be secured. This class incorporates all instruments that have at least one face secured with stow away. These are the percussion instruments. Drums of different sorts fall into this group
4. "Ghana" (idiophones): "Ghana" signifies strong. They are the instruments made of metal, stone, wood or dirt. They don't require further tuning once they are manufactured. Haripala in his treatise Sangita Sudhakara names numerous veenas and furthermore depicts a couple of assortments of woodwinds. Some of them are equipped for delivering assortments in all the three octaves.

Sarangadeva's Sangita Ratnakara (1210-47 AD) likewise buys in to Bharata's four-fold

classification of musical instruments. The job of musical instruments for music and dance, its significance is additionally stressed. He depicts four assortments of instrumentalists, for example, Vadaka, Mukhari, Pratimukhari, and Geetanuga. Vadaka implied an instrumentalist, dance backup is Mukhari, one with humble pretensions is the Pratimukhari and Geetanuga is the capacity to handle any complex composition. Tulaja in Sangita Saramrita (1729-35) depicts the equivalent fourfold classification. He portrays different wind instruments, for example, vamshi, pava, pavika, murali, madhukari, kahara, thundagini, sushika, shringa and sankha. Diverse avanaddha vadyas, for example, pataha, mardhala, udukha, karala and dasha are portrayed. He portrays Ghana vadyas, for example, kansyathata, khandika and kshutha. He further orders instruments into githanga, nrithanga, and devayanga.

Apart from the Sanskrit texts, the most established Dravidian literature that is Sangam literature additionally contains an abundance of information about music, musical instruments, playing techniques, and so forth. The most established Dravidian expression for instrument is 'Karuvi,' The Sangam literature arranges musical instruments into five groups.

- Tolkaruvi: Tol meaning hide, this class consisted of instruments covered with hide, generally drums. Tulaikkaruvi: Tulai means hole. This class was comprised of hollow instruments, generally wind instruments.
- Narampukkaruvi: Narampu means animal gut. This class comprised of stringed instruments.
- Mitarukkaruvi: Mitaru means throat. This represented the human voice.
- Kanchakaruvi: Kancham means metal. This class was comprised of metallic instruments.



The earliest classification of musical instruments in the West additionally takes after that of the Indian system. Four classes were perceived, for example, "Autophones," which means self-vibrating, "Membrophones" which means instruments secured with films, "Chordophones" signifies stringed instruments and "Aerophones," implies wind instruments. At present musical instruments are essentially arranged into three significant sorts, for example, stringed instruments, wind instruments and percussion instruments. A fourth classification named electronic instruments can be incorporated for the present day classification. Every one of these groups is additionally arranged, in view of different factors.

4. STRINGED INSTRUMENTS:

Stringed instrument is a large genre, which comprises of assortments of instruments of various shapes and sizes and diverse playing techniques. The earliest stringed instruments in this country were harps. There are three significant classes inside the stringed instruments. First classification isn't utilized to make melody or a raga however is utilized as automatons and musical extras. Second classification might be named as poly-chords. Harps, lyres, dulcimers and comparable instruments, on which melody can be played fall into this classification. In these instruments, there exists an onestring for one note. At that point, the third class is the biggest that is "Monochords." In monochords one string is adequate for playing the entire melody. It might be noticed that there might be more than one string in these instruments; however all of them can be utilized to produce an entire melody, autonomously of different strings. The instruments might be worried or fretless.

This is additionally ordered dependent on the mode of playing:

- a. Playing by erosion with a bow, like the violin, sarangi, dilruba, esraj, and so on (ravanastram is one of the earliest known bowed instrument).
- b. Playing by plucking the strings like the veena, rudraveena, gottuvadyam, sitar, sarod, guitar, mandolin, harp, (tambura, ektar - rambale instruments) and so forth.
- c. Playing by hitting with a hammer or a pair of sticks like gottuvadyam, swaramandala.

5. WIND INSTRUMENTS:

In the wind instruments, sound is produced by the vibration of air segments. Being empty cylinders, with or without appendages they have been named as sushira vadya. One very popular belief is that the ideas of a sushira vadya may have struck man when he listened to the wind, whistling through the openings in bamboos in the meadows. Wind instruments might be additionally characterized into two groups. In the primary assortment no mechanical reeds is utilized. This classification involves cornets, trumpets, horns and woodwinds. In the second classification a couple of reeds are fitted to a cylinder. In every one of the instruments recorded in this species it was the wind segment in the cylinder that truly decided the pitch and quality of the sound. The lips and the reeds acted simply as valves controlling the progression of air. In any case, in harmonium then again the wind stream just energizes the reed and the sound we hear is of the metal tongues inside the instrument and not that of the vibrating air.

The wind instruments can be further classified by the mode of playing:



- a. Instruments, where wind is supplied by some mechanical methods, for the most part howls for example organ, harmonium.
- b. Instruments, where wind is provided by the breath of the performer, which can be additionally, delegated mouth cleaned out and nose blown.
- c. Mouth blown is, where wind is blown through the mouth piece in the instrument - for example clarinet, nadaswaram, shehanai.
- d. Nose blown is where wind is blown through the holes in the mass of instrument - for example woodwind.

6. PERCUSSION INSTRUMENTS

Rhythm comes naturally to man since everything known to mankind rotates around it. Layavadya are the instruments utilized for cadence. They are additionally called "avanaddha" on the grounds that they are secured with calfskin. Customarily there is another word Pushkara, which likewise appears to recommend drums in general. This is referenced by Bharata in his Natyashastra. These can be additionally arranged by the mode of playing:

- a. Instruments played with hand - for example mridangam
- b. Instruments played utilizing sticks
- c. Instruments played partly with hand and partly with stick - for example tavil
- d. Instruments, which are self-struck - for example damaru
- e. Instruments, where one side is struck and the opposite side is stroked - for example perumalmadu drum.

They are strong percussion instruments. This sort comprises of instruments made of metal, wood, stone or mud yet those that are strong like the ghatam, kartal, gongs, cymbals, and so forth.

7. INSTRUMENTS OF KARNATAK MUSIC:

1. **Tambura:** This has a place with the stringed, plucked, fretless classification of stringed instrument. It is utilized all over India as an automaton backup. Its powerful and thunderous automaton forms an ideal automaton to human voice. The tambura resembles a South Indian veena without fuses. It doesn't have the second gourd resonator and a long resplendent tail piece like the veena. The body of the Tambura is semi-globular fit as a fiddle. The South Indian tamburas are made totally of wood. The best tamburas are the ones, which are shaped out of a solitary square of wood, ideally if the wood of a similar tree is utilized for the various parts of the whole instrument. Jack wood is the most mainstream wood utilized for making tamburas. Incredible consideration must be taken during the determination of wood for making a tambura.

- a. **Kudam or bowl:** the shape of the bowl is hemispherical. It is normally an enormous one from 25cm to 45cm wide. The round shaped kudam is normal for the instrument. Yet, as of late, tamburas have been planned with various shaped dishes. The kudam of the tambura is a top notch resonator and it is seen that the tamburas having a round shaped bowl have a superior tonal impact than ones with level resonators.



- b. Belly or top plank:** The belly is usually convex in shape. This empowers the strings to be at a raised level and encourages free vibration. Logically, the curved shape of the top bowl likewise enables the vibration to reflect inside the vibrating section.
 - c. Dandi:** The long dandi that associates the bowl and the neck is hollow inside and it fills the need of a resonator. Like the top board or the bowl. The top board of the dandi is additionally curved fit as a fiddle so as to give an equalization to the instrument and enable the strings to vibrate in progression.
 - d. Neck:** This is the end part of the tambura wherein the pegs are fixed. The neck, however a little part, must be firm enough to withstand the high strain made by the vibration of all the four strings as one.
 - e. Pegs:** There are four pegs fixed on the neck of the instrument, two are opposite to the dandi and of the other two, one is at either side of the neck. The strings are attached to these pegs and the tambura is tuned with the assistance of these pegs, either by expanding or diminishing the strain of the strings.
- 2. Violin:** Violin is a bowed stringed instrument. Though every civilization had some sort of simple bowed instrument like ancient Ravanahasta or Vil Yazh or Jyaghosa, the present day violin is a Western instrument that has been adopted into Indian music. It is presently the chief melodic backup in Karnatak classical music. It is likewise performed as a performance instrument. The subject of the root of European

violin has been talked about by a few prominent scholars of the West themselves. They are of the feeling that the violin has an Indian family. "The cause of the violin bow has been and still is a steady source of exchange, however is winding up increasingly more obvious that not of the Germanic peoples, as has been as of late proposed yet to India we owe its reality.

A violin normally comprises of a spruce top, maple ribs and back, two end blocks, a neck, a bridge, a sound post, four strings, and various fittings, optionally including a chin rest, which may attach directly over, or to one side of the tail piece. An unmistakable component of a violin body is its hourglass-like shape and the curving of its top and back. The hourglass shape contains two upper sessions, two lower sessions, and two inward C-sessions at the midriff, giving clearance to the bow. The voice of a violin relies upon its shape, the wood it is produced using, the graduation (the thickness profile) of both the top and back, and the varnish that covers its outside surface. The varnish and particularly the wood keep on improving with age, making the fixed stockpile of old violins much looked for after.

- 3. Gottuvadyam:** The name of the instrument happens in Sringara Savitri composed by Raghunatha Nayak in early seventeenth century. This instrument is otherwise called Mahanataka Vana. The name Mahanataka Vana proposes that Gottuvadyam may have been 35 utilized for going with music dramatization performances." xiv Gottuvadyam (chitraveena, hanumadvina, or



mahanatakavina), is a 21-stringed fretless lute of Karnatak music, played essentially in South India today. It is very comparative in its playing procedure to the vichitra veena of North India. Its starting points can be traced back to Bharata's Natya Shastra. The Natyashastra alludes to this as a 7 string fretless instrument. It has experienced various advancements and today it is one of the noticeable performance instruments in Karnatak music. It is additionally regularly observed in shared world music concerts and North-South Indian jugalbandis. It is probably the most established instrument in the world and furthermore the harbinger of the fussed veena. "The playing of a stringed instrument by sliding a bit of wood is found in India as well as outside. The Amaravati model demonstrates a stick being utilized to stop the strings. Along these lines playing an instrument by other than fingers is in excess of 2,000 years old."

- 4. Mandolin:** Mandolin has a place with the lute family (plucked, or strummed). It plunges from the mandore, a soprano individual from the lute family. The mandolin soundboard comes in numerous shapes—yet generally round or teardropshaped, now and again with scrolls or different projections. A mandolin may have f-holes, or a solitary round or oval sound gap. A round or oval sound gap might be circumscribed with enriching rosettes or purling, yet for the most part doesn't include an unpredictably cut grille like a Baroque time mandolin.

A mandolin has a hollow wooden body with a tailpiece that holds one end of the strings, a floating bridge, a neck with a

flat (or slight radius) fretted fingerboard, a nut, and mechanical tuning machines to accommodate metal strings. Like any plucked instrument, mandolin notes rot to quietness as opposed to sound out constantly likewise with a bowed note on a violin. Its little size and higher pitch make mandolin notes rot quicker than bigger stringed instruments like guitar, which encourages the utilization of tremolo (fast picking of at least one sets of strings) to make supported notes or chords.

- 5. Flute:** Flute is the most ancient instrument and straightforwardly got from Nature. At the point when wind blew through the tight passages and gaps exhausted on bamboo a sweet sound radiated. It is accepted that woodwind rose up out of this. Prof V Raghavan brings up that Flute assumed an important job in the ancient period of Indian music as the base or 'adhara' for vocal singing. The flute supplied the pitch note to which the human voice sang and it performed the capacity of automaton or sruti. This job of the wind instrument is borne out by depictions in Kalidasa's sonnets. In the Kumarasambhava, Kalidasa says that the wind, which blew from the mouths of the caverns and filled the openings of bamboos exhausted by honey bees, supplied the Tana or Sthana for the Kinnaras who needed to sing. Raghuvamsha gives progressively explicit portrayal of the function of flute.

8. CONCLUSION

An investigation of the evolution of these classics of art exposed the profundity of learning and logical standards lying in ancient Indian arts and how these standards of logical



information have been kept alive through the evolution of these Lakshanagranthas. These treatises gave information about the classification of musical instruments also the structure and playing strategy. Notwithstanding this they give the valuable information about the inconspicuous changes, which have occurred both in the form, technology and the playing techniques of these instruments, which is important for our investigation.

REFERENCES

1. Raghavan V, "Music in Ancient Literature" in Collected Writings on Indian Music Vol II, Chennai, 2007, p 3
2. Sambamoorthy P, History of Indian Music, Madras, 1982, p 202.
3. Eemme te Nijenhuis, Francoise Nalini Delvoye, "Sanskrit and Indo-Persian Literature on Music" in Hindustani Music Thirteenth to Twentieth Century, Manohar, 2010, P 35.
4. Sambamoorthy P, 'Vina Through The Ages' in History of Indian Music, Madras, 1982, P 202.
5. Dr Raghavan V, "Music in Ancient Literature" in Collected Works on Indian Music Vol II, Chennai, 2007, p 4
6. Dr Ragahavan V, "Music in Sanskrit Literature" Collected Works on Indian Music Vol II, Madras 2007, p 26. vii. Sambamoorthy P, History of Indian Music, The Indian Music Publishing House, Madras, 1982, p 203.
7. Satyanarayana R,
Vinalakshnanavimarshe, Sri
8. Sambamoorthy P, pp 212-214.
9. Galpin F.W. Legacy of India. Pp 331-34.
10. Dr Raghavan Centre For Performing Arts, 2007, p 248.
11. Satyanarayan R, "Karnatak Music: A Synoptic Survey," in Aspects of Indian Music Ed Sumati Mutatkar, Sangeet Natak Academy, 1987, pp59-60.
12. Amanda J Weidman, Singing the Classical Voicing the Modern, Seagull Books Pvt Ltd, Calcutta, 2006, pp 44-45.