



Swaranjali Music School

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Visharad Poorna Theory

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Theory: Written Exam Paper # 2:

Chapter 1: Detailed Notes

1. Auxiliary Naad Created by Taanpuraa:

(Note: Real taanpuraa with strings)

Taanpuraa is a very important instrument in Indian Classical Music. In a vocal concert, resonance from all swar from taanpuraa create and maintain a very pleasant atmosphere. It is almost impossible to perform in a concert without taanpuraa. The rich resonant atmosphere created by taanpuraa happens according to theories explained in phonetics (auditory physics).

Taanpuraa is tuned to swar that are called prime or original naad. You can hear them as soon as you pluck a string of taanpuraa and the strings start vibrating. After the original naad, some secondary naad are created automatically. These secondary naad are called auxiliary or self-made naad. Original naad are heard clearly as soon as you pluck a string and secondary naad are heard slowly few moments after the original naad.

Taanpuraa has four strings tuned to following swar: (1) Mandra saptak Pancham, (2) Madhya saptak Shadja, (3) Madhya saptak Shadja, (4) Mandra saptak shadja. If Pancham is varjya (omitted) in a raag, the first string (mandra saptak Pancham) is tuned to Madhyam or Nishaad swar.

When the strings are plucked from 1-4 in succession, each string has a focal point in the middle of a string along its length which virtually divides the string in two equal halves. These two virtual halves of the strings also start vibrating as if they are two different strings with half the length of the string and create a secondary swar with different frequency than the vibration of a full string. Consequently, more virtual focal point are generated automatically and the four strings continues to produced more swar with different frequencies than the original swar. The string will have one, two, three, four or more virtual focal points dividing the string into 2-3-4-5 equal parts. Each part will vibrate and produce secondary or auxiliary swar.

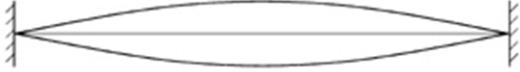
Example: (See the illustration)

(In Pandit Bhatkhande ji book 'Kramik Pustak Maalika', Volume 4, he assumed frequency (vibrations per second) for madhya saptak Shadja (Sa) to be 240 Hz. We will use the same here). Hence consequently a mandra sptak Shadja will have frequency of 120 Hz and taar sptak Shadja will have frequency of 480 Hz.

Frequency of a swar created by plucking a string is inversely proportional to the string's length.

Hence if a 36 inch long string produces a swar 'madhya saptak Sa' with frequency 240 Hz, an 18 inch string will produce a taar saptak Sa swar with frequency of 480 Hz and a 9 inch string will produce a 'ati taar saptak Sa' (Ultra high pitch) swar with frequency of 960 Hz. Mandra saptak Sa swar has frequency of 120 Hz.

Please note that a 36 inch long string producing original swar will be divided by virtual focal points and the sections of string the focal points will create will subsequently vibrate at different frequencies in proportion to their virtual lengths and create more secondary naads. Below is an illustration about the loops of string and corresponding naad the focal points create.

Modes of a Vibrating String		First string on Taanpuraa	Second and Third string on Taanpuraa	Fourth string on Taanpuraa
	one loop	Mandra Saptak Pancham Frequency: 180 Hz	Madhya Saptak Shadja Frequency: 240 Hz	Mandra Saptak Shadja Frequency: 120 Hz
	two loops	Madhya Saptak Pancham Frequency: 180X2 360 Hz	Taar Saptak Shadja Frequency: 240X2 480 Hz	Madhya Saptak Shadja Frequency: 120X2 240 Hz
	three loops	Taar Saptak Rishabh Frequency: 180X3 540 Hz	Taar Saptak Pancham Frequency: 240X3 720 Hz	Madhya Saptak Pancham Frequency: 120X3 360 Hz
	four loops	Taar Saptak Pancham Frequency: 180X4 720 Hz	Ati Taar Saptak Shadja Frequency: 240X4 960 Hz	Taar Saptak Shadja Frequency: 120X4 480 Hz
etc.	n loops			

In this manner, you can hear Rishabh, Nishaad (with five loops, not shown here), Pancham from a Pancham string and Gandhar (Five loops – not shown here), Pancham Shdja from a Shadja string. You can also calculate and show that if Pancham string is tuned to Madhyam while performing a raag that omits Pancham, Madhyam string will create Dhaivat, Shadja and komal Gandhar as auxiliary naad.

From these secondary or supporting naad, a robust tuneful environment is created which is very pleasant and helpful for the performer. Many times a performer (vocalist or instrumentalist) uses two taanpuraa on stage. The first string of one is tuned to Pancham and the first string of the second one is tuned to Madhyam. This creates entire saptak with auxiliary or supportive naad and makes the performance very pleasant tuneful and entertaining.

Sympathetic Vibrations and Naad (Prerak Naad)

When you pluck one string that is tuned to Shadja (Sa), another string that is also tuned to Sa will start vibrating on its own. These are called '**Prerak Naad**' or '**Sympathetic Vibrations (that create Sympathetic Naad)**'. In Indian instruments, Saarangee, Dilrubaa, Israaj and Sitaar etc. have extra strings below the main strings that are plucked. They are called 'Taraf strings', which are tuned to same swar as the main plucked strings. Taraf strings create 'sympathetic naad' and the original swar becomes robust and resonant.

2. Kalaavant, Pandit – Vaggeyakaar, Geeti, Baaniyaan, Gamak (Artsit, Scholar – Poet/Composer, Lyrics, (Dhrupad) Styles, Swar vibrations)

Pandit Bhatkhande ji described four categories of people connected to art and science of music.

1. **Vaaggeyakaar (Poet/Composer):** All vocal music has two parts. Lyrics of the composition (Vaak) and the swar composed for the lyrics (Geya). Vaak + Geya = Vaaggeya. Vaageyakaar = Poet/Composer. A person who writes nice stylish words and creates an entertaining fetching tune for the words is called vaaggeyakaar or Poet/Composer.

Shaarngadev wrote about three virtues of vaaggeyakaar: Uttam (Excellent), Madhyam (Medium), Adham (Inferior).

In short, to be an excellent vaaggeyakaar, a person should have (a) genius, talent, (b) Scholarship (careful study of arts and science, detailed observations of folk life), (c) Repeated study and perusal of arts, music, people's lives, people's emotions, languages etc.), (d) Have a clean living with morals and values.

Longer list of virtues of Vaaggeyakaar is:

Excellent knowledge of grammar, dictionary, verse styles, speech, finesse in languages, various languages, gist-sentiment-emotion, regional customs-living styles, arts, sciences, vocal-instrumental-dance art forms, percussion-tempo, various swar, talent, local raag, propriety etc. He/she should be an entertaining performer – vocalist or instrumental. He/she should be a decent-moral person, good orator, must not have anger or jealousy issues, should be kind, must not plagiarize from or imitate other composers, create new compositions, be aware of other people's emotions and opinions, a good writer, instant composer, be able to create various styles of compositions, be able to perform swar with gamak in three octaves, be able to concentrate on his task.

2. **Artist:** A person who presents his art form in a sophisticated, smooth manner is an artist. In older books, they have discussed virtues and flaws (merits and demerits) of an artist (vocalist or instrumentalist). In a book 'Sangeet Ratnakar' has listed virtues of a vocalist as follows: 1. tuneful with good improvisation, 2. expert in smooth presentation, 3. Good blend of swar, taal, laya, style, 4. Good representation of 'Gharaanaa' (musical families), 5. Entertaining performance etc. Pandit Bhatkhande ji said, the main virtue of an artist is 'readiness to perform'. For a vocalist his vocal cords and for an instrumentalist his hand, should always be kept in a super ready condition.

In older days, music was only taught in person by oral instructions. Notation system was not developed until early 20th century. Now a days, conditions have improved. An artist can learn by written script in books and audio recordings of lessons. Still, an artist has to practice diligently to acquire sufficient skills to perform properly. Main goal of an art form is to express and manifest beauty and to entertain. One cannot be a successful performer just by presenting grammatically scientifically correct music. One has to have capability to

present an entertaining performance. Really rock the concert. An artist can learn by observing successful artists like Pandit Bheemsen Joshi, Pandit Kumaar Gandharva, Pandit Jitendra Abhisheke, Vidushi Kishori Amonkar.

3. **Pandit:** A person who has mastered full knowledge of theory of music, but who is not a skilled performer used to be called 'Pandit'. Such a person cannot present an entertaining concert. Even though he knows all rules and regulations of music, he cannot entertain the audience. Such scholars generally guide people by writing books, analyzing (critique) other artists, and teaching. Scholars like Pandit Bhatkhande are called 'the scientist' or music scholars.

These days, customarily, senior level artists on All India Radio are called 'Pandit' (men) and Vidushi (Women). Musalmaan (Islam) artists are called Ustead. Difference is that Ustead were not well educated in music theory or rules. They were excellent composers and performers, sometimes from the dance halls of ill repute.

4. **Geeti:** Type of songs originating from one village and with similar tunes with one main swar are called Jaatigaayan from time of 'Bharat'. After some time, it acquired the common name 'raag'. The main principle for raag was 'The one that entertains is a raag'. By this principle, many entertaining swar clusters were formulated. With various swar formulations and specialties are called 'Geeti'. According to ancient teacher 'Durgaashaktee', there are five types of Geeti. Shuddhaa, Bhinnaa, Goudee, Vegaswaraa and Saadhaarane.

Shuddhaa: Even and pleasant swar are used

Bhinnaa: zigzag or twisted and dainty swar are used.

Goudee: Use of gamak in three saptak.

Vegaswaraa: Energetic, entertaining and fast tempo swar are used.

Saadhaarane: A geeti formed by combination of four styles above.

A raag based on these geeti is called graamaraag. Shaarngadev described second type of Geeti (Andar Maagadhee, Ardhamagadhee, Sambhaavita, Pruthulaa). These four types are based primarily on lyrics and taal. Last five types of Geeti were prominently based on swar.

Scholars think that the four Baani (styles of Dhrupad) of Dhrupad are thought to be based on these Geeti.

5. **Baani or Baaniyaan:** Baani or Baaniyaan are related to dhrupad singing. Dhrupad singing was promoted and popularized by King Maansinha Tomar in fifteenth century. Dhrupad singer was called an artist. Based on the artist's style of dhrupad singing and his place of domicile, four styles of dhrupad presentation emerged.
- Gobarhaar Baani: It had clean straight forward rendition, serious nature, suitable for peaceful and spiritual renditions.
 - Khandahaar baani: Playfulness, diversity of tempo, and renditions of romantic lyrics were main features.
 - Daagur Baani: Even though it was simple and genteel, the swar formation were complex and skewed.
 - Nouhaar Baani: It was full of surprising, amazing content, since this baani compositions jumped from one swar to 2-3 swar distance away.

Pandit Bhatkhande and other scholars think that the original source of these baani are the five geeti described above. However, geeti are a major source for raag. Geeti do not introduce any particular singing style.

Except for Daagur baani, one cannot find anyone who practices or knows secrets of other baani.

6. **Gamak:** In Indian music, while singing or playing instrument, there is a tradition to perform same swar in various forms. In a broad sense, this method of presenting a swar in various different forms is called 'Gamak'. In this method, some extra vibration is created in a swar. This vibration is a specialty of 'Gamak'. In Indian music solitary straight swar are not used very often. A swar is performed by using a shade or essence of a swar before or after the original swar. This way, the swar becomes more emotive and entertaining. This vibrating swar is used in books like Rigved and Saamaved. When mantra from ved were performed, particular vibrations were used. 'Sangeet Ratnaakar' defined 'Gamak' in these words:
 " Singing or playing vibrating swar in an a manner that is entertaining to the audience is called 'Gamak'".
 In a book 'Sangeet Samay', author Parshvadev said: " When one swar acquires a shade of another shruti, this act is called 'Gamak'".

Gamak can be used in singing

- (a) Based on meend (going from one swar to the other that is four-five swar apart in a smooth continuous arc)
- (b) Taan style
- (c) Vibration style.

Sangeet Ratnaakar described following Gamak:

Kampit (Vibrating like a damaroo – tiny drum),
 Jamjamaa (fast vibration),
 Bahalaavaa,
 Chhotaa Gamak,
 Aandolit (Oscillating),
 Ghaseet (grinding),
 Gitkadi (three saptak taan),
 Khatkaa (jolting or striking on next swar and then touch earlier swar),
 Murkee (singing ascending swar in quick succession),
 Hudak (Humming sound while vibrating),
 Mukhbandi Taan (vibrating swar with close mouth),
 Avarohee Meend (Sing full swar and then use descending swar).