



GATHI – The Rate of Progression of a Composition

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Abstract

Thālam is a device used to indicate a song's tempo. Thālam assists us in keeping the beats or rhythm of the song, where it has a major impact on the mood of the song too. In a Thālam, Gathi enumerates the sub-divisions of an aksharā (i.e) the beat in a composition. Gathi is also named as Nadai. This fundamental understanding forms the basis of how Thālam operates. Layam is non as tempo or speed. Understanding the meanings of Tala and Laya is necessary for the study of rhythmic elements. Chaturasra gathi is the most commonly used gathi, followed by chaturasram, trisram, kandam, misram, sankeernam. In a composition, Gathi bhedom involves changing the speed and type of walking. For example, a Thanivarthanam set to Adi Thālam with Gathi bhedom might change between Chaturasra (4/4), Khanda (5/4), and Thisra.

Keywords: *Thālam, Rhythm, gathi, jāthi, layam, Ādi Thālam, Gathi bhedom, chaturasram, trisram, kandam, misram, sankeernam, tempo, speed, Chavukka/Vilamba Kālam, Madhiyama Kālam, Dhuritha Kālam, Nadai, Mridngam, aksharās, mātras, avarta, anuloma-pratiloma, Theermanas, Nattuvangam.*

INTRODUCTION:

The tempo or speed is known as Layam. It represents a unified dynamic force in a specific rhythm, and it can encompass anything that is concentrated and unified to create balance. It is inherently primordial and predated the manifestation of Thālam. Universally, it can be described as the motion of entities in the cosmos; from the orbital movement of electrons around the nucleus to the orbit of planets around a star, each possesses its distinct tempo.

The rhythmic sound created by the sun's burning, the orbits of planets around the sun, and the ocean waves crashing onto the shores all serve as prime illustrations of the universal presence of layam. These occurrences are all governed by subtle energies that guide them in the universe in a specific rhythmic manner. This subtle rhythmic energy is known as layam. When this energy materializes into a tangible form to create music, it can be said that the music possesses layam.

The unified dynamic force known as Layam goes beyond being just a sound; it embodies the rhythm of the universe. Layam determines the tempo of music, which comes in three types:

- 1) Chavukka/Vilamba Kālam (slow tempo)
- 2) Madhiyama Kālam (normal tempo, twice as fast as Chavukka Kālam)
- 3) Dhuritha Kālam (fast tempo, twice as fast as Madhiyama Kālam).

In traditional Thālams, the cycle typically uses the same Nadai consistently. However, in this particular type of Thālam, this is not the case. The Thālam will incorporate multiple Nadais within a single cycle. An example of this type of Thālam is Pancha Nadai Thālam, which includes all five Nadais.

The rate of progression of a composition is known as Gathi, indicating the number of aksharās included in each of the kriyas of a tala. The Gathi types mirror the jaati types. Tisra, chaturasra, khanda, mishra, and sankeerna Gathis consist of 3, 4, 5, 7, and 9 aksharās per kriya, respectively. Let's provide a detailed explanation using Ādi Thālam.

The Ādi Thālam [chaturasra jaati triputa Thālam] consists of 8 kriyas. In trisra Gathi, there are 24 aksharās per avarta at lower speed and 48 at higher speed. Similarly, in chaturasra Gathi, there are 16 and 32 aksharās per avarta respectively. Khanda Gathi has 40 aksharās, while mishra and sankeerna Gathis have 56 and 72 aksharās respectively. The 35 Thālam can be grouped into 5 types to accommodate Gathi variations, resulting in a total of 175 Thālam. Gathi, the Sanskrit term, is referred to as 'Nadai' in Tamil and denotes the pulse or speed of the tala. The number of subunits within an Aksharā determines the Gathi or Nadai. Having defined the thirty-five Thālam structure, we move on to the concept of Gathi the concept of Gathi. Gathi, meaning "speed," indicates the underlying rhythm per mātra. In South Indian music, unlike North Indian music, where the number of mātras remains constant regardless of speed, the speed is adjusted by incorporating smaller rhythms within each mātra, creating an impression of higher speed. There are five types of speeds, coincidentally sharing the same names as the Jāti: trisra Gathi, caturasra Jāti, khanda Gathi, misra Gathi, and sankeerna Gathi. Each mātra will contain a Gathi-dependent number of mātras within it.

THĀLAM NAME	SYMBOL	TOTAL MĀTRAS
Trisra Jāti Eka Thālam Trisra Gathi	3	$3*3 = 9$
Caturasra Jāti Eka Thālam Caturasra Gathi	4	$4*4 = 16$
Kanda Jāti Eka Thālam Khanda Gathi	5	$5*5 = 25$
Misra Jāti Eka Thālam Misra Gathi	7	$7*7 = 49$
Sankeerna Jāti Eka Thālam Sankeerna Gathi	9	$9*9 = 81$

In the case of caturasra jāti eka Thālam, each mātra exhibits a distinct rhythm. The caturasra jaati eka Thālam caturasra Gathi, commonly known as Ādi Thālam, is the most prevalent Carnatic Thālam. Originally consisting of four mātras, the caturasra jaati eka Thālam has been expanded to sixteen mātras in Ādi Thālam, with each mātra containing four sub-mātras. By applying gathi to each Thālam, a total of one hundred seventy-five Thālam can be generated, with the longest cycle being 261 mātras in length. This extensive cycle would be unfamiliar to North Indian musicians, as their longest comfortable cycle consists of sixteen mātras.

UNDERSTAND THE CONCEPT:

Vocalists rely on these concepts to maintain rhythm, while percussionists utilize them for improvisation. For percussionists, the knowledge is particularly valuable when playing instruments like mridangam. Carnatic percussionists first learn how to produce sounds and their corresponding names, known as konnakol. They then proceed to understand how to apply their chosen instrument to the studied Thālam and effectively accompany other musicians. These advanced topics are beyond the scope of this platform, and it is advisable to seek guidance from a professional Carnatic percussionist.

1, 2, 3, and 4 count had to exactly match the hand motions, regardless of how we broke the beat up into smaller parts. According to our nomenclature, the count was associated with the kriya, whereas the aksharā was associated with the count in different ways. The number of divisions in the primary beat is represented by the gathi. The total number of beats in the tala is determined by its jāthi. For example, if the tala is Ādi, the total number of beats is eight since Ādi tala is chaturasra jāthi triputa tala ($IOO = 4+2+2 = 8$). The gathi determines how many divisions each of the eight beats is divided into. In the same fashion, the same five types are used.

- Thrisra — 3 sub beats — Tha-ki-ta
- Chaturasra — 4 sub beats — Tha-ka-dhi-mi
- Khanda — 5 sub beats — Tha-ka-Tha-ki-ta
- Misra — 7 sub beats — Tha-ka-dhi-mi-Tha-ki-ta
- Sankeerna — 9 sub beats — Tha-ka-dhi-mi-Tha-ka-tha-ki-ta

If the gathi is chaturasra gathi, each 8 beat is split into 4 aksharā. Since it is in chaturasra gathi, one whole cycle has 32 aksharā, as 8 multiplied by 4 equals 32.

Chaturasra gathi and trisra gathi are commonly used. In which dance jāthi incorporates khanda gathi is, some jāthis and songs stick to one gathi throughout, while others add some flair by switching gathis for different sections. Regardless of whether the gathi remains constant or modifications, the Thālam as a whole need to keep its steady heartbeat and tempo.

Whether the Thālam is performed more quickly or more slowly, the gathi has no effect on it. After selecting your Thālam according to your preferred jāthi, and deciding to stick with the same gathi, let's consider the following scenario.

A rhythmic sangathi occurs when a musical phrase that was played at one tempo is altered to be played at a different tempo. Traditionally, Gathi or jāthi combinations were associated with a chaturasra jāthi which always had 4 counts in a beat, forming the basis for calculations. However, a gathi or jāthi combination does not have to begin on a beat, i.e., on samam of any beat, as is seen with polyrhythms that begin on different beats. In the concept of Gathi bhedom, when linking regular phrasing to any jāthi within that gathi, the regular phrasing can be succeeded by a jāthi that begins on any of the accents found in that particular combination. Omitting beats from the rhythmical syllables does not imply that there must be a pause of that length before the rhythmic syllables begins. This concept is illustrated in sankeerna jāthi 5, where the 4 remaining beats were employed to begin the syllable.

NATTUVANGAM:

The Nattuvangam is a crucial component of Bharatanatyam, a classical dance form from South India. It's essentially a conductor's role and involves managing the rhythm and timing of the performance. The Nattuvangam is usually performed by the Nattuvanar, who is responsible for maintaining the rhythm and guiding the dancers through the performance. The Thālam is used to mark different beats and rhythms, which helps the dancers synchronize their movements with the music. The Nattuvangam is performed by the Nattuvanar, who directs the rhythm and timing of the Bharatanatyam performance. Nattuvanar, Acts as a conductor, ensuring that the dancers' movements align with the rhythm and music. Combining vocal cues, hand gestures, and rhythmic patterns to guide the dance. In summary, the Nattuvangam, with its wooden Thālam, plays a pivotal role in Bharatanatyam by providing rhythmic support and guiding the dancers throughout their performance.

GATHI BHEDAM:

The concept of "gathi bhedom" involves the succession of accents with groups of mātras of different lengths. Gathi bhedom sequences offer more accent possibilities than gathi bhedom sequences. In Carnatic music, a gathi bhedom sequence is almost as important as the motivic elements in classical composition from the 19th century or be-bop. The 56 mātras in chatusra of the original sequence will become 11 beats + 1 mātra in khanda if the two cycles of tala 7 are executed in khanda. In order to resolve the entire sequence to the tala's sama, two beats and four mātras are thus absent. In Bharatanatyam, gathi bhedom is usually seen in jāthi-s where many jāthi-s use the combination of Chaturasram, Trisram, Kandam and Misram. Very rarely we find Sankeerna gathi-s in usage. Thodyamangalam where gathi is constantly changed in each stanza. Gathis draw attention to the elements of literary beauty that harmoniously combine rhythm and melody. In recent times, we are able to find Gathi bhedom alarippu.

CONCLUSION:

Perhaps the most advanced and complex rhythmic elements in the world can be found in Carnatic music. Both simple and complicated patterns can be found. The combination of anuloma-pratiloma is examined within a specific context. Anuloma is characterized by doubling, tripling, or quadrupling the number of mātras in a aksharā, while pratiloma involves spreading the number of mātras in a Gathi across 2, 3, 4, 5, 6 or 7 beats. Developing concepts with anuloma-pratiloma speeds requires an understanding of the Karnatic concept of speed. These speeds fall under the category of "regular phrasing" in the Gathi bhedom framework. Theermanas are one of the most extensive, diverse, and captivating subjects in laya aspect, and short theermanas represent their simplest form.

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