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Rhythmic Syllables: Introduction, Analysis and Conceptual Approach in Carnatic Music of South India

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Abstract

This article explores the rhythmic alphabet of the Carnatic System along-with its analysis, concepts and its applications. A concept-based application has lesser chances of failures during a performance and offers immense scope for *impromptu* improvisations which form a major part of South Indian percussion artistry.

Keywords: Carnatic Music, Classical Music, South India, Gathi, Arudi, Theermanams, Kuraippu, South Indian Percussion, mathematics, Talas, Korvai

Introduction

Carnatic Music is one of the foremost and ancient Musical systems of South India[1] and it falls under the category of Classical Arts. It is unique in its form and content.[2] Melody and Rhythm form the basis of many music systems of the world. As the language of Raga has swaras,[3] the Language of rhythm has varied rhythmic syllables. By permuting these seven swaras innumerable ragas emerge and are still emerging. Likewise with the available rhythmic syllables, innumerable combinations can be formed as the process is continuous and the system is dynamic. In Carnatic Rhythm there are 14 basic syllables and by adding vowels they become 52 syllables (Annexure 1) in total.[4]

The process

The foundation for a rhythmic metre is number of beats which needs to be expressed in rhythmic language which may fill up entire cycle or parts thereof. Hence, rhythmic syllables encompass mathematical principles.

Music is a creative art form. Creativity is a process by which an artiste is able to bring out such combinations out of the existing concepts and practices that stand out as unique and new. It is a cognitive process that produces new ideas or transforms old ideas into updated concepts.[5]

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[1] Sundaram B M, Article on Thavil, *Talavadya Seminar-3, Proceedings of Talavadya Seminar3 and Allied Papers,* Compiled and edited by Bangalore K Venkataraman, Published by Percussive Arts Centre, Bangalore, 1996 : 7

[2] Prof. Sathyanarayana R, (Mysore Brothers), *The Suladis and Ugabhogas of Karnataka Music*, Mysore, Sri varalakshmi Academy Publication Series, Sri Varalakshmi Academy of Fine Arts, 1967 : 1

[3] The swaras are 7 in number viz., Sa, Ri, Ga, Ma, Pa, Dha, Ni.

[4] Arivanar, *Pancha Marabu* (Tamil Work), Editor : Vidwan Ve.Ra Deivasigamani Gownder, Erode, 1973, 1975, Verse-118"

[5] Liane Gabora, Professor of Psychology, Brusseles Free University in "*5 Steps in the Creative Process Model*" by Flora-Richards- Gustafson, Demand Media

This process does not overlook or replace the existing practices, but enhances them by giving a different and unheard-of dimensions to it. When the creativity is defined, a logical process of sequence is obtained which eases the pedagogical path.

Creative Models

Of the various Creative Models, Wallis' model[6] gives the following steps which is closer to this author's rhythm creation model:

1) Preparation
2) Incubation
3) Illumination
4) Verification

With specific reference to Carnatic rhythm the following logic[7] can be applied:

1) Mathematics – Process of Preparation

2) Syllable Substitution - Incubation

3) Cognizable combinations - Illumination

4) Artistic Interpretation – Verification

Tala in Carnatic Music

A rhythmic metre in Carnatic music is called "Tala" and each "Tala" has certain total number of beats per cycle. If there is 1 syllable per beat then the rendition is in first speed, if there are 2 syllables then it is in second speed and if there are 4 syllables then it is 3rd speed and so on. Simply by doubling the number of syllables per beat the next speed is achieved.[8]

Apart from the universal rhythm pattern of 4, Carnatic rhythm has bestowed magnificent contribution to the world of rhythm by including numbers like 3/6, 5, 7 and 9, for which innumerable patterns have been formed. There are also technical terms for these numbers which are given below:

3 -Thisram

4 - Chatusram

5 - Khandam

7 - Misram

9 - Sankirnam.

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[6] Also see Ned Hermann's Quadrant Model
[7] These four steps were formed by this author in 1995 which have been widely accepted as creative rhythm making process.
[8] The concept of three speeds is called "Trikaala" and the concept of 6 speeds is "Shadkaala". "Tri" and "Shad" are Sanskrit words meaning three and six respectively. Kaala means speed.

Even though Tala is basically a time-keeper, Carnatic Music has taken it beyond its facade and has extended it to make it as one of the most sophisticated rhythm systems in the world.[9]

Parts of Tala

All talas are unique and no tala structure repeats, though the total counts may be equal for two or more talas. Each tala has a definite structure with different parts called "Anga". There are 6 parts or "angas" of tala: (Table 1):

Sno	Name of the Part	Total number of beats	Physical representation
1	Anudrutam	1	A clap
2	Drutam	2	Clap and a wave
3	Laghu	4*	Clap followed by 3 finger counts (small, ring and middle)
4	Guru	8	Clap followed by a circular movement of the right hand with closed fingers for a total duration of 8 beats.
5	Plutam	12	Each action takes 4 beats duration Clap; a waving the right hand from right to left; waving the right hand from left to right
6	Kakapadam	16	Each action takes 4 beats duration Clap; palm upwards and lifting the right hand up; a wave of right hand from right to left; and wave of right hand from left to right

Table 1: Parts of a Tala

* Laghu is a variable according to the number of finger count it takes. These are called "jaati" variations.

Types of Talas

A group of tala system called Suladi Talas[10] has been widely used for both learning as well as performance.[11] The learning system comprised of memorizing the patterns for Suladi Sapta Talas and the performance system ensured creating cadential and other forms. Apart from this there were other group of talas as given below:

1) 108 Talas
2) 72 Melakarta Talas
3) 120 Talas listed by Nissanka Sarngadeva
4) Nava sandhi talas for temple rituals
5) Chaapu Talas with Tisra, Khanda, Misra and Sankeerna varieties

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[9] M.McComb, Todd, *Why Carnatic Music?* , Article for Keertana, a magazine for Carnatic Music Circle, Melbourne, 1999

[10] Suladi Talas are a group of 7 Talas viz.,Dhruva, Matya, Jhampa, Ata, Triputa, Rupaka and Eka. Apart from this various other systems are also present, a discussion of which is beyond the scope of this article.

[11] The learning in Carnatic Music is called "Kalpita Sangita" and the performance is called "Kalpana Sangita". Kalpita and Kalpana are Sanskrit words meaning Learning and imagination respectively.

Creative model for South Indian Percussion

1) Mathematics

In Carnatic Music the rhythm cycles are broken down as numbers. These numbers are generally said in 1 count per beat for even talas and 2 counts per beat for uneven talas. In the former the interval between two successive beats remain constant whereas in the latter beat intervals are unequal. All chaapu talas mentioned at serial No: 5 above fall under this category. For understanding a tala or a series of tala cycles, simple mathematical forms like Addition, Subtraction and Multiplication are used. Advanced mathematical forms like progressions, combinations, permutations, calculation of a total for a given series of numbers are some of the other principles used.

Carnatic Percussion employs predominantly mental maths and hence internalisation of the numbers with patterns become necessary.

2) Syllable substitution

The next step is substituting the numbers with rhythmic syllables:

1	-	Tha
2	-	Tha ka, Ki ta
3	-	Tha ki ta, Tha dhi mi, tha jo nu,
4	-	Tha ka dhi mi, tha ka jonu, ki ta tha ka, tha ri ki ta
5	-	Tha dhi gi na thom, tha ka tha ki ta
6	-	Tha dhi . gi na thom, tha ka tha ka jo nu
7	-	Tha . Dhi . gi na thom, tha ka dhi mi tha ki ta
8	-	Tha thom . Tha dhi gi na thom, tha ka dhi mi tha ka jonu,
9	-	Tha . Thom . Tha dhi gi na thom
		Tha ka dhi mi tha dhi gi na thom
10	-	Tha ki ta thom . tha dhi gi na thom
		Tha ka dhi mi tha dhi . gi na thom
		Tha ki ta tha . dhi . gi na thom

Given above are some basic and commonly used patterns. There is no hard and fast rule that only these syllables should be used every time for the representative number. The following are some of the methods used for syllable substitution:

1) Learning to render the structure of the entire tala in three speeds.
2) Learning to render syllables in three speeds for different talas.
3) Learning to give appropriate pauses for the phrases.

Rendering three speeds

In the following table an example is given for Adhi Tala of 8 beats in which a pattern called <u>tha thom . tha dhi gi na thom</u> is rendered in three speeds (Table 2):

	Laghu				Drutam -1		Drutam-2	
	Beat	Little Finger	Middle finger	Ring finger	Beat	Wave	Beat	Wave
First Speed	Tha	Thom	.	Tha	Dhi	Gi	Na	Thom

Second Speed	Tha thom	. tha	Dhi gi	Na thom	Tha thom	. tha	Dhi gi	Na thom
Third Speed	Tha thom . tha	Dhi gi na thom	Tha thom . tha	Dhi gi na thom	Tha thom . tha	Dhi gi na thom	Tha thom . tha	Dhi gi na thom

Table 2: Pattern for 8 rendered in 3 speeds.

The (.) in the above pattern is called "*kaarvai*" which means rhythmic pause.

Rendering three speeds for a pattern of 9 in the same tala of 8 beats needs a bit of mental calculation. In all the speeds the number of counts will not change. You may notice that the patterns rendered in 1st, 2nd and 3rd speeds span one cycle each, which means the speed of rendition varies but neither the tempo nor the cycle. Hence for rendering 9 in three speeds we need to simply multiply 9 by 3 which is 27 and this is the 27th place in the Tala cycle from where the pattern for 9 has to rendered in three speeds.

Finding positional values

The following methods can be used to find positional values in a tala cycle:-

1) Multiply the total tala count by 1 or 2 or 3 or more to get the result that is more than the resultant number which, in our example is 27. Hence, 8 * 4 will be 32. Subtract 27 from 32 we can get 5. From the starting point of the tala count 5 and start rendering the patterns for 9 in three speeds from the 6th place onwards (See Table 3).

2) Counting the Tala cycles in reverse and from the 27th point render the patterns. For example 4 * 8 is 32. Start the tala by counting numbers from 32; 31; 30; 29; 28 and then from the 27th point onwards render the pattern for 9 in three speeds.

Tala Structure	Beat	Little Finger	Ring finger	Middle finger	Beat	Wave	Beat	Wave
First Speed						Tha	Ka	Dhi
	32/1st beat	31/2nd beat	30/3rd beat	29/4th beat	28/5th beat	27/6th beat	26	25
	Mi	Tha	Dhi	Gi	Na	Thom/	(Second Speed)	Dhi . mi .
							Tha . Ka .	
	24	23	22	21	20	19	18	17
Second speed (continued)	Tha . dhi .	Gi . na .	Thom . / tha .	Ka . dhi .	Mi . tha .	Dhi . gi .	Na . thom . /	(Third Speed)
								Tha ka dhi mi
	16	15	14	13	12	11	10	9

Third speed (continued)	Tha dhi gi na	Thom/ tha ka dhi	Mi tha dhi gi	Na thom/ tha ka	Dhi mi tha dhi	Gi na thom/ tha	Ka dhi mi tha	Dhi gi na thom
	8	7	6	5	4	3	2	1

Table 3: Pattern for 9 rendered in 3 speeds from positional value of 27.

This way all the patterns (at least 5, 6, 7, 8, 9 and 10) need to be internalised at least for four major talas like Aadi Tala, Rupaka Tala, Misra Chaapu Tala and Khanda Chaapu Tala.

3. Cognizable combinations

The rhythmic patterns can be beaded together to bring out larger rhythmic phrases called "Solkattu",[12] (solfeggio). These "solkattu" becomes a cognizable combination when rendered orally or played on a percussion instrument. Following broad-based methods are used in forming "solkattu":

1) Normal basic pattern
2) Speed mixture within a pattern
3) Splitting the syllable and making patterns within a pattern-Recursive
4) Mixture of kaarvais
5) Mixture of Gathi variations within a pattern

4) Artistic interpretation

Various rhythmic forms of Carnatic Music

All the syllables need expression in the form of structured arrays. There are various ways in which these structured arrays are rhythmically made.

1) Gathi
2) Arudi
3) Teermanam
4) Kuraippu
5) Pharans
6) Mohara
7) Korvai
8) Melodic Phrases

Gathi

There are 5 Gathi variations in Carnatic Music:

1) Tisram   -   3 or 6
2) Chatusram   -   4
3) Khandam   -   5
4) Misram   -   7

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[12] Sankaran Trichy, *The rhythmic principles and practice of South Indian Drumming*, Lalith Publishers, Toronto, 1994, 43 defines sol = syllable, kattu = bunch, group

5) Sankirnam   -   9

This indicates a flow of rhythm where 4 internal pulses of a single beat is converted into 3 or 6, 5, 7 and 9 for even talas and every 2 in third speed is made into 3 for uneven talas like Chaapu Talas. It is a tradition to play only Thisra Gathi for uneven talas. In Gathi the basic tempo is maintained whereas the total is altered.

For Adhi tala having 32 pulses (8 beats * 4 internal pulses in third speed) the measurement changes as follows when gathi is applied(Table 4):

Sno	Gathi	Total 32 =
1	Thisram	3 per beat means 24; 6 per beat means 48
2	Khandam	40
3	Misram	56
4	Sankirnam	72

Table 4: Gathi application

Arudi

Arudi is an ending pattern. This is a Tamizh word meaning "limit" or "boundary". Arudi is also construed to be an ending point of the first portion of a Ragam-Tanam-Pallavi, an improvisational form in Carnatic Music, called "Poorvanga" and the end point is called "Padagarbha". (The next portion is called "Utharaanga"). The point of Padagarbha is called an "Arudi". Rhythmically whenever a compositional form is ended by a Vocalist, the percussion artiste finishes it off with a rhythmic pattern called "Arudi". The purpose is to end the Tala properly at the end/start point and also to indicate completion of a song. A sample lyrics and an example of "arudi" is given below in Table 5:

Beat	Little Finger	Middle finger	Ring finger	Beat	Wave	Beat	Wave
Sa . ro .	. . ja .	Da . La .	Ne . . .	Thri . . .	Hi . ma .	Gi . ri .	Pu . . .
Thri . . .	The song has ended here even though the tala has not ended. The percussion artiste has an option to start from the Middle finger and play an arudi for 6 beats and finish the song or he can choose to play a longer arudi by starting anywhere in the tala and end in the next cycle also. This example is a 10 count Arudi.					Tha tha ku thom	Tha ka jo nu
Thom . tha .	Thom . / tha tha	Ku ku tha ka	Jo nu thom .	Tha . thom . /	Tha tha ku thom	Tha ka jo nu	Thom . tha . (thom)

Table 5: Example of Arudi

In this example the gap beats between the first and the 7th beat will be filled up by "Melodic Phrases" which is also explained in this article.

Theermanams

Theermanams are short ending phrases. The tradition has it that these cannot exceed 3/4th of a Tala Cycle. This is also used to indicate finish of one section and start of another section of song

like Pallavi, Anupallavi and Charanam. The rhythmic phrases played between Pallavi and Anupallai, Pallavi and Charanam is called Theermanam, if it observes the rule of not exceeding 3/4th of a Tala Cycle (Table 6):

Beat	Little Finger	Middle finger	Ring finger	Beat	Wave	Beat	Wave
Sa . ro .	. . ja .	Da . La .	Ne . . .	Thri . . .	Hi . ma .	Gi . ri .	Pu . . .
Thri				. thom thom tha	Tham . ./ thom	Thom tha tham .	. /thom thom tha
Anupallavi of the Song continues (tham) Pa . ra .	. . ku .	Se . . .	Ya . ka .	(Song continues)			

Table 6: Example of Theermanam

Kuraippu

Kuraippu can be translated as "rhythmic descent" or "step by step reduction". This is mostly used in Percussion Solo before the Farans. Kuraippus are not used during song accompaniment. The rules for "Kuraippu" are as follows:

1) Kuraippu can be done for any tala. A general rule is that the pattern taken up for "kuraippu", needs to be rendered 8 times, 4 times, 2 times and once in that order.
2) The patterns played for 8 times can be repeated with incessant varieties, so also with the others.
3) The Kuraippu pattern for a particular tala is obtained by a simple process of total tala count minus 1. For example for Adhi Tala of 8 beats 7 will be the Kuraippu Pattern (8-7).
4) The start point for this resultant pattern is arrived by leaving 2 beats in that particular tala and render the pattern 8 times. After playing many sets of varieties for the pattern leave 1 beat and play the pattern 4 times; then leave ½ beat and render the pattern twice and leave ¼ of a beat and then render once.

The above rules are applicable to any tala. It doesn't mean that other kuraippu patterns should not be played for talas like Aadi tala etc. There are 5 varieties of Kuraippus and their suggestive talas are given below (Table 7)

Sno	Kuraippu Pattern	Talas
1	Thisram 3 Double Thisram 6	Chatusra Jaati Eka Tala Tisra Jaati Triputa/Misra Chaapu
2	Chatusram 4	Khanda Jaati Eka Tala, Khanda Chaapu
3	Khandam 5	Chatusra Jaati Rupakam, Tisra Jaati Jhampa
4	Misram 7	Adhi Tala, Khanda Jaati Jhampa Tala
5	Sankirnam 9	Misra Jaati Jhampa Tala, Chatusra Jaati Matya Tala

Table 7: Kuraippu patterns and their suggestive Talas

Example of Sankirna Kuraippu

After 2 beats pattern 9 rendered 8 times

Beat	Little finger	Ring finger	Middle finger	Index finger	Thumb	Little finger	Beat (Anu drutam)	Beat	Wave

		Tha . thom .	Tha dhi gi na	Thom/ tha . thom	. tha dhi gi	Na thom/ tha .	thom . tha dhi	Gi na thom / tha	. thom . tha
Dhi gi na thom	Tha . thom .	Tha dhi gi na	Thom/ tha . thom	. tha dhi gi	Na thom/ tha .	thom . tha dhi	Gi na thom / tha	. thom . tha	Dhi gi na thom

After 1 beat pattern 9 rendered 4 times

Beat	Little finger	Ring finger	Middle finger	Index finger	Thumb	Little finger	Beat (Anu drutam)	Beat	Wave
	Tha . thom .	Tha dhi gi na	Thom/ tha . thom	. tha dhi gi	Na thom/ tha .	thom . tha dhi	Gi na thom / tha	. thom . tha	Dhi gi na thom

After ½ Beat pattern 9 rendered 2 twice

Beat	Little finger	Ring finger	Middle finger	Index finger	Thumb	Little finger	Beat (Anu drutam)	Beat	Wave
. . Tha .	thom . tha dhi	Gi na thom/ tha	. thom . tha	Dhi gi na thom	Tha .// Tha .	thom . tha dhi	Gi na thom / tha	. thom . tha	Dhi gi na thom

After ¼ beat pattern 9 rendered once (4 times)

Beat	Little finger	Ring finger	Middle finger	Index finger	Thumb	Little finger	Beat (Anu drutam)	Beat	Wave
. tha . thom	. tha dhi gi	Na thom ./ tha	. thom . tha	Dhi gi na thom	. / tha . thom	. tha dhi gi	Na thom . / tha	. thom . tha	Dhi gi na thom

9: Sankirna Kuraippu for Misra Jaati Jhampa Tala

Pharans

Pharans are fast paced, lesser or no-karvai-phrases preceding a long mohara. Here is an example of a Pharan patterns for Adhi Tala 3 cycles.

Beat	Little Finger	Middle finger	Ring finger	Beat	Wave	Beat	Wave
Thom . kita dhi ku tha ri	Kita thaka/ thak kita	Dhi ku tha ri ki ta tha ka	Dhi ku tha ri ki ta tha ka	Nam . Kita dhi ku tha ri	Kita thaka/ thom . kita	Dhi ku tha ri ki ta tha ka	Dhi ku tha ri ki ta tha ka
Tha ri tha Na kita jonu	Dhi ku tha ri ki ta tha ka	Gu gu na na ki ta jo nu	Dhi ku tha ri ki ta tha ka	Tha . thom . ki ta tha ka	Dhi ku tha ri ki ta tha ka	Thaka . thom . kita thaka	Dhi ku tha ri kita thaka
Tha ri tha	Tha Na ki	Tha ri tha	Dhi ku	Gu gu na	Na na ki	Gu gu na	Dhi ku

Na ki ta tha ri	ta tha ri tha Na	Na kita jonu	tha ri ki ta tha ka	na ki ta gu gu	ta gu gu na na	na ki ta jo nu	tha ri ki ta tha ka

Table 8: Example of Pharans

Mohara

Mohara is another rhythmic form played 4 times just before the Percussion solo ends. This is a sort of *denouement* and various types of moharas can be formed by observing the following rules:

1) Mohara is generally rendered for 4 tala cycles.
2) The second cycle is just a repetition of first cycle.
3) After mohara a pattern called Muktayee or Thadhinginathom or Korvai is generally played.

Some artistes call short ending patterns as short Moharas and the final *denouement* pattern as a long mohara.

The structure of mohara

1st Cycle	A	B	C	D$_1$+D$_2$//
2nd Cycle	A	B	C	D$_1$+D$_2$//
3rd Cycle	A	B	C	D$_2$ and pattern of A will be rendered and continued in 4th cycle.
4th Cycle				Continuation of A and D$_2$; then A once which will be followed by D$_1$ played three times with 2 Gaps each for the first and second time only. (D$_1$ +2 gaps; D$_1$ + 2 gaps; D$_1$ is the structure of 4 count theermanam).

Table 9: Structure of a Mohara

Illustration

9 Count Mohara

A = Tha . tha ri tha na ki ta jo nu tha ka tha ri ki ta tha ka = 5
B = dhi . thaam kita thaka thari kita thaka = 4
C = Tha . tha ri tha na ki ta jo nu tha ka tha ri ki ta tha ka = 5
D$_1$ = thaka dhina thaka dhina = 2
D$_2$ = Thaka dhina tham . = 2

1st Beat	2nd Beat	3rd Beat	4th Beat	5th Beat	6th Beat	7th Beat	8th Beat	9th Beat
(A) tha . tha ri tha na	Kita jonu thaka tha ri	Kita thaka/ (B) dhi .	Tham kita thaka thari	Kita thaka/ (C) Tha .	Tha ri tha na kita jonu	Thaka thari kita thaka	(D$_1$) Thaka jonu thaka jonu	(D$_2$) Thaka jonu thom .
(A) tha . tha ri tha na	Kita jonu thaka tha ri	Kita thaka/ (B) dhi .	Tham kita thaka thari	Kita thaka/ (C) Tha .	Tha ri tha na kita jonu	Thaka thari kita thaka	(D$_1$) Thaka jonu thaka jonu	(D$_2$) Thaka jonu thom .

Tha . tha ri tha na	Kita jo nu thaka thari	Kita thaka/ dhi .	Tham kita thaka thari	Kita thaka/ Tha .	Thari tha na kita jo nu	Thaka thari kita thaka	(D2) Thaka jonu thom .	(A) Tha . tha ri tha na
(A Continued) Kita jonu thaka thari	Kita thaka (D2) Thaka jonu	Thom . (A) tha .	Tha ri tha na kita jo nu	Thaka thari kita thaka	(D1) Thaka jonu Thaka jonu	Thom . (D1) Thaka jonu	Thaka jonu Thom .	(D1) Thaka jonu thaka jonu (thom)

Table 10: 9 Count mohara

Korvai

Korvai is another Tamizh word meaning "joining" or "beading". This is another magnificent contribution of Carnatic Music to the world of rhythm. What was earlier called Muktayi or Thadinginathom came to be replaced by this term in popular usage. A Korvai can be defined as a "rhythmic pattern set to a metre adhering to a structure".

Following are the components of a korvai:

1) It has generally 2 parts which are called Poorvanga and utharanga.
2) Korvai can be made for any number of cycles.
3) The poorvanga idea is sometimes called "aasu" which means foundation pattern.
4) One korvai developed for one tala can be used for other talas as well, by manipulation of rhythmic pauses.
5) Korvai can be played anywhere in Percussion Solo, but not during Song accompaniment.
6) The long mohara mentioned above is always finished with a Korvai.
7) Korvai is also rendered three times with or without variations.
8) Korvais can also be rendered in different Gathis.

Beat	Little Finger	Middle finger	Ring finger	Beat	Wave	Beat	Wave
Poorvanga start – Tha . Thom .	Tha dhi gi na	Thom/ tha . Dhin	. Gi na thom /	Tha dhi gi na	Thom/ tha ki ta/	Thom/(Utharanga start) Tha . Dhim	. Tha dhi gi
Na thom/ (tha ki	Ta tha ki ta)	Tha . Thom .	Tha dhi gi na	Thom/ (tha ki ta	Tha ki ta) tha	. Thom . Tha	Dhi gi na thom //

Table 11: Korvai for Adhi Tala

Melodic Phrases

Melodic Phrases in Carnatic rhythm are of many types and are called "Sarvalaghu" patterns. They differ with the tala cycles and they are complementing the melody during the song accompaniment. Some of the melodic phrases for Adhi Tala are listed below:

1) Tha na tha dhi na tha jo nu
2) Nan gu tha dhin
3) Tha jo nu than gu tha jo nu
4) Dhin tha jo nu thu tha na

The above syllables need to be played continuously alternating between hard and soft notes to give effective output.

Conclusion

The varieties in Carnatic Rhythm not only offer listening pleasure to the audience but also add great value to the rhythmic principles of the world. Western music Composer Mr. Hovhaness in his telegram to the Music Academy, Madras said thus: "Your sacred art is our inspiration. The Glory of your music will bring new life to a dead world".[13]

Learning the principles, conceptualising the nuances and analysing the creations of the masters provide us logical approach for the continuation and furtherance of the art. Any art becomes easy if the concepts are clear as Carnatic rhythm strikes a perfect balance between science and art.

Annexure 1

List of 52 Syllables as listed in Pancha Marabu (An ancient Tamizh work)

Hard consonant series

Ka, cha, Ta, Tha, Pa, Ra (This ra is generally done as an accented syllable "rra"

Nasal consonant series

Gna, gnya, Na, na, ma, na

Medium consonant series

Ra (this is non accented Ra)

The combinations on account of vowel addition to each of the above consonants give raise to the following:

Hard consonant series:

In Ka series	:	ka, ki, ku, ke
In cha series	:	Cha, che (e to be pronounced as 'ay' as in Bay) also pronounced as
		Sa, sey, and ja and jey
In ta series	:	Ta, ti,m tu, te (same as above)
In Tha series	:	Tha, thaa, dhi, dhee, thu, thoo, the, thay, tho, (This tho as in home), tho (This tho as those)
In Pa series	:	Pa, pe
In Ra series	:	RRa, RRi, RRu, RRe, RRai

Nasal consonant series

In Gna series	:	gna, gni, gno
In gnya series	:	gnya, gnyi, gnyo
In Na series	:	Na, Naa (Accented Na represented in tamizh as " "
In na₁ series	:	na, ni, nu, ne

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[13] *The Journal of the Madras Music Academy,* Vol.XXXII, 1961:4

(In tamil there are two types of un-accented na represented by the syllables " " and " ".

In Ma series	:	Ma, mi, mu, me
In na2 series	:	na, ni, nu ne

Medium consonant series

In ra series	:	ra, ra, ri, ru

Special Character

Dot	:	agh

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