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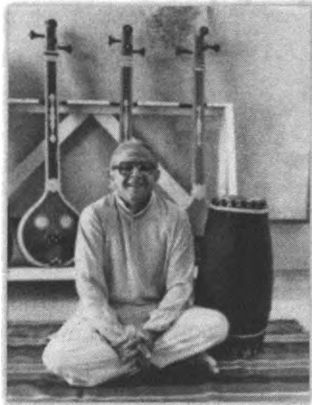
Professor Rāmanāthan said that tutelage in mṛdaṅgam could be arranged for me under the former Principal, Śrī C. S. Śaṅkaraśivam, who had recently retired.



My lessons with Śrī Śaṅkaraśivam took place every day except Sunday, interrupted only by the inevitable illnesses my foreign body contracted over the next nine months. Nothing I had ever experienced prepared me for the energy, focus, and intensity of these lessons. Each day I was asked to play everything I had learned, from the beginning. When I made a mistake I had to repeat the pattern until he was satisfied before he taught anything new. Before long, my daily lesson took nearly three hours. I had never met such a teacher, nor had such a relationship, and when it was time to return to the US, I did not know how I would survive without him. He wrote down all my lessons, as the following sample page shows,

- 1) அதில் அடிக்கொண்டிருக்கிற - அதன் மூலம் அடிக்கொண்டிருக்கிற
- 2) அதில் அதன் அடி அடி அதில் அதன்
- 3) அதன் அடி அதில் அதன் அடி அதன் அடி அதன்
- 4) அதில் அதன் அதன் அதன் அதன் அதன் அதன்
- 5) அதில் அதன் அதன் அதன் அதன் அதன் அதன்
- 6) அதன் அதன் அதன் அதன் அதன் அதன்

and suggested that, until I could return to Madurai, I go to Wesleyan University, where his student Rāmnād Īsaran's younger brother Rāmnād Rāghavan was teaching.



Śrī Rāmnād V. Rāghavan (1927 – 2009)
photo courtesy Wesleyan Archive

Learning in the US

I followed his suggestion as my college schedule allowed, and went to Middletown, Connecticut for three months to work on my Senior Thesis. By this time my other teacher, Śrī Rāmanāthan, was also at Wesleyan, as was the violinist L. Shankar, who was a graduate student. When I finished my B.A., I moved to Middletown to work with Śrī Rāghavan and Śrī Rāmanāthan.

A few months after I had moved to Middletown, the extraordinary brothers T. Viśvanāthan and T. Raṅganāthan came to Wesleyan to perform in one of the first Navarātri concerts there.



Saṅgīta Kalānidhi Dr. T. Viśvanāthan (1927 – 2002)
photo: John Groo



Śrī T. Raṅganāthan (1925 – 1987)
photo: Jan Steward

I was asked to play one of the śruti peṭṭi-s at their concert, and was seated directly behind Śrī Raṅganāthan. His playing was like nothing else I had ever heard, and I loved it immediately. The three-hour concert passed in a twinkling; I knew I had to study with him.

As soon as I could, I moved to California and entered the Master of Fine Arts program at California Institute of the Arts, where Śrī Viśvā and Śrī Raṅgā were teaching. Viśvā and Raṅgā, as everyone called them (we Americans are, after all, a recklessly egalitarian lot), had thoroughly adapted to life and teaching in the U.S. I was deeply impressed by the success of some of their students, especially Jon Higgins, Douglas Knight, and Glenn Gillette. These musicians were role models for me as I aspired to some semblance of mastery on the mṛdaṅgam.

I learned from Raṅgā for the next thirteen years, first at Cal Arts, and later back at Wesleyan, to which he and Viśvā returned in 1975. For several of these years I served as Raṅgā's teaching assistant, which was an extraordinary experience. Each student had one session per week with him, and another with me. Raṅgā was a fountain of material, and I noticed very quickly that he never gave any two students exactly the same lessons. Instead, he tailored the lesson to the individual student. Beyond that, the volume of material he provided was often overwhelming, so my job in the second lesson was to make sure the student had understood Raṅgā's lesson properly. This meant that I had to look at material I had likely never seen before, understand it myself, and try to explain it to the student.

I began to see patterns of formation and transformation in all this varied material, and an underlying logic started to show itself. I often took my new insights to Raṅgā; many long, penetrating conversations resulted. I slowly developed a way of understanding what was happening in mṛdaṅgam playing that made it possible to figure out what other players, from different styles, were doing. Raṅgā thought I was on the right track, but what would these other players say?

With this question in mind, I came to Chennai in 1987 for the first time since my college year in Madurai. My fieldwork involved making video recordings of five mṛdaṅgam masters (Vellore Ramabhadran, T.K. Murthy, Karaikudi Mani, Palghat Raghu, and Trichy Sankaran), each playing a tani āvartanam for the same song (Kaligiyuṇṭēgādā), by the same singer (D.K. Jayarāman). In Trichy Sankaran's case, the soloist was T. Viśvanāthan and the venue was Amherst College, but the song was the same. In each case I wanted to conduct two interviews with each mṛdaṅgam master. The first would precede the performance and feature a conversation about his life and learning. After each performance I did a sketchy analysis of the tani using the tools I had developed working with Raṅgā, then had a second interview in which we discussed the details of the drummer's tani.

The five tani-s ranged in length from twelve to twenty-two minutes, and differed widely in terms of approach. I am not here to compare these five solos. Rather, I am going to speak

briefly about the external structure of the tani āvartanam, and in greater detail about form and process in the materials that make up the tani.

External structure requires, after all, only two components when there is a single percussionist: *periya mōrā* and final *kōrvai*. If there are two or more drummers, these will be preceded by a *kuraippu*. This series of events provides an unmistakable signal that the tani is coming to an end and the other musicians must return to the song. The rest of the tani comprises explorations into the varied realms of rhythmic and sonic beauty, and while we can describe some of what might happen, there are very few hard and fast rules.

I have already thrown out some words that require careful examination, *mōrā*, *kōrvai*, and *kuraippu*. You all know them by their functions, and many of you are quite fluent in their use. But imagine trying to communicate their meanings to non-Indian students who are keen to understand how the system works. I have now spent more than twenty-five years working on ways to do just that, and I will spend the rest of this talk demonstrating them to you. I will use a minimum of Saṁskṛta and Tamil words to do this.

In using any of the Saṁskṛta and Tamil vocabulary, I will use terminology that is familiar to some of you, but it may be used in a different way from that to which you are accustomed. I claim the authority to do this since the words we all use for these concepts are troublemakers, different from person to person and style to style. We all understand the underlying structural and functional realities, whatever the words. Most of you are already quite comfortable with your own terminology; I don't ask you to abandon that, but to suspend it for the next half hour or so in order that we can look into these matters together.

Time-flow and design, the creative continuum at the core of Karnatak drumming.

We are all familiar with the wizardry by which Karnatak percussionists entice us. They give us an illusion of comfort with well-paced patterns and beautiful sounds, then upend us with sleight of hand, leaving us trying to figure out what happened to the tāla. My teacher used the term “*ṭekā*” to describe the patterns that feel so good and sound so beautiful. I sometimes use the term “*sarvalaghu*,” in a more generalized sense than its particular usage as “*tam - - di ta ka jo nu*.” Trichy Sankaran (1994) has used the term “time-flow,” which I like very much. Such patterns and phrases form the largest part of a drummer's playing, even in a tani. As we will see, these can very easily and deceptively take on a different meaning.

These “time-flow” patterns and phrases, organized as they are to reinforce and beautify the tāla, stand in contrast with material that creates tension with the tāla. I refer to this sort of material as “design,” or, borrowing a Tamiz term, “*kaṇakku*” It is under this heading that we find the *mōrā*, *kōrvai*, and *kuraippu*.

Mōrā, the fundamental design

The first non-Indian to try his hand at explaining the *mōrā* was Robert Brown, whose 1965 dissertation from UCLA is still a valuable resource, containing many lessons in the style of Pazani M. Subramaṇiya Pillai as taught by T. Raṅganāthan.



Sri Palani M. Subramania Pillai (1908 – 1962)

photo courtesy T. Viśvānathan

Here is Brown's description:

A *mōrā* is a cross-rhythmical cadential phrase pattern within the tāla, (usually) repeated three times, with the last stroke of the third line ending on the samam or eḍuppu. In order to analyze the design of a *mōrā* several factors have to be taken into account. First, we must determine the length of the entire pattern; this is complicated by the fact that there will always be an “extra” stroke at the end to finish the composition or link it with a following important structural division. Second, we must determine the length of the individual phrases; this is complicated by the fact that the time length assigned to the terminal syllable of the first phrase (before beginning the second) and the time length assigned to the final syllable (before beginning the third) has no counterpart in the third phrase, for here the final syllable has, literally, no length. It is a point of contact for a following rhythmic structure. Therefore, third, we must determine the length of the gap between phrases one and two, and two and three. (Brown, 1965)

As my understanding of the system developed, this description began to seem over-complicated and off the mark. Brown was a wonderful scholar, but he lacked a performer's functional understanding. Among other flaws, he took the notion of a gap (*kārvai*) too literally, assuming it was pure silence, like the rest in Western music. He did not realize that the gap might contain articulations.

Brown

(ta ka din ta tam) •
 (ta ka din ta tam) •
 (ta ka din ta) tam

statements = 5 + 5 + 4, gaps = 1

Post – Brown

• (ta ka din ta) [tam •]
 • (ta ka din ta) [tam •]
 • (ta ka din ta) tam

statement = 4, gap = 2

Over time, Raṅgā and I developed the notion of the mōrā as comprising three statements, which we called x, that might be separated by gaps (kāvai), called y. So a mōrā could have the form xxx; if there were no gap, or xyxyx, if there were a gap. This formulation first saw print in Marcie Frishman's 1985 M.A. thesis at Wesleyan.

But this formulation lacked something. Finally I came up with my own formula.

- A mōrā is characterized by a phrase, stated three times, with separations, called gaps, inserted among them as follows: (statement) [gap] (statement) [gap] (statement).
- We will abbreviate these as (s) and [g], with the following properties:
- $(s \geq 1)$ (syllable) The statement must state something, at least one syllable.
- $[g] \geq 0$ (pulse) The gap may be zero or greater, and, if greater than zero, may be sounded or unsounded.

The crucial difference here is the idea that the gap may be zero. It removes the necessity of imagining different kinds of mōrā-s, and reveals both the mōrā's fractal character and its innate expandability. As I proceed, I will point out mōrā-s at widely divergent levels of scale. Mōrā is the fundamental element of design in Karnatak drumming; its importance is hard to overstate. Below are two mōrā-s, one with gaps of zero, and one with gaps of two pulses. Frishman's definition would have required calling these two different types, an xxx, and an xyxyx

statement = 5, gap = 0 || • (ta di ki | ṭa tom) [0] (ta di | ki ṭa tom) [0] (ta | di ki ṭa tom)||

statement = 1, gap = 2 (ta) [tam •] (ta) [tam •] (ta)

Solkattu as an analytic tool

In all my examples I will represent patterns and phrases in solkattu. Solkattu, besides being an important teaching and notational device, (and one of the most significant contributions of India to world music), is a powerful analytic tool. In fact, to represent a sounded figure in solkattu is to analyze it. I will explain by using three examples, each of which demonstrates a slightly different sense of this analysis.

The first example is a passage ending the svāra kalpana section of a main piece. The singer, my colleague B. Balasubrahmaniyan, uses a kōrvai, which he sings three times using different svāra-s. A kōrvai, in my usage, is a rhythmic composition that generates some degree

of tension with the tāla structure. It is used at important structural points in a tani āvartanam: in svāra kalpana, it is most often used at the end, though some more rhythmically inclined musicians may use it more frequently. There are so many different types of kōrvai that classification is nearly impossible. What we can say is that it has at least two parts: the first part or parts exhibit some sort of phrase-based design, while the last part is a mōrā. Later I will demonstrate some other kōrvai types. This one is a very orderly gōpucca reduction with a relatively simple mōrā. Here are the svāra-s for the first time; let us listen to the whole thing.

s r g m p d n S •
 r g m p d n S •
 g m p d n S •
 m p d n S •
 p d n S •
 n S •
 S •
 g r • s n d •
 r s • n d p •
 s n • d p m

In order to play this kōrvai on the mṛdaṅgam, I have to follow his phrasing. But I also have to come up with phrasing on the mṛdaṅgam that makes structural sense. The first line, as you can see, has eight notes followed by a rest, the second seven notes followed by a rest, etc. But if I were to play a random eight note pattern, then a seven-note pattern, and so on, the result would not reflect the underlying logic of the kōrvai. My thinking about how to approach this kōrvai used the language of solkattu. The next slide shows my solution.

Svāra-s

• s r g m p d n S •
 • r g m p d n S •
 • g m p d n S •
 • m p d n S •
 • p d n S •
 • d n S •
 • n S •
 • S •
 • g r • s n d •
 • r s • n d p •
 • s n • d p m

Solkattu

• ta ki ṭa ta ka jo ṇu tām •
 • ki ṭa ta ka jo ṇu tām •
 • ṭa ta ka jo ṇu tām •
 • ta ka jo ṇu tām •
 • ta jo ṇu tām •
 • jo ṇu tām •
 • ta tām •
 • tām •
 • (ta diṇ • gi ṇa tom) [•]
 • (ta diṇ • gi ṇa tom) [•]
 • (ta diṇ • go ṇa tom)

When I recite this, you will hear that the kōrvai is quite clear and orderly. As you are all aware, this process happens in nearly every concert, as accompanists catch on to what a soloist is doing rhythmically. Here we have a demonstration of solkattu used as analysis in

the service of performance. The *kōrvai* may have come from *svara kalpana*, but my way of approaching it is the same as if it had come from a *tani*.

The next example shows *solkaṭṭu*'s value in revealing concealed structure. The composition in this example is a fairly lengthy and complex *mōrā* (which incidentally could also be analyzed as a *kōrvai*).

ta₄ ta ri gu gu ta ri gi ḍu di ku ta ka ta ri gi ḍu ta ri gi ḍu ta₂
tom₂ ta₂ tām₃

ta₄ ta ri gu gu ta ri gi ḍu di ku ta ka ta ri gi ḍu ta ri gi ḍu ta₂
tom₂ ta₂ tām₃

ta₄ ta ri gu gu ta ri gi ḍu di ku ta ka ta ri gi ḍu ta ri gi ḍu ta₂
tom₂ ta₂ tām₃

ta ri gi ḍu ta₂ tom₂ ta₂ tām₃

ta ri gi ḍu ta₂ tom₂ ta₂ tām₃

tom₂ ta₂ tām₃

tom₂ ta₂ {tām}

96-pulse composition

This is a composition of Śrī Pazani of which Raṅgā was quite fond, and so was (and am) I. It is built from a single phrase of twenty-one pulses, and reduces to a small, simple *mōrā* at the end. I learned it fairly early on, and frequently played it, using several variations Raṅgā had taught me. It was always ninety-six pulses, and fitted nicely in *caturaśra* or *tiśra*. I never gave much thought to the underlying structure.

One day Raṅgā recited a new version, designed for a *kañjirā* student of his. The version I knew was too densely articulated for the student to play with one hand, so he simplified it as follows:

ta ki ṭa tom₂ ta diṇ gi ṇa tom jo ṇu jo ṇu tom₂ ta₂ tām₃

ta ki ṭa tom₂ ta diṇ gi ṇa tom jo ṇu jo ṇu tom₂ ta₂ tām₃

ta ki ṭa tom₂ ta diṇ gi ṇa tom jo ṇu jo ṇu tom₂ ta₂ tām₃

jo ṇu jo ṇu tom₂ ta₂ tām₃

jo ṇu jo ṇu tom₂ ta₂ tām₃

tom₂ ta₂ tām₃

tom₂ ta₂

96-pulse composition, simplified

This version revealed that the filled-out version I knew had concealed the composition's structure. The original, with its emphatic accents on "ta," had fooled me. I had a kind of rhythmic epiphany; the composition took on a new, generative life. Here is the simplified version, arranged in its newly revealed structure:

phrases	structure
a. ta ki ṭa tom ₂ ta diṇ gi ṇa tom = 10 pulses	• abcd 10 + 4 + 4 + 3 = 21 abcd 10 + 4 + 4 + 3 = 21
b. jo ṇu jo ṇu = 4 pulses	abcd 10 + 4 + 4 + 3 = 21
c. tom ₂ ta ₂ = 4 pulses	bcd 4 + 4 + 3 = 11
d. tām ₃ = 3 pulses	b (c) [d] 4 + (4) + [3] = 11 (c) [d] 4 + (4) + [3] = 11 (c) (4), 96 pulses total

You can see that the original twenty-one pulse phrase is now displayed so that its internal arrangement is much clearer. I quickly realized that this composition could very easily be transformed for other *tāla* contexts. The figure "a" occurs three times, and the figure "b" five times. If I add two pulses each to "a" and "b," I have increased the pulse total to 112, which is a perfect fit for *miśra*. If I add one more, the pulse total is 120, which fits *tiśra*, *caturaśra*, and *khaṇḍa*. Here is the *miśra* version in its simplified form:

phrases	structure
a. ta ka ta ki ṭa tom ₂ ta diṇ gi ṇa tom = 12 pulses	• abcd 12 + 6 + 4 + 3 = 25 abcd 12 + 6 + 4 + 3 = 25
b. ta jo ṇu ta jo ṇu = 6 pulses	abcd 12 + 6 + 4 + 3 = 25
c. tom ₂ ta ₂ = 4 pulses	bcd 6 + 4 + 3 = 13
d. tām ₃ = 3 pulses	b (c) [d] 6 + (4) + [3] = 13 (c) [d] (4) + [3] = 7 (c) (4), 112 pulses total

And here is the filled out version for *miśram*:

phrases	structure
a. tr gḍ ta ₂ tr gg tr gḍ dk tk tom = 10 pulses	• abcd 12 + 6 + 4 + 3 = 25 abcd 12 + 6 + 4 + 3 = 25
b. tr gḍ tk jn ta ₂	abcd 12 + 6 + 4 + 3 = 25
c. tom ₂ ta ₂	bcd 6 + 4 + 3 = 13
d. tām ₃	b (c) [d] 6 + (4) + [3] = 13 (c) [d] (4) + [3] = 7 (c) (4), 112 pulses total

Again, it was analysis of the composition using *solkaṭṭu* that made this new insight possible.

The third example I will present is a *miśra kuraippu* devised by T. Viśvanāthan. Again, this is a piece that originated in *svara kalpana*, but as was the case with the first *kōrvai*, the approach is the same as if it were from a *tani*. I suspect that the use of *kōrvai*-s and calculated *kuraippu*-s in *svara kalpana* may have originated as borrowing from the *tani*.

Some of you have heard me talk about this *kuraippu* elsewhere; it involves a striking inversion of my representation of the *mōrā* form. As you all must know, a *miśra kuraippu* in *ādi tāla* (if in *caturaśra naḍai*), starts with groups of 56-pulse phrases (8*7) starting after 8 pulses, proceeds to 28-pulse phrases that start after 4, then 14 starting after 2, and finally 7 starting after 1.

1 – 2	3 – 4
tam ₈	• tam ₈
ta ₃ ki ₃ ta ₃ tam ₅	• ta ₃ ki ₃ ta ₃ tam ₃ (ta ka)
ta ₃ ki ₃ ta ₃ tam ₅	• ta ₃ ki ₃ ta ₃ tam ₃ (ta ka)
ta ₃ ki ₃ ta ₃ tam ₅	• ta ₃ ki ₃ ta ₃ tam ₃
[tam ₇] [tam ₇]	• (ta ka) [tam ₅] (ta ka) [tam ₅] (ta ka)
tam ₈	• tam ₈
ta ₃ ki ₃ ta ₃ tam ₄ (ta)	• ta ₃ ki ₃ ta ₃ tam ₂ (ta ki ta)
ta ₃ ki ₃ ta ₃ tam ₄ (ta)	• ta ₃ ki ₃ ta ₃ tam ₂ (ta ki ta)
ta ₃ ki ₃ ta ₃ tam ₄	• ta ₃ ki ₃ ta ₃ tam ₂
(ta) [tam ₆] (ta) [tam ₆] (ta)	• (ta ki ta) [tam ₄]
	• (ta ki ta) [tam ₄]
	• (ta ki ta)

Viśvā has taken the 56 pulses of the first stage of the *miśra kuraippu* as four groups of 14 pulses each. Each of the first three lines is divided 3+3+3+5, and the last line is divided 7+7. Each phrase has only one articulation—its first syllable.

In version 2, the last syllable in each of the first three lines is also articulated, as is the last syllable of each of the two seven-note groups that make up the fourth line. The effect of this articulation is to generate a *mōrā*, where the statement is one pulse (ta) and the gap is six [tam - - - -]

Each of the subsequent examples articulates more of the formerly silent pulses at the end of each line until the fourth line is reversed from its original form. Now the first syllable, which had been articulated, is silent. And the six originally silent pulses are now fully articulated as the six-pulse statement.

5 – 6	7 – 8
tam ₈	• tam ₈
ta ₃ ka ₃ tam ₄ (ta ka di mi)	• ta ₃ ki ₃ ta ₂ (ta di • ki ta tom)
ta ₃ ka ₃ tam ₄ (ta ka di mi)	• ta ₃ ki ₃ ta ₂ (ta di • ki ta tom)
ta ₃ ka ₃ tam ₄	• ta ₃ ki ₃ ta ₂
(ta ka jo nu) [tam ₃]	• (ta di • ki ta tom) [•]

(ta ka jo nu) [tam ₃]	• (ta di • ki ta tom) [•]
(ta ka jo nu)	• (ta di ki ta tom)
tam ₈	• tam ₈
ta ₃ ki ₃ ta ₃ (ta di ki ta tom)	• (ta ₃ ka ₄ (ta • di • ki ta tom)
ta ₃ ki ₃ ta ₃ (ta di ki ta tom)	• (ta ₃ ka ₄ (ta • di • ki ta tom)
ta ₃ ki ₃ ta ₃	• ta ₃ ka ₄
(ta di ki ta tom) [tam ₂]	• (ta • di • ki ta tom)
(ta di ki ta tom) [tam ₂]	• (ta • di • ki ta tom)
(ta di ki ta tom)	• (ta • di • ki ta tom)

As the *kuraippu* unfolds, a series of *mōrā*-s has emerged, beginning with example 2, which uses the smallest possible statement in the *mōrā* formula I spoke of earlier.

When I first confronted this *kuraippu* as a performer I grasped its structure fairly readily. This is not to say that I was able to play it easily or right away. To be honest, I struggled mightily; for me, it was a minefield. But I puzzled over its first expression, seen in line 1. I didn't quite get the reason for starting with a piece that did not contain a *mōrā*, when all the others did. I had seen some exceptions to the (statement) [gap] (statement) [gap] (statement) structure of *mōrā*, but this was something else.

Indeed, it was not until I understood that its beginning is the key to apprehending its full beauty that I really got the point of this *kuraippu*. Instead of beginning with a gap value of zero, it begins with a statement value of zero. It inverts our usual expectation, that the statements that comprise a *mōrā* are somehow the real material, and that the gaps are mere separations. By starting with the gaps and letting the statements emerge little by little from the background material, Viśvā is teaching us that every detail is aesthetically necessary and, can generate order and beauty of an unexpected kind. He is also teaching us not to take our rules too seriously.

Once again, *solkaṭṭu* was the key to my ability not only to perform this *kuraippu*, but also to understand its particular beauty.

Time flow, *kaṇakku*, and *naḍai*

I spoke earlier about time-flow and design as the ends of a continuum. Nearly every *tani* involves shifts of *naḍai*, or pulse-group. This can be done abruptly, for dramatic effect, but one beautiful and subtle way to do this is to use time-flow figures from one *naḍai* in a contrasting pulse group. Here is a well-known example, performed by TR, of a composition by Śrī Pazani that begins with time-flow figures in *caturaśra* and shifts to *tīśram*, leaving the time-flow phrasing in *caturaśra*. In so doing, the meaning of the *caturaśra* figures is changed, and they become elements in a new design. Within any *naḍai*, the interplay of time-flow and design is a key element in maintaining rhythmic interest.

Phrases

- a. $t\ddot{a}m_4$ ta ka din_2 din_2 na_2 tr gñ
- b. tom ta ka tom ta ka din_2 din_2 na_2 tr gđ
- c. • • ki ʔa ta ka din_2 din_2 na_2 tr gđ
- d. tom ta ka tom ta ka din_2 din_2 na kʔ tk $t\ddot{a}m_4$

mōrā (s) = 20, ($t\ddot{a}m_4$ ta ka di na tom ta ka tom ta ka di na din_2 na kʔ tk)

[g] = 2 [$t\ddot{a}m_2$]

Structure

{abcd} *2 + mōrā

Periya mōrā

Now that we have looked at the formal aspects of some tani components, we can talk about the end, the periya mōrā and final kōrvai. The periya mōrā must be clearly identifiable as the next to last item in the tani. This is accomplished by use of two devices: its form, and the repeated use of phrases such as ta lan_2 gu tom₂ ta₂ ta lan_2 gu tom₄. While there are many periya mōrā-s, the presence of these distinguishing phrases helps to identify its function. My students are able to learn this in a short time when it is written this way.

Phrases

- a. di₄ $t\ddot{a}n_2$ giđu diku taka tari giđu
- b. ta₂ di₂ $t\ddot{a}n_2$ giđu diku taka tari giđu
- c. ta $l\ddot{a}n_2$ gu
- d. tom₂ ta₂
- e. tom₄

Structure

abacdce *2

abace

bce

a

(cd)[e]

Kōrvai examples

As I mentioned earlier, there are many types of kōrvai. Some are quite simple, others extremely complex. Some stay in a single naḍai, others change in the middle, and still others are designed to be played in different naḍai-s as they are re-stated. A kōrvai is typically done once or three times, but occasionally once each in two different rhythmic settings. This is not thought of as performing the kōrvai twice, however, but once and once. There are no hard and fast rules about where, within a tani, a given kōrvai may be used; this is the drummer's choice. Here are two sample kōrvai-s, very different in organization, each complex in its own way. The first uses only three syllables, "tom," "ta," and "tam." Its auditory simplicity is deceptive; its mōrā is quite sophisticated.

tom₂ ta₂ tam₃ tom ta₂ tam₃ ta tam₃ tam₃

tom₂ ta₂ tam₃ tom ta₂ tam₃ ta tam₃ tam₃

tom₂ ta₂ tam₃ tom ta₂ tam₃ ta tam₃ tam₃

((ta₄) [tam₃] (ta₄) [tam₃] (ta₄)) [tam₇]

((ta₄) [tam₃] (ta₄) [tam₃] (ta₄)) [tam₇]

((ta₄) [tam₃] (ta₄) [tam₃] (ta₄))

The mōrā is what I have called a compound mōrā, by which I mean that each of the three statements is itself in the mōrā form, namely (statement) [gap]. When I write this for students who have been trained in my way of thinking, I can write it quite efficiently by using the parentheses and brackets you have seen so far.

tom₂ ta₂ tam₃ tom ta₂ tam₃ ta tam₃ tam₃, 3x

((ta₄) [tam₃]) [tam₇]

The second kōrvai is more complex in phrase structure and uses a different type of mōrā, one that expands from one statement to the next.

ta₂ di₂ ta lan • gu ta ka jo nu ta di ki ta tom •

ta₄ din_8 gi₄ na₄ tom₄

di₂ ta lan • gu ta ka jo nu ta di ki ta tom •

ta₄ din_4 gi₂ na₂ tom₂

ta lan • gu ta ka jo nu ta di ki ta tom •

(ta din_2 gi na tom) [tam₄]

(ta din_2 gi na tom

ta din_2 gi na tom) [tam₄]

(ta din_2 gi na tom

ta din₂ gi na tom
(ta din₂ gi na tom)

There is no inviolable rule governing the choice of the final kōrvai in a tani āvartanam. Either of these kōrvai-s could be used to end a tani in ādi tāla (or rūpaka, for that matter). The final kōrvai is usually, though not always, chosen to fit easily into the given tāla. In other words, a single performance of this kōrvai usually fits neatly into one or two cycles. Since its purpose is to provide a smooth transition back into the song, it is always done three times so that the musicians can synchronize their return.

In 2008 I published my first book, *Solkattu Manual: an introduction to the rhythmic language of South Indian Music*. This is designed as a textbook for solkattu classes, which have been offered at Wesleyan for more than forty years. After lessons introducing the students to some of the concepts I have outlined here today, the lessons in *Solkattu Manual* are arranged in the form of a tani āvartanam in ādi tāla. By the end of a semester, the students are able to perform this tani without notes, and with a good understanding of the forms and processes involved. Only after they have taken this course do I teach mṛdaṅgam, which they begin with a much better understanding than I had forty years ago.

There are many other subjects we could discuss under the heading of tani structure, including the influence of eḍuppu and tempo. But in the interest of time we must stop here for questions.

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FLUTE AND ITS PLAYING TECHNIQUES

Mala Chandrasekar

Wind is one of the 5 natural elements. The bamboo flute is one of the most organic and natural instruments from mother nature and has been in existence from times immemorial and is related to Lord Kṛṣṇa.

Nāṭya Śāstra classification...
Ślōka

ततंचैवअवनद्धं चघनंसुषिरमेव च
चतुर्विधंतु विज्ञेयम आतोद्यं लक्षणान्वितं

The instruments are classified as tatam, avanadham, ghanam and suśiram.

Tata are stringed, example vīṇā, avanaddha are covered, example drums, ghanam are solid, example cymbals and suśira are hollow, example flute.

The history of flute can be traced to more than 2000 years ago. The first ever mention of the instrument was in saṅgam literature's Tolkāppiyam. Flute was indigenous to mullai-s or the forest regions. The features corresponding to mullai terrain are predominantly:

- Herdsman and Hunters
- Presiding deity - Māyōn or Lord Kṛṣṇa
- Musical Instrument - the Flute
- Melody-Mullai Paṇ or Sādāri - The modern day Mōhana Rāgam.

Mōhanam is a universal melody and is used in Chinese, Japanese, Korean, European, Hungarian, Swedish and gypsy too.

Here I would like to quote a short verse from Iḷa Vēṭṭanār's song from Aganānūgu.

andhikkovalar ambanai imiz isai
aramiya viyal agattu iyambu

The nāda of the flute is so melodious that when herdsman play the instrument in the farms, it captivates the souls of the people inside the houses making them happy. Such is the beauty of this instrument.

1. About the Bamboo flute

There are 2 types of Indian bamboo flutes to suit both Carnatic and Hindustani styles. The structure differs for both the styles.

