



## Rhythm, a dance in time

Article: Cosmic order, cosmic play: an Indian approach to rhythmic diversity by Ludwig Pesch

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Edited by Elisabeth den Otter

ROYAL TROPICAL INSTITUTE  
THE NETHERLANDS

# **Rhythm, a dance in time**

edited by Elisabeth den Otter

Royal Tropical Institute  
Amsterdam, The Netherlands

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Shiva Natarāja, the Lord of Dance; bronze idol from southern India.

Illustration: Rijksmuseum, Amsterdam.



# Cosmic order, cosmic play: An Indian approach to rhythmic diversity

Ludwig Pesch

## Introduction

A Sanskrit saying refers to tonal order as the mother, and rhythmic order as the father of music (*srutir mâtâ layah pitâ*). Melodic grace (*sruti*) is embodied by Sarasvati, the goddess of the arts and letters, who plays the long-necked lute (*vînâ*). On similar lines, Shiva Natarāja performs his 'cosmic dance' with serene detachment while accompanying himself with a *damaru* drum, symbol of rhythm (*laya*). With this vigorous Tândava dance he marks the time cycles of life and death. Darkness and ignorance - the dwarf crushed by his feet - are vanquished in this manner.

The path that leads towards self-realisation is believed to be marked by an ever-deepening musical experience which is at once pleasurable and ennobling. Hermann Hesse expresses himself on similar lines through his alter ego named Joseph Knecht.

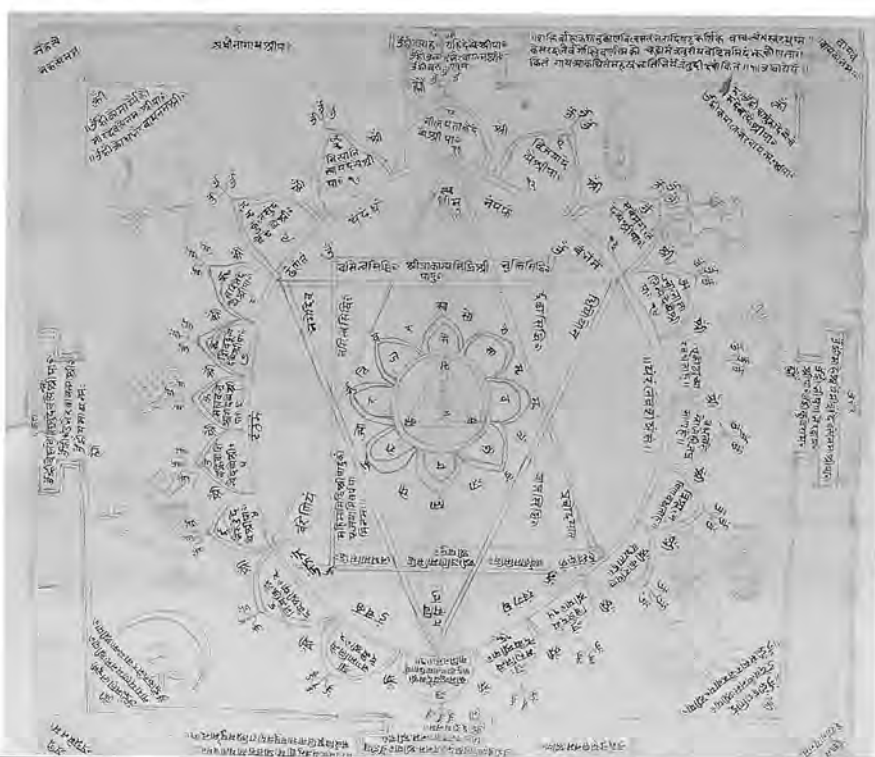
*'My life, I resolved, ought to be a perpetual transcending, a progression from stage to stage; I wanted it to pass through one area after the next, leaving each behind, as music moves on from theme to theme, from tempo to tempo, playing each out to the end, completing each and leaving it behind, never tiring, never sleeping, forever wakeful, forever in the present.'* (Magister Ludi, p. 368).

The project undertaken by Joseph Knecht, Hesse's self-effacing hero, is an attempt to redefine the agenda for the 'master player' (magister ludi) on whose contribution hinges civilized society: neither brilliant careerist nor celebrity of the day, the greatest personality is a committed citizen whose intellectual gifts are developed and applied in tandem with moral and aesthetic sensibilities. Since his childhood, Hesse was inspired by Yoga, Tantra and Vedanta philosophy, thanks to the broad-mindedness of his grandfather, Hermann Gundert, a former missionary in Kerala where his fame as linguist lives on to the present day. According to Indian tradition, the delusions dominating everyday life must be unmasked and overcome for good. Instead of clinging to the deceptive notion of mankind that consists of countless separate 'selves', reduced to a blind, desperate,

and often brutal pursuit of 'happiness', we are all invited to become participants in a supreme celebration of both, our shared humanity and the divine bliss for which we are destined. Not only Hesse, but countless other poets, visionaries and mystics of East and West before and after him, among them Christians, Hindus, Sufis, and members of some branches of Buddhism, have proclaimed this to be the only goal worth striving for. At the same time, they sought to prepare us for the realisation that this can be a spiritual as well as a sensuous experience with all the attendant perils to guard against. This background accounts for the manifold depictions - ecstatic, symbolic, abstract, at times terrifying, often erotic - found in painting, sculpture, dance, song, and poetry that link people belonging to different continents and epochs.

Yantra: 'In Tantrism the mandala is often a more specialized figure referred to as *yantra*, "instrument" or "engine", which is widely used in worship. Each god or goddess worshipped has a yantra of their own and the designs are full of symbolism. The triangle pointing down represents the yoni; the triangle pointing up, i.e. standing on its base, is the linga; two superimposed triangles like the Seal of David symbolize the union of yoni and linga. More triangles form the lotus, and so on. The central point is called the bindu, "drop", and represents the focal area of psychic power. Although drawn flat a yantra represents a three dimensional figure.' (Walker, Vol. II, p.21).

Illustration: Ludwig Pesch.



In terms of the Indian philosophy known as Yoga, innate oneness or union (*yoga*) with one's divine self can be experienced amidst the diversity of all apparent manifestations. However diverse they may appear at first, all manifestations of culture are likewise understood as having a higher common denominator of which we can gain a glimpse through the arts if we care to take notice. As Heinrich Husmann puts it: 'It is a fundamental idea of the Indian musical theory that the great impacts which music exerts on the soul of human beings originate in the fact that musical forms, melodies, motifs, even the seven fundamental notes composing the greater forms have received that strength of influence from the gods because the latter created the phrase referred to in corresponding psychic situation as an expression of their emotions' (Waldschmidt, p. 29).

### **Rhythm**

More than any other element, be it melody, lyrics, harmony, or embellishment, it is rhythm that provides the link between various types of music, especially the complex tasks performed by specialists. In most cases where musical complexity is appreciated in its own right, both by large audiences and experts, it is rhythmic intricacy rather than any other compositional or improvisational principle.

According to Seashore (p. 144): 'Our consciousness of pleasure in music is often a consciousness of seeing and doing things, rather than a consciousness of hearing rhythm.' Whether it is written down or transmitted orally, perceived as being traditional or contemporary, 'serious' or 'light' music, rhythm constitutes the most compelling aspect of all these musical variants. Melodic intricacies, on the other hand, require some familiarization before they even register with untrained ears. Musicians, dancers and actors from various parts of the world increasingly seek to identify a common ground for shared performances, and if something in such a performance is remembered as having 'clicked', it often has to do with rhythm.

### **Numbers**

Making music often also means playing with numbers, either for the purpose of structuring musical time, or conversely, overcoming its constraints. The Pythagorean tradition, the isorhythmic motets of fourteenth century France, and many compositions of J. S. Bach prove that this is a trait which indeed transcends history and geographic boundaries.

Indian musicians, too, resort to calculation as well as visual analogies in the process of artistic creation. Unlike their Western counterparts who mainly work with finished compositions, Indian musicians draw from a

repertoire of concise compositions which they are expected to elaborate. Although explicit performing instructions are conspicuous by their absence, there are unwritten conventions to guide musicians through a concert. Some conventions are easily noticed by alert listeners, while others draw from a background of imagery that can be alluded to at will, a tapestry of the individual mind, as it were. Its contents are not only traceable to the lyrics of countless songs, underlying both vocal and instrumental music, but also to figurative and geometric patterns seen in the temples where classical music has evolved over centuries.

India can be likened to a cultural quilt. Since ancient times, the Indian subcontinent has been exposed to migrations and invasions on an epic scale. Hundreds of ethnic, religious and linguistic groups can be found scattered across the country. In ancient times, Egyptian, Sumerian and Roman traders, members and descendants of the expedition led by Alexander the Great, Buddhists pilgrims from China, and in Medieval times, Muslim travellers and scientists were as keen on learning from Indian civilization as Indians were to benefit from the achievements of other civilizations. Much of India's unique contribution to World Music as we know it today has evolved from the continuing exchanges between representatives of Hindu cultural traditions and those of the Islamic world. Particularly Sufism, the non-orthodox branch of Islam, propagated the virtues of tolerance, love, empathy, and its varied musical expressions facilitated a two-way cultural exchange on many levels. The Hindu numerical system entered the Islamic world about 771. In the ninth century, India contributed the decimal system to Arab mathematics (Bary, p. 171).

### **Diversity**

The rhythms of classical South Indian ('Carnatic') music readily appeal to both Indian and non-Indian audiences in spite of their complexity. Musicians from many parts of the world have gained from using them to enrich their own vocabulary. In the arena of World Music and youth culture, some rhythmic patterns and percussion instruments of Carnatic music, such as the clay pot (*ghatam*), have come to stay.

A South Indian temple festival or music festival conveys a sense of shared celebration, and the contribution of drummers cannot be overestimated in the creation of a festive mood. The shattering bursts of a *tavil* drum-roll marks the important and auspicious junctures of rituals and processions in Tamil Nadu. On occasions like a marriage ceremony, 'special *tavil*' performers team up to entertain the gathering with rhythmic interludes of considerable duration. The same can be said of other drummers on occasions such as a temple festival in Kerala where, facing a long row of caparisoned elephants, an ensemble known as *mélam* provides the musical focus.



A music ensemble, known as mēlam, during a temple festival in Kerala.

Photo: Ludwig Pesch.

In short, their rhythms transport a listener to a plane of shared consciousness. For this reason, the rhythm experts of South India will continue to enjoy a special role in their society for generations to come just as their ancestors or predecessors did since the first centuries of our era. Diversity is the key to a musician's lasting success. Competition is fierce, and often it is the very ability to learn and focus on specific techniques that proves to be the winning edge in the bid to captivate an audience and hold its attention with feats of virtuosity.

To a large extent, rhythmic diversity in Carnatic music is based on strategies that resemble those adopted by drummers of other cultures: musicians seek to master one or several instruments, value virtuosity, and know how to extract the greatest possible variety of sounds from their instruments.



The most important drum of South Indian classical music is the *mridangam*, played here by T.R. Sundaresan; its outline inspires the increasing rhythmical pattern combined with a decreasing rhythmical pattern known as *mridanga yati* in Carnatic music.  
Photo: Ludwig Pesch.

In addition, Carnatic drummers train their ability to react quickly to others' cues. This, combined with their improvisational skills, enables them to interweave contrasting patterns of great beauty. Sometimes the manner in which percussionists surprise one another makes their combined performance reminiscent of an elegant tennis match. Ideally, the process known in Tamil as 'reducing' or 'shortening', which results in interwoven rhythmic patterns similar to those transcribed below, is as much an exercise in collective creativity as it is competitive in terms of not being outdone by one's fellow musicians. However, the less obvious strategies are equally worth looking into so as to better understand the special appeal, multifaceted nature, and vigour of rhythmic music in South India.

## Kôrvai

In the Tamil language, the word *kôrvai* literally means 'to string flowers or beads; to merge, enumerate, invent, narrate'; it also denotes 'expressing oneself clearly and coherently'. All these diverse connotations can help us to appreciate the finer points of South Indian rhythm. And indeed, it is an interlaced rhythmic pattern, also known as *kôrvai*, that leads to the climax and conclusion of the customary percussion solo. This interlude of a percussionist or percussion ensemble is normally embedded in the main piece of a classical concert.

The term *kôrvai* equally applies to a very intricate border pattern in the form of a ribbon of fabric attached to a superior quality *sari*, the ornate and colourful dress worn by southern Indian women on special occasions.

Whether for the purpose of rhythmic music or in weaving, the completion of a *kôrvai* pattern requires great precision in terms of planning and execution, dexterity as well as aesthetic sense. Both types of *kôrvai* seamlessly 'merge' with something else which, although complete in itself, deserves to be refined to perfection in this manner. Being added at the end we can equate the Tamil word *kôrvai* with the musical term *coda*, which derives from the Italian word for 'tail' and denotes a passage that gives a strong sense of finality.

The objectives of a rhythmically structured passage in Carnatic music consist indeed of 'making sense' while providing an effective conclusion to a concert item. As if meeting these demands weren't challenging enough, a performer is also expected to appeal to the finer sensibilities of fellow musicians and listeners alike.

In the course of a solo interlude, a percussionist can therefore take all the time needed for a formal exposition that reveals the various rhythmic facets inherent in any given theme or composition. Several stages are generally observed during which the density of events per time cycle, rather than the basic tempo determined at the beginning of a piece, is gradually increased. This is done by substituting one subdivision of each beat with another, and by building up larger structures from several small rhythmic motifs. Instead of merely piling decoration upon decoration, a seasoned musician is expected to endow his creations with qualities such as freshness, coherence, depth, and musical meaning.

(*Kôrvai* rhythms can be heard on the accompanying CD.)

### Transcription of figurative patterns used in South Indian rhythm

Rhythmic syllables such as those used below serve to teach and analyse patterns not just in the context of drumming classes: they are also performed as *konnakkol* (rhythmic recitation) and serve to clarify rhythm within melody compositions and improvisations. This makes them equally useful to singers, dancers and instrumentalists.

The technical name of the *tâla* adopted here is *âdi tâla*, *tisra nada* which is a cycle of eight counts or beats, whereby each count is subdivided into three time units expressed by syllables or marked by pauses (1-2-3 = 'tom, ta' or 'din, ta'). A comma marks the extension of a syllable by one syllabic unit or a pause; thus 'tom, ' and 'din, ' have twice the duration of 'ta'.

The composition transcribed below can be read out line by line as if it were a text. (Pronounce 'tom' like English 'Tom', the vowel 'a' in 'ta' and 'na' as 'u' in English 'tub', and the vowel 'i' in 'ki' and 'din' as in English 'din'.) The basic tempo of approximately three syllables per second is maintained from beginning to end. Please note that both parts, namely Part A and Part B, are inseparable parts of one composition which should be read continuously. It is only for the purpose of the present article that they are transcribed and annotated separately below.

To highlight the correspondence between musical and figurative patterns, groups of syllables that form a rhythmic motif (*yati*) have been marked by colours in the following manner:

**Blue** letters refer to the increasing pattern named 'river's mouth' (Sanskrit *srôtôvaha yati*);

**Green** letters refer to the decreasing pattern named 'cow's tail' (Sanskrit *gôpucchâ yati*);

**Blue + green** form a combined pattern named 'drum-shaped' (Sanskrit *mridanga yati*);

**Green + blue** (in that order) form another combined pattern named 'hourglass drum-shaped' (Sanskrit *damaru yati*).

## Part A

For the purpose of reading or recitation, all rhythmic patterns are printed inside a shaded box. The first beat (syllable) of each cycle is marked by printing the first syllable **red**. In combination these markers highlight the fact that, unlike in Part B, all patterns in Part A fit into the boundaries of the *tāla* cycle of 24 units or syllables (*ādi tāla*, *tisra nadai*). There are altogether eleven *tāla* cycles in Part A: five cycles that contain an increasing pattern or rhythmic motif (printed **blue**); five cycles that contain a decreasing pattern or rhythmic motif (printed **green**). Both motifs are of equal length and, seen together, they form a rhombus or drum shape. This is followed by one cycle characterized by its lilt and free flow rather than any distinct motif. Its composer has nevertheless endowed it with a charm of its own, namely tonal modulation, suggested by ‘din’ in place of ‘tom’ in the second half of the 11th cycle. This last cycle of Part A has the function of leading us to Part B - the lull before the storm, as it were.

Patterns are fitted within the boundaries of the *tāla* cycle and comprise 11 cycles (*ādi tāla*, *tisra nadai*); the 11th cycle follows a free flowing pattern which leads to Part B; please note the tone modulation indicated by “tom” and “din”.

1 to 5 syllables	tom , ta tom , ta tom , ta tom , ta tom , ta tom , ta tom , , , , ta	1 24
<i>srôtôvaha yati</i>	din , ta din , ta din , ta din , ta din , ta din , ta din , , , , ta ka	2 24
= “river’s mouth”	tom , ta tom , ta tom , ta tom , ta tom , ta tom , ta tom , ta tom , , , , ta ki ta	3 24
(increasing pattern)	din , ta din , ta din , ta din , ta din , ta din , ta din , ta din , ta ka di na	4 24
	tom , ta tom , ta tom , ta tom , ta tom , ta tom , ta tom , ta tom , ta ta ka di na	5 24
5 to 1 syllables	din , ta din , ta din , ta din , ta din , ta din , ta din , ta din , ta ta ka di na	5 24
<i>gôpuccha yati</i>	tom , ta tom , ta tom , ta tom , ta tom , ta tom , ta tom , ta tom , ta ka di na	4 24
(decreasing pattern)	din , ta din , ta din , ta din , ta din , ta din , ta din , ta din , , , , ta ki ta	3 24
= “cow’s tail”	tom , ta tom , ta tom , ta tom , ta tom , ta tom , ta tom , ta tom , , , , ta ka	2 24
	din , ta din , ta din , ta din , ta din , ta din , ta din , ta din , , , , , ta	1 24
<i>srôtôvaha + gôpuccha</i>		
= <i>mridanga yati</i>		
free flow	tom , ta tom , ta tom , ta tom , ta tom , ta din , ta din , ta din , ta din , ta	24

Subtotal (Part A)

264

## Part B

Parts A and B are of unequal length. Together they can be learnt as a solfège exercise. They can also feature in a percussion solo as a short but highly varied rhythmic coda. As there are only six *tâla* cycles in Part B, its duration is considerably shorter than that of Part A.

Rhythmic patterns are again printed inside a shaded box. Those syllables and pauses that coincide with the beginning of the *tâla* cycle are printed red as before. But a single glance is sufficient to discover the difference: whereas two rhythmic motifs in Part A were calculated to gradually emerge from the ends of five *tâla* cycles, only to retreat again in the same manner, there are three motifs in part B that 'leap' across the boundary of every other cycle. This new arrangement delights by conveying a sense of suspense and surprise.

The six motifs in Part B form three pairs, namely larger motifs or twin-motifs. They are printed in such a manner as to make the graphic analogy known as *yati* instantly recognisable. The two segments of each twin-motif are not halves but of unequal length: yet both together add up to 48 units in all the three cases. This means that, quite unlike the symmetrical rhombus or 'drum motif' in Part A, each of three twin-motifs in Part B is calculated to fit into the boundaries defined by two *tâla* cycles ( $24 + 24 = 48$  syllabic units).

The first twin-motif is made up of  $27 + 21$  units. Its threefold 'ta, din, ki na tom' ( $3 \times 7$ ) is a very common concluding phrase or final marker, applicable to virtually any type of composition and its divisions. The second twin-motif, an hourglass shape, is also made up of  $27 + 21$  units. The final marker used here is a variation on the previous one ( $3 \times 7$ ) with a subtle difference: to yield a fresh impression, a repetitive number pattern ( $7 + 7 + 7 = 21$ ) is substituted by a progressive one ( $5 + 7 + 9 = 21$ ). The third twin-motif is formed by inverting the second one ( $27 + 21$ ) which results in another drum shape; but unlike the symmetrical drum shape which slowly emerges in Part A, the concluding twin-motif in Part B is asymmetrical and reaches its culmination more rapidly; it is also designed to reconnect with the beginning of Part A in a seamless manner. In theory, this cyclic arrangement of rhythmic patterns can be repeated or varied indefinitely until terminated on a final 'tom' on the first count of the *tâla* cycle. As a climax, the final decreasing pattern creates an illusion of acceleration in the last few seconds of the carefully calculated arrangement. Due to the seemingly sudden return to the first beat of Part A, the conclusion of Part B not only takes listeners by surprise; this merger with the original pattern also re-establishes a sense of balance and playfully illustrates the cyclic or 'cosmic' order of our present title.

Patterns are placed across the boundaries of the *tāla* cycle and comprise 6 cycles (*ādi tāla, tisra nadaī*)

7 to 2 syllables ( <i>gōpuccha yati</i> )	decreasing pattern	7 (5+2)	ta ta ka di na tom ,	
		6 (4+2)	ta ka di na tom ,	
		5 (3+2)	din di na tom ,	
		4 (2+2)	di na tom ,	
		3 (1+2)	ta tom ,	
		2	tom ,	27
7 syllables ( <i>sama yati</i> )	"equal" pattern (thrice the same)	7 (2+2+3)	ta , din , ki na tom	
		7 (2+2+3)	ta , din , ki na tom	
		7 (2+2+3)	ta , din , ki na tom	21
Subtotal (two <i>tāla</i> cycles: 12+13)				48 48
7 to 2 syllables ( <i>gōpuccha yati</i> )	decreasing pattern	7 (5+2)	ta ta ka di na tom ,	
		6 (4+2)	ta ka di na tom ,	
		5 (3+2)	din di na tom ,	
		4 (2+2)	di na tom ,	
		3 (1+2)	ta tom ,	
		2	tom ,	27
5, 7, 9 syllables ( <i>srōtōvaha yati</i> )	increasing pattern	5	ta din ki na tom	
		7 (2+2+3)	ta , din , ki na tom	
		9 (2+2+2+2+1)	ta , din , ki , na , tom	21
Subtotal (two <i>tāla</i> cycles: 14+15)				48 48
<i>gōpuccha</i> + <i>srōtōvaha</i> = <i>damaru yati</i>	("pattern resembling the hourglass-shaped drum")			
2 to 7 syllables ( <i>srōtōvaha yati</i> )	increasing pattern	2	tom ,	
		3 (1+2)	ta tom ,	
		4 (2+2)	ta ka tom ,	
		5 (3+2)	ta ki ta tom ,	
		6 (4+2)	ta ka di na tom ,	
		7 (5+2)	tat ts ka di na tom ,	27
9, 7, 5, syllables ( <i>gōpuccha yati</i> )	decreasing pattern	9 (2+2+2+2+1)	ta , din , ki , na , tom	
		7 (2+2+3)	ta , din , ki na tom	
		5	ta din ki na tom	21
<i>gōpuccha</i> + <i>srōtōvaha</i> = <i>mridanga yati</i>	("pattern resembling the mridangam drum")			
Subtotal (two <i>tāla</i> cycles: 16+17)				48 48
<b>Total (Parts A+B)</b>				<b>408</b>

On completing Part B, both parts can be repeated or varied; a final "tom" is added to stop on the first count.

Although Parts A and B are distinct rhythmical arrangements from a structural point of view, they enhance each other and form a truly 'round' piece of music which adheres to the principles of South Indian classical music. Neither the diversity of underlying ideas nor several surprise changes of direction that catch listeners unaware are permitted to obscure the sense of unity sought to be conveyed. In the context of the exhibition at the Tropenmuseum we can even view it as an exposition of Yoga philosophy which expounds 'unity' as the fundamental principle of the universe. The sequence transcribed above was specially composed and recorded by T.R. Sundaresan to illustrate the rhythmic aspect of Carnatic music. For this purpose he took the sounds of the frame-loom, operated by a hand loom weaver at Kalakshetra Foundation in Chennai (Madras), as the basic motif. This repetitive sound pattern was translated into 'tom, ta' (long - short) and superimposed onto the most important *tâla* of Carnatic music (eight counts, *âdi tâla*). Each count was subdivided into three short 'beats' to match the loom's movement, and to form an endless musical loop to begin with. In order to make the result suitable for the purpose of the rhythm exhibition, T.R. Sundaresan was requested to develop a concise but characteristic pattern. The resulting composition extends over 17 *tâla* cycles.

Inspired by the traditional border designs of a sari fabric, he incorporated and re-arranged the 'increasing' and 'decreasing' figurative patterns commonly adopted by Carnatic musicians and known as *yati*.

The ornate dress fabric worn by southern Indian women (*sari*); from the Rhythm exhibition at the Tropenmuseum.





river's mouth



srôtôvaha



srôtôvaha yati

ta  
ta ka  
ta ki ta  
ta ka di na  
ta ta ka di na

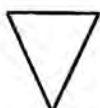
jati syllables



cow's tail



gôpuccha



gôpuccha yati

ta ta ka di na  
ta ka di na  
ta ki ta  
ta ka  
ta

jati syllables



drum



mridangam



mridanga yati

ta  
ta ka  
ta ki ta  
ta ka di na  
ta ta ka di na  
ta ta ka di na  
ta ka di na  
ta ki ta  
ta ka  
ta

jati syllables



hourglass



damaru



damaru yati

ta ta ka di na  
ta ka di na  
ta ki ta  
ta ka  
ta  
ta ka  
ta ki ta  
ta ka di na  
ta ta ka di na

jati syllables

Yati patterns in music.

Illustration: Ludwig Pesch.

Although the aesthetic as well as playful aspect of professional percussion were kept in mind, it makes little difference whether this rhythmic arrangement is recited by readers or performed on any percussion instrument. The composition follows the convention of having three successive concluding patterns. The aim is to return to the starting point of the *tâla* cycle and the initial motif at the proper point in time.

Musicians either repeat the entire section or, if time permits, construct a larger rhythmic coda with further displays of skill, mathematical ingenuity, and precision. In South Indian music, the analogies between rhythm, symbolic figures, and woven patterns are indeed striking. Just as the value and strength of a fabric is mainly determined by the workmanship invested in intricate decorative patterns such as geometric or floral shapes, the merit of a drum solo is judged by the neatness and complexity of the rhythmic figures used. On a mental grid, as it were, numerical reckoning, experience, intuition, and aesthetic sense coalesce in the pursuit of beauty. On similar lines, weaving patterns reveal themselves as they emerge from the loom or unfold before the discerning eye, just as a listener delights in the patterns gradually perceived by the mind, and not merely transmitted by the ear. According to Mircea Eliade, Indian mythology recognizes the wonder of creation on a cosmic scale in the act of weaving whereby the divine weaver's shuttle represents the confluence of time and space. Living, he observes, means 'being woven' by a mysterious power which operates the loom of the universe, being connected by an invisible thread with a cosmic Creator who is recognized in the sun, Brahman, or a personal deity (Eliade, p. 255). Perhaps it is more than a coincidence that two of India's most revered writers, Kabir in the north, and Tiruvalluvar in the south, are believed to have belonged to the community of weavers in spite of their far from privileged social status. After all, theirs was an occupation which, with its endlessly repeated operations, gives much scope for uninterrupted reflection.

### **Tâla**

Seemingly unrelated ideas and phenomena can serve to grasp, stimulate, and structure the experience of rhythmic beauty in a surprising manner. The basic elements of rhythm, the metric cycles known as *tâla*, provide a grid which could be likened to placing the warp – the regular arrangement of threads on a loom – before the process of weaving can begin. This background pattern is indicated by gestures that mark the various sections and the number of counts assigned to them. In a classical dance performance, a *tâla* pattern is marked with the aid of a pair of cymbals (*tâlam*) to which the sound of the dancer's ankle bells provides a charming counterpoint. It is not after all the *tâla* cycles that we mainly hear by way of rhythm, either in the form of 'beats' or melodic patterns. Far from

being absorbed by the *tâla*, we are fascinated by the contrasting yet amalgamating sound impressions that arise from the intersections of two patterns: the implicit metric pattern provided by the *tâla* (to which we soon get used and therefore cease to pay any attention), and the explicit rhythmic patterns that are much more interesting. The interplay of these two layers makes rhythm so irresistible to most of us.

Each rhythmic element generally is positioned intentionally rather than being at whim, even when everything about Carnatic performance has the appearance of effortless spontaneity.

Without going into theoretical details here, it is helpful to remember that any given rhythmic cycle or *tâla* comprises a definite number of counts or 'beats', grouped into one or several sections. Each count is subdivided into basic units. The most common division is into four units. Whenever a longer solo performance is possible, 3, 5, 6, 7, 8, or 9 basic units can also occur.

Even in this case, the tempo chosen at the outset should be maintained, and counting or marking the *tâla* continues as before. Instead of actually increasing or decreasing the basic tempo, the effect of tempo variations is created by way of adjusting the spacing of beats in incremental steps. To suggest a faster tempo, for instance, the original spacing can temporarily be reduced to half or a quarter of its original value. Complex variations involve intermediary time values or number ratios. In addition, patterns can be rearranged in such a manner that the resulting groups of beats, based on particular numbers, temporarily result in new rhythmic entities. In a percussion solo, accents and pauses or extended 'beats' are carefully placed in order to provide resting points and orientation. At every juncture, a performer thus remains aware of the distance in time from the impending reunion with the rhythmic motif or theme from which the solo was developed in the first place. On achieving the rhythmic climax of a solo, the performer reaches back to the very point within the cycle where the solo started, be it on the first 'beat' of a *tâla* or at any pre-defined point between two subsequent 'beats'.

A great deal of calculation is required to create a successful and original solo of this calibre which can, but need not, be planned in advance. An elaborate solo can last between ten minutes and an hour, depending on the number of participants (usually one to three percussionists), their status, experience, and of course the time constraints imposed by the nature of the occasion. (The duration of a classical concert now varies from one to three hours.) The concluding stage or rhythmic coda provides an opportunity for musicians to invest all their resources into a highly concentrated display of virtuosity, originality, and teamwork rarely found in other realms of music making.

## Conclusion

Considering the musical principles and cultural factors outlined above, it is not surprising that many Indian musicians quickly feel at home in other styles of music. In the process of sharing their music with fellow musicians and new audiences anywhere in the world, they seize the opportunity to imbibe new expertise, be it in music, musicology, or other related fields. India has prided itself for over half a century for being a modern, democratic country with a constitution based on democratic values. India's educated classes have access to the global network of mass media, computers and communication. Two Nobel laureates from India: physicists C.V. Raman and S. Chandrasekhar, were deeply involved with, and inspired by, various aspects of classical music. Their contribution to modern science, and the fact that many of the recent developments in the realm of Indian music have a 'modern feel' about them, remind us that innovation has also been the source of strength for the 'Indian way'. Nothing is ever as 'traditional' as it appears to be at first sight, and the kind of music one strongly feels about as being 'immortal' was certainly innovative, mostly provocative, and at times revolutionary in its own time. *'The sense of rhythm gives us a feeling of freedom, luxury, and expanse. It gives us a feeling of achievement in molding or creating. It gives us a feeling of rounding out a design... As, when the eye scans the delicate tracery in a repeated pattern near the base of the cathedral and then sweeps upward and delineates the harmonious design continued in measures gradually tapering off into the towering spire, all one unit of beauty expressing the will and imagination of the architect, so in music, when the ear grasps the intricate rhythms of beautiful music and follows it from the groundwork up through the delicate tracery into towering climaxes in clustered pinnacles of rhythmic tone figures, we feel as though we did this all because we wished to, because we craved it, because we were free to do it, because we were able to do it.'* (Seashore, p. 142.) Reflecting on the tiny rhythmic and figurative patterns described here, we can feel reassured that the joys of creativity, evoked by Seashore with such exuberance, are indeed within our reach irrespective of age and cultural background.

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