## 14 | Rhythmic Thought and Practice in the Indian Subcontinent

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Tala

The remarkable facility in rhythmic play demonstrated by musicians and dancers throughout the Indian subcontinent is as impressive as it can be bewildering for the listener. From local and regional practices, through devotional and popular genres, to the heavily theorized concert traditions of the North (Hindustani music) and South (Karnatak music), rhythmic complexity abounds. A performance may begin without even a pulse, where melodies seem to float unpredictably in musical space. Yet increasing rhythmic regularity leads to the establishment of repetitive sequences of beats, both evenly and unevenly distributed, which provide the frameworks for elaborate melodic and rhythmic compositions, variations, and improvisations. The entrance of drums – also essentially melodic in their subtle manipulations of pitch, timbre, stress, and resonance – is invariably a moment of great visceral as well as intellectual excitement. Together, singers, dancers, instrumentalists, and drummers build their performances around the anchors provided by the beats; they subdivide these beats in myriad ways, playing with different rhythmic densities and syncopations. The thrilling, rapidly articulated sequences with their offbeat stresses can temporarily disorient the listener until all seems to resolve in a triumphant convergence of surface rhythm and target beat. The rhythmic system as a whole and the individual frameworks of beats that serve to organize rhythmic expression are known as *tala*.

The Sanskrit term *tala* (Hindi: *tal*; Tamil: *talam*) is an ancient concept described in treatises close to 2,000 years old, and still today the word carries the same essential meaning of a handclap. Any attempt to summarize what are arguably the world's most complex and virtuoso rhythmic-metric practices must necessarily begin with a definition of *tala*, for it differs from Western meter in a fundamental way. Meter is implicit: it is a pattern that is abstracted from the surface rhythms of a piece, and consists of an underlying pulse that is organized into a recurring hierarchical sequence of strong and weak beats. On the other hand, *tala* is explicit: it is a recurring pattern of non-hierarchical beats manifested as hand

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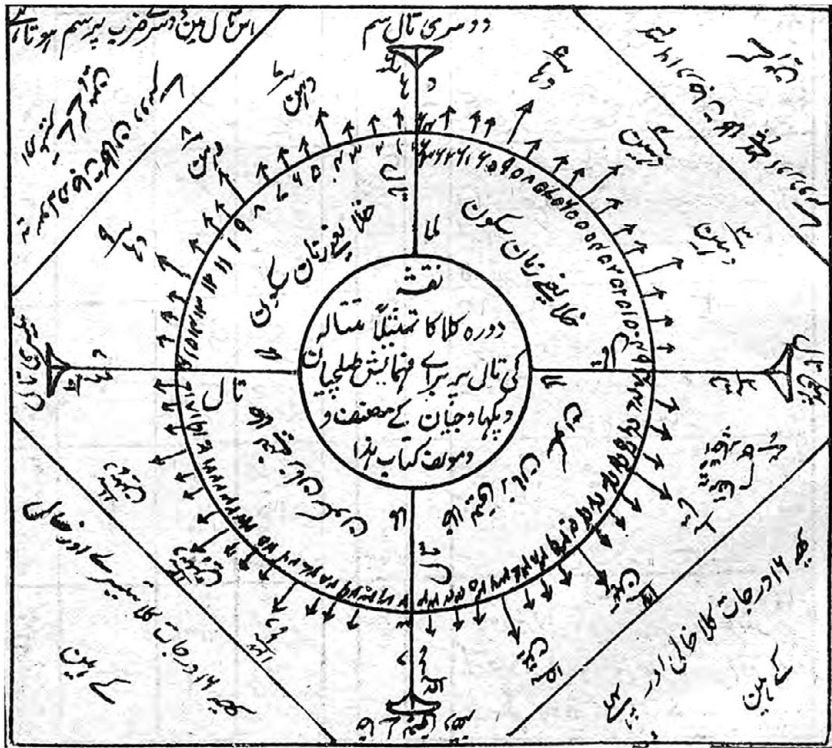
14.1 Cyclic representation of *tala*

gestures consisting of claps, silent waves, and finger counts, or as a rela-
tively fixed sequence of drum strokes.

The repetitive beat patterns of a *tala* are often thought of as cyclic, and
certain words describing the cycle (*avartana*, for instance) are based on the
Sanskrit root *vrt*, meaning "turning" or "revolving." The circular represen-
tation shown in Figure 14.1, taken from an Urdu book published in 1869,
maps out *tintal*, Hindustani music's most prevalent *tala* of four beats, with
each beat lasting four counts for a total of sixteen: it contains quasi-
onomatopoeic syllables for the drum strokes (*dha*, *dhin*, *ta*, *tin*) used to
represent the *tala*. Conceptually, the cycle begins and ends on *sama* (Hindi:
sam; Tamil: *samam* – here, at the top of the dial), which is the beat
representing the most common point of melodic and rhythmic confluence.

Throughout this chapter, readers will encounter many examples of
clapped beat structures as well as syllables representing the strokes that
articulate rhythms. All are encouraged to engage physically with these
phenomena by performing the patterns of claps, waves, and finger counts,
and by orally expressing the syllables. For it is through physicality and

orality that the musical system is taught. Such an embodiment of *tala* is crucial not only for achieving rhythmic competence and engendering creativity as a performer but also for deriving enhanced aesthetic pleasure as an audience. Indeed, audience participation through gestures marking *tala* is prevalent in the concert traditions, especially in Karnatak music, and allows audiences to experience and appreciate more keenly the rhythmic architecture of performance.

Tala in Karnatak Music

As an abstract structure, *tala* finds its most canonical form in the concert tradition of southern India: Karnatak music. We begin with the example of *adi tala*: a series of claps, silent waves, and finger counts that provides the framework for roughly 80 percent of songs and other composed works in this repertoire. In Table 14.1, the eight-count sequence of hand gestures provides both visual and sonic markers that allow performers and listeners alike to know precisely where they are within the *tala* at any given moment. This pattern begins with a clap of the right hand down onto the upturned palm of the left hand on count 1, followed on counts 2, 3, and 4 by taps of the pinky, ring, and middle fingers of the right hand onto the left palm; it continues on count 5 with another clap, and on count 6 with a wave, which is where the right hand turns palm upward and effects either a light tap of the back of the right hand on the left palm or a bounce in the air above it; another clap and wave on counts 7 and 8 conclude the sequence, and the pattern cycles back to repeat from count 1. As stated earlier, the *tala* has no internal accent structure like Western meter, not even on the clap marking count 1. The gestured 8-count pattern functions to provide a solid temporal reference for complex surface musical activity.

Table 14.1 Clapping structure and *solkattu* syllables for *adi tala*

Counts	1	2	3	4	5	6	7	8
Gestures	*clap*	*pinky*	*ring*	*middle*	*clap*	*wave*	*clap*	*wave*
Speed 1	ta	ka	di	mi	ta	ka	jo	nu
Speed 2	taka	dimi	taka	jonu	taka	dimi	taka	jonu
Speed 3	takadimi	takajonu	takadimi	takajonu	takadimi	takajonu	takadimi	takajonu
Triplets	takadi	mitaka	jonuta	kadimi	takajo	nutaka	dimita	kajonu

A musician trained in a Western tradition might well approach the clapping pattern of *adi tala* by doing the hand gestures and counting out the eight counts. Yet this approach is rare in South Asia, where musicians tend to use syllabic sequences to mark time rather than numbers. This results in a qualitatively different way of experiencing one's relationship to the *tala*. The syllabic sequences are based on *solkattu*: a rich vocabulary of drum strokes and sounds that are expressed as onomatopoeic syllables like *ta*, *di*, *tom*, and *nam*. Returning to Table 14.1, we note the presence of eight syllables that should now replace the numbers as one performs the gestures. As a basic exercise, one begins with density level 1, where each hand gesture is accompanied by one syllable. Density level 2 doubles the speed of articulation of the syllables, although one must remember to strictly maintain the original pace of the hand gestures so that now each one is accompanied by two syllables. Density level 3 doubles the speed of articulation yet again, so that four syllables accompany each gesture. These three density levels are known as *trikala*, the "three speeds," and all students of Karnatak music, whether melodic or percussive in form, learn this fundamental technique of changing rhythmic densities while maintaining the original pulse. Students of vocal music, for example, proceed through defined sets of scalar exercises sung to the solfège names Sa Ri Ga Ma Pa Dha Ni Sa, all the while clapping *adi tala* and applying the "three speeds." As can also be seen in Table 14.1, an additional rhythmic exercise arranges the same syllables in triple time.

Adi tala is fundamentally duple in character, and as such it fits into the first of five classes of rhythm. This first class, or *jati*, is known as *caturasra*, or "four sided," and is commonly articulated with the *solkattu* sequence *ta ka di mi* (or *ta ka jo nu*). As shown in Table 14.2, there are four other *jati* of 3, 7, 5, and 9 (this is their traditional order), each with its own pattern. The *jati* are important in several ways: they show how the beat may be internally subdivided into quadruplets, triplets, septuplets, quintuplets, and nonuplets, respectively; they can form the basis for calculating larger units of rhythmic improvisation; and they can serve to modify *tala* structures. This last point necessitates a brief discussion of the *suladi sapta tala* system.

Appearing first in the late nineteenth century, the *suladi sapta tala* (seven primordial *tala*) system quantifies seven basic categories, each with a distinctive gestural structure. The three gestures are *laghu* (symbol I: a clap plus a variable number of finger counts), *drutam* (symbol O: a clap plus a wave), and *anudrutam* (symbol U: a single clap). *Adi tala* belongs to the *triputa* category, which comprises one *laghu* and two *drutam*. The

Table 14.2 The five *jati* "classes," the *suladi sapta tala* system, and some common non-*suladi* structures

Caturasra (4)	ta	ka	di	mi				
Tisra (3)	ta	ki	ta					
Misra (7)	ta	ki	ta	ta	ka	di	mi	
Khanda (5)	ta	ka	ta	ki	ta			
Sankirna (9)	ta	ka	di	mi	ta	ka	ta	ki	ta

I = *laghu*: clap plus finger counts
O = *drutam*: clap plus wave
U = *anudrutam*: clap

	caturasra (4)	*tisra (3)*	*misra (7)*	*khanda (5)*	*sankirna (9)*
Dhruva – IOII	14	11	23	17	29
Matya – IOI	10	8	16	12	20
Rupaka – OI	6	5	9	7	11
Jhampa – IUO	7	6	10	8	12
Triputa – IOO	8 (*adi tala*)	7	11	9	13
Ata – IIOO	12	10	18	14	22
Eka – I	4	3	7	5	9

Rupaka (3) = clap clap wave
Misra capu (7) = wave wave – clap – clap –
Khanda capu (5) = clap – clap clap –

length of the variable *laghu* is determined by one of the *jati* categories: in the case of *adi tala*, the clap is followed by three finger counts for a total of four counts, and thus the *laghu* is "four sided." Another, more cumbersome name for *adi tala* is therefore *caturasra jati triputa tala*. As can be seen in Table 14.2, the combination of seven *tala* categories with the five *jati* results in thirty-five distinctive *tala* structures, from three counts up to twenty-nine. What is interesting is that *adi tala* is not the only structure comprising eight counts, and yet *tisra jati matya tala* (clap pinky ring clap wave clap pinky ring) and *khanda jati jhampa tala* (clap pinky ring middle index clap clap wave) differ markedly in their arrangements of gestures.

In truth, however, very few of the thirty-five structures have been employed in performance practice, though one does occasionally hear uncommon *tala* structures used for exercises and technically challenging showpieces called *pallavi* that are designed to demonstrate technical virtuosity. The vast majority of compositions, including those of the greatest composers from the Golden Age of Karnatak music in the late eighteenth and early nineteenth centuries – the so-called "Holy Trinity" of Tyagaraja, Diksitar, and Syama Sastri – are set in just four *tala*: *adi tala*

plus three that do not even belong to the *suladi sapta tala* system. These are also given in Table 14.2 and comprise only claps and waves: *rupaka* (3 counts), *misra capu* (7 counts), and *khanda capu* (5 counts). These structures are very likely to have entered the concert tradition from local or regional practices. *Rupaka* is an interesting and somewhat confusing case, as it shares its name but not its structure (clap clap wave) with one of the seven *suladi* categories (comprising one *drutam* and one *laghu*), and it also appears to be a relatively modern substitute for the ancient *tisra jati eka tala* (clap pinky ring). In practice, *rupaka* and *tisra jati eka tala* are interchangeable, and musicians choose according to the teaching lineage through which they have acquired their knowledge.

Rhythmic Play in Karnatak Music

The performance of a typical piece of Karnatak concert music begins with *alapana*, which is an exposition of the melodic motivic characteristics of a *raga* without *tala*. Although the melodies may seem to be free of any regular sense of rhythm, many musicians insist that they are mindful of an underlying pulse against which melodic expression is measurable. *Alapana* is often quite short, but nevertheless the expanding range of melodic motifs is complemented with increased surface rhythmic density.

Following the *alapana* is the composition, a text set to melody (or an instrumental rendition of one) that is always framed by a *tala* and thus always accompanied by a drum. The great percussion instrument of Karnatak music is the *mridangam*, a barrel drum with two heads made from layers of animal hide, laced together, and capable of being tuned by means of a permanent black compound applied as a low, circular mound in the center of the right head and by the application of a temporary ball of dough stuck and flattened onto the left. While the left head provides a deep, resonant bass, the right produces a variety of timbres depending on how and where the fingers and palm strike it. As the first strains of the melodic composition are delivered, the *mridangam* player must quickly identify the *tala* and the tempo, which then remain constant throughout the piece. The starting point for the melodic composition may occur anywhere in the cycle and could even begin on a half beat. Experienced drummers will likely know many compositions and may even play along with some of the prominent rhythmic signatures of the melody. As an accompanist, the drummer's role is to support the melodic unfolding of the composition, mark the ends of sections of the exposition with rhythmic cadences, and

Table 14.3 *Sarvalaghu* patterns in *adi tala*

	clap	pinky	ring	middle	clap	wave	clap	wave
1	ta	din	din	na	ta ka	din	din	na
2	ta	din	ta ka	din	ta	din	ta ka	din
3	ta	din	ta	din	ta ka	din	tom	kita taka
4	ta ka	di mi	ta ka	di mi	ta ka	di mi	ta ka	di mi
5	tam	– ki	ta ka	jo nu	tam	– ki	ta ka	jo nu
6	tam	– ki	ta ka	jo nu	ta ka	tom ki	ta ka	jo nu
7	din din	din tom	– ta	din na	din din	din tom	– ta	din na
8	tom	kita taka	taka din	kita taka	tom	kita taka	taka din	kita taka

contribute to the increasing energy and intensity of sections of improvisation that follow.

The rhythmic patterns played by the drummer fall into two categories: those that structurally maintain the flow of time, and those that disrupt it through rhythmic formulas that are calculated to terminate on a target beat within the *tala*, most commonly *sama*. The first category is known as *sarvalaghu* (from Sanskrit words implying "all short/easy"). Table 14.3 outlines a few simple examples of *sarvalaghu*, each of which the reader is encouraged to read out loud while clapping the structure of *adi tala*. These patterns have a tendency toward internal repetition that subdivides them into two halves and thus reinforces the repetitive groove resulting from the distinctive timbres and articulations. The groove takes on a particularly heavy swing in examples 4–7 (for instance, in example 5 one should sharpen the attack on TAka and exaggerate the weighty resonance of JOnu), and example 8 suggests greater surface rhythmic density, pointing toward patterns that become increasingly complex as pieces develop. Once one has gained familiarity with these patterns, one should double their speed to get a sense of how they sound in performance (yet maintain the original tempo of the clapping pattern – a metronome mark of roughly 84 counts per minute is a fairly typical performance tempo). A drummer will switch between many different *sarvalaghu* patterns according to the flow and rate of activity of the melodic exposition and its development.

The second category is known as *kanakku*, "calculation," which is a vast and complex topic too large for anything but a cursory introduction. We shall briefly look at endings (*mora*), shapes (*yati*), and complex designs (*korvai*). All are configured in such a way as to create temporary uncertainty only to find familiar ground once again by directing our attention to a target beat. The simple examples given in Table 14.4 are borrowed from David Nelson's exemplary *Solkattu Manual*.[1]

Table 14.4 *Mora, yati,* and *korvai*

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1. *Mora*

    Structure: (statement) + [gap] + (statement) + [gap] + (statement)

      Statement: (ta ta kt tom tom ta) = 6 pulses

      Gap: [tam – –] = 3 pulses

    (ta ta kt tom tom ta) [tam – –] (ta ta kt tom tom ta) [tam – –] (ta ta kt tom tom ta)

clap	*pinky*	*ring*	*middle*
ta – din –	din – na –	(ta ta kt tom	tom ta) [tam –

clap	*wave*	*clap*	*wave*
–] (ta ta kt	tom tom ta) [tam	– –] (ta ta	kt tom tom ta)

2. *Yati*

Gopucca yati	*Srotovaha yati*
6 + 2 (ta ta kt tom tom ta) [tam –]	1 + 2 (ta) [tam –]
4 + 2 (kt tom tom ta) [tam –]	2 + 2 (tom ta) [tam –]
3 + 2 (tom tom ta) [tam –]	3 + 2 (tom tom ta) [tam –]
2 + 2 (tom ta) [tam –]	4 + 2 (kt tom tom ta) [tam –]
1 (ta)	6 (ta ta kt tom tom ta)

3. *Korvai*

    a) ta ki ta tom – ta din gi na tom = 10 pulses

    b) jo nu jo nu = 4 pulses

    c) tom – ta – = 4 pulses

    d) tam – – = 3 pulses

ta ki ta tom	– ta din gi	na tom jo nu	jo nu tom –
ta – tam –	– ta ki ta	tom – ta din	gi na tom jo

nu jo nu tom	– ta – tam	– – ta ki	ta tom – ta
din gi na tom	jo nu jo nu	tom – ta –	tam – – jo

nu jo nu tom	– ta – tam	– – jo nu	jo nu (tom –
ta –) [tam –	–] (tom – ta	–) [tam – –]	(tom – ta–)

A *mora* is a rhythmic cadence that ends a section of the music. In its simplest form, it is a sequence of strokes that is played three times: the reason for three statements of a given pattern is important. With just two statements, it would be difficult to anticipate the target beat, whereas with three, the pattern is not only more firmly established in the listener's mind but also the temporal distance from the second to the third can be predicted to be the same as from the first to the second. The *mora* shown in Table 14.4 features the pattern *ta ta kt tom tom ta tam*, which covers

7 pulses (*kt* stands for *kita* and occupies 1 pulse). The body of the pattern is the 6-pulse statement *ta ta kt tom tom ta*, and *tam* is its end point. *Tam* may be followed by no gap at all, or more commonly with a gap of a variable number of pulses. In this case, *tam* is followed by a 2-pulse gap for a total of 3 pulses: *tam – –*. The *mora*, then, comprises (statement) + [gap] + (statement) + [gap] + (statement) for a total of 24 pulses. If the rate of rhythmic action in *adi tala* is 4 pulses per count, then the 8-count cycle will comprise 32 pulses. It follows, therefore, that in order to target the *sama* of the cycle on count 1 the *mora* should start after a gap of 8 pulses (in this case, those pulses are occupied by part of a *sarvalaghu* pattern from Table 14.3, *ta – din – din – na –*); in other words, the *mora* begins on the third count that is marked by the ring-finger gesture.

Yati refers to a series of operations that create shapes in the mind of the listener. The truly interesting ones among them are the cow's tail (*gopucca*) and the river mouth (*srotovaha*), which represent narrowing and expanding operations, respectively. Retaining the same statement used for the first *mora*, we can see in Table 14.4 how elements are subtracted from the original phrase in *gopucca yati*, while the reverse is true in *srotovaha yati*. The gap in each instance is reduced to 2 pulses [*tam –*], and once again the total number of pulses for each sequence is 24. Therefore, these *mora* also begin on the third count of *adi tala*. By combining these two shapes, one can create two more: *damaru yati* (a small hourglass-shaped drum) with *gopucca-srotovaha*, and the barrel-shaped *mridanga yati* with *srotovaha-gopucca*.

In accompaniment, the *mridangam* player tends toward shorter, simpler *mora* structures. Yet often near the end of a concert piece the spotlight may shift over to the drummer for a solo that can run anywhere from two to ten minutes. This is the *tani avartanam*, and it marks a special moment of great concentration for the other performers on stage who attempt to maintain the clapping pattern of the *tala* as the only accompaniment to the sounds of the drum. Here the rhythmic designs are longer and more complex, and may involve changing the surface rhythmic density from duple to triple time, or even to quintuplets and septuplets. Compound *mora* structures are also increasingly likely, where a *mora* is repeated three times, thus prolonging the tension before a resolution on the *sama* of the cycle. But the *tani avartanam* must also have at least one grand, pre-composed structure: the *korvai*.

A *korvai* may feature all manner of clever rhythmic thinking, but at root it comprises a *yati* plus a *mora*. In the relatively simple example given in Table 14.4, there are four phrases of 10, 4, 4, and 3 pulses, respectively,

which create the narrowing shape of *gopucca yati*. The composition repeats phrases abcd three times, then bcd, then b, and finally the *mora* statement and gap constructed from (c)+[d]+(c)+[d]+(c). A *korvai* may in fact be extensive, combining many sections, as long as it ends with a *mora*. They are often difficult to execute, and difficult to follow, but they represent the pinnacle of arithmetic thinking merged with musical aesthetics and technique, and they are quite thrilling to experience.

Finally, one may sometimes find more than one percussion instrument on stage in a Karnatak music concert, most commonly a *ghatam* (clay pot) and a *khanjira* (small tambourine). These are wielded with extraordinary technical skill, and are capable of replicating anything the *mridangam* can do.

A Brief Word on Local and Regional Rhythmic Traditions

There exists an extraordinary diversity of approaches to rhythm in South Asia, yet outside the concert traditions of Karnatak and Hindustani music there is relatively little detailed documentation or analysis of how precisely rhythm works. Certain scholars have unearthed evidence contradicting the notion that rhythm in South Asia is rigidly organized into isometric, that is, unchanging cycles of beats and counts. Jim Sykes[2] has described Sinhala Buddhist ritual music in Sri Lanka where drumming patterns can sound like unmetered speech, where long and short drum syllables set in lines of drum poetry often do not coincide with beats or pulses, and where sometimes the beats may even be stretched to match the durations of drum words. Without an insider's understanding of the rhythmic logic of the drums in these ritual contexts, these irregular cycles and rhythms are difficult or impossible to count. Richard Widdess[3] has noted how in many older repertoires of religious genres – such as Sikh *gurubani* hymns in the Punjab, Sufi devotional *qawwali* songs from Delhi, temple traditions from Lord Krishna's heartland of Vrindaban, and religious and ceremonial music and dance among the Newar of the Kathmandu Valley in Nepal – heterometric rhythmic organization survives alongside isometric structures, and may have been (or indeed may still be) far more widespread that we realize. In a heterometric composition, the *tala* changes from section to section of the piece, unlike the concert traditions where the *tala* changes only if the composition does. In his work with Shi'a drumming groups active during Muharram (the annual period of mourning) in Muslim centers across India and Pakistan, Richard Wolf[4] also documented

examples of heterometric structure. Additionally, in his study of Kota tribal drumming from South India,[5] he introduced the important analytic idea of beats as anchor points that act as signposts that are especially important in coordinating group rhythmic practices. The spaces between beats can be flexible through non-uniform inflation, just as they are in the Karnatak system where the variable *laghu* can expand from 3 to 4, 5, 7, or 9 counts. Indeed, the rationale for many of the observations Wolf has made about a wide array of drumming practices focuses on the importance of the number of beats – both as a series of foundational anchors and also as stressed strokes in a surface rhythmic pattern – in the naming and identification of a *tala*. Of course, not all carry the name *tala*: though the term is widespread, others like *cal* (Hindi: "motion; gait") or *ati* (Tamil: "beat") are also found, and some traditions appear to have no word for *tala* at all.

One other very important analytic concept introduced by Richard Wolf is "stroke melody." This resonates with what I wrote earlier about the extraordinary variety of different pitches, timbres, and articulations that drummers can produce on their instruments, either solo or in ensembles featuring several different kinds of membranophones and idiophones (small cymbals, for instance, that have always traditionally marked anchor points). Stroke melodies are prominent throughout South Asia, and are fixed patterns whose combinations of timbres and stresses set up what might best be described as a groove: a repetitive rhythm rooted in bodily movement that often involves offbeat stresses and that conveys a feeling of motion (compare the Hindi term *cal*). They often establish an underlying framework for other musical activity, and sometimes through variation, expansion, and changes in density they can be the focus of the musical performance itself. As we shall see, stroke melodies are also very important in the Hindustani concert tradition.

Hindustani *Tala*

The Hindustani *tala* system in fact harbors two systems that over the past two centuries have become enmeshed to such an extent that few would acknowledge any separation whatsoever. Yet extricating one from the other can prove instructive. The first lies within the domain of *dhrupad*: widely considered to be the oldest genre still performed, a *dhrupad* performance features a substantial unaccompanied *alap* (compare this with *alapana*), followed by one or two compositions set in *tala* and accompanied by a barrel drum called either *pakhavaj* or *mridang* (compare this with

mridangam, to which it is structurally similar). The second pertains to all other types of concert music: vocal genres such as *khayal*, *thumri*, and so on; instrumental music of the *sitar*, *sarod*, and so on; and the dance form that during the twentieth century came to be known as *kathak*. All these genres are accompanied by the *tabla*, which along with the *sitar* has become a globally recognized symbol of Indian music.

Of the hundreds of *tala* structures that have been listed over the centuries in Sanskrit and Indo-Persian treatises, only four continue to appear with any regularity in the modern *dhrupad* repertoire. Of these, *cautal* and *dhamar* (12 and 14 counts, respectively) dominate slow-tempo compositions, and *sultal* and *tivra* (10 and 7 counts) frame those in fast tempo. *Matra* (etymologically linked to meter) is the commonly used word for a count: in the past, the *matra* corresponded to a healthy human pulse, but it is now conceived as a flexible unit dependent on tempo: *laya*. In the three categories, slow, medium, and fast (*vilambit*, *madhya*, *drut*), the *matra* can range from 12 per minute in the case of slow *khayal* compositions up to 720 in ever-accelerating instrumental climaxes.

Table 14.5 maps the beats of *tala* structures for *dhrupad* using only clap and wave gestures: unlike Karnatak *tala*, finger counts are not generally used, and certainly not systematically so. What *dhrupad* has in common with Karnatak practice, however, is the strict maintenance of the clapping pattern by performers and audience as an external representation of the *tala* in use, which in turn frees the *pakhavaj* player to support the melodic unfolding of the composition, mark the ends of its sections with rhythmic cadences, and contribute to the increasing energy and intensity of the performance – as is precisely the case with the *mridangam* player. Moreover, just as the *mridangam* player may choose from various *sarvalaghu* patterns to fill the *tala* cycle and contribute to rhythmic flow, the *pakhavaj* player too adopts repetitive, groove-like patterns. The first examples were notated in the early 1850s by Wajid Ali Shah, king of Awadh, a lavish patron and practitioner of music at his court in Lucknow. He called them *theka*, "accompaniment." A *theka* is a fixed sequence of drum strokes that, when repeated relatively unchanged cycle after cycle, creates a recognizable representation of a *tala* – an aural symbol of it – and thus its presence largely obviates the need for the clapping pattern to mark time. However, Wajid Ali Shah's *theka* for *cautal* would in subsequent years be interpreted merely as a kind of filler pattern akin to *sarvalaghu*, and was superseded in the late nineteenth century by another pattern that even today continues as the established *theka* representing *cautal*. The paradox is that in spite of the presence of these *theka* patterns, there is still a heavy reliance on external

Table 14.5 *Tala* structures for *dhrupad*

Cautal clapping structure (2+2+2+2+2+2):   *clap*   *wave*   *clap*   *wave*   *clap*   *clap*

... *theka* – mid-nineteenth century, Wajid Ali Shah

clap	dha	dhin na	*wave*	na ka	dhet
clap	dhin na	na ka	*wave*	dhin na	na ka
clap	dhad	dhi	*clap*	ghin na	na ka

... *theka* – late nineteenth century

clap	dha	dha	*wave*	din	ta
clap	ki ta	dha	*wave*	din	ta
clap	ti te	ka ta	*clap*	ga di	ge na

Dhamar (5+2+3+4)

clap	kat	dhit	ta		dhit	ta	*clap*	dha	—
wave	kat	tit	ta	*clap*	tit	ta		ta	—

Sultal (2+2+2+2+2)

clap dha dha   *wave* din ta   *clap* ki ta dha   *clap* ti te ka ta   *wave* ga di ge na

Tivra (3+2+2)

clap dha din ta   *clap* ti te ka ta   *clap* ga di ge na

clapping patterns for *dhrupad* and *pakhavaj* performance. By contrast, clapping in non-*dhrupad* genres is rare. This raises three points: (1) that *dhrupad* and Karnatak performance are less removed from one another than is generally assumed; (2) that the *pakhavaj* accompanist spends very little time playing *theka* but rather quickly shifts gears into filler patterns and compositions, thus creating the need for an external set of markers for the *tala*; and (3) that *theka* is probably not native to the *pakhavaj* but instead owes its presence to the influence of the *tabla*. *Theka* is first linked to *tabla* in texts from the early nineteenth century.

First appearing in the early eighteenth century, the *tabla* was, organologically speaking, a *pakhavaj* split into two parts and played with skins facing up. The substitution of a small hemispherical kettledrum for the bass gave drummers the ability to create extremely active pitch inflections of its resonant sonority, allowing it to replicate not only the rhythmic language of the *pakhavaj* but also that of the barrel drum *dholak*, widely used in local and regional musical genres as well as in the traditions of the Qawwals, who sang Muslim devotional genres as well as *khayal*, among other things. It was this flexibility that led to a growing preference for *tabla* in all genres other than *dhrupad*, but the drum owed its rapid spread throughout northern parts of the subcontinent to the popular songs and dances of female entertainers. Such performances were labelled "nautch" by the British (a corruption of *nac*, "dance"), and were very much the rage in the eighteenth and nineteenth centuries among Indians and foreigners alike.

Three rhythmic patterns dominated the nautch: a compound duple with hemiolic properties called *dadra* (3+3 / 2+2+2), a lilting *ghazal* (3+4), and a duple *kaherva* (4+4). These were articulated on *tabla* with short, fixed patterns – stroke melodies – that likely underwent embellishment and intensification without deviating greatly from the beat pattern other than to end a section of music or dance with a short cadential flourish. As *tabla* began to be used for other genres with longer beat patterns, the grooves largely remained intact, but were played twice in order to fill the extended *tala* structures. A case in point is *ektal*, whose clapping pattern derives from *cautal* for *pakhavaj*, but whose *theka* consists of a *dadra* groove played twice, as seen in Table 14.6. Yet in order to differentiate between the repetitions, and thus ensure that the *theka* marks the *sam* of the cycle, the repeat removes the bass resonance (voiced phonemes *dhin dhin* become unvoiced ones, *kat tin*). This highlights the timbral difference between the opposing polar axes of *sam* at the beginning of the cycle (clapped and marked with an X) and *khali* halfway through it (waved and marked with a 0). *Khali*, the "empty" beat, therefore becomes an

Table 14.6 *Titala* and other *tala* structures

Ektal

clap	dhin	dhin	*wave*	dha ge	tira kita
clap	tin	na	*wave*	kat	tin
clap	dha ge	tira kita	*clap*	dhin	na

Groove structure of *ektal*

X	dhin	dhin	dhage	tirakita	tin	na
0	kat	tin	dhage	tirakita	dhin	na

Some *theka* structures of *titala*

Dhima titala	X	dhin	kita	dhin	na	na	dhin	dhin	na
	0	tin	kita	tin	na	na	dhin	dhin	na
Tilvara	X	dha	tira kita	dhin	dhin	dha	dha	tin	tin
	0	ta	tira kita	dhin	dhin	dha	dha	dhin	dhin
Addha /	X	dha	ge dhin	– ge	dha	dha	ge tin	– ke	ta
Sattar Khani	0	ta	ge dhin	– ge	dha	dha dha	ge dhin	– ge	dha
Ikvai	X	dha	dhin	—	dha	dha	dhin	—	dha
	0	dha	tin	—	ta	ta	dhin	—	dha
Tintal	X	dha	dhin	dhin	dha	dha	dhin	dhin	dha
	0	dha	tin	tin	ta	ta	dhin	dhin	dha

Some other common *tala/theka* structures

Jhumra	3+4+3+4	X	dhin	– ta	tira kita	dhin	dhin	dha ge	tira kita
		0	tin	– ta	tira kita	dhin	dhin	dha ge	tira kita

Dipcandi	3+4+3+4	X	dha	dhin	—	dha	dha	tin	—
		0	ta	tin	—	dha	dha	dhin	—

Jhaptal	2+3+2+3	X	dhin	na	dhin	dhin	na
		0	tin	na	dhin	dhin	na

Rupak	3+2+2	*wave*	tin	tin	na	*clap*	dhin	na	*clap*	dhin	na

important marker in a bipartite structure. The same process can also be
seen in Table 14.6 with the most common of all *tabla tala* structures, *titala*,
which in an older form was called *dhima titala* that was adapted from
dhrupad-pakhavaj repertoire (but that is now rarely heard there). *Dhima*
was only one form of *titala*, however, as other stroke melodies appropriate

to different song genres were also in common usage. A few of these are shown in Table 14.6, but most are now obscure owing to the almost complete dominance of *tintal* (also represented in Figure 14.1), which was originally used in dance accompaniment. Nowadays, the vast majority of vocal and instrumental genres of concert music accompanied by *tabla* use *tintal*, *jhumra*, *dipcandi*, *ektal*, *jhaptal*, and *rupak* (this last, a structural anomaly, is representative of an iambic lilt influenced by regional and popular forms of 3+4). These patterns are also given in Table 14.6.

Rhythmic Play in Hindustani Music

In *dhrupad*, a melodic composition is stated several times before undergoing many kinds of rhythmic transformation of text and tune, with the beats being subject to increasingly denser subdivisions. The *pakhavaj* accompanist tries to match these, and can draw on a variety of filler patterns, as noted earlier, or on compositions known broadly as *paran*. Table 14.7 outlines two simple *paran* compositions: the first is known as *sath paran*, *sath* meaning "with; together," suggesting its use in accompaniment; the second is a *mohra* that incorporates a threefold repetition generally called *tihai* in Hindustani music (compare this with the Karnatak *mora*). In these, the typically unbroken stream of stroke phrases in the *sath paran* contrasts with the broken pattern initiating the *mohra* before the *tihai* (*ghege tite kata gadi gena dha –*) directs our attention to the *sam*.

There is no equivalent of Karnatak music's *tani avartanam* in *dhrupad*, but instead the *pakhavaj* may be heard as a discrete solo item in a concert. Here, drummers embark on sets of longer, varied *paran* structures, including the *chakradar paran* that will comprise the threefold repetition of a

Table 14.7 *Paran* and *mohra*

Sath paran					
clap	dha ge ti te	ga di ge na	*wave*	na ge ti te	ga di ge na
clap	dha ge ti te	ka ta ka ta	*wave*	ga di ge na	na ge ti te
clap	kat ti te ta	ge na dha ge	*clap*	ti te ka ta	ga di ge na
Mohra					
clap	dha ge – na	dhet – ta –	*wave*	dhet – dhet –	ta – (ghe ge
clap	ti te ka ta	ga di ge na	*wave*	dha –) (ghe ge	ti te ka ta
clap	ga di ge na	dha –) (ghe ge	*clap*	ti te ka ta	ga di ge na
clap	dha)				

paran plus a *mohra*, calculated to end on *sam. Pakhavaj* players have resurrected many older, obscure *tala* frameworks as the basis for solo performances, many possessing names of Hindu gods: Brahm, Rudra, Lakshmi, and so forth. They also recite and play compositions that blend drum syllables – *bol* – with lines of verse praising gods: the elephant-headed Ganesh, Remover of Obstacles, is a popular subject for an opening piece, an invocation for an auspicious blessing.

The role of the *tabla* as accompaniment to vocal genres differs from *pakhavaj*, because it is confined to a far greater extent to maintaining the *theka*, with very few opportunities for solo flourishes. In instrumental music, the modern trend has moved increasingly toward a collaborative performance where the accompanist is given several opportunities to perform solo, during which time the melodist maintains the *raga* composition as an aural marker of the *tala. Theka* and melodic composition become important frames of reference for the *tala* structure in the absence of the clapping gestures of Karnatak music and *dhrupad.* This is true also of *lahra*, a tune specifically designed to accompany the discrete genre of *tabla* solo.

Many different types of composition are available to the *tabla* player, but once again all fall into one of two categories: those that maintain the structure of the cycle and those that are calculated to end on a target beat, the *sam.* As far as the latter category is concerned, *tabla* borrows heavily from the structures of the *pakhavaj*: *tukra* is the equivalent of *mohra*, ending with a threefold *tihai*, and a *chakradar-tukra* repeats that structure three times. A *gat* is a specialized composition of mostly *tabla* material and is prized for its specialized techniques: some end with a *tihai* (*gat-tukra*), and others blend *tabla* material with *pakhavaj* phrases (*gat-paran*).

What truly sets *tabla* apart is the manner in which pieces that maintain the cycle are structured and performed. *Peshkar* ("presentation") and *bant* ("division") are slower, introductory compositions, *qaida* ("base; rule") is the primary vehicle for developing variations on a theme, and *rela* ("torrent") presents a stream of rapidly articulated phrases. There is considerable evidence to suggest that these compositional types emerged from *theka* and its embellishments and variations, particularly those for *tintal.* Crucially, all are subject to transformations dependent on the *khali* of the cycle. Take the popular late nineteenth-century Delhi *qaida* shown in Table 14.8: the 8-count theme (*dhati tedha tite dhadha tite dhage teena kena*) occupies the first half of the cycle, and is then repeated in the second half (*tati teta tite dhadha tite dhage dheena gena*). The right-hand, treble strokes remain the same, but the left-hand bass strokes change from open, resonant sounds to damped ones. As noted earlier with *ektal theka*, the transformation is

Table 14.8 Delhi *qaida*

Qaida theme...				
X	dha ti	te dha	ti te	dha dha
	ti te	dha ge	tee na	ke na
0	ta ti	te ta	ti te	dha dha
	ti te	dha ge	dhee na	ge na
...doubled				
X	dha ti te dha	ti te dha dha	ti te dha ge	dhee na ge na
	dha ti te dha	ti te dha dha	ti te dha ge	tee na ke na
0	ta ti te ta	ti te ta ta	ti te ta ke	tee na ke na
	dha ti te dha	ti te dha dha	ti te dha ge	dhee na ge na
Dohra				
X	dha ti te dha	ti te dha dha	dha ti te dha	ti te dha dha
	dha ti te dha	ti te dha dha	ti te dha ge	tee na ke na
0	ta ti te ta	ti te ta ta	ta ti te ta	ti te dha dha
	dha ti te dha	ti te dha dha	ti te dha ge	dhee na ge na
Vistar 1				
X	dha ti te dha	ti te dha ti	te dha ti te	dha dha ti te
	dha ti te dha	ti te dha dha	ti te dha ge	tee na ke na
0	ta ti te ta	ti te ta ti	te ta ti te	ta ta ti te
	dha ti te dha	ti te dha dha	ti te dha ge	dhee na ge na
Vistar 2				
X	ti te dha ti	te dha ti te	ti te dha ti	te dha ti te
	dha ti te dha	ti te dha dha	ti te dha ge	tee na ke na
0	ti te ta ti	te ta ti te	ti te ta ti	te ta ti te
	dha ti te dha	ti te dha dha	ti te dha ge	dhee na ge na
Tihai				
X	(dha ti te dha	ti te dha dha	ti te dha ge	tee na ke na
	dha – dha –	dha –) (dha ti	te dha ti te	dha dha ti te
0	dha ge tee na	ke na dha –	dha – dha –)	(dha ti te dha
	ti te dha dha	ti te dha ge	tee na ke na	dha – dha –
X	dha)			

represented by a phonemic change from voiced syllables (*dha, ge*) to unvoiced equivalents (*ta, ke*) as the theme approaches the *khali*, and then by the return of voiced syllables as the repeat returns toward the *sam*. Typically, the *qaida* is then played at twice the rhythmic density, though the theme continues to be subject to the bipartite division of the *tala* into *sam*

and *khali* halves. Variations (*vistar*, "spreading") are built from the components of the original theme by repeating, permutating, expanding, and compressing its phrases. *Dohra* ("double"), for example, is a common method of repeating the opening phrase three times. The *qaida* ends with a *tihai* based on the original theme or one of its variations. This Delhi *qaida* with a short sequence of variations and concluding *tihai* (bracketed) can be seen in Table 14.8.

Rhythmic Diversity or Unity?

In a region of the world so obviously socio-culturally diverse, different approaches to musical rhythm are to be expected. Yet as this necessarily brief introduction to rhythmic thought and practice in the Indian subcontinent has tried to show, there is much more that unites the region than divides it, in spite of the tendency of many musicians and scholars to maintain distance between Karnatak and Hindustani music systems, or between elite/concert and local/regional traditions. The fundamental orality of rhythm is ubiquitous, as is the explicitness of *tala* either as gestured, quantitative structures based on arrangements of beats or as qualitative stroke melodies that articulate and represent them. Indeed, it is clear that both Karnatak and Hindustani rhythm combine these quantitative and qualitative approaches to *tala*, and that the rhythmic strategies in their respective performance contexts are really not so different. The all-important beats of a *tala* are anchors that organize the flow of time, frame composition, and coordinate creativity: we have seen that this flow can be maintained with stroke melodies like *sarvalaghu* and *theka*, and through various rhythmic compositions that are bound to and reflective of the structure of the *tala* cycle; and we have noted how the flow may be disrupted by rhythmic patterns and compositions calculated to target a specific beat, most commonly *sama/sam*, the principal marker of creative confluence. One does not need to understand complex theory to sense the sheer excitement of rhythmic performance in South Asia, but an awareness of its beat structures and patterns of maintenance and disruption will most certainly enhance enjoyment of what is one of the world's most thrilling systems of rhythm.

Endnotes

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3 R. Widdess, "Time Changes: Heterometric Rhythm in South Asia," in R. Wolf, S. Blum, and C. Hasty (eds.), *Thought and Play in Musical Rhythm* (Oxford University Press, 2019), 275–313.

4 R. Wolf, *The Voice in the Drum: Music, Language, and Emotion in Islamicate South Asia* (University of Illinois Press, 2014); and "'Rhythm,' 'Beat,' and 'Freedom' in South Asian Musical Traditions," in Wolf, Blum, and Hasty (eds.), *Thought and Play*, 314–36.

5 R. Wolf, *The Black Cow's Footprint: Time, Space and Music in the Lives of the Kotas of South India* (Delhi: Permanent Black, 2005).