TRADITION AND RENEWAL:
THE DEVELOPMENT OF THE KANJIRA IN SOUTH INDIA

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CHAPTER I
INTRODUCTION

Research Questions and Statement of Problem

This dissertation is based on fieldwork conducted in India on the *kanjira*, a diminutive single-headed frame drum with one pair of jingles used in Carnatic music of South India. The dissertation seeks to document the *kanjira* tradition in both its historical and cultural contexts. My sources are audio and video field recordings, interviews, transcriptions, analyses, and published accounts. The findings construct a history of the *kanjira* and contribute to an understanding of its diffusion into a number of different musical contexts, and its performance practice.

The *kanjira* is a small tambourine used in conjunction with other Carnatic percussion instruments in South Indian art music. Its complexity as an evolving musical instrument is shown through historical evidence dating back at least five hundred years. There have been no comprehensive studies of its history, performance practice, organological development, and the ethnography of its performers until now. Only a few articles published in India have detailed the organological issues regarding the *kanjira*’s membrane, shell, and its performers.¹

Given this instrument’s long history and complex performance practice, the problem of reconstructing its history, documenting its diffusion, and subsequent adoption into new musical contexts required my research to explore many unexpected directions. My study began by pursuing the most obvious questions. The instrument was first known in North Indian folk music,

but how and why did it become a part of classical music in South India? How and why did it spread to musical genres and percussionists beyond India? When did this occur? Additionally, the research uncovered data that required other issues to be sorted out, such as the instrument’s organological changes, the name of the instrument not having a common root word in South Indian languages, and the impact of modernization on younger generations of performers.

**Research Methodology**

My field research on this instrument was conducted from 2005 to 2006 and was supported by a Senior Performing Arts Fellowship from the American Institute of Indian Studies at the University of Chicago. This research was carried out in the South Indian states of Tamil Nadu, Karnataka, and Kerala, and in North India in New Delhi and Rajasthan. As a participant-observer, I was able to study with and interview forty-three field informants and attend numerous concerts to observe performance practice in context. I collected more than forty hours of field recordings in audio-visual media. I also had access to the libraries of the University of Madras and The Music Academy and state museums in Tamil Nadu, Karnataka, and New Delhi. The research led to my conducting herpetological observations, organological studies, linguistic analysis, musical analyses, cultural analyses, iconographic studies, ethnography, library research, and transcriptions.

**Issues in the Field**

An important issue in the field preceding a study of the history of the *kanjira* was to sort out all of the various frame drums used in India. This was necessary because the *kanjira* itself appears to have previously been a rather limited topic for research and publication. The investigation of frame drums more broadly helped categorize and track down historical accounts of great value. To begin with, the term for the instrument has many romanizations, some from
North India and others from South India. North Indian terms include *khanjeri* (Urdu) and *khenjir* and *khanjari* (Hindi), while South Indian terms include *kanjira* and *ganjira* (Tamil), *kanjira* (Malayalam and Telugu), and *khanjira* (Kannada), among others. Older terms for frame drums in Tamil Nadu include *sillari*, *sallari*, *jhallari*, *kaipparai*, and *challari*, among others. Some researchers assert that these generally mean *kanjira*, but in my research it was found that many of those terms are more likely onomatopoetic, and it remains unclear if they were used to indicate a *kanjira* or not. Indian ethnomusicologist S.A.K. Durga claimed, “The forerunner of the Frame Drum Khanjari can be said as Dardura or Dardara, the single faced drum described by Bharata in his *Natyasastra [in Chapter 33]*. It looks like a large gong.”² This was a recurring problem among field informants and some published sources in that they were too general and assuming. I was only able to understand such references after cataloguing the wide variety of frame drums played in India. One of the most widespread frame drums in India is known as *tape*, *dapu*, or *dap*, which is a much larger size than the six-inch frame of a *kanjira* but most likely more closely related to *dardara* than to *kanjira*. My research shows a much more likely continuum of smaller and related tambourines diffusing to the South from the North. By piecing together iconographical and historical accounts of these drums, it became clearer that a case for diffusion and adoption was stronger than seeing development purely in the south from other frame drums located there.

The instrument is also described as having various skin types and jingle patterns. In South India, the most common skin in use today is lizard skin, but of the multiple instrument builders and retailers I interviewed, none could identify the exact species. Since trade in goods made with certain endangered reptile skins is illegal, it became necessary to conduct herpetological

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observations and interview members of rural communities where the lizard skins are collected. It was found that the skin of *Varanus bengalensis* was used, which is endangered and one of four *Varanus* species in India. It was also found that the lizard is hunted as a food source and that the building and selling of *kanjiras* is not what drives the desire to hunt the species to decline. The skin is a by-product of the desire for lizard meat in rural communities of southern India. In collecting oral histories and corroborating them with published sources, I was able to identify that Manpoondia Pillai was the individual credited with first using lizard skin and also reducing the number of jingle slots from three to one in the later-1800s in Carnatic music.³

Dealing with the *kanjira’s* formidable technique and musical sophistication required patient study and many hours of practice in the field not only for my own development and understanding, but also to satisfy the instructors with whom I studied. When they felt a lesson was not yet mastered, I was not given any further information until my playing met with their satisfaction. It was a constant challenge to balance the need for instrumental study with research and concert attendance and still meet regularly with my field informants, many of whom required daily lessons. In addition there was culture shock and ethnocentrism in my daily navigation of cultural values and experiences vastly different from what I had encountered until then in my life.

**Musical Representation and Cultural Interpretation**

The transmission of Carnatic music is achieved mainly through oral tradition. Some memory aids are used in the form of a basic notation that involves text, *solfège* syllables for melodic phrases, and a separate *solfège* system for percussionists known as *solkattu*, for rhythmic phrasing. The subdivided rhythm is not written in a graphic form, although the beat structure, or *tala*, can be shown with the hands (much like conducting) and with written symbols...

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known as anga. The problem was finding the best way to represent aspects of this tradition graphically to allow for effective analyses. Carnatic rhythmic phrases are typically shown in solfège. The solfège is constructed in a manner that shows the phrasing but not the rhythm. This is important to grasp, as the phrasing often sounds independent of the tala (or meter from a Western perspective). Western music notation groups subdivisions according to the meter, and a graphic representation in that manner would distort the appearance of the Carnatic phrasing. It became necessary to collect phrases in solfège form and then graphically represent the rhythm with a grid that shows tala beats and subdivision markings with the solfège syllables placed beneath. In this way, I could show traditional rhythmic phrases and clearly articulate their rhythms. The system I use in this dissertation is explained below with examples showing why this system is necessary.

**Carnatic Rhythms**

Western music notation misrepresents Carnatic musical phrasing because of the need to beam notes according to beat as shown below:

![Music notation](image)

Although the notation is accurate, it does not communicate clearly that a phrase of five in three different speeds is being repeated. Solkattu solfege shows Carnatic rhythmic phrases in syllables with dashes showing rests and subdivision. With this system, the musical phrasing can be clearly seen when written in graphic form. The placement of the tala beats and subdivision is not shown. For musical analysis, one can easily see what the phrase is doing much more readily than in music notation.
Adi Tala (eight beats): A phrase of five in three speeds — the phrase subdivision is reducing, or speeding up, within a steady tala. Below is the same phrase as notated above.

- - Ta - - Di - - Gi - - Na - - Thom - - = 17
Ta - Di - Gi - Na - Thom - = 10
Ta Di Gi Na Thom = \( \frac{5}{32} \) total subdivisions

Beat 1 of next tala cycle (or measure)

The syllables often can be read as sixteenth-note values with dashes as rests. Rather than think beats in a meter, the Carnatic perspective is more concerned with total subdivisions of the tala in terms of rhythmic phrasing. Adi tala indicates eight beats, in this case subdivided in four equal parts each and totaling thirty-two subdivisions in one cycle (or one measure of eight beats from a Western perspective). The total number identifies the phrase as one cycle in duration. A tala grid, shown below, gives the rhythmic placement of the syllables within the tala from the phrase above. The bold syllables show where each line in the solfège phrase above falls in the tala rhythmically. Both beats and subdivision can easily be represented in graphic form with this system below.

1 - - - - 2 - - - - 3 - - - - 4 - - - - 5 - - - - 6 - - - - 7 - - - - 8 - - -
- - Ta - - Di - - Gi - - Na - - Thom - - Ta - Di - Gi - Na - Thom - Ta Di Gi Na Thom

1 Ta

These solfège and grid systems are used to graphically represent rhythmic phrases from Carnatic music, one of the main contexts in which the kanjira is used. The kanjira is also used to perform bhajans (traditional Hindu devotional songs) and fusion (a kind of popular music combing influences from American popular musics with aspects of musics from India). In the musical analyses of the kanjira's performance patterns in these three contexts (seen in Chapters
IV and V), certain cultural phenomena were found embedded at deep levels in Carnatic music that were absent in bhajan performance and appear infrequently in fusion music performance. These phenomena are recurring zoomorphic symbols, other influences from the natural world, and numerological patterning, which I interpret as semiotic representations of, or references, to Hinduism. As Hindu society is hierarchical, I show how changes in context in the music broke with established social hierarchical patterns allowing kanjira players to adapt to new contexts largely without the established patterning of Hindu cultural norms.

**Review of Related Literature**

In reconstructing the history of the kanjira, few publications offered good documentation about this instrument. In tracing the history and movement of the kanjira across North India, Mughal court iconography showed evidence of transculturative processes. Anthropologist Fernando Ortiz first defined transculturation as a preferable term in place of acculturation:

*Acculturation* is used to describe the process of transition from one culture to another, and its manifold social repercussions. But *transculturation* is a more fitting term.

I have chosen the term transculturation to express the highly varied phenomena that have come about in Cuba as a result of the extremely complex transmutations of culture that have taken place here, and without knowledge of which it is impossible to understand the evolution of Cuban folk, either in the economic or in the institutional, legal, ethical, religious, artistic, linguistic, psychological, sexual, or other aspects of its life.\(^4\)

In this dissertation, I show various processes at work in Indian musical culture that involved the kanjira. Along with transculturation, a general process of Indianization or indigenization occurred followed by diffusion and renewal of various frame drums (such as the khenjir and duff) with other cultural phenomenon.

In *Imaging Sound: An Ethnomusicological Study of Music, Art, and Culture in Mughal India*, Bonnie Wade states that the transformation of Mughal Court music and culture was one of gradual Indianization:

As Indian society became transformed by the interplay and integration of ethnic and religious forces so, too, did the empire and culture, including artistic components. The Mughal empire was constructed on four pillars: leadership, alliance, balance of power, and tolerance, the last of which began to crumble during the Aurangzeb’s tenure. To achieve success in leadership, the Mughals had to exert their dominance in the South Asian sphere while simultaneously keeping content all the prime players within it — Rajput, Turki, Persian, Hindu, Muslim, Sikh, and myriad others. The key alliance for the Mughals was with the Rajputs, whom Akbar had changed from challengers to agents of the empire. Within the larger world context, with its catalogue of multiple empires and civilizations, the dominant players were the Indian and Persian empires, so the emperor had to play his part in maintaining a regional balance of power between the Mughals of India and the Safavids of Iran.\footnote{Bonnie C. Wade, *Imagining Sound: An Ethnomusicological Study of Music, Art, and Culture in Mughal India* (Chicago: The University of Chicago Press, 1998), 160.}

As Wade points out the need for Mughal rulers to balance the cultural forces at work within India, doing so caused more appearances of indigenous musical culture in Mughal miniature art, which included the *khenjir*.

Another issue in this dissertation regarding the *kanjira* is continuity and change. I hope to show that the use of this instrument experienced both periods of stability as well as adaptive change throughout its history. Presenting several models about culture change, Gerhard Kubik wrote,

> Change in a tradition may occur through one or several processes which often take place simultaneously. These processes may be described as either

a) generated by external (foreign) stimuli (*externally stimulated culture change*), or

b) generated by stimuli from inside the culture (*internally stimulated culture change*).

While this seems to be a valid distinction, processes of change are usually
brought about by a combination of these stimuli.⁶

Kubik would later write about change from within Africa resulting from the interchange between various polities:

Thinking of precolonial Africa as a mosaic of rigidly traditional, tightly knit, autonomous, ethnic/linguistic units overlooked what might well have been the only stable trade in African cultural history, as it probably was elsewhere: continuous change. The processes of innovation sometimes went slowly and sometimes fast; abrupt leaps sometime occurred: but no people, no cultural group, remained stagnant.

In African prehistory, there was always contact/ if not always by grand migrations, at least between neighboring groups. In that manner, innovations spread from group to group, often as a trickle. In other instances, it spread by migration through wide areas, even across the continent. And in the last millennium, innovations began to spread in a skipping manner: from king’s court to king’s court, with envoys exchanged between them; or from trading post to trading post, leaving large parts of the countryside untouched.⁷

With regards to the *kanjira*, both of Kubik’s ideas apply within the cultural context of India, as diffusion with the ever-expanding Mughal courts within India between the 1500s and 1700s and external stimuli such as British rule, modernization, and foreign musical influences helped to bring about change from established patterns of stability in *kanjira* performance practice.

With regards to cultural diffusion, “Stimulus Diffusion” by American anthropologist Alfred Krober stated that,

Diffused culture material often contains concrete or specific elements by which the fact of diffusion can be subsequently recognized even in the absence of a record of the event. In some cases it happens that the diffusion is definitely piecemeal; only fragments of a larger complex or system reach the affected culture or are accepted by it. In this event, the fragments or isolated items may be put into an entirely new context in the culture which they enter. Such partial bits may diffuse more widely than the patterns or systems or complexes of which they form a part. In the inter-influencing of cultures, it must frequently happen that a new item or specific trait


fills some need or is of obvious advantage in a culture which has not previously possessed it; or at any rate that there is nothing already established with which it would have to compete for acceptance.\textsuperscript{8}

Krober’s identification of the diffusion process as “definitely piecemeal” applies to the context of fusion music and Western percussionists who adopted the \textit{kanjira} for use outside its original traditions in India, which I detail in Chapter V.

Writing about diffusion and classical music specifically within India in the works of Carnatic composer Muttuswami Dikshitar, scholars Chandra Balachandran and Surinder Bhardwaj point out,

Although the larger Indian space was still territorially contested due to different warring factions, significant movement of people, products, and ideas was taking place at the local, regional, and national scales. As a musician, Dikshita was part of the cultural undercurrents that sustained and nurtured a fundamental Indian syncretic.\textsuperscript{9}

Dikshitar lived from 1775-1834, and as these scholars point out, like Kubik in Africa, significant movement of people, and subsequently ideas and products, can occur from within a geographical area resulting in change. The time period about which Balachandran and Bhardwaj wrote covers much of the same period with historical accounts of the \textit{kanjira} that I draw attention to in Chapter II.

With regards to the idea of renewal, anthropologist John Janzen wrote of Belgian ethnologist Albert Doutreloux,

The perspective of continuity or process is not altogether lacking in existing works but it is not systematically developed; it is often replaced by a more static theoretical perspective. Doutreloux, for instance, notes that the BaKongo have a remarkable facility of adaptation, of partial obliteration of their tradition and the


\textsuperscript{9} Chandra S. Balachandran and Surinder M. Bhardwaj, “Geography as Melody in Muttusvami Dikshita’s Indian Musical Works,” \textit{Geographical Review} 91, no. 4 (October 2001): 692. Note that the composer’s name can be romanized as Muttusvami Dikshita, Muddusvami Dikshitar, or Muttuswami Dikshitar.
substitution of a new feature that says the same thing another way; nevertheless, he goes ahead elsewhere to construct a static metaphysic of Kongo magic.\(^{10}\)

Janzen’s account of Doutreloux’s identification of renewal at work in Kongo culture is similar to a process of renewal I see at work on the *kanjira* within India. In Chapter II, I detail its spread from northern areas southwards, its involvement in various musical contexts, and its subsequent renewal to fit some of those contexts.

Iconographic studies have much to offer in the reconstruction of particular musical histories. To gain a general familiarity with the various styles of Indian miniature painting and sculpture surveyed in this dissertation, I relied upon the following works: *Music in Indian Art* by M. Hariharan and Gowri Kuppuswamy, G.H. Tarlekar’s and Nalini Tarlekar’s *Musical Instruments in Indian Sculpture*, B. Chaitanya Deva’s *Musical Instruments in Sculpture in Karnataka*, B.N. Goswamy’s *Pahari Masters: Court Painters of Northern India*, Mohinder Singh Randhawa and Doris Schreier Randhawa’s *Guler Painting*, Pramod Ganpatye’s *A Guide to the Indian Miniature*, Dr. Daljeet’s *Immortal Miniatures: From the Collection of National Museum, New Delhi*, and Dr. Richa Jain’s *Song of the Rainbow: A Work on Depiction of Music Through the Medium of Paintings in the Indian Tradition*.\(^{11}\) However, the single most important resource for this dissertation with regards to iconography and Indian musical history was Bonnie

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C. Wade’s *Imaging Sound: An Ethnomusicological Study of Music, Art, and Culture in Mughal India*. Her work provided an important model for how to interpret Mughal miniature paintings and provided a number of additional images that filled in the historical continuum in my survey in Chapter II.

To understand the complex topic of Hinduism, Lawrence Babb’s *The Divine Hierarchy: Popular Hinduism in Central India*, M.N. Srinivas’ *Caste in Modern India and Other Essays*, and Edward Harper’s “Ritual Pollution, as an Integrator of Caste and Religion” specifically detailed issues on social hierarchy in Hindu societies that helped me relate hierarchical aspects of Carnatic music to Hindu culture in general.\(^\text{12}\) Trichy Sankaran and Matthew Allen’s article “The Social Organization of Music and Musicians: Southern Area” also deals with this issue.\(^\text{13}\)

For general familiarity with the classical musics of India, Bonnie C. Wade’s *Music in India: The Classical Traditions* remains a worthy introduction. More recent ethnomusicological surveys of Indian classical music that include coverage of a blend of musical and cultural issues are *Music in South India: The Karnatak Concert Tradition and Beyond* by T. Viswanathan and Matthew Harp Allen and *Music in North India* by George E. Ruckert.\(^\text{14}\) Alison Arnold’s introduction to “Karnatak Tala” in *The Garland Encyclopedia of World Music: Volume 5: The

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Indian Subcontinent clarified the influence of folk music on some South Indian tala. Specific works by Indian scholars that were more detailed on the music history of India include Neerja Bhatnagar’s Evolution of Indian Classical Music (1200-1600 A.D.), Salem S. Jeyalakshmi’s The History of Tamil Music, S. Seetha’s Tanjore as a Seat of Music (During the 17th, 18th, and 19th Centuries), M.B. Vedavalli’s Mysore as a Seat of Music, and Lakshmi Subramanian’s From Tanjore Court to the Madras Music Academy: A Social History of Music in South India. With the exception of Subramanian’s book, all of these sources were consulted for insights into differences between the classical systems, musical details on raga and tala, compositional structure, and historical data on courts and composers, but very little useful data was found regarding the history of the kanjira. Subramanian’s book was valuable in that it articulated important aspects of change in the social climate surrounding music in Madras in the early twentieth century, and this related to my ideas presented in Chapter IV on social hierarchy and its effects in the percussion section of Carnatic music.

Gerry Farrell’s article “Music and Internationalization” and his book Indian Music and the West provided details on the early meetings of Indian classical musics with Western music. Additionally, Peter Lavezzoli’s book The Dawn of Indian Music in the West gave other details on the movement of Indian classical musics to the U.S.A. that were helpful to my detailing of fusion

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music development in Chapter V.\textsuperscript{17}

Three dissertations on Carnatic percussion to date include Robert Brown’s “The Mrdanga: A Study of Drumming in South India,” John Hartenberger’s “Mrdangam Manual: A Guidebook to South Indian Rhythm for Western Musicians,” and David Nelson’s “Mrdangam Mind: The Tani Avartanum in Karnatak Music.” All, being focused on the mridangam, were performance-based studies and not historical. A thesis on solkattu by vocalist Lisa Young, “Konnakol: The History and Development of Solkattu — the Vocal Syllables — of the Mridangam,” was also written from a performance-based perspective. The problem with these sources for me was in how each of the authors chose to represent the Carnatic rhythmic phrases. Each has their own presentation system with some using geographic shapes, syllables, or abbreviations for syllables. Nelson and Young found the need to include DVD and CD media with their documents to help clarify what they presented. The Canadian-based Carnatic musician Trichy Sankaran has published several books on mridangam drumming and solkattu, but these also have a presentation system that does not always present phrases and rhythm with accessible clarity. Although each of these sources is reliably detailed, I found none to be suitable models for how best to organize my dissertation on kanjira.\textsuperscript{18}


British ethnomusicologist Katherine Brown, in “Reading Indian Music: The Interpretation of Seventeenth-Century European Travel-Writing in the (Re)construction of Indian Music History,” stated,

It has increasingly been recognized that European travel literature, with its easy accessibility and its copious documentation of cultural detail, constitutes a valuable source of musical information. However, travel-writing is also a notoriously complex and contradictory genre, generally denying a straightforward reading. This has rarely been taken into consideration by musicologists using these sources. When interpreted critically, however, this genre does offer a unique perspective on music, which is able to make a significant contribution to the reconstruction of Indian music history.¹⁹

This article was important in pointing out a particular and necessary direction of my research in surveying this literature, which yielded a number of important accounts. These, in turn, connected my historical reconstruction from the end of the Mughal iconographical record up to the 1900s. I found these accounts in sources that ranged from travel literature, census publications, and illustrated accounts, to diaries, business documents, catalogues, and early

surveys of Indian music. The dating and geographical locations of each coupled with their accounts of the kanjira and other frame drums were valuable in piecing together my historical reconstruction.

Scholarly work on the history of frame drums is relatively new. A range of scholars from a variety of disciplines have previously published on frame drums found elsewhere in the world. Much of this work is relatively recent. Of the twelve authors’ work I examined, seven of them were published between 1999-2008 with half of the authors being ethnomusicologists.

Important early work by Hayes, Lansing, and Hickman documented the discovery of frame drums from ancient Egypt. Archaeologist Lise Manniche, has published her findings on Egyptian frame drums in “Rare Fragments Found of a Round Tambourine in the Ashmolean Museum.”

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21 I would like to acknowledge ethnomusicologist Richard Graham for introducing me to the work of Ambrose Hayes and William Lansing, Hans Hickman, Carol Meyers, and Tony Langlois.

Museum, Oxford” and “Musical Instruments from the Tomb of Tut’ankhamūn.” In a number of her articles, archaeologist Carol Meyers documented that a significant number of women were portrayed with the frame drum in the visual arts of Ancient Israel. 

Italian ethnomusicologists Febo Guizzi and Nico Stati in Le forme dei suoni: l’iconografia del tamburello in Italia surveyed ancient Greco-Roman iconography. In this work and Guizzi’s previous article “The Continuity of the Pictorial Representation of a Folk Instrument’s Playing Technique: The Iconography of the Tamburello in Italy,” important observations on the technique of the Italian tamburello were derived from their examinations of iconography from that area.

Veronica Doubleday’s ethnomusicological article “The Frame Drum in the Middle East: Women, Musical Instruments, and Power,” documented that across the Middle East, frame drumming has long been associated with women. In her survey of frame drums, she stated “My aim in this article is twofold: (1) to contribute to the ethnography of frame drums, and (2) based on this data, to offer theoretical conclusions on gender and musical instruments.”

In writing about Morocco, ethnomusicologist Tony Langlois documented the use of frame drums in North African contexts in his article “Heard But Not Seen: Music Among the Aissawa

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Women of Oujda, Morocco.”

His work helps to show that scholars have turned their attention to contributing frame drum ethnography from a broad variety of contexts and cultures.

Ethnomusicologist and musician Svend Kjeldsen has written two theses documenting different aspects of the Irish frame drum known as *bodhrán*. In “The Coleman Handstrikers: Old Style Bodhrán Playing in South Sligo,” he documented a tradition of beating these drums with the bare hand while in “Bodhrán-playing in Ensembles: The Creative Spacing Process,” he details contemporary stick-beaten developments in ensemble playing. With these two works, he has effectively documented a musical tradition and its renewal regarding the *bodhrán* in Irish contexts.

Malaysian ethnomusicologist Mohd Hassan Abdullah’s dissertation, “Kompang: An Organological and Ethnomusicological Study of a Malay Frame Drum,” is yet another academic study of a frame drum tradition that covers transculturative movement of people, religion, ideas, and music that resulted in a new frame drum tradition, the *kompang* of Malaysia. Abdullah describes how this renewed Arab frame drum was adapted into Malay culture:

The kompang performance is an important part of the traditional Malay wedding ceremony especially in the Southwest of Peninsular Malaysia. The activities and ritual practiced during the traditional Malay wedding ceremony came from diverse cultures, of indigenous, Hindu and Islamic traditions blended together. The Malay people practiced Hinduism before Islam spread into the Malay Archipelago. When Islam became a dominant religion in the region, the Malay practiced the Islamic way of life, but still maintain some of the Hindu culture in their life including the wedding ceremony.

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He wrote further about the influence of Islam in the region stating, “The Islamic influence has left many traces of instruments in Southeast Asia including frame drums. The primitive tribes have absorbed most of the Islamic instruments and they have become part of their culture.”

Abdullah’s work shows that parallel processes of transculturation and adaptive renewal have occurred regarding frame drums and the mix of Islamic and Hindu cultures in areas outside India.

Spanish Musicologist Mauricio Molina has published several important works on frame drums in early music contexts. Most notable were his dissertation and subsequent book *Frame Drums in the Medieval Iberian Peninsula*, which remained the most valuable model for me on how to approach frame drum ethnography with regards to my study of the *kanjira*. His paths of investigation included a number of trends in frame drum ethnography:

A study of iconographical and literary sources reveals the widespread use of two different types of hand-held frame drums in the medieval Iberian peninsula: one of circular shape with parchment stretched over one side of its shell, and another of square shape with parchment covering both sides of its body. While both varieties were described in medieval Iberian Latin sources by the generic term *tympanum*, in Castilian and colloquial Arabic literature, specific terms such as *pandero, bandair, adufe, and duff* were assigned to each type according to its shape.

Molina’s careful observations of iconographic, linguistic, and organological sources offered a theoretical framework from which I could pursue my own study of frame drums within India. In looking at Iberian frame drums as symbols, he stated,

The medieval *pandero / panderete* and *adufe*, in addition to their function as musical instruments, also operated as symbolic and emblematic objects both in art and literature. As symbols, the instruments stood for and suggested something else that was not intrinsically connected with them in order to communicate and reinforce social, religious, and moral

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30 Ibid., 117.


values of a specific group.33

His dealing with frame drums as symbols gave rise to the idea for me that other semiotic representations may be identified in other frame drum traditions, which I detail in Chapter IV.

Canadian ethnomusicologist Judith Cohen conducted fieldwork in Spain and Portugal associated with the Iberian frame drums known as adufe or pandero cuadrado. In her article “‘This Drum I Play:’ Women and Square Frame Drums in Portugal and Spain,” she explains various gender roles involving women and these frame drums:

In some parts of Portugal adufeiras (i.e. women players of the adufe), are still central figures in certain religious activities, especially in the Beira Baixa area, close to the border with Spain. The adufe plays a pivotal role in local pilgrimages and their religious processions (romarias), and some song lyrics allude to their specific day or place of the romaria.34

Besides gender associations, her article also details the decline of this frame drum tradition and how these instruments have undergone innovations or renewals as men have adopted them for modern popular musics:

In Portugal the adufe is often used emblematically, especially in ensembles in regions where it is not traditionally found. Since the 1970s, Portuguese urban revival groups and protest singer-songwriters — men, in most cases — have played adufe. These include the legendary José (‘Zeca’) Afonso, and in Beira Baixa some village women have adjusted traditional patterns to conform to his recordings. In Galicia, men as well as women play square pandeiro, and have done for some time. In both Spain and Portugal, revival and fusion groups have been using adufes, usually played by men, with or without women singing.35

This directly relates to how I see the kanjira’s renewal and adoption in other contexts, such as fusion, as presented in Chapter V of this dissertation.

33 Ibid., 107.


35 Ibid., 111.
In my article, “Frame Drums and Tambourines,” published in the Continuum Encyclopedia of Popular Music of the World, Volume II: Performance and Production, details a variety of frame drums and how Western percussionists created a pan-ethnic frame drum tradition for popular music contexts:

As a result of a new type of Western percussionist approaching frame drums as a single family of instruments, it has become common to mix the playing techniques, grips and concepts associated with each instrument to create a composite vocabulary that can be used on almost any frame drum as its paying technique. Since this approach operates mostly outside of each instrument’s respective cultural tradition, the innovative use of frame drums in Western popular music has continued alongside traditional frame drum use in various regional world musics.36


The use of frame drums in popular music during the 1980s blossomed into an innovative renaissance largely as a result of the work of frame drum virtuoso Glen Velez. Velez’s innovations centered around detailed studies of unrelated frame drum techniques, such as Egyptian riq and tar, Azerbaijani ghaval, Basque panderoa, Moroccan bendir, Indian kanjira, Brazilian pandeiro, and Italian tamburello. Velez subsequently applied these techniques and others as a unified performance technique to frame drums such as Irish bodhrán (Velez plays with bare hands), Spanish pandero and adufe, Thai thon and rammana, and Native American frame drums.37

In my article “Performing the Past, Present and Beyond: Glen Velez and Researching Frame Drum History,” when asked what he discovered in researching frame drum history, Velez’s response indicated that iconography was a major source of information, that most ancient iconography depicted female performers, and from iconographical studies he was able to observe...


important organological features such as the presence of jingles.\textsuperscript{38} Velez’s observations on iconography, gender, and organology are yet another example of the trends in frame drum ethnography.

This preceding survey of scholarly frame drum ethnography shows several important developments. Ethnography about frame drums is by international scholars from a variety of disciplines including archaeology, religious studies, gender studies, ethnomusicology, and musicology. While scholars have documented aspects of frame drum traditions in many cultures, none have focused on India. This dissertation will make an important contribution to the field by filling this void. Several scholars discussed above have previously identified trends with regards to transculturation, diffusion, tradition, renewal, semiotic representations, linguistics, gender, organology, and historical documentation. Several of these trends appeared in the work of scholars documenting broader cultural phenomena, such as the work of Ortiz, Kubik, Krober, and Janzen, among others. Many of these facets are key components in my study of the South Indian\textit{ kanjira}.

\textbf{Organization of Dissertation}

Following this Introduction I seek to reconstruct the\textit{ kanjira}’s history, detail its organology and evolution, make ethnographic observations on its performers, detail and interpret its performance practices, and delve into aspects of continuity and change in the multiple contexts into which this instrument has been adopted. Chapter II presents a historical reconstruction through linguistic and iconographic analyses, fieldwork documentation, and published accounts. Chapter III presents organological and ethnographic observations compiled from statistical data gathered in fieldwork, herpetology, and library research. Chapter IV presents musical and

\textsuperscript{38} Robinson, “Performing the Past, Present and Beyond: Glen Velez and Researching Frame Drum History,”\textit{ Percussive Notes} 51, no. 4 (July 2013): 30-31.
semiotic analyses of audio-visual recordings and transcriptions gathered and made during fieldwork. Chapter V presents contextual analyses made during fieldwork. An appendix gathers a selected list of *kanjira* performers followed by a bibliography, selected discography, and selected videography.
CHAPTER II
RECONSTRUCTING A HISTORY OF THE KANJIRA

Because the history of the South Indian Carnatic musical instrument known as kanjira has not yet been reliably documented, a reconstruction is made here based on fieldwork in India during which I collected data and oral histories, made linguistic and musical analyses, and consulted iconographic studies. The evidence shows that foreign musical instruments entered the Mughal courts through a process of transculturation. Some of these were subsequently Indianized after which diffusion to southern India occurred. Some of those instruments, including the kanjira, were reinterpreted to fit local social and musical contexts.¹

Linguistic Observations: The Term Kanjira

Understanding the term kanjira was problematic because of the many languages used within India involving multiple romanizations. These include kanjira, khanjira, khanjari, ganjira, khenjeri, and other related terms such as manjira, kaiparai, sallari, and jhallari, among others. Compounding this situation are the multiple types of frame drums in several areas of India, some related, some not, including the tape, tapu, dhapu, def, dap, and daf, among others.

Historical publications yield a variety of terminology in researching the problematic history of the kanjira. The principal areas for Carnatic music research in southern India include the states of Tamil Nadu, Karnataka, Kerala, and Andhra Pradesh, where Dravidian languages are

¹ The term “frame drum” indicates any hoop-framed membranophone for which the depth of the shell is far less than the diameter of the skin, is equipped with single or double membranes, with or without jingles or other attachments, hand or stick-beaten, and with a frame made in circular, square or octagonal shapes. The classification for these drums was first developed by German organologists Eric Moritz von Hornbostel and Curt Sachs in their 1914 book, Zeitschrift für Ethnologie, where the original German term was Rahmentrommel. A translation of that work was published by Anthony Baines and Klaus P. Wachsmann in The Galpin Society Journal 14 (March 1961): 3-29. The kanjira is specifically a diminutive tambourine of six to seven inches used in South Indian Carnatic art music since the late-1800s and is equipped with a round and convex frame, a single pair of jingles, a lizard skin, and beaten with one hand in a manner that emulates other Carnatic membranophones that utilize both hands in their performance practice.
spoken. In Tamil Nadu the principal language is Tamil, while in Andhra Pradesh it is Telugu, in Karnataka it is Kannada, and in Kerala it is Malayalam. English is used in all of those areas to some degree, as are Hindi and other local dialects, while Sanskrit terminology persists as well. No standardized romanization has officially been in use although British English is the standard spoken form.

The term kanjira is not found in the southern languages, Tamil, Telugu, Malayalam, or Kannada or in Sanskrit, and the term does not appear in any of the Indian dictionaries for these languages. The closest terms are khanjeri and khanjari, which are from the North Indian languages Urdu and Hindi. The term, like the instrument itself, diffused from the north to the south where its original name, construction, and performance practice were reinterpreted to fit local contexts.

In the Tamil alphabet there is no letter indicating a separate “k” from “g” nor is there a letter for “kh.” There is little or no difference in the sound of the two consonants “k” and “g,” and the Tamil written form uses a single character for each. Both kanjira and more commonly ganjira are used in Tamil areas. In Kannada language, the term more closely resembles its northern origin as khanjira. In Malayalam and Telugu languages, the term remains kanjira. The lack of a common Dravidian root term from languages in southern India may indicate that the origin of the term itself lies outside of the immediate area.

Other frame drums in India clearly have foreign root sources for their nomenclature. The daf, a Persian frame drum, migrated to northern India with broader Persian influence in painting and music. The oldest term for this drum is dap, daf being an Arabic form. Many of the terms for

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2 Dravidian languages are said to be native to southern India and at one time may have been spoken all over the subcontinent. The Indo-Aryan languages in northern, central, western, and eastern parts of India show a more common root source with Persian languages and have spread into India from outside in many cases replacing the Dravidian languages in those areas over time. For more on languages in India see The Oxford History of India, 4th edition, by Vincent A. Smith (New York: Oxford University Press, 2005), 41-42, 44, 50-53.
frame drums across northern India, including *tāpe, tapu, dhapu, duff, duffli, dāyere, dā‘re*, and *dap*, are derived from Persian and Arabic nomenclature. Languages in northern, central, western, and eastern India are derived from the same source as those in Iran (Indo-Aryan languages), as the two areas experienced similar influence and migrations of peoples since the Neolithic period (9,500 B.C.E.). Diffusion of Islam from Persia, and later Afghanistan, brought with it elements of culture such as religion, miniature painting, and music.

The term *khanjari* does not appear to be an imported term in India, although *khan* is Arabic indicating a formal title for a ruler or its simpler form as “Mister” before a male name. The term *khanjar* is applied to a dagger, and is of non-Indian origin. This term spread throughout Central Asia, Turkey, and Afghanistan by the eighth century. The Arabic terms *jalajil* (small pellet bells) and *sanjat* (disc jingles as on a tambourine) were not otherwise adopted in areas where Arabic language influences penetrated northern India. The Hindi term *jira* is used throughout northern India for a variety of spices, while *jari*, also Hindi, is a term in northern India used to indicate political bodies and other non-musical meanings. Then there is the problem of the pronunciation of the terms. In Hindi, but not in Urdu, the syllable “z” is often pronounced as “j.” These terms have no obvious Arabic or Persian sources or musical context.

In an interview, eminent South Indian scholar T.S. Parthasarathy informed me that the term *khanjeri* is of Hindi/Urdu origin, pointing out that a translation of a passage in the *Ain-i-Akbari* uses *khenjir* to describe a small “duff hung round with small bells,” while ethnomusicologist Bonnie C. Wade also mentions this translation where the romanization is *khanjari*.

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3 T.S. Parathasarathy (1913-2007) was 93 when I met him. He had government positions in many parts of India. From an early age, he had a deep interest in both music and languages and became fluent in Sanskrit, Hindi, Tamil, Kannada, Bengali, Telugu, and English. He was my primary informant while in India for terminology translation, but died in 2007 soon after I left India. The *Ain-i-Akbari* is a historical account of the reign of the third Mughal emperor of India, Jalāl ud-Dīn Muhammad Akbar, from the 1500s written by Abu al-Fazl ibn Mubarak. Also see Bonnie C. Wade, *Imaging Sound: An Ethnomusicological Study of Music, Art, and Culture in Mughal India* (Chicago: The University of Chicago Press, 1998), 144.
Parthasarathy informed me that Farsi was the official court language of the Mughal Empire, which accounts for the prevalence of Persian nomenclature in the iconographical record that often depicts frame drums in Indian miniature paintings. Hindi and Urdu were north Indian languages that are partly derived from Persian sources, with the exception that Urdu makes more use of common influences from Farsi, Turkish, and Arabic, while Hindi makes more use of Sanskrit roots. Since no form of *kanjira* appears in Sanskrit sources, Urdu and Hindi are the most likely sources for the original terms *khenjir* and *khanjari* respectively.

Dr. Premeeela Gurumurthy’s translations from ancient Tamil poetic texts, such as *Periya Puranam* (compiled in the 1100s), yielded an assortment of terms that most likely indicate frame drums, tambourines, and other percussion in Tamil Nadu at that time. Older Tamil terms for small hand drums/tambourines include *sillari* or *sallari*. Later *jhallari* and eventually *challari* were used to indicate the sound or *jhal* of some percussion instruments. The *sal* or *jhal* part of these terms is onomatopoetic, and the later spellings are derived from Sanskrit pronunciations.

Dr. A.N. Perumal, in *The Music of the Tamils*, describes *sillari* as a small round drum while *jal jal* indicates the sound of foot bells (*ghungroo* or *salangai* in Tamil).

Because of the vague manner in which both ancient (and sometimes current) music scholarship in India describes such ancillary musical instruments, it remains unclear if these archaic Tamil membranophones are related to the modern-day Carnatic *kanjira*.

In Tamil, *Kanja* means “skin” while *jira* onomatopoetically represents a small jingling anklet worn by Indian women. Since the instrument diffused to South India, the term *khanjari* translated into local Tamil as *kanjira* and/or *ganjira* (literally “skin with bells”) makes sense for this small hand drum linguistically in terms of local syntax and onomatopoetically in terms of the

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4 A.N. Perumal, *The Music of the Tamils* (Chennai: International Institute of Tamil Studies, 1984), 114, 144. Tamil translation assistance in this area is credited to Premeeela Gurumurthy, Chair of the Department of Indian Music at Madras University in Chennai, Tamil Nadu, India in 2005.
semantic representation of how the foreign instrument sounded. The term remains *kanjira* in non-Tamil areas such as Kerala and Andhra Pradesh, and this suggests the spread of the instrument and the Tamil term to those neighboring South Indian states. The exception is in Karnataka to the northwest of Tamil Nadu where the term became *khanjira*. Kannada has some terms in common with both Hindi and Tamil but uses separate letters for both “k” and “kh.” Since Mughal rule did extend into Karnataka, and the original term is tied to Hindi, the “kh” spelling and pronunciation was how it translated into Kannada suggesting a tie to the north. The linguistic evidence shows Karnataka as more closely linked to northern India and that the term experienced little change in its diffusion there. The linguistic evidence shows that the term was changed into a more local form in Tamil Nadu (an area that was largely not part of Mughal rule). The language of Kerala, Malayalam, is based on Tamil but does have letters in its alphabet for both “k” and “kh.” Since the term is identical in Malayalam as in Tamil, it suggests to me that the term was adopted. Telugu language includes influences from both Sanskrit and Urdu and employs representations for both “ka” and “kha.” Despite this commonality with Urdu, the Tamil term seems to have been adopted there as well. The linguistic analysis shows clearly a transmission of nomenclature from northern India to the south where it was translated and spread to local contexts in neighboring states.

While the linguistic evidence suggests that the term *kanjira* is of North Indian extraction, the iconographical record in northern India shows further evidence of transculturation, Indianization, diffusion, and reinterpretation as the *kanjira* moved south. The consistent physical attributes in shape, size, number and position of jingles, performance grip, gender, and social context remained relatively consistent over two centuries before the instrument appeared in Carnatic music of southern India. An examination of the iconographical evidence from 1527 to
1823 and published accounts from 1796 to 1914 in comparison with photographs of more contemporary Indian musical contexts between 1860 to 2005 were used to reconstruct a history of the kanjira during this long process of diffusion and reinterpretation.

**Identifying Frame Drums in Indian Iconography**

As iconographical records I have used the various schools of Indian miniature painting because of their compositional accuracy and reliability, and the ability to trace historical areas and periods. In 2005, during a visit to the National Museum in New Delhi, northern India, I photographed many paintings in various styles from the 1600s to the 1800s. Important secondary sources include various books on Indian miniature paintings, the most important being Bonnie C. Wade’s *Imaging Sound: An Ethnomusicological Study of Music, Art, and Culture in Mughal India*, some of which I include here because she had access to a wider range of international museums and historical periods. Of the 167 figures and twenty plates Dr. Wade collected for her publication, fifty-eight show a variety of frame drums in various social contexts dated between 1527 and 1823. I collected another twenty from the 1600s to the 1800s. What follows are details on thirty-one images (eleven from Wade’s book and twenty-one from my fieldwork out of the 208 total that I examined) that show evidence of transculturation, Indianization, and diffusion in the movement of musical instruments from various cultures to and within India. In these images I

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identify types of frame drums used, countries of origin, the contexts for frame drums, painting styles, regional locations, and dates. This is necessary to establish a historical continuum for certain types of frame drums used in various parts of India, from which observations specific to the kanjira’s history can be reconstructed.

The Indian miniature painting styles include Mughal, Deccan, Pahari, Rajasthani, and Guler. Each regional style also has sub-styles. These painting styles show a transculturative legacy of Islamic influences from Iran and Turkey blending with Hindu, Jain, Buddhist, Sikh, and other indigenous Indian cultural influences. These syncretic painting traditions introduced the researcher to their respective time periods, geographical locations, and stylistic markers. Figure 1 shows the location of these various Indian miniature painting styles.

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The Mughal Empire and its painting style date from the 1500s to the mid-1800s involving nearly the entire subcontinent of India. Figure 2 shows the extent of this political entity by 1707. The Mughal painting style developed as a style of miniature painting often featured in illustrated court documents deriving influence from Persian Islamic miniature painting style. Subject matter from various Indian religious influences such as Jainism, Buddhism, and Hinduism are also evident in Mughal and other Indian styles. The later Islamic, Hindu, and Sikh courts adopted this style, often employing Persian and Turkish artists whose function was to transmit the technical aspects of this style of painting. This particular cultural makeup led to syncretic subject matter in the visual compositions of these styles. Although Persian and Turkish technical aspects were preserved, Indian religious orientations permeated the subject matter.

Figure 2. Map of Mughal Empire from 1530-1707 extending across India.

Mughal painting was the earliest miniature style to develop in India and is known for its precise depictions of daily life, court proceedings, weddings, births, celebrations, funerals, circumcisions, religious scenes, musical contexts, and martial contexts. These depictions were often illustrations for court commissioned historical texts.\(^8\)

Deccani painting extended from modern day Mumbai to Andhra Pradesh to Karnataka dating from the 1500s to the 1700s. The style involved miniature-painting influences from Iran and Turkey with local Indian styles reflecting regional differences in taste, art, and music with other miniature painting types. The use of blue, pink, and gold colored depictions are common to this style.\(^9\)

Pahari painting grew out of Mughal painting and was influenced in the later 1700s by the nearby Guler style. Kangra and Chamba are important regional sub-styles of Pahari painting, whose area extends from modern-day Kashmir to Uttarakhand and dates from the early 1600s to the mid-1800s. Its extreme northern location in India is important, an area known for mountainous natural beauty, often a theme in these paintings combined with interpretations of devotional poems honoring Hindu deities depicted in musical contexts.\(^10\)

Guler painting developed later and extends from modern day Uttarakhand to Kashmir, Himachal Pradesh, and Punjab. This style dates from the 1740s to 1850s. In 1780, it was brought to Kangra, a Pahari area, and helped establish a newer trend in that style. The Guler style is known for its precision in depictions like most of the Indian miniature painting styles and particularly the use of colors and themes of nature, feminine beauty, depictions of both Sanskrit

\(^8\) Dr. Daljeet, 50. The full name of this female author is unknown; sometimes she is listed as “Dr. Daljit.” Also of interest is that some of the musical contexts depicted show the presence of musical instruments of Chinese origin.

\(^9\) Ibid., 73-75.

\(^10\) Ibid., 89-90.
and Hindu poems, and a variety of Hindu deities.\textsuperscript{11}

Rajasthani painting is a separate tradition and dates back earlier than the others to the 1400s, but much of the earlier works have been lost. The style evolved from illustrating Jain texts and involved influences from the art of nearby Gujarat and Ajanta. The style became associated with the Rajput courts of Rajasthan from the 1700s to the mid-1800s. This style features many of the common themes of Indian miniature painting such as nature, depictions of Hindu deities, court life, and epic stories.\textsuperscript{12}

Basically, two frame drum types appear in Indian iconography: those with jingles and those without. Of the type with jingles, there are tambourines with five, four, three, and one pair of jingles. Of the type of frame drum without jingles there are two types, those played by hand and those played with by stick. Sorting out which of these are indigenous to India and which were most likely imported and from where has not yet been pursued in publications on Indian art and music. Frame drums are usually considered ancillary musical instruments within Indian musical contexts and rarely considered in-depthly. These depictions give us the most accurate information on contexts these instruments were used in, types of frame drums used, physicality of performance practice (grip, one or two handed performance), gender representations, and organological representations (jingles present or not, decorative frame or not). These cultural elements help show the transculturation of some of those frame drums from other areas and a pattern of diffusion southward. This data will help us understand the varying terminology, social functions of frame drum players, and how long certain performance practices have existed.

While sources presented here are not exhaustive, the visual corpus and historical period

\textsuperscript{11} Randhawa, 19.

\textsuperscript{12} Information on Rajasthani painting from the miniatures display at National Museum, New Delhi, India, 2005, no author given, presumably it was Dr. Daljeet.
evaluated will yield valuable observations about understanding frame drums in India with regards to transculturation, Indianization, and diffusion.

Figure 3 represents the earliest example of Mughal miniature art depicting frame drums from the images I examined. This example is significant because it dates two types of frame drums in use simultaneously in a single musical context from 1527 in northern India. The scene depicts early Mughal music ensembles, in this case with two tambourines, a frame drum (bottom of painting), and a fiddle; none appear to be indigenous to India. The tambourines have four pairs of jingles each and the holding-hand grip resembles that of modern day players of the Persian dāyere-zangi. Tambourines in India typically have had fewer sets of jingles while those in Turkey and Arab areas usually come equipped with five pairs of disc jingles. This painting is significant as visual evidence of musical transculturation relatively early in the Mughal Empire.

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13 The Persian dāyere-zangi has three of four sets of disc jingles and sometimes three clusters of jingles in pairs in a triangular position at each of the three areas on the instrument. Wade refers to nearly all of the tambourines in her book as dāī’re, a spelling that took hold in Afghanistan. These instruments have small rings mounted on the inside of the frame as they do in Iran where they are called dāyere. I am attempting to be more accurate in the use of nomenclature that reflects the great variety of frame drums used in the contexts depicted showing transculturative movement of cultural capital.
Figure 4 shows a scene from Humayun’s court in 1550 depicting two musicians. This image shows a tambourine with five pairs of jingles, which identifies this as a frame drum not native to India. Because five pairs of jingles on tambourines are common in Arab and Turkish cultures, this image documents the movement of foreign musical instruments into Mughal courts.

14 Wade, Figure 119.

Figure 5 shows the work of Persian artist Abd as-Samad who was employed at the court of Humayun, the second Mughal emperor of India (full name, Nasir ud-din Muhammad Humayun, 1508 to 1556). Wade points out that this scene of abundant music making involves instruments from various cultures, showing the Arab/Persian nāṭ (also *ney*) with Arab oud, a bowed lute indigenous to Afghanistan (*ghichak*), Afghan *rabāb*, and a Persian *dāyere-zangi* (tambourine in

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top left). This depiction also demonstrates that transculturation had already occurred involving frame drums and a variety of other musical instruments in an early period of the Mughal Empire of India.

Figure 5. Title: *Humayun and Akbar in a Garden Pavilion*. Artist: Abd as-Samad.
Period: Mughal, 1555. Basic theme: daily life. Source: Golestan Palace Museum, Tehran, Iran.16

Figure 6 shows a scene from daily life in the Mughal court with a female dancer accompanied by a pair of Persian *dāyere-zangi* (lower left, with disc jingles). Wade points out that this depiction clearly shows left hand grips and right hand strokes on the skin; the frame is decorative, the skin is glued on, and the weight of the instrument is relatively light, evident from the distance the performers hold their instruments from their bodies. These characteristics remain common in modern day Persian (*dāyere* and *dāyere-zangi*) and Afghan (*dāi ’re*) tambourine playing. The identifying markers in this painting that show a Persian origin of the tambourines

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16 Ibid., Plate 19 and pages 154, 156-157.
depicted are the Islamic head covering of the female performers and the decorative shells of the
tambourines. Frame drums indigenous to India are usually depicted with undecorated frames
while female performers of tambourines from Persia, Turkey, and India in the context of Mughal
art are depicted in different dress enabling more accurate identification of their ethnicities.

Figure 6. Title: Tīmur Nāma: Malka Agha Khanam, Wife of Prince Rukh, Granting an
Interview to Tuku Khanam. Period: Mughal, 1580. Basic theme: court daily life.
Source: Khuda Bakhsh Oriental Public Library, Patna, India. 17

Figure 7 shows a Persian díaere-zangi used in a celebratory context about a political
victory. The only musical instruments there are the frame drum and a bowed spike fiddle. This
example demonstrates the continued presence of Persian musical culture over time (fifty-three
years after Figure 3) and helps demonstrate Mughal India’s history as a transculturative locus for

17 Ibid., Plate 14 and page 87.
Persian, Turkish, Islamic (both orthodox and non-orthodox forms such as Sufism), Chinese, Arab, Afghan, and Indian cultures.

![Figure 7. Title: Darab Celebrates Victory. Period: Mughal, 1585. Basic theme: celebratory. Source: British Library, London, England, United Kingdom.](image)

Another example of transculturation is present in Figure 8, which shows Turkish dancers (lower left) accompanied by female Turkish büyük tef players (large tambourines with disc jingles) alongside dancers from India and a royal naubat ensemble (wind and percussion). These large tambourines are most unusual in that they are equipped with large metal disc jingles. In many Indian miniature paintings where tambourines are present, the artist will clearly depict pairs of jingles in each slot. Büyük tef were used in the classical music of the Ottoman Empire (1299 to 1923), and their existence may pre-date Mughal India, making Turkey a possible source

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18 Ibid., Figure 109.
for the larger tambourines depicted in so many miniature paintings from India dating from after 1500.¹⁹

Figure 8. Title: *Royal Musicians Perform at a Marriage*. Period: Mughal, 1590. Basic theme: wedding. Source: Victoria and Albert Museum, London, England, United Kingdom.²⁰

Figure 9 also shows Ottoman instruments in the Mughal court in the form of Turkish *büyük tef*, the double-reed *zurna* and *nāʿī* (lower left) as well as the *nakers* (small kettle drums). The tambourines are accompanying the Turkish dancing much in the way West Asian “Oriental”

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¹⁹ *Büyük tef* translates as “large tambourine.” Information on Ottoman frame drums comes from my interview with native Turkish frame drummer Murat Coşkun, who is the founder of Tamburi Mundi, a German frame drum association, Murat Coşkun, “Tambourine help,” [personal e-mail] 26 September 2011.

²⁰ Wade, Plate 13 and page 95. Turkish dancers and musicians are identified in these paintings by the long flowing gowns and hats worn by women that contrast in the overly decorative Indian dance costumes.
dance would be accompanied today, with the exception being tambourines and goblet drums for modern performances.


Figure 10 shows whirling dervishes approaching trance at a Sufi ceremony accompanied by a plucked lute and the Persian *dāyere-zangi*. Significantly, this image depicts Sufism at the Mughal court. Sufism is a non-orthodox sect of Islam with which frame drums have been long associated. The Mughal courts were contexts that involved not only transculturative music but religions as well. One reason is that in order to help bond their political connections with such a

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21 Ibid., Plate 12.
broad and diverse land base, intermarriage between members of the Islamic Mughal courts with Hindus was common. William Dalrymple explains that,

For generations the Mughal emperors had intermarried with Hindus — Zafar was quite typical in having a Rajput mother — and the slow seepage of Hindu ideas and customs from the harem into the rest of the Palace had led the later Mughal emperors to subscribe to a particularly tolerant and syncretic form of Sufi Islam, aligned to a liberal Chishti brotherhood, at the very opposite end of the theological spectrum from the hard-line views of Shah Waliullah. As a result all traditions were tolerated: anyone was capable of expressing his or her love for God, and that ability transcended religious associations, gender or indeed one’s place in the social order.  


23 Ibid., Figure 113.
Another example of Turkish cultural capital is evident in Figure 11 where there is an imported frame drum. This scene from 1605 depicts a circumcision ceremony with Turkish female dancers accompanied by a male *tef* (small tambourine) player while the lower left depicts a Turkish *boru* (long horn) and *nakers.* Another possible interpretation of this scene is that it shows what Joseph Kaminski termed sound barrage during which multiple Akan ensembles in Ghana perform varying and conflicting pieces of music simultaneously for a ceremonial function. Metin And states that Ottoman ensembles, also at celebratory times, performed different kinds of music simultaneously. Figure 11 shows dancers accompanied by a single tambourine and the much louder wind and percussion directed at another area of the scene close by. Such instruments do not typically accompany dance and would surely overpower the much softer tambourine. As And describes, this seems to be a festive occasion with Turkish Ottoman style event music: a kind of sound barrage in the Mughal court. The identifying marker on the tambourine is the five pairs of disc jingles, an organological feature of tambourines in Turkic and Arab areas but not in Persian.

Spanning seventy-eight years, the depictions examined thus far show the transculturative movement of tambourines from Iran and later Turkey into the Mughal courts of India. Those membranophones became an established part of official celebrations for weddings, circumcisions, births, battle victories, and political gatherings. Depictions after this time continue to show similar contexts but increasingly with an Indianization of the court ensembles.

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24 Coşkun provided the terms used for smaller tambourines in Turkey as *tef, def, zilli def, and zilli tef.* In Arab areas this identical tambourine is called *riq* (Egypt), *riqq* (Lebanon), *tar* (Morocco), and *deff, duff, def, duf* elsewhere in the Arab Middle East.


Figure 1. Title: Circumcision Ceremony for Akbar’s Sons. Period: Mughal, 1605. Basic theme: circumcision. Source: The Cleveland Museum of Art, Cleveland, Ohio, United States.

Figure 12 is a curiosity in that it shows a tambourine unlike any other I have found in the iconography of this period. In the lower left, there is a tambourine played by a female performer. Disc jingles are clearly present, but most curiously the artist has depicted straight lines between each set of jingles, which do not appear to be in the decorative style of earlier frame drums shown. The grip is also unusual and not one that appears earlier or later in the known images. My interpretation is that it is an early depiction of tuning hardware attached to the shell of the tambourine. If this is the case, the technology for metal tuners on tambourines pre-dates those found in the 1600s in England and Italy. Additionally, the female performer does not appear to be of Turkish, Persian, or Arab extraction since her head is not covered. Her hair is tied back, and the dress and drum in the lower left appear to be more Indian than those seen in earlier

27 Wade, Figure 107.
depictions. This can be attributed to an indigenous folk element and is significant in that the transculturative Mughal court turned to local sources of entertainment in addition to foreign.\textsuperscript{28} With regards to the metal tuners on the tambourine, the British East India Company began its trade relations with India around this time, so it is possible that this depiction was of an early English tambourine brought to a Mughal Court.

Figure 13 from 1634 depicts a large wedding procession for Dara-Shikoh, the older son of Shah Jahan, the fifth emperor of Mughal India (1628 to 1658). Two areas in this painting show

\textsuperscript{28} Wade identifies the frame drum by the Arabic term \textit{daf}. Much later in northern India this term is adopted as \textit{duff} and used for a variety of large and small frame drums without jingles from Rajasthan to Kerala while \textit{daf} replaces the Farsi term \textit{dap} for large Sufi frame drums, originally from Kurdistan, with chains of rings on the interior of the shell in Iran. The addition of tuning hardware seems to have not been noticed.

\textsuperscript{29} Wade, Figure 63.
evidence that the development of the Mughal court’s use of music turned increasingly Indian as far as the instrumentarium is concerned.


Detail 1 from Figure 13 is a close up of the mid-left of the painting just in front of the elephants. Here we see depictions of several Indian musical instruments in the procession. Near the bottom are a rudra vina and dholak surrounded by lutes and fiddles with one of the earliest known depictions of the diminutive, indigenous khenjir, with what appears to be small clumps of pellet bells attached to the frame rather than the later practice of a single pair of disc jingles. This

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30 Photo by N. Scott Robinson from National Museum of India in New Delhi as part of the Indian miniatures exhibit of January 2005.
depiction is consistent with an earlier description of the instrument from the *Ain-i-Akbari* written in the mid-late 1500s as “The *Khenjir*, is a little Duff hung round with small bells.”

Detail 1 from Figure 13. From mid-left of painting, next to lute player on lower right, a male percussionist performs on an Indian *khenjir* in 1634.

Detail 2 from Figure 13 shows in the same painting shows large Turkish tambourines, *büyük tef*, played on the upper group of elephants, except that by this time not by Turkish women but by Indian women alongside a variety of indigenous double-headed cylindrical membranophones.

The identifying markers of these cylindrical membranophones indicate an Indian origin and

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31 The *Ain-i-Akbari (Institutes of Akbar)* is a historical account in three volumes of the reign the third Mughal emperor of India written from 1590 to 1596 by Abu al-Fazl ibn Mubarak, who is more commonly referred to as Abu al-Fazl and/or Abul Fazi Allami. The work in its entirety is the third volume of a much larger three-volume work known as *Akbarnāma (Book of Akbar)*. A digital translated version of volume three in English from the original Persian is cited as *The e-t Ain I Akbari by Abul Fazi Allami, translated from the Original Persian by Colonel H.S. Jarrett, vol. II* (Calcutta: Asiatic Society of Bengal, 1891), Harvard Law School Library, Harvard University [book online], last modified September 36, 2011, accessed September 22, 2012, http://www.archive.org/stream/ainiakbarivolum00mubgoog/ainiakbarivolum00mubgoog_djvu.txt. There is another historical account published as *Akbarnāma* by Shaikh Illahdad Faiz Sirhindi (also referred to as Faizi Sirhindi) but this work is a compilation of earlier publications in the court of Emperor Akbar. The quote is from Wade, 232 but originally by Francis Gladwin, “Sungeet,” in *Hindu Music from Various Authors*, Rajah Comm. Sourindro Mohun Tagore, compiler, (Calcutta: I.C. Bose and Co., Stanhope Press, 1875/1882), 206.
include the decorative cloth wrappings, cylindrical shape, and playing positions similar to modern day dholak found in folk contexts of northern India.

Figure 14 depicts a typical wedding context in Mughal art with much music making and dancing. As with the previous art example, this one, too, features a musical ensemble with an increased number of musical instruments indigenous to India. In the lower left of the painting there is an ensemble featuring the conical pakhawaj drum, the cylindrical dholak, a rudra vina,
and *khenjir* player. Towards the back on the lower left is a *shenai* player, several lute players, and stick-beaten drums. This is more easily viewed on the right side of the detail from Figure 14 where on the lower right there is also a female ensemble of dancers including a woman playing a large decorated frame drum. At this time, Farsi was still the dominant language of the Mughal Empire, indicating that the Farsi term *dâyere* is more appropriate for that large frame drum. The identifying markers on this drum that indicate a Persian origin are the decorative frame, its shallow depth, and the all-female gender context. These are most like modern day Iranian *dâyere* where small metal rings are attached around the inside of the frame and where the instrument is mostly associated with female performers. These rings give the instrument an

Figure 14. *Title: Padshahnama: Shah-Jahan Honoring Prince Dara-Shikoh at His Wedding.*
*Source: National Museum of India, New Delhi, India.*

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32 Robinson, 2005.
almost inaudible soft jingling sound. From this painting’s vantage point, one cannot see the rings that may be inside the frame of this instrument. Indian miniatures are known for the accuracy of the artist’s depiction of detail in their subject matter. In other paintings examined in this study, we have noted where artists even detail the numbers of jingles, tuning hardware, performing grip, and gender contexts. In not giving an indication of the presence of soft internal jingling rings, the artist is being true to what could actually be viewed rather than heard in this scene.

Figure 15 shows another celebratory wedding scene in which female singers are depicted in two groups. On the lower left are two frame drums, the larger being the Persian dâyere-zangi. Just above this is another female performer with the smallest-sized khenjir yet seen. The significance of this image is that women are shown playing this indigenous frame drum at
Mughal courts. From this we can conclude that the performance of *khenjir* at Mughal courts was not an engendered tradition by the mid-1600s.

Figure 15. Title: *Shah Jahan Honoring Aurangzeb at His Wedding*. Artist: Bholo. Period: Mughal, 1637. Basic theme: wedding.

\(^{33}\) Wade, Figure 108.
Figure 16 depicts yet another scene of Sufi worship with dervishes in various states of trance. The title identifies one of the most famous of Sufi saints, Khwaja Muinuddin Chishti of the Chishti Order. What is significant are the small *khanjari* used to accompany the devotees in trance in the lower left of the painting. In comparison to Figure 10, an earlier image showing a similar Sufi context where Persian tambourines were in use, Figure 16 shows the same context but with indigenous tambourines adopted some sixty years later. The identifiable markers that make these drums indigenous to northern India are the reduced number of disc jingles on each frame and the identifiable performance practice. It is also of interest that the performance practice closely resembles modern day Carnatic *kanjira* in southern India, a diminutive tambourine played only with the right hand in the same position as appears in this image. Also of note is the smaller-sized tambourine on the lower right. The term *khanjari* is used today in northern India for a great variety of tambourines both imported Western and indigenous. By the date of this painting, the instrument and term had become a part of Mughal courts. The varieties of shell diameters we have seen in previous images of the *khenjir/khanjari* show the variations in local organological construction. This image may be a reflection of that practice as far as jingles are concerned as the instrument was originally reported to have multiple sets of bells on the exterior while I have been able to show local versions with multiple bells and fewer pairs of disc jingles. The plainness of the shell in this depiction also suggests a non-Arab, Persian, or Turkish esthetic. These observations show that all the frame drums in this painting of a Sufi context are local to India, despite their variations.

Figure 17 shows a martial context in which a diminutive tambourine with three pairs of jingles is depicted. This Mughal image from 1690 shows us the transculturative mixing of indigenous Indian instruments such as the *rudra vina* and *dholak* with a Persian lute and tambourine.

34 Ibid., Figure 114.
Figure 17. Title: Nata Raga. Period: Mughal, 1690. Basic theme: Martial. Source: Aga Khan Museum, Toronto, Ontario, Canada.  

Figure 18 depicts the celebration of the Holi Festival, a Hindu holiday observed each spring. Large jingle-less frame drums called duff are associated with the music of this festival. In the lower mid-area of the painting is a female duff player drumming for the celebration. This Pahari depiction shows us another context where frame drums were used in Mughal India — Hinduism. Subsequent depictions of this same scene, but from other areas, help us understand the movement of culture within these areas where frame drums were depicted. It is evidence of the movement south of the frame drum that is significant in this specific image. The Pahari painting area extends from Jammu on the border with China in the extreme north to Garwhal on the northeast side of India near Nepal. Figures 19 and 20 (with accompanying detail) show the same Holi scene but in a Deccani painting style further south in Golkonda, Andhra Pradesh. Figure 21

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shows the same scene but in the Rajasthani painting style from northeast India. In each scene, the Arab frame drum *duff* is present, which is mentioned by name in the historical text *Ain-i-Akbari* of the 1500s in northern India. As previously discussed, the *duff* is described as being similar to the *khenjir/khanjari*, a frame drum indigenous to northern India, with the difference being the attachment of jingling technology to the *khanjari*’s frame. The adoption of the Arabic term and frame drum *duff* in a uniquely Indian context is evidence that both transculturative and reinterpretive processes occurred in the movement of this kind of foreign cultural capital. This first began in the northern part of India and moved south to areas where the *khanjari* was also eventually adopted.

![Figure 18. Title: Krishna Playing Holi with Gopies. Period: Pahari, 1667. Basic theme: religious celebration. Source: National Museum of India, New Delhi, India.](image)

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36 Robinson, 2005.
Figure 19. Title: *Prince Playing Holi in Harem*. Period: Deccani, 1700 (Golkonda). Basic theme: celebratory. Source: National Museum, New Delhi, India.  

\[\text{Ibid.}\]
Figure 20. Title: *Prince Playing Holi in Harem*. Period: Deccani, 1720 (Golkonda area). Basic theme: religious. Source: National Museum of India, New Delhi, India.\(^{38}\)

\(^{38}\) Ibid.
The eventual Indianization of the Mughal courts is another process evident in the iconographical record as Figure 22 shows. Depicted is a Rajasthani painting from northeastern India showing a Rajput enjoying musical entertainment by an ensemble of musical instruments mostly indigenous to India, including the Indian *rudra vina* (chordophone in rear lower left) and *dholak* (cylindrical membranophone). Also present are the Arab *duff* (frame drum without jingles) and a Turkish long-necked lute, similar to the modern *saz*. This painting also shows the transculturative movement of musical instruments from Arab and Turkish areas and their reinterpretation for use in distinctly Indian contexts.

39 Ibid.
Figure 23 is similar in that it shows the common use of tambourines in a wedding context, in this case in Rajasthan with a Persian tambourine (*dāyere-zangi*) seen in the lower left of the detail.

Figure 22. Title: *Raja Hinola*. Period: Rajasthani, 1690. Basic theme: court entertainment.  

Figure 23. Detail from painting titled: *Krishna and Balasama Accompanying the Marriage Procession of Naminath*. Period: Rajasthani, 1760. Basic Theme: wedding. 
Source: National Museum of India, New Delhi, India.

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41 Robinson, 2005.
Figure 24, from Rajasthan in 1800, is further evidence of the diverse contexts in which transculturation of foreign frame drums occurred showing their subsequent Indianization. This image depicts a female ensemble entertaining a Rajput with mostly Indian musical instruments. In the upper left are a sarangi and pakhawaj while in the lower left there is a small tambourine with five pair of jingles, a diagnostic marker of Turkish and Arab tambourines rather than Persian or Indian.

Figure 24. Title: Thakar Jagnath Enjoying Music on the Terrace of His Palace. Period: Rajasthani, 1800. Theme: court entertainment. Source: National Museum of India, New Delhi, India.  

42 Ibid.
Figure 25 depicts another royal marriage scene. Some of the figures already discussed depicted weddings in the Mughal Court of northern India but with varying ethnicities as indicated by the makeup of the instrumentalists. The earliest such scene in my study was Figure 8 from 1590 in which the musicians and dancers are clearly of Turkish origin and yet they are identified as royal musicians. In Figure 14 from 1635, the instrumentalists were seen to have both Persian and Indian musical instruments. Figure 25, from 1740 in the North Indian Pahari painting style, shows all of the musicians in this wedding scene to be of Indian ethnicity. The musicians on elephant back in the upper right are dressed as North Indian Muslim men and beat large Turkish kettle drums while the last Indian female seated on an elephant at the top carries an Arab duff, and the dholak player at the bottom right is clearly of Indian origin. What Figure 25 and the accompanying detail shows us is that over a period of 150 years, North Indians adopted a variety of transculturated musical instruments into their Mughal courts, but by this time, due to subsequent Indianization, they are played by Indian musicians, and these foreign instruments are used not to accompany foreign dance or other such entertainment as previously detailed, but have been adopted to serve Indian contexts. The painting also clearly shows that both men and women drummed for royal ceremonies and further underscores that royal drumming in India was not an engendered tradition.
Figure 25. Title: Mughal Conqueror Shahjahan in the Marriage Procession of His Eldest Son Prince Dara-Shikoh. Period: Pahari, 1740. Basic theme: wedding. Source: National Museum of India, New Delhi, India.

Detail from Figure 25.

Ibid.
Now that a historical continuum has been demonstrated showing transculturation and a process of Indianization of the adopted cultural elements, other figures help us understand cultural diffusion in the movement of those adopted items southward within India similar to what Gerhard Kubik identified in African music as “intra-African streams of influence.”

Figure 26 shows a Deccani painting from the south Indian city of Hyderabad in Andhra Pradesh from 1750. In the lower left corner, there is an Indian cylindrical membranophone with the decorative cloth wrapping present. In the lower right corner, we see a large Persian tambourine with four pairs of jingles, clearly not of Indian origin. The Deccani paintings in Figures 19, 20, and 26 clearly show foreign frame drums from Arab, Persian, and Turkish areas in a variety of northern regional painting styles (Rajasthani, Pahari, and Mughal). The significance of the Deccani images I have found is that they serve as evidence that Arab, Persian, and Turkish frame drums later moved south from those northern areas in a pattern of diffusion. In other images examined, we have seen the khanjari tambourine, clearly from northern India, absorbed into Mughal contexts. Although no Deccani painting has yet been found depicting this same tambourine, there is no real need for this. A path of diffusion of culture from the north into the south is clear. The khanjari today is found in South Indian art music contexts reinterpreted as the modern day kanjira.

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Figures 27 and 28 are especially significant in reconstructing the kanjira’s past and diffusion from the north and reinterpretation in the south. These two paintings, from the Indian miniature exhibit at the National Museum in New Delhi, although Pahari style from the north, are not illustrations from historical documents but instead a type known as Rāgamālā paintings. Unlike the historical illustrations of other miniature paintings, rāgamālā artists had more freedom with subject matter. While not meant to be a snapshot of an historical event, they do contain the typical detail and realism of other miniature styles. Rāgamālā painting was practiced in the Pahari, Rajasthani, Mughal, and Deccani areas and

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45 Robinson, 2005.
sought to blend images of the Hindu deities and poetry with music and art. They are partially titled either *Raga* or *Ragini*, attempting to convey the male and female gender associations of some musical *ragas*. The colors of these paintings also convey the mood or *rasa* of the musical *raga* or *ragini*, while the images convey a particular poem that served as subject matter. While these images are not historical accounts, they are also not fantasy. They depict something real in a contextual and regional sense. Figure 27 shows a frame drum that appears to be identical to the modern day South Indian *kanjira* with two exceptions, its size and skin type. The instrument’s size is much larger than a modern day *kanjira* and the skin appears to be goat while lizard is in use today but these exceptions are due to its being a North Indian variety. The grip (left hand held), performance practice (struck with right hand only), and number of jingles (single pair) are consistent with the South Indian *kanjira* today. This image dates from 1785, well before the instrument is otherwise reported in Carnatic music.

![Figure 27. Title: Raga Brahmarananda. Period: Pahari, 1785. Basic theme: music performance. Source: National Museum of India, New Delhi, India.](image)

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46 Ibid.
While it may appear that Figure 27 depicts a folk music scene, that subject matter for a Rāgamālā painting is not likely. It more likely depicts Kathak dance, which has both strong associations with Hindu stories and Mughal courts. The mixture of genders is also interesting, a male dancer accompanied by a female frame drummer. There are many Hindu stories about deities, such as Krishna, associating with earthly women, such as Gopis (cow herding devotees). We have seen this in other depictions of musical performances with mixed genders in the Holi celebration (Figure 18) and some court entertainments (Figure 14). In orthodox Muslim societies, the genders are often kept separate until marriage. The painting shows us that gender restrictions may not have been as extreme as are upheld in more Orthodox Muslim regions today and that Mughal India’s embracing of Sufism perhaps allowed for such restrictions to be relaxed under some emperors.

Figure 28 shows the khanjari in what appears to be a more formal setting. The image features instruments associated with classical Hindustani music. The chordophone appears to be an early form of a sitar, and at the player’s feet is a cylindrical pakhawaj, the principle accompanying membranophone for Hindustani dhrupad music. The highly ornamented carpet, refined dress of the musicians, and the formal architecture in the background suggest that this setting is art music rather than folk or devotional. The inclusion of the khanjari as an accompaniment for art music in North India is unusual. This diminutive tambourine had a long association with formal music performances in Mughal courts but was abandoned in North Indian art music within a century of this painting. Its diffusion to South India where it was reinterpreted into Carnatic music enters the historical record in the later 1800s and speaks to the resiliency and adaptability of frame drums as simple technology easily adapted to a variety of cultures and contexts. This process is still going on today as will be detailed in my final chapter.
of this dissertation. These images serve as a solid point of reference documenting the *khanjari* in a North Indian art music context by the late-1800s. Other images have documented the movement of North Indian cultural capital to southern Deccani areas. That Southern India is the only part of India today where this diminutive tambourine is used in classical music suggests diffusion.

Figure 28. Title: *Ragini Karnati*. Period: Pahari, 1790. Basic theme: music performance. Source: National Museum of India, New Delhi, India. ⁴⁷

Figure 29, in the North Indian Guler style from 1800, shows us one of the earliest depictions of a stick-beaten frame drum in the upper right. Such frame drums are found all over India’s southern states today. During my fieldwork, I often encountered this drum, which is referred to as *tape* in Tamil Nadu. The images of this drum in North Indian iconography closely resemble its

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⁴⁷ Ibid.
modern day use in South Indian states, but it remains absent from similar historical iconography of South India. In this North Indian martial context, it is the only musical instrument accompanying a royal assemblage. It is quite possible that the tape was part of the diffusion of frame drums from North India to southern states at least by the 1800s.

Figure 29. Title: Young Raja Bhup Singh on Tour in His Realm. Period: Guler, 1800. Basic theme: daily life. Source: Chandigarh Museum, Chandigarh, Punjab, India.

Another Guler example in Figure 30 shows an Arab duff with a Hindustani tamboura and possibly female singers. The manner of dress and architecture in the image also suggest a formal setting and art music. This depiction also shows that the phenomenon of adopting foreign musical instruments and subsequently Indianizing them was widespread since it is

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48 Randhawa, Plate 4, page 18.
seen in many of the miniature painting regions examined thus far. This suggests to me that several frame drums diffused to southern states, including the kanjari, tape, and duff.

Figure 30. Title: Lovers Admiring Sarus Cranes. Period: Guler, 1810. Basic theme: daily life. Source: Chandigarh Museum, Chandigarh, Punjab, India.

Figure 31 and its accompanying detail are of a Pahari image from 1810 depicting Hindu deities in a celebratory scene showing both Indian and Arabic membranophones. The lower corners show both a pakhawaj wrapped in blue cloth and several small duff nearby. This

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49 Ibid., Plate 11, page 32.
image’s significance is that it shows further the process of Indianization in which foreign cultural capital was adopted for use within specifically Indian contexts.

Figure 31. Title: Sheshsayi Vishnu and Lakshmi Enjoying Festivity. Period: Pahari, 1810 (Chamba area). Basic theme: celebratory. Source: National Museum of India, New Delhi, India.

Detail from Figure 31.

Figure 32 and its accompanying detail, a Pahari painting from 1823, shows the same type of stick-beaten frame drum (in the lower left edge, a pair of frame drummers) as

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50 Robinson, 2005.
previously noted in Figure 29 in Guler style. Twenty-three years after the Guler image this frame drum appears in a neighboring area and similar martial context. This appears to be an intra-Indian stream of influence with this instrument’s diffusion south as part of the overall movement of frame drums, both foreign and indigenous, to South Indian states followed by subsequent selection and reinterpretation in forms more practical for musical contexts located there.

Figure 32. Title: Pahari Kings Participating in the Marriage Procession of Anirudh Chand and of Raja Sansar Chand of Kangra. Period: Pahari, 1823. Basic theme: wedding. Source: National Museum of India, New Delhi, India.  

51 Ibid.
Figure 33 shows an ensemble context from Benares in 1830. The significance of the frame drum in this image is that it shows continuity in performance practice. The right hand of the frame drummer is shown in a split-hand position (in which the thumb and index finger are kept together while the remaining three digits act as a second portion of the hand to percuss with in alternation). This split-hand technique is how modern day kanjira is performed in southern India.

In comparison to more recent photographs taken during my fieldwork of frame drums in South India, the evidence supports diffusion and reinterpretation of North Indian frame drums to South India. Figure 34 shows two variants of modern day tambourines from Iran. The triple sets of jingles on a dâyere-zangi resemble the tambourines in older Mughal paintings in the 1500s while the dâyere on the left is equipped with six pair of jingles (sometimes also with four but never five).

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52 This reproduction is from David Trasoff’s “Researching the Evolution of a Musical Instrument in Modern India,” *Pacific Review of Ethnomusicology* 9, no. 1 (Fall 1999): 4-26, (cover and page 22). The original publication was by James Prinsep, *Benares Illustrated in a Series of Drawings* (Calcutta: Baptist Mission Press, 1830).
Figure 34. Persian tambourines — dâyere. Dâyere-zangi.53

Figure 35 shows modern duff varieties from Rajasthan and Kerala (southern India) that remain similar organologically and contextually to the older depictions in Mughal art.

Figure 36 shows the stick-beaten frame drum that first appeared in Guler paintings in North Indian martial contexts in the 1800s and then diffused south where they entered local popular and folk cultural contexts. A slight reinterpretation in Tamil Nadu was to beat the skin with a pair of sticks despite the hand positions remaining the same.

53 Mohammad-Rezâ Darvishi, *Encyclopaedia of the Musical Instruments of Iran, Volume II: Membranophones and Idiophones in Regional Music* (Tehran: Mahoor Institute of Culture and Art, 2005), 425, 490. Another more common variety of dâyere has small rings attached to the inside frame in place of disc jingles.

54 Photo one by N. Scott Robinson, Jaipur, Rajasthan, India, 2005, photo two is from Pauline van Lynden, *Rajasthan* (New Delhi: Timeless Books, 2003), 160, and photo three is by N. Scott Robinson, Thiruvananthapuram, Kerala, India, 2005.
Figure 37 shows three images from 1994 to 2003 with duffli and khanjari in recent Rajasthani folk contexts. Small duffs are also known as duffli in Rajasthan and New Delhi and may or may not be equipped with one to three pairs of jingles. The first image from Jaipur, shows an interior left hand grip and use of a single hand for performance as is consistent in the Mughal iconographic depictions. The second image, also from Jaipur, shows a khanjari identical to its first description in the historical text Ain-i-Akbari from the reign of Akbar in the 1500s where it was described to be similar to a small duff with bells mounted on the outside of the frame. This photo, some five hundred years later, shows the instrument is organologically the same, most likely from a similar folk context. The third image, from Bikaner, shows a trio of folk musicians performing for the tehra-tal folk dance. The Rajasthani ensemble features a local chau-tara fiddle with a Western tambourine and khanjari. The tambourine player (middle of

The photo of the tape is from a billboard in Chennai advertising a Tamil film in 2005. Frame drums such as these have been used in regional Indian films to evoke a folk context, while the stick-beaten dap is used in regional varieties of Tamil folk music, both photos by N. Scott Robinson, Chennai, Tamil Nadu, India, 2005.
third image) uses the right hand split-hand stroke identical to modern *kanjira* technique in Carnatic music where the thumb and index fingers are kept together and alternate with a subsequent stroke of the remaining three digits.

Figure 37. *Duffli.*

Figure 38 shows regional varieties of North Indian *khanjari*, *duffli*, and *khañjoni*. The first image is of Dharwash folk musicians from Eastern Bengal (modern day Bangladesh) from 1860. This photograph shows identical organological features to the *khanjaris* depicted in Figures 27 and 28 seventy years earlier. In comparing the painted artwork with an actual photograph, we can observe that the size of the membranophone and the over-sized jingles are identical as is the goatskin covering.

The *duffli* player in the second photograph is from Rajasthan in 1925 where once again the consistent one-handed performance practice and organological features of a diminutive frame, goatskin membrane, and single pair of jingles in a modern folk context of North India are seen. The *khañjoni*, played by the Bauls in West Bengal, features two pair of jingles in the third photograph.

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Figure 39 shows three *kanjira* from South India. In the first image, dating from 1930 in Tamil Nadu, the instrument appears with the same North Indian organological features as first described in a historical text of the 1500s but reinterpreted with a lizard skin head to achieve the lower tones associated with its performance practice in South Indian art music. The second image of a *duffli*, a drum approximately ten inches in diameter, is much larger than is typical for Carnatic music. This instrument features a reinterpretation of the jingles, three pair of coin jingles in place of the exterior triple sets of pellet bells. Larger goat-skinned versions like this are sometimes found in the accompaniment of *bhajans* but never in Carnatic music. The third image, from 2005, is the final reinterpretation keeping the diminutive size but reducing the number of jingles to a single small pair of coins with a lizard skin equipped frame.

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Figure 40 (image one) shows a stick-beaten frame drums from a modern day folk context in Iran. In comparison to the Baltazard Solvyns’ portrait in image one of Figure 41 from 1796, the similarities show continuity — the shape, dress and head covering of the performer, and a shared folk context. Also of interest is the Persian nāqara drum in the left background of Figure 40 (first image). It appears to be a stick-beaten frame drum suspended from the neck similar to those used in martial musics of North India in the 1800s and the modern day tape or dap of southern India. Similar frame drums of this type, except that they were hand beaten, are found in temple carvings in northern Karnataka at Hampi from the 1500s where they were known as halige or tammate in Kannada language in image two of Figure 40. Images three and four of Figure 40 are of a modern day Persian daf with a detail of the inside rings. This drum was also reported in India in the late-1700s by Flemish artist Baltazard Solvyns (as doira in Figure 41). Despite over five hundred years between the two neighboring cultures and in considering the historical record of Iran and India and their shared history of transculturation, Indianization, diffusion, and reinterpretation, the examples in Figures 40 and 41 suggests that some of these processes may have been reciprocal.

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58 Image one is from Government Museum, Chennai, Tamil Nadu, India, 1930. Images two and three by N. Scott Robinson, Chennai, Tamil Nadu, India, 2005.
Another aspect of reconstructing the *kanjira*'s history is to examine published accounts that mention this instrument and related frame drums to fill out the chronological record. When the Indian courts fell to British rule, many of these miniature-painting styles lost patronage. Some miniature painting styles modernized by depicting more artistic visions of contemporary life that did not necessarily document actual events. Published accounts appearing from the latter-1800s fill in the historical record during the period of political upheaval from British colonialism and its disruption of the iconographic record.

**Published Historical Accounts of Frame Drums in India**

Many descriptions documenting various frame drums come from foreign travelers, artists, military men, census takers, and others dating from 1796 to 1914. These sources are important as they document these frame drums in time, place, and context overlapping chronologically with the iconography previously examined. This extends the chronological historical record up to a time when the *kanjira* was well established in Carnatic music. Among the first important sources are the published portraits by Flemish artist Baltazard Solvyns from 1796. Figure 41 shows three

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59 Darvishi, 167, Deva, Plate 4.1, and Darvishi, 398.
frame drums that Solvyns witnessed while he lived in Calcutta from 1791 to 1804. These provide additional evidence of the transculturative movement of people and ideas between India and Iran. Robert Hardgrave and Stephen Slawek examined his portraits and concluded that the *dump* frame drum was the *damphā* from Bengal. In comparing Solvyns’ image of a *dump* to image one in Figure 40, the Indian *dump* is similar to the *tabl-e hashtgush*, found in Iran more than 200 years later. Although Solvyns describes the *doira* in the middle image as an indigenous frame drum of India, Hardgrave and Slawek correctly identify this as a frame drum that came to India from Iran in the 1100s. However, they improperly identify it as *doira*. As discussed previously, the Persian term *dāyere* denotes a tambourine either with a few sets of jingles or with a single row of rings mounted on the interior frame, which cannot be seen from any position except from behind the performer. The Solvyns image details the internal rings seen hanging down from the front view, and thus this appears to be the Persian *daf*, whose interior sets of rings hang from the frame in chains of four mounted on the shell. Figure 40 in images three and four shows a modern Persian *daf* detailing the interior — what Solvyns most likely witnessed — another example of the transculturation associated with frame drums in India. Solvyns’ third image shows the *khanjari* in its folk context. Solvyns reports that this instrument was used to accompany vocalists and “is most used by *Faïrs, Beeshnubs, and the Kawns,*” and that the instrument is known in many parts of India. Hardgrave elaborates on the descriptions of the

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60 Frame drums with rings on the internal frame exist in a few varieties. Besides the Persian *dāyere* and *daf* described above, *doïra* and *doïra* are terms for frame drums in Uzbekistan, Tajikistan, and Afghanistan with the difference being that the internal rings are much larger and heavier in Uzbekistan and Tajikistan than on a Persian *dāyere*. In Azerbaijan, their variant of the Persian *dāyere* is the *ghaval* (or *qaval*) on which the rings are heavier than on a *dāyere* but not as large as on an Uzbek *doïra*. *Ghaval*-type frame drums are also played in Turkey (*dayre*) and Xinjiang, China (*doïra*). The terms *daïre* and *dajre* are used in Macedonia for tambourines with disc jingles.

castes that use the instrument as being low on the Indian social hierarchy, clearly placing the instrument in a folk context.

Following Solvyns’ eyewitness account of the *khanjari*, Captain Thomas Williamson, a British officer who travelled in India, recorded his accounts in what became the first travel guide for India published for a Western audience. Williamson was in India from 1790 to 1810, and his descriptions are mainly of Calcutta and Bengal. His description of the *khanjari* closely resembles a context that Solvyns reported. Williamson described,

> Some ladies affect to possess a musical ear, and exercise not only their lungs, but those of their attendants also, in vociferating their common-place songs, accompanying their captivating strains with tremendous thumps on a large long drum called a *dhole*; or perhaps shewing [sic] the agility of their fingers in playing upon a very small kind of tambourine, called *coonjerry*.

Williamson seemed to be describing a call and response *bhajan* and the various membranophones accompanying, including a *khanjari*.

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62 Ibid., 99-104, 111-114.

Between 1820 to 1830 Mrs. B. Mir Hasan’ali reported of Muslim ("Mussulmauns") customs of eating beef, practicing a Sufi form of Islam, and using the *khanjari*:

They all practice one plan whenever called upon to remove the difficulties of any person who places sufficient confidence in their ability. On such occasions, a young heifer, two years old, is supplied by the person having a request to make, after which a fire of charcoal is made in an open space of ground, and the animal sacrificed according to Mussulmaun form. The tender pieces of meat are selected, spitted, and roasted over the fire, of which when cooked, all present are requested to partake. Whist the meat is roasting, the Chillubdhaars beat time with a small tambourine to a song or dirge expressive of their love and respect to the memory of the departed saint, their founder and patron, and a hymn of praise to the Creator.

The feast concluded, whilst the fire charcoal retains a lively heat, these devotees commence dancing, still beating their tambourines and calling out with an audible voice, ‘There is but one God! — MaHumud is the Prophet of God!’

The book is largely comprised of letters written by Mrs. Hasan’ali. The exact area she visited in India (then referred to as Hindustan) is not identified, but from her descriptions of Islamic practice it is clear that this is Sufism because of the inclusion of music and dance and the mention of dervishes throughout the publication. She also mentions the Dharwash ethnic group discussed previously in relation to Figure 38 as being located in East Bengal (now Bangladesh) and who play *khanjari*. In a later passage describing the people from the ceremony above, she wrote “They are distinguished from other sects, by each carrying a small tambourine, and wearing clothing of a deep, buff colour.” Of another group shortly thereafter, she wrote, “There are another set of wandering mendicants, who are called Madhaar beggars, or the Duffelees, by

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64 Mrs. B. Meer Hasan Ali [also as B. Mir Hasan’ali], *Summary of Observations on the Mussulmauns of India: Descriptive of Their Manners, Customs, Habits and Religious Opinions: Made During a Twelve Years’ Residence*, Volume 2 (London: Nabu Press, 1832), 316-317.

65 Ibid., 318.
reason of the small hand-drum they carry with them.” It is important that she distinguishes between a tambourine (khanjari) and “small hand drum” indicating no jingles (or the frame drum previously identified as duff or duffli). I encountered the term duffli in my research throughout Rajasthan and New Delhi where I found the term applicable to small six-inch frame drums without jingles, or with groups of pellet bells, and for larger frame drums both with or without jingles. While my encounters were in northwestern India, she documents the term and both variants, khanjari and duff, in northeastern India. The significance of this reference is that it coincides with the iconographic record of frame drums in those areas and that the iconography there was based on actual contexts.

In his 1834 treatise on Indian music, Captain N. Augustus Willard described two frame drums:

The Duph and the Daera: The first of these is an octagon frame of wood, about three feet in diameter and six inches deep, covered on one side with skin, the stress of which is counterbalanced on the outer with a net-work of thin slips of the same. The skin is struck upon, in playing, with the fingers of the right hand, while a tender flexible switch, held perpendicularly over the instrument with the fore-finger of the left, is made to strike on it with the middle finger at stated intervals of the measure.

The Daera, as its name implies, is a circle of wood, metal, or other material, covered on one side, as the preceding. Its diameter is generally about 11 to 12 inches. The right-hand fingers are applied in the same manner as in using the Duph, and the thumb of the left is thrust into a string passed through a hole on one side of the circle, so as to form a rest or support for that hand a little above the centre, against which the knuckle of the middle finger is pressed on the inside when a rise in tone is desired.

Both these instruments are now almost entirely used by amateurs, although the former is sometimes played upon by professional men of the lower order. These instruments may be compared to the Tambour de basque, Tabret, or Timbrel of the

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66 Ibid. The experiences of Hasan’ali appear in the footnotes verbatim in Ja’far Sharif’s accounts of Sufi Muslim rituals in India in 1863, in his Qanoon-e-Islam, or the Customs of the Moosulmans of India: Comprising a Full and Exact Account of Their Various Rites and Ceremonies, from the Moment of Birth till the Hour of Death, translated by Gerhard Andreas Herklots (London: Parbury & Co., 1863), 193-194.
ancients.\textsuperscript{67}

This account is filled with valuable observations by an Englishman attentive enough to describe frame drum performance practice within India. His comparison to frame drums of other cultures seems based on only the physical resemblance that most frame drums share. More precisely, it is only the \textit{daera} that may be compared to the three tambourines he mentions because of the shared round shape. Of the three, the \textit{tabret} and \textit{timbrel} were archaic tambourines even by his time in the early 1800s. The \textit{tambour de basque} is more properly called the \textit{panderoa} (being the tambourine from Basque Country, Spain). His mention of the instruments mainly played by amateurs indicates that these were not court musicians he witnessed, and this account was based on his witnessing a folk context.

So far the historical references to Indian frame drums examined above reinforce the iconographical record examined previously. The accounts that follow refer to contexts chronologically later than the iconographical survey and mostly show the movement of these frame drums out of courts depicted in the iconographic record and into more localized folk music contexts.

In a diary covering 1858 to 1859, Sir William Howard Russell wrote of his travels in Punjab, “To us there comes one Noor Khan, a musician, with a harp very like Brian Boirohme’s implement, as preserved in the museum of Trinity College, Dublin, strung with wire, very metallic in tone, who was attended by a lad with a flat, bell-less tambourine.”\textsuperscript{68} Russell appears to describe a small \textit{duff}, many of which were previously identified in Pahari paintings of this

\begin{flushright}
\textsuperscript{67} Captain N. Augustus Willard, \textit{A Treatise on the Music of Hindoostan, Comprising a Detail of the Ancient Theory and Modern Practice} (Calcutta: Baptist Mission Press, 1834), 93, 95-96. The entire source was republished in a compilation of writings by Sourindro Mohun Tagore, \textit{Hindu Music from Various Authors — Part I} (Calcutta: Babu Punchanun Mukerjea, 1875), 93, 95-96.

\textsuperscript{68} Sir William Howard Russell, \textit{My Diary in India, in the Year 1858-9, Volume 2} (London: Routledge, Warne and Routledge, 1860), 79.
\end{flushright}
area. After the coming of British colonial rule, the accounts of frame drums in Northern India are limited to folk music contexts.

In 1865 James Kerr described a dance event he experienced in Calcutta for which the musicians play a vina, and when “there are several musicians on the stage, as sometimes happens, a small hand-drum and a tambourine play a part in the performance.”69 Kerr identifies early in this chapter Nautch dancers, originally associated with Mughal courts. His account indicates that what happened to court artisans in India as British rule replaced the courts is similar to the fate of classical musicians in Western Europe, when similar political upheavals forced them to turn to public support. Kerr’s account indicates this contextual shift. The membranophones he identifies are most likely the dholak and the khanjari, which were seen in earlier court art in the iconographic record preceding Kerr’s experience.

In a presentation to the Royal Irish Academy in the 1860s, Colonel P.T. French described a series of Indian frame drums as Duffdé, Do, Hulkya, Dayra, and Duff:

These five instruments belong to one class, the common tambourine drum of India, which is played partly by sticks, partly by the hand. The performer holds two long thin pieces of wood or twig in his left hand, which he rests upon the frame of the instrument, which is strung over his shoulder, while with the right he beats it with a short thick drumstick. The measure and tone can be changed and varied by the sticks in the left hand, and in this respect the drummers are very expert. These instruments form the ordinary accompaniments to the horn, No. 7. Every village or watch on town bastions, fort walls, and the like, has one; and in native armies the duff is beaten furiously on occasions of attack. In all sorts of processions, festivals, and the like, they are employed; but they do not aspire to the refinement of other drums of a more scientific character, which will be described in turn.70

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70 Colonel P.T. French (presenter) and Captain Meadows Taylor (author in proceedings), “Catalogue of Indian Musical Instruments,” Proceedings of the Royal Irish Academy IX — Part I (Dublin: M.H. Gill, 1865-1867): 107, 116. This article was also later republished in Tagore, 259.
This account is rather vague on identifying each frame drum, but he makes a useful distinction through his preference for the more refined drums presumably of court musicians. He mentions a *duff* as being used in martial occasions. This drum must be the larger stick-beaten variety, as the smaller *duff* beaten by the hand would be too soft for martial contexts. His mention of frame drums in martial contexts also confirms earlier conclusions drawn from Figures 29 and 32. Similarly, his description of the playing technique of a pair of sticks used and the strapping for hanging the frame drum over the shoulder matches what I saw in Royapuram, Chennai, Tamil Nadu with a *dap* player in 2005 (in Figure 36).

In 1872, Baden Henry Baden-Powell published a glossary detailing all manner of products manufactured in Punjab at that time. The glossary for Chapter 26 was devoted entirely to musical instruments by name and description, wherein there are several frame drums described as,

905. — "Tāsha" is a sort of tambourine. Its body in fact consists of a sort of basin of pottery ware, covered with a goat skin and played with sticks. A hole is made through the basin at the back. The instrument is worn suspended from the neck by the performer by strings, and used in processions, weddings, &c.

906. — "Daira or Darya" is a large tambourine without bells.

907. — "Khanjri" is a smaller tambourine, with bells, set in the rim, just as in the European tambourine.

A native book of musical instruments I have seen, contains a rather small but rather deep made tambourine, with bells called “daffli.”

909. — "Daf" — is a sort of tambourine, used only by bhangis, and chūras (sweeper caste). A circular wooden frame, the front covered with parchment and the back by a network of catgut (or rather goat-gut) leaving, however, a round hole in the centre.71

Of the frame drums Powell describes, the *tāsha* may be a variant of the *tammate* (the frame drum previously identified in Karnataka temple carvings as being suspended from the neck). The *Daira or Darya* he describes is likely a large *duff* like those shown in modern nearby Rajasthani Holi festivals in Figure 37. The ever-present *khanjari* clearly has disc jingles according to his

comparison to a European tambourine and his distinction between frame drums with and without bells. The *daf* is unusually described here as a variant from a folk music context.

Julia Stone’s visual and written account of traveling with her husband from Singapore to Burma and parts of North India in the 1870s in *Illustrated India: Its Princes and People* provided,

The father and his sons entered the emperor’s service, and rose rapidly to good positions. The mother had free access to the royal harem, where she recited very acceptably the traditional poems and songs of her own country, which were eagerly listened to by the grand sultans and their daughters. The little Noor-Mahal all unconscious of her future fate, accompanied her mother on tambourine or *ziraleet*, in the recitations and songs at the palace.⁷²

Stone wrote about her experience in North Indian areas including Calcutta, West Bengal, Benares, and Delhi. The description of a vocalist accompanied by a tambourine is a common scene in the iconographic record. The term tambourine here can be misleading, as many descriptions of small frame drums without jingles were simply referred to as tambourine. Since a child was identified as the performer and the performance practice of a *khanjari* is quite technical, the identification is in doubt. A jingle-less *duff* may be more fitting in this context.

J. Drew Gay wrote in 1876 about an experience in Bombay (now Mumbai), which may be taken as further evidence of the North Indian tambourine having diffused south. Gay described arriving in a formal home of a “Mohammedan” where he described the social life there:

Once arrived in the reception-hall, the spectacle was even more novel. All round the apartment were velvet couches, with comfortable pillows, on which guests were comfortably reclining. Servants were moving swiftly about, handing iced water, sherbets, cheroots, and hookahs; at one end of the apartment was a mellow-toned mechanical organ, which played English airs very prettily and very softly, while through a doorway, partially covered with a curtain, we could see into the interior of another saloon, and there descry a party of singing girls and instrumentalists. In this apartment we now found two girls were seated on cushions placed on the floor, accompanied by four male musicians, one of whom played a

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small descriptions of a kettledrum attached to his waistband, two having instruments somewhat similar to a hurdy-gurdy in their hands, while the fourth had a tambourine. Yet when the ear once became accustomed to the strange thumping of the drum, the harsh noises drawn by the bows of the players from the hurdy-gurdies, the shaking of the tambourine, and jingling of little bells which the girls wore on their ankles and wrists, it was, after all, by no means an unpleasant sound.\(^73\)

This account refers to an area much further south than those previous by far as Bombay borders on the Indian southern states Karnataka and Andhra Pradesh. Here we find mention of velvet couches on which visitors are seated, ice, sherbet, a mechanical organ that played English melodies, and a tambourine. Most of these items are clearly European, while the tambourine’s origin is Indian. These were witnessed in another chamber where native folk musicians were waiting to entertain. Gay finally identifies the scene as that of a *Nautch* performance, an entertainment previously reserved for Mughal courts but subsequently transformed into a tourist entertainment for the British colonials. Because this music belonged to Mughal courts in the past, the tambourine is likely a *khanjari*, a frame drum recorded often in the iconographic record.

A valuable reference in tracing the *khanjari’s* diffusion to southern India is the description made by C.R. Day in 1891 from his book about music in South India. This dates from a time later than most of my other evidence in which *khanjari* are pictured and their contexts described. In *The Music and Musical Instruments of Southern India and the Deccan* Day wrote about *bhajan* accompaniment, “. . . or, if the means of the worshippers be very limited, a single *tambouri*, with, perhaps, one pair of little cymbals and a common drum, or *tabor* such as *Khanjeri*, is found.”\(^74\) His photograph of the instrument is seen in Figure 42 in comparison with a *khanjari* from northern India, also from the late-1800s, with similar organological traits.

\(^73\) J. Drew Gay, *From Pall Mall to the Punjab or With the Prince in India* (London: Chatto and Windus, Piccadilly, 1876), 12-14.

Day also describes several frame drums in the south that coincide with earlier reports of such membranophones from Northern India:

Tambourines and tabors of all kinds are found throughout India, but are rarely used by professional musicians. The largest instrument of this kind is called Duff, or Duffde, and is an octagon frame of wood about 6 inches deep and 3 feet in diameter, covered upon one side with skin strained by means of a network of thin leather thongs. The Duff is struck with the fingers of the right hand; and a thin switch held perpendicularly over it by the fingers of the left is made to strike the instrument with the middle finger at certain intervals according to the tāla. The Daera is circular and not more than 11 to 12 inches in diameter. It is played with the right hand in a similar manner to the duff. The thumb of the left hand is thrust into a loop in the underside of the Daera. This forms a sort of rest for the left hand a little above the centre of the instrument, so that the knuckle of the middle finger can be pressed against the skin when a rise in the tone is desired. In the Southern provinces a large circular instrument of this kind, called Thambatté, is found; this varies from 3 to 4 feet in diameter. The Thambatté is played in a similar manner to the duff, and is commonly employed by the lower castes, and usually associated with the Kahalay or Kombu, a horn similar to the s’ringa shown in Plate XVII.

The Khanjeri, or common tambourine, shown in the plate, consists of a piece of vellum or skin stretched upon a wooden hoop, 8 to 9 inches in diameter and about 3 to 4 inches deep, bored out of the solid. In the hoop are placed three or four slits containing pieces of metal strung together, which clash when the instrument is shaken. The lower edge of the hoop is sometimes bound with silver, chased with mythological devices, and the hoop itself is often carved in the same way. Water poured upon the skin serves for tuning. The Khanjeri is generally employed in Bhazana — described elsewhere — and by Nautch girls.76


76 Ibid., 141-142.
Day shows continuity with the diffusion of the instrument being used in sacred music contexts and its use in the *Nautch* dance as did Gay in Bombay in 1876, Kerr in Calcutta in 1865, Hasan’ali in eastern Bengal in 1832, Williamson in 1810 in Calcutta, and Solvyns in Calcutta in 1796. Day’s descriptions of several frame drums, including the *khanjari*, his observations on performance practice, and organological features are also consistent with earlier northern reports including those of Baden-Powell in Punjab in 1872, French in 1864 to 1866, Russell in Punjab in 1858 to 1859, Willard in 1834, and Solvyns in Calcutta in 1796. Day’s statement that tuning is done by using water suggests that lizard skin in the south had already replaced the northern use of goatskin as this is the modern method used for tuning lizard skin *kanjira* in Carnatic music.

These accounts suggest a pattern of diffusion over time and place paralleling the iconographic record but beginning at a time when the Mughal court was losing its central position in Indian society. Day’s observations document the pattern of diffusion and continuity with the *khanjari* and related frame drums towards the end of the iconographical record examined.

V.N. Narasimmiyengar, in an 1891 census report on Mysore, Karnataka, wrote,

> This imputation the professing Dásas are however not slow to repudiate. They are however indistinguishable in appearance and external symbols from the other Mādhvās. Many of the Dásas are at the present day in the habit of going about with the tambourine and other musical instruments, singing Kanarese songs and hymns, in honor of the Divine Being, and His manifestations in the Hindu Avatārs. The sect presents much that is akin to the Tengthé division of the Srivaishnavās, especially in the prominence that is given to the vernacular versions of Sanskrit sacred writings, which remain a sealed book to the majority of the congregation.

This census report also associates the *khanjari* with *bhajan* singing in Karnataka at the same time as Day. What is significant about this is that the report is made for the Mysore government in

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Karnataka by a native of the culture, not by an ethnocentric foreign observer as so many of the other reports had been.

Figure 43, a photo by J.J. Lohr, shows in 1899 in Chhattisgarh, Central India, a frame drum that closely resembles descriptions of a *khanjari*. He wrote, “A few rustic musical instruments: On our left sits a man with a small drum, something like a tambourine, called *dhamri*. It has a wooden frame covered with the skin of an Indian Monitor lizard.”78 The report and accompanying photograph further demonstrate a resurgence of these frame drums in the north of India in numerous folk contexts as British colonialism had disrupted their use at Mughal courts.

Some final examples appear in Figures 44 and 45 from the South Indian states of Kerala and Karnataka, photographed, recorded, and written about by A.H. Fox-Strangways in 1914. Writing about folk music he witnessed, recorded, and transcribed in Kerala, he described a pair of *Pānans* as “A man and his wife sang alternatively with a *chakravādyā* (‘Circular tambourine,’ 9 inches in diameter, 2 inches deep; the laces cross the back, and are held in the left hand) and a

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79 Ibid., 67.
triangle.”

Figure 45 shows his photo from a museum in Bangalore, Karnataka, from that year where he photographed a *kanjari* and tambourines. Fox-Strangways’ evidence is significant as it places this frame drum in two southern states at a time when Carnatic music in southern India was in a period of development partly as a response to the growing effects of modernization in the early twentieth century. The photograph of the *Pānans*, a lower caste known to perform exorcisms and folk songs about historical events with small tambourines and idiophones, shows the dress of northern Kerala. The nomenclature also reflects a Malayalam term, as *chakra* means “wheel” and *vādyā* means “instrument,” translated more precisely as “round instrument.” This reinforces my view that the *kanjira* went from the north to the southern state of Karnataka and then to Tamil Nadu where the term was changed to *kanjira* meaning approximately “skin and bells.” Since a term already existed in Malayalam for a similar folk instrument, it suggests that when the *kanjira* was reinterpreted for Carnatic music, the Tamil term *kanjira* was adopted as it spread to the neighboring states of Andhra Pradesh and Kerala.

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81 Ibid., Plate 4.
Figure 45, from a museum in Bangalore, Karnataka, shows the *kanjari* in the upper left along with large tambourines in the lower part, the latter resembling similar larger tambourines from northern India. Appearing as they do in a museum in southern India suggests further that a great variety of frame drums had already diffused to southern areas, some reinterpreted for newer contexts while others either died out or survived in more rural folk contexts.

![Figure 45. Kanjari and tambourines, Bangalore museum, Karnataka, India, 1914.](image)

**Conclusion: The Kanjira — Transculturation, Indianization, Diffusion, Continuity, and Reinterpretation**

In examining the iconographic record of the Mughal court of India between 1527 and 1823, the sources demonstrate transculturative movement of people, ideas, and material culture from a variety of foreign areas into North India. The *tef* and *dâyere* tambourines and *duff* frame drum from Turkish, Persian, and Arab areas cominged for a time in the Mughal courts with an indigenous tambourine, the *khanjari*. As the Mughal Empire developed over time, a process of Indianization occurred where some of the imported instruments became Indian. As the Mughal Empire expanded over much of India, the movement of people and ideas spread these frame drums to southern states, a process demonstrated by the iconographic record. With the political

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82 Ibid., 228, Plate 13.
upheaval brought about by British colonialism, the changed context lowered the social position of some court artisans, such as the Nautch dancers and their accompanying khanjari performers, to the level of popular entertainment, street performance, and rural life. Historical references also document this complex process into the early twentieth century as Mughal India declined. These sources identify continuity of folk contexts, performance practices, and organological traits of North Indian frame drums into the South Indian states by the start of the twentieth century. Linguistic evidence also demonstrates the movement and adoption of nomenclature. As the khanjari was adopted in the southern states, it was reinterpreted to better fit Carnatic art music. Subsequent chapters will document the process of reinterpretation by examining organological developments using musicological and semiotic analyses, ethnography, Carnatic art music contexts, and new performance contexts.
CHAPTER III

THE KANJIRA: ORGANOLOGICAL AND ETHNOGRAPHIC OBSERVATIONS

Through organological and ethnographic observations, this chapter details how deviations from and changes to established traditions affected the kanjira. By investigating its organological aspects, I found that methods of construction had changed relatively recently, which had an impact on the design of the instrument. Fieldwork with kanjira performers conducted during the annual Chennai music season from 2005-2006 (held in Tamil Nadu, India) provided quantitative data showing deviations from established traditions.

Organological Observations: The Kanjira’s Membrane

In studying the organological aspects of the kanjira, I worked with three principal informants in Chennai. An early observation was that no single builder of kanjira is known to construct the instrument from start to finish. Instead, parts are constructed by several different specialists, with final assembly and sales of the finished product handled by a middleman. The three parts to this seemingly simple instrument, the membrane, shell, and jingles, each presented different problems with regard to the exact materials used.

Identifying the exact species of reptile used for the membrane of the kanjira proved to be difficult. In the historical references that described the instrument in several locations within India, the preferred membrane was lizard skin. When asked which species of lizard was preferred, all informants stated that they used udumbu, a local term meaning monitor lizard.¹ This was an obstacle to documentation because identification of the lizard skin species required learning basic herpetology. Accomplishing this required further contacts and going to the rural village of Govindapuram of Ariyalur (north of Chennai) in Tamil Nadu to witness lizard hunting.

¹ Udumbu is Tamil while Udumb is Malayalam. In Kannada the term is Uda and for Telugu it is Udumu. Goa is used in Urdu while a variety of other terms exist across North India including Gho-samp. These terms generically identify monitor lizard but not the exact species.
There are four species of monitor lizard native to India. Because the instrument’s use has been reported since the 1500s in northern areas, the species was likely to be one with distribution in both northern and southern India. I first visited the Madras Crocodile Bank Trust and Centre for Herpetology founded by Romulus Whitaker. There I was able to photograph a large Water Monitor Lizard (Varanus salvatore) and an accompanying distribution map. This species ranges from northeastern coastal India across much of insular Southeast Asia and reaches lengths of 130 to 200 centimeters (approximately 51 to 78 inches). When shown a photo of Varanus salvatore, one informant confirmed that this was the lizard, but considering its distribution, the species was not known to live in the wild in Tamil Nadu. In pursuing this conundrum further, I contacted my informant’s lizard skin supplier, who also did not know the exact species. To solve this issue, I realized I needed to meet the supplier’s hunters to ascertain the correct lizard species.

In consulting Jivanayakam Cyril Daniel’s book on reptiles native to India, there are three other species of monitor lizards to consider. These were the Bengal or Common Monitor (Varanus bengalensis), Desert Monitor (Varanus griseus), and the Yellow Monitor (Varanus flavescens).² To isolate the skin type, I compared photographs of the distinctive skins of these monitor lizards with the kanjira only to find that it is the belly of a monitor lizard that is used for the membrane, and few photos showed this part of the animals. Species trait differences on skins used to classify lizards and other reptiles do not extend to the belly area of these animals. The Desert Monitor is found in Pakistan and northwestern India and is a diminutive species, while the Yellow Monitor is found from Punjab to Bengal, placing these two species beyond the area for use in kanjira making.

The Common or Bengal Monitor lizard’s range of distribution is across the entire subcontinent of India, making this the most likely species of monitor lizard used for *kanjira* skins. An opportunity to observe hunters in a rural setting was secured through my informants. On the trip to the rural village of Govindapuram, I was accompanied by the skin supplier, the instrument maker, and three hunters. Upon my arrival, the hunters presented a bag of four specimens they had previously captured. I had convinced my contacts that the hunters were to not kill the lizards so I could examine them to determine their species while alive.

The village was quite rural with very poor dirt roads that made travel to it by automobile slow and difficult. I noted the habitat of a village capable of supporting these lizards as having an ample water supply from a large pond and small river nearby with lush vegetation to provide plenty of cover and access to food. While accompanying the hunters, I queried them about their favorite food items, and why they hunted lizards. These people enjoy eating *Udumbu*, and all of the hunters stated a preference for lizard meat over mutton, beef, poultry, pork, and fish. A common belief is that the meat of these lizards is medicinal and capable of curing problems with eyesight and additionally acting as an aphrodisiac. I also noticed coconut and banana trees being cultivated nearby in quantities larger than would be used by the local people in their food supply. In my conversations with the skin supplier and hunters, I learned that these people take advantage of seasonal economic opportunities by renting out tracts of their land for coconut and banana production, then working to harvest these products, and during the rainy season hunting lizards to supplement their diet. The sale of the skins by the hunters yields a low price of ten to fifteen rupees per animal while the skin supplier charges up to twenty-five rupees per skin to instrument makers. The total profit these three hunters made for their collecting a total of five lizards on this trip was seventy-five rupees (twenty-five rupees per person is approximately US
$.50). With the cost of a standard dinner being approximately thirty rupees in South India in 2005, why would they hunt lizards for days at a time for such little economic benefit?

The main reason these particular monitor lizards are hunted is for food, but some meat is also sold for cash. Because the sale of the skin is secondary, I concluded that lizards are not hunted solely for kanjira making in southern India. The size of the animal is crucial in kanjira skin selection. If the animal is too young, the belly will not have reached a length where it can be mounted on a kanjira shell. If the animal is too old, the skin is generally too thick to be easily mounted and is not musically effective for kanjira. The ideal sized animal is one with a belly length of no more than 19-23 centimeters (approximately 7.5-9 inches).

The hunters take any lizards they can find, making no stipulations about age or sex of the animals so long as they are big enough to be eaten. All four types of monitor lizards in India are considered endangered and protected by the Indian Wildlife Act of 1972 as well as listed as endangered by the U.S. Fish and Wildlife Service, and the Convention of International Trade in Endangered Species of Wild Fauna and Flora (known as CITES). I attempted to impress upon the hunters the need for conservation and suggested that they not take pregnant females and juveniles, but their reply was that they do not believe that the lizards are endangered because every time they hunt, they always find them. Further, pregnant females are desired because the eggs are also eaten.

While on the hunt, they located a fifth specimen, which I asked them not to injure, but the hunters ignored my request. The animals were put under much stress once captured. Because of

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3 The Indian Wildlife Protection Act, Article 1, Part 2, lists reptiles and amphibians protected in India, which includes all four Varanus species as well as many crocodilians, snakes, terrapins, and frogs, last modified October 13, 2011, accessed October 9, 2012, http://envfor.nic.in/legis/wildlife/wildlife1.html. The Convention of International Trade in Endangered Species of Wild Fauna and Flora (CITES), Appendix I, lists these lizards as endangered while Appendix II lists the trade of products made from these animals as needing fair trade agreements. The U.S. Fish and Wildlife Service website, http://www.fws.gov, lists these animals as endangered. Officially, monitor lizards are protected in nearly every part of the world they are found including China, Malaysia, and parts of Africa.
the sharp claws and great strength of these relatively small lizards, the hunters immediately break a front leg and pull a claw off the foot. They then pull a looped tendon through the location where the removed toe/claw had been. The hunters wrap the tail around the neck of the animal and insert the end of the tail through a loop of sinew in the foot. By pulling the end of the tail tightly, the body of the animal forms a loop acting as an effective handle. In this conditions, the animal is immobilized and consequently goes into shock. This method allows for much easier handling of the animal without injury to the hunters who carry the captured lizards in sacks while on the hunt.

The skinning of the animal is most gruesome. The skin is removed while the animal is still alive by making an insertion with a traditional knife around the neck and then down the back of the animal to the tail after which the animal is peeled out of its own skin. When this process began, the animal was so stressed that it hardly reacted until the final act of wrenching its skin off caused it to shirk and die. The hunters wrapped the meat and internal organs in large leaves and presented the skin to the man who in turn supplies instrument makers. The fact that Bengal Monitor lizards used to be far more plentiful in Tamil Nadu than today seems to not register with the individuals who hunt them.

In my examination of the specimens, I photographed the craniums from both side and top views for comparison with the chart from Daniel’s book, and the underside of each animal to compare with finished _kanjiras_. Although skin differences between juvenile and adult specimens can vary greatly over some reptile lifetimes, the best way to determine monitor lizard species is by cranial examination. Figure 46 shows three species of monitor lizards in India as differentiated by cranial shapes, while Figure 47 shows a specimen I identified as _Varanus bengalensis_, the exact species of Indian monitor lizard used for the membrane of the _kanjira_. 
Figure 48 shows the underside of a specimen and the finished use as a *kanjira* membrane. The shape of the cranium, shape and placement of the ear cavity, nostrils, and snout ridge of the specimens I examined in the wild were all consistent with the diagrams in Daniel’s book, allowing for an accurate identification of the species.

![Figure 46. Cranial shapes of various *Varanus* species of India.](image1)

![Figure 47. *Varanus bengalensis*.](image2)

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4 Daniel, 71. Similar cranial charts for *Varanus* species of India were first published by George Albert Boulenger in *The Fauna of British India, Including Ceylon and Burma: Reptilla and Batrachia* (London: Taylor and Francis, 1890), 162.

5 Photos of *Varanus bengalensis* by N. Scott Robinson, Govindapuram, Ariyalur, Tamil Nadu, India, 2005.
Having identified the exact species of the membrane of the *kanjira*, the next organological question is why lizard skin is preferred over the other skins known to be used for membranophones in India: goat, cow, and deer. Other membranophones used in Carnatic music, such as the *mridangam* and *thavil*, are bimembranic instruments using goatskin that covers both ends. When the goatskins are struck, the resultant sound relies on a vibrating column of air inside the sealed resonating chamber (the drum shell) to produce the desired sound. As a membranophone with a single membrane and open back, the *kanjira* relies on its skin to produce its respective sound. In performance, all other membranophones used in Indian art and devotional musics employ both hands to execute rapid passages of rhythmic and thematic material. The tuning of these instruments is typically in a higher range, and the timbres produced are tonally clear and sustaining. In contrast, the *kanjira* performer is the only percussionist in Carnatic and Hindustani musics that must rely on a single hand to execute the same rapid

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6 Photos of *Varanus bengalensis* by N. Scott Robinson, Govindapuram, Ariyalur, Tamil Nadu, and *kanjira*, Chennai, Tamil Nadu, India, 2005.

7 The same is true of other membranophones used in South Indian art or ritual musics, such as the *chenda*, *udduku*, *maddhalam*, and *thimila*, and the *pakhawaj* for Hindustani Dhrupad music; all are bimembranic with closed resonating chambers that rely on the vibration of a column of air to sound. The *tabla* of North India operates under a similar process but having only a single membrane on each its two drums.
passages as done by other percussionists. It is therefore necessary that the response of the skin ensure a quick decay. This better facilitates the performance technique in the production of multiple strikes on the membrane with the desired clarity.

In his analyses of lizard, deer, and goatskins, physicist N. Somanathan found that the structure of *Varanus* skin includes channels of fibrous organic material that act much in the way strings do on a chordophone; when one is struck the others respond sympathetically, reinforcing the sound. The *Varanus* skin acts in such a manner that all channels of the skin respond to the impact on its surface. The typical lower tuning of the *kanjira* also ensures that its short resonance decays quickly, which facilitates the performance technique. The skins of most mammals vary greatly from the reptilian epidermis structure because they lack such channels. Mammalian epidermis tends to harden when processed for membranophones, which better facilitates the higher tuning and tone production of instruments that employ such membranes.  

Figure 49 shows Dr. Somanathan’s images used in his analyses explaining those phenomena.

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8 In N. Somanathan’s analyses in 1996, he found that the skin of a Lesser Bandicoot (*Bandicota bengalensis*, a rodent) had similar structure, sound, and feel to that of *Varanus bengalensis* — a suitable substitute that has not as of yet entered Indian *kanjira* production.

The most labor-intensive part of assembling the *kanjira* is mounting the skin. After soaking the *Varanus* skin for several days, it is pulled taut across the frame with the central line of the belly running top to bottom in the center of the shell with the jingle slot to the right side (assuming view from the back of the instrument). The skin is not fixed to the frame with glue. Having natural glutinous properties, cooked rice is taken and pressed into a small ball, and after a minute it becomes a natural paste. This is rubbed across the shell where the skin will touch, and the skin is fixed in place until dry, after which excess is trimmed off.

Officially, the *kanjira* is banned for construction and sale in India because of the use of an endangered species’ skin but ownership and use of the instrument remains an unresolved issue. Despite the legal prohibitions on this instrument, it continues to be featured in well-advertised Carnatic concerts all over southern India, with performers taking on students regularly. However, musical instrument shops I visited in Tamil Nadu, Kerala, and Karnataka never displayed *kanjira* for sale, and inquiries about their availability were met with a paraphrase of the ban. As a foreigner I was identified as someone who could be charged more and after carefully introducing myself as a researcher from the U.S.A., some shops readily brought forth instruments for purchase at prices that were well above normal Indian charges. The production and economy of the *kanjira* has gone underground rather than being halted due to the legal restrictions that have been in place for over forty years.

**Organological Observations: The Kanjira’s Shell**

The shell of the *kanjira* is made from the Jackwood tree (*Cryptocarya glaucescens*) whose wood darkens with age. The shell is made from a single piece of wood, but the current convex shape of the *kanjira* is one that developed relatively recently with the availability of modern power tools. Currently, shells tend to be thicker and more convex in shape, but they were not
always constructed in that manner. Older artifacts in private collections exhibited shells that were flatter, much thinner, and far less uniform than a machine-produced product, probably because they were handmade, carved, or done on a hand-operated lathe. One of my informants told me that *kanjira* shells were the byproduct of *thavil* making, as the body of this membranophone has a very narrow end. When that shell is finished, the wood left on the lathe was only enough for a *kanjira* shell. Figure 50 shows older, handmade *kanjira* seen in private collections of performers in Chennai. When I inquired about the availability of these instruments, it was explained to me that quite often when a Carnatic musician dies, their instrument is kept within the family and sometimes no longer used for performance by subsequent generations. The instrument is effectively retired upon the death of its owner. This cultural practice helps stimulate the need for newly constructed *kanjiras* required by each generation, which in turn supports the local underground *kanjira*-making trade.

Modern *kanjira* shells have been produced on power lathes since the influx of this technology for drum shell construction in the 1980s. In Tamil Nadu it appears that most *kanjira*, *mridangam*, and *thavil* shells are produced at a single location in Panruti. In a fieldtrip to this location I was able to witness and photograph the construction of *kanjira* shells with this modern

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Photos of handmade *kanjira* by N. Scott Robinson, Chennai, Tamil Nadu, India, 2005.
method. Several older men staffed the small facility, but young teenagers did all the work I witnessed. Safety and insurance issues seemed not to be a concern as a young teenaged apprentice operated the heavy machinery without safety glasses. A block of Jackwood was mounted to the lathe much larger than required for a single *kanjira* shell. The youth proceeded to turn four shells simultaneously. The newer convex shape of the shell and its resultant increased thickness is more due to the shift in technology in producing these instruments than performer preference. As a participant-observer in Carnatic music I found the newer types of shells more difficult to play, an observation echoed by B. Shreesundarkumar (one of my informants). Figure 51 shows the use of newer construction technology that has changed certain organological aspects of the *kanjira*.

![Modern *kanjira* shell production in Panruti](image.png)

**Figure 51. Modern *kanjira* shell production in Panruti.**

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11 Photo of modern *kanjira* shell construction by N. Scott Robinson, Panruti, Tamil Nadu, India, 2005.
Panruti in Tamil Nadu has long been an area for prized Jackwood trees, going back 300 to 400 years. The shell makers I met told me that the soil and moisture of the area are ideal for the trees desired for drum shell construction. Given that Jackwood trees can reach a hundred years in age and heights over twenty-five feet, trees of a younger age of about twenty to twenty-five years (and sometimes up to fifty years) at ten to eleven feet in height are more prized because of the desired diameters needed for mridangam and thavil shells at the widest portion of the tree and kanjira shells at the more narrow portion. The cut wood is put through a seasoning process taking three to four months or more during which the wood darkens. A single Jackwood tree of fifty years and twenty-five feet in height can be purchased for 25,000 to 30,000 rupees by the buyer for wholesale markets. Such a tree can yield the following from the bottom of the trunk upwards: one to two thavil shells selling for 8000 rupees total, five mridangam shells selling for 15,000 rupees total, fifteen tabla shells selling for 4500 rupees total, fifteen to twenty kanjira shells selling for 3000 rupees total, and branches and other leftover parts selling for firewood for approximately 2000 rupees (with the labor to cut and move the wood costing about 5000 rupees additionally). The total wholesale of a single tree yielding the shells listed above can be 32,500 rupees. The sale of all of the finished products from a single tree far outweighs the costs, with the total income in retail markets 75,000 to 100,000 rupees.

In his scientific studies of the properties of Jackwood, Dr. N. Somanathan found that there were significant differences in the density, weight, growth ring structure, fiber length, moisture absorption, pore size, and pore density in comparison to other locally available woods in South India such as Teak (Tectona grandis), Neem (Azadirachta indica), and Mango (Mangifera indica). These differences showed that Jackwood had an increased fibrous structure with a tighter pack of the wood fibers, had fewer pores, was less dense, lighter, and the rate of
absorption of moisture was also less. All of these factors affect the velocity of sound in a positive manner, making Jackwood an ideal choice for *kanjira* shell construction considering its use of a single membrane, lower tuning, rapid performance practice, and open wood resonator.\textsuperscript{12}

**Organological Observations: The *Kanjira’s Jingles***

Many references to the *kanjira* commonly identify coins as being used for the jingles. My research showed that in context this only partly true. The use of coins as jingles for *kanjira* is not consistent historically or regionally across southern India in Carnatic music. When coins are used, the most valued are the King George V quarter *anna* (1/64 rupee) coin, minted in Calcutta and Bombay from 1911 to 1936. These coins were mostly made from an alloy of copper and nickel, although silver was used for a brief period during those years. Should the quarter *anna* coin not be obtainable, a fifty *paise* (½ rupee) coin from 1970 to the 1980s may be used, which was also made from an alloy. Fifty *paise* coins made in the 1990s to 2000s were made from stainless steel, and are avoided for jingle use because the resultant timbre is not desirable for jingles. India has used a variety of metals and alloys for minting coins including aluminum, copper, nickel, silver, and stainless steel yielding a variety of timbres, but only some are desired for *kanjira* jingles. One Chennai-based *kanjira* maker showed me a method for testing coins to find their suitability as jingles. By dropping the coins on a ceramic tiled floor one at a time, a high singing sound was listened for as each coin rebounded. This simple test was used to check for desirable timbre and to match the “tuning” of each jingle/coin. To mount the coins, a hole is drilled through the center, and they are inserted onto a jingle pin often made from a spoke of a bicycle wheel. The coins are left flat and are not worked in any other manner.

The insertion of the jingle pin is also not standardized. Some makers will insert a pin through the back of the shell. It was pointed out to me that insertion from the front of the shell (where the skin makes contact with the bearing edge) should be avoided as pins can sometimes work loose and puncture the skin if inserted in this location. My Chennai informant also pointed out that due to the convex shape of the shell, it was problematic to insert from the back of the shell because of the curved path the pin would need to take to get into place. In order for the jingle pin to function properly for jingle use, it must be perfectly straight after insertion in the shell. Some makers make small holes on each side of the jingle slot in the frame and attempt to insert a pin with jingles without going through the shell. By making deeper holes than needed in the jingle slot and using a shorter pin, the jingles can be inserted in this manner and the pin fixed in final place with a paste.

Senior *kanjira* artist H.P. Ramachar in Bangalore, Karnataka, showed me a pile of metal jingles he experimented with, none of which were coins. These ranged from small flat bits the size of an American dime to much larger discs the size of an American quarter and even larger. Some makers have been convinced by performers to produce miniature curved jingles based on those of a Western tambourine in shape but in a heavier weight approaching that of Indian coins. Traditionally, early *kanjiras* were often found with groups of pellet bells attached to the exterior of the frame in three locations, but at some point in the Carnatic *kanjira*’s recent history the number of jingle slots was reduced from three to one. The single pair of jingles functions more to articulate the movements of the hand on the skin producing a much drier timbre with a fast decay. On a tambourine equipped with numerous sets of jingles, the decay of the timbre is much longer, making articulations on the skin separate from the jingles more difficult to perform. Figure 52 shows some of the types of coins used for jingles on *kanjira*. After 1957, older coins
were removed from legal tender in India, so charges of defacing currency seem not to be an issue. A Chennai-based informant said that the King George V coins can only be found in Delhi, and that he has a local contact there that searches for them, sending them to Chennai when found. The builder of a *kanjira* is in reality an assembler: one who collects the various parts — the skin, shell, jingles, and pin — from others, assembling the instrument to fill local orders.

![Image of coins]

**Figure 52.** Various coins use as *kanjira* jingles.

**Ethical Concerns**

The *kanjira* is in many ways a problematic musical instrument. Officially, its sale is banned in India because the hunting and killing of *Varanus bengalensis* is illegal as is the trade in products made from its skin. Though it was my intention to solve many hitherto undocumented aspects of this instrument, I found myself in the midst of ethical concerns as my research had revealed how a local folk culture has little awareness of just how destructive it can be on its immediate natural surroundings. The hunting of *Varanus bengalensis* is an important part of the local economy for the poor, allowing them to consume its meat and sell both its meat and skin. This impacts the *Varanus bengalensis* population by as much as 1000-1200 lizards annually in Tamil Nadu alone. In a mass religious five-day gathering in the northeast state of Orissa in Joranda, the Indo-Asian News Service reported that 5000 *kanjira* were sold in 2004 in that state

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13 Photo of Indian coins by N. Scott Robinson, Chennai, Tamil Nadu, India, 2005.
alone. Compounding this is that every kanjira player in India must own several instruments due to the way the lizard skin dries out mid-performance. To properly tune the kanjira for performance, small amounts of water are applied to the inside of the membrane. This produces the characteristic bass timbre, onomatopoeically referred to as dum. The tuning is temporary at best as the water evaporates quickly causing the tension of the membrane and its timbre to increase, which has a negative impact on its playability. Kanjira players must have three to four on stage somewhat pre-tuned with water so they may abandon one instrument as it becomes unplayable during a concert for one that will last at least until the end of the particular piece being performed. This phenomenon continues throughout the entire concert event.

The illegal activity of skin production in Tamil Nadu supplies eight kanjira assemblers locally in Chennai, four in Bangalore, Karnataka, and two in Thiruvananthapuram, Kerala. A crew of seven hunters performs this seasonal but illegal work for a single skin supplier. This totals twenty-two individuals who willingly participated in the hunting and sale of Varanus meat and skin at the time this research was carried out. Lizard meat is eaten mainly by poor Hindus and other minorities but never Muslims. When found in abundance, additional quantities of lizard meat are sometimes sold while the skin remains a secondary item to be sold. Prices are fixed by size and weight by butchers who deal in Varanus meat, while the supplier fixes skin prices.

Despite the exposure of the kanjira to Western markets, the demand for the instrument is low as its performance practice is difficult to learn and master. The American companies REMO and Cooperman have developed alternative synthetic-headed kanjira since the 1990s. The synthetic instruments remain a favored choice of Western percussionists interested in kanjira.

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The REMO company was the first to introduce a *kanjira* with a cloth-Mylar skin that replicated the traditional sound of lizard skin in 1994, while their newest model in 2010 has a lizard skin graphic printed on Mylar. These instruments are also tunable, and the sound is close to the traditional version.

The Cooperman Company introduced a synthetic *kanjira* with cloth-Mylar that was designed in collaboration with Carnatic percussionist Ganesh Kumar (Natarajan Ganesan) in 2003. This instrument is also tunable, and the jingles are exchangeable with Cooperman often making use of Japanese five and fifty-yen coins to better match the traditional timbres. They have also produced a number of alternative instruments based on *kanjira* designs such as the “Bendira” (a *kanjira* with snares like that of a Moroccan frame drum known as *bendir*), the “Hadjira” (designed in collaboration with percussionist Jamey Haddad is a slightly larger tambourine equipped with *kanjira*, Arab *riqq*, and Brazilian *pandeiro* jingles), and their Hybrid Tambourine (developed with Todd Roach has jingles from tambourines found in Indian, Italian, Brazilian, and Arab musical contexts). In 2010, Mid-East Mfg., Inc. introduced *kanjira* with a variety of fish skins, and the German company Meinl has developed a *kanjira* with goatskin, but the sounds of these two models are not as suitable as the versions by REMO and Cooperman.\(^{15}\) The German company Anklang Musikwelt introduced a treated goatskin *kanjira* in 2009. Figure 53 shows some of these alternative *kanjira* designs.

Despite these well-intentioned innovations, the lizard skin *kanjira* is still preferred within India, as Western-made instruments cost between $57.00-$222.00 (plus shipping costs) when

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\(^{15}\) Patrick Cooperman, e-mail message to author, October 24, 2011. Cooperman first built a *kanjira* in the USA in 1995. John Fitzgerald of REMO, e-mail message to author, October 25, 2011. In 2011, French company Tambor de Masca began making a *kanjireqq* with a clay shell, goatskin, and Arab-style jingles. As an attendee of over twenty frame drum festivals between 2008-2013 in Europe and North America, I have never witnessed any companies outside of India build a *kanjira* with a lizard skin. The practice seems limited to South India.
compared with 300 to 500 rupees for a traditional *kanjira* in India ($5.00 to $8.50 approximately) in 2005 to 2006.

![Image of kanjira types](image)

| REMO John Bergamo *kanjira*, synthetic, 1994 | REMO synthetic *kanjira*, 2010, front | REMO synthetic *kanjira*, back |

*Figure 53. Selected alternative *kanjira* made in U.S.A.*

The ethical concerns of the *kanjira* presented me with a very real dichotomy — the callousness of a trade that ignores the decline of a native species in pursuit of local economics and the inherent beauty and refinement of the traditional musical instrument. As an ethnomusicologist pursuing fieldwork in India, my experiences went well beyond what my coursework was able to prepare me for.

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Ethnographic Observations: The Kanjira Performers

While doing research in India, the most valuable time for me was the Chennai music season, which runs annually from mid-November through January 1\textsuperscript{st}. Locally, it is referred to as the “December season,” but it begins well before December and finishes in January. The music season is a mass celebration of Carnatic music throughout the entire city of Chennai. For the 2005-2006 season, there were 129 venues and organizations (known locally as sabhas) with over 600 artists performing. Concerts typically start taking place at 7:00 am and conclude by 11:00 pm with as many as eighty-six concerts in a single day at twenty-six locations featuring sometimes as many as nine concerts simultaneously.\textsuperscript{17} Each concert can run from two to three hours on average. Chennai is spread over sixty-seven square miles with a population of over eight million people. In the midst of this spectacle, my research required meeting, interviewing, photographing, and video and audio recording as many kanjira artists as possible. I managed to collect personal data on thirty kanjira artists representing all of those performing that season with my studies of kanjira with five of those artists. I also studied mridangam, solkattu, ghatam, morsing, and tabla with six other percussion artists to better develop my understanding of the South Indian musical system.\textsuperscript{18}

It was only possible to attend three or four concerts in a day because of the time each concert took, the logistics of getting from one location to another, and the need for meals and

\textsuperscript{17}Locations of all of the concerts with all of the artists listed for each are published in an annual guide by S. Kannan, *Comprehensive Programme Diary for Chennai Music Season 2005-06* (Chennai: SanVik Printers, 2005). Despite this detailed source in English, it was published so far in advance of the season that in a few cases information, such as venue, was changed by the time of a particular performance. Up-to-date listings were published daily in local Chennai newspapers but I found it best to contact performers directly to inquire the locations of their concerts. An annual directory in English was also published for each season listing performers by instrument and name with full contact information by Mudhra Bhaskar, *Music Planner-Cum-Directory 2005* (Chennai: Mudhra, 2005). I managed to track kanjira artists appearing at four seasons by acquiring copies from 2004-2007 and an additional program diary from the 2006-2007 season.

\textsuperscript{18}My principal kanjira teachers were B. Shreesundarkumar, Amrit Nataraj, T.V. Vasan, Natarajan Ganesan, and T.H. Subash Chandran. I studied mridangam with B. Shreesundarkumar and T.V. Vasan, ghatam with T.V. Vasan, solkattu with T.H. Subash Chandran, morsing with Srirangam Kannan, and tabla with N. Seetharaman.
breaks throughout the day. Further complicating matters was the massive departure of much of the audiences during the peak moments of concerts when the kanjira solos were featured. These took place during a “main piece” kriti, always occurring near the end of a concert. In a three-hour concert, this would be approximately two and one-half hours or more from the start. The percussion solo, known as thani avartanam, featured mridangam and other percussionists. What complicated my research was that the general audience takes these soli to be an indication that the concert is ending, and that it functions as a break. Many members of the audience would get up and walk out, making photography and video recording problematic. As the concert finished, I was faced with having to get backstage (as a foreigner laden with cameras) and introduce myself to the kanjira artists and conduct interviews. Many of the main performers could not understand why I did not want to talk to them and expressed confusion that my interests were with the kanjira artists only.

I was able to interview thirty of the kanjira players during the 2005-2006 season. Qualitative personal data was collected on each by asking them a series of control questions. I recorded their names, castes, ages, birth dates, areas originally from, areas where they worked, respective gurus (teachers), main and secondary instruments played, length of time playing kanjira, why they play kanjira, styles of music performed, e-mail contacts, and artists they have performed with, in addition to photographing and video recording each of them in context. The data was then used in statistical analyses to see what correlations there might be among the performers as a community, which is shown in Table 1.
<table>
<thead>
<tr>
<th>Caste</th>
<th>Age: 17-28</th>
<th>Age: 30-39</th>
<th>Age: 40-49</th>
<th>Age: 60-66</th>
<th>Age: 71-75</th>
<th>Age: 80-82</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 Brahman 9 Non-Brahman</td>
<td>8</td>
<td>9</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
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<table>
<thead>
<tr>
<th>Years Performing</th>
</tr>
</thead>
<tbody>
<tr>
<td>75 Years 1</td>
</tr>
<tr>
<td>60 Years 1</td>
</tr>
<tr>
<td>56 Years 2</td>
</tr>
<tr>
<td>47-51 Years 3</td>
</tr>
<tr>
<td>30-38 Years 2</td>
</tr>
<tr>
<td>20-25 Years 7</td>
</tr>
<tr>
<td>10-18 Years 8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Primary Instrument</th>
<th>Secondary Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kanjira 20</td>
<td>Mridangam 9</td>
</tr>
<tr>
<td>Vocal 1</td>
<td>Mridangam 13</td>
</tr>
<tr>
<td></td>
<td>Kanjira 9</td>
</tr>
<tr>
<td></td>
<td>None 7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Music Performing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Only Carnatic 8</td>
</tr>
<tr>
<td>Only Fusion 0</td>
</tr>
<tr>
<td>Both Carnatic and Fusion 22</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reason for Playing Kanjira</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Tradition 7</td>
</tr>
<tr>
<td>Chose to Play 23</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>City, State and Country of Current Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chennai, Tamil Nadu, India 20</td>
</tr>
<tr>
<td>Tiruchirappalli, Tamil Nadu, India 2</td>
</tr>
<tr>
<td>Bangalore, Karnataka, India 4</td>
</tr>
<tr>
<td>Thiruvananthapuram, Kerala, India 1</td>
</tr>
<tr>
<td>New Delhi, Delhi, India 1</td>
</tr>
<tr>
<td>Toronto, Ontario, Canada 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th># of Kanjira Players per Season</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-2005 Season 19</td>
</tr>
<tr>
<td>2005-2006 Season 36</td>
</tr>
<tr>
<td>2006-2007 Season 35</td>
</tr>
<tr>
<td>2007-2008 Season 37</td>
</tr>
</tbody>
</table>

Table 1. Statistical data on control group of *kanjira* performers.

According to this data, most *kanjira* players appearing at the 2005-2006 season were *Brahman* in caste (as many Carnatic musicians are). More than fifty per cent were below the age of forty while thirteen performers were above the age of forty with two of the eldest deceased soon after that season. Most *kanjira* artists are located in Chennai, the most active city in India for Carnatic music performance, where they also study, teach, and are also involved in the production of recordings. The age differences indicate that *kanjira* players were in decline until approximately twenty years ago when many of the current Chennai based *kanjira* artists began to play. A contributing factor to the decline may have been the Indian Wildlife Act of 1972, which may have impacted the *kanjira* tradition. Between the 1980s and 2001, G. Harishankar was then

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known as the greatest *kanjira* performer who ever lived, having expanded the technical performance practice of the instrument considerably. It was most likely his influence that attracted attention to the *kanjira*, giving rise to a new generation of performers following in his innovative style.

Most *kanjira* artists also play *mridangam*, which is the only Carnatic percussion instrument with a clear and gradual pedagogy. Studying the *mridangam* gives the *kanjira* player understanding of the performance practice of the main percussion accompanist in Carnatic music, an essential skill in a performance tradition for which rehearsals before concerts are practically non-existent. Most performers also play fusion music.\(^{20}\) Given the hierarchy and politics inherent in Carnatic music, this makes sense. Many of the ancillary percussion instruments in Carnatic music, such as the *ghatam*, *kanjira*, and *morsing*, have each developed more refined performance practice in recent decades while *mridangam* has not experienced as much of this recent trend in refinement.\(^{21}\) Because of the political nature and social hierarchy of Carnatic music, the *mridangist* occupies a level higher than the other percussionists. Many of the younger performers told me that they could not show their full skill in concerts for fear of outplaying an elderly *mridangist*, which can result in a political backlash where such an “upstart” performer can be blacklisted from further engagements. One performer told me that he lost all his performances for a year because of this. The ancillary percussionists seek out fusion contexts,

\(^{20}\) The term fusion is used to describe a popular music phenomenon since the 1970s that involves mixing musical instruments and ideas from various ethnic musics, particularly those associated with India, with jazz, rock, and funk.

\(^{21}\) The golden age of *mridangam* refinement was during the 1930s-1940s with performers such as T.S. Mani Iyer, Palani Subramaniam Pillai, and later Palghat R. Raghu. These performers substantially refined the rhythmic and technical virtuosity of the *mridangam* at that time effectively creating a lineage of performers following in their respective styles ever since. Although some may argue to the contrary, the *mridangam* has not experienced the same kind of recent wave of innovators (excepting Karaikudi R. Mani) that the *ghatam* and *kanjira* have in recent decades as these instruments are more readily approached for international fusion contexts while the *mridangam* remains staunchly more committed to its hierarchical position in Carnatic music.
often without a *mridangam* player. Their instruments fit these contexts more readily, they are freer to express themselves, and earn more financially, particularly when collaborating with Western musicians.\(^{22}\)

**Conclusion: The Impact of Accelerated Time**

The *kanjira* as a musical instrument in India is problematic ethically as it relies on the use of the skin of a reptile that is now endangered worldwide. As modern methods of construction replaced older methods, the instrument could be made much faster and in greater numbers. This acceleration in construction has had a positive impact on local economies as more work can be secured, while it negatively impacts some of the resources this construction process relies on such as lizard population density. I saw no further signs of conservation enforcement within India during my research other than the legal ban on hunting and selling items produced with reptile skins, which are typically lightly enforced.

As with many oral traditions, the loss of elder performers has a negative impact on those traditions because of the loss of those most experienced within the culture. Because of the nature of oral tradition with its slow rate of transmission, younger generations are usually not more highly valued. With the *kanjira* in Carnatic music in India, this does not seem to be the case. Rather, it seems that the younger generations of players are carrying on a more refined style than the elder performers who developed their styles before the newer refinements in performance practice appeared. Furthermore, the elder performers learned in a manner more akin to oral tradition, relying on memorized methods of pedagogy. The younger generations were also experiencing the newer refinements more rapidly in their culture during which time the use of

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\(^{22}\) *Kanjira, ghatam, and morsing* all require a single microphone in fusion contexts while the *mridangam* require two making its sound amplification problematic for louder contexts. This may also have contributed to the successful movement of the ancillary percussion to the newer context and opportunities in fusion music, where there is little social hierarchy.
recordings, videos, the Internet and related social media (such as YouTube), came to be more accepted aspects in the oral transmission of their pedagogy. These performers were able to learn and develop at a faster rate than the older generations did, resulting in younger generations more excelled at kanjira performance, a factor that continues to increase. As younger generations continue to grow and the Varanus bengalensis population continues to decline, it seems that the future of the kanjira will become more problematic. The social hierarchy and politics of Carnatic music has to some degree prevented the featuring of the younger and more refined ancillary percussionists. In seeking out newer performance contexts, a greater degree of change to continuity can be seen in the kanjira tradition than the more dominant mridangam tradition. By detailing the complexities of the kanjira performance practice in Chapter IV, we can understand more clearly what the established tradition and continuity are.
CHAPTER IV

MUSICAL AND SEMIOTIC ANALYSES OF KANJIRA PERFORMANCE PRACTICE

This chapter focuses on *kanjira* performance practice with musical analyses presented in both Western musical notation and South Indian rhythmic *solfège* known as *solkattu*. In addition, attention is given to the South Indian art music context, especially as it influences *kanjira* performance practice. In sum, the complexities of the *kanjira*’s style will be shown through musical analyses illustrating that Hindu zoomorphic and numerological philosophy permeates much of the musical rhythmic structure produced on the instrument. Semiotic analysis will be used to interpret the philosophical symbolism in order to clarify the deeper cultural foundation inherent in Carnatic *kanjira* art music performance.

**Understanding Tala in Carnatic Music**

Carnatic music involves the use of highly detailed and complex structures in its music theory. In Carnatic music, South Indian percussion performance practice is characterized by rapid and rhythmically dense passages, complex subdivision and syncopation, and ornamental qualities.\(^1\) In order to show this complexity with clarity, a variety of analytical approaches must be used. Before proceeding with these, however, one must first understand the *tala* rhythm cycle.

*Tala* is most commonly presented as a rhythmic system in Indian art musics, but to some degree it can also be understood as the Western equivalent of both meter and conducting.\(^2\)

During a South Indian Carnatic music concert, either the performing members of the ensemble or an additional musician seated with them show the *tala*. Although there are thirty-five *sapta talas*

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\(^1\) By “ornamental,” I mean the particular bending qualities that many Indian membranophones employ in art music contexts in both North and South India. Such ornamental displays occur almost exclusively on the lowest timbre produced by applying pressure to the membrane, yielding a fluctuation in the “pitch” of the timbre. This is a regular part of the performance practice of *tabla* in Hindustani music, *pakhawaj* in *Dhrupad*, and the *mridangam*, *thavil*, *kanjira*, and *ghatam* in Carnatic music.

\(^2\) *Tala* is singular or plural but may also appear as *tal* or *talam* reflecting linguistic variance. *Talas* can also be used for a plural form. I use *tala* for singular and *talas* for plural throughout.
and five *chapu talas* possible in Carnatic music, my analyses will focus on only the four most commonly used *talas*: *rupaka chapu tala* (three beats), *adi tala* (eight beats), *khanda chapu tala* (five beats), and *misra chapu tala* (seven beats).

To understand how these rhythm cycles are shown or “conducted,” one must understand *tala* terminology. The terms *laghu*, *dhrutha*, and *anudhrutha* indicate the outer structure of the *tala* — what can be viewed by watching the pattern of the *tala* keeper’s hands. *Jathi* and *nadai* detail the inner structure of the rhythm cycle in different ways. In the outer structure, *Laghu* is a clap of the hands followed by the counting of fingers indicating from three to nine beats. *Dhrutha* is a clap of the hands immediately followed by turning over the hand, commonly referred to as a wave, together indicating two beats. *Anudhrutha* is a clap of the hands indicating a single beat. The strokes of the *tala* can be written in a kind of descriptive notation called *anga*. The symbol for *laghu* is I while 0 indicates a *dhrutha* and U indicating an *anudhrutha*.

To compose the forty basic *talas*, a specific outer structure is combined with an inner structure, which can occupy from three to twenty-nine beats. The number of *tala* strokes is complete only when the *jathi* are specified. The term *jathi* indicates a clap (**laghu**) and the number of finger counts following it. The *jathis* are categorized numerically as three (**tisra**), four (**chatusra**), five (**khanda**), seven (**misra**), or nine (**sankeerna**) with each clap and finger counting as separate beats. The jathi can be shown graphically with the corresponding numbers for **tisra**, **chatusra**, **khanda**, and **sankeerna** written after the **laghu** symbol.

*Nadai*, also part of the internal structure, denotes the subdivision of each of the beats. These are categorized numerically by the same terminology used for *jathi*. Rhythmic subdivision in Carnatic music is usually symmetrical with *nadai* following numerically related patterns of subdivision. If four per beat is in use (**chatusra**), then eight per beat is also possible but typically
not five (*khanda*) or six (*tisra*). If the *nadai* is *tisra*, this indicates subdivision of threes with three, six, and nine the possibilities but not four or eight.³ *Khanda* *nadai* would indicate divisions by five. The *jathi* and *nadai* terminology are similar in their numerical representations but differ in their contextual usage. Table 2 shows the thirty-five *sapta talas* categorized by *jathi* with *anga* notation for *laghu*, *dhrutha*, and *anudhrutha*. Dashes or commas are used to represent *nadai* when rhythmic phrases are shown in *solfège* form.

<table>
<thead>
<tr>
<th>TALAS</th>
<th>JATHIS</th>
<th>Chatusra (4)</th>
<th>Khanda (5)</th>
<th>Misra (7)</th>
<th>Sankeerna (9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dhruva Tala</td>
<td>I₁ O I₁ I₁</td>
<td>I₁ O I₁ I₁</td>
<td>I₁ O I₁ I₁</td>
<td>I₁ O I₁ I₁</td>
<td>I₁ O I₁ I₁</td>
</tr>
<tr>
<td>I O I</td>
<td>14 Beats</td>
<td>17 Beats</td>
<td>23 Beats</td>
<td>29 Beats</td>
<td></td>
</tr>
<tr>
<td>Matya Tala</td>
<td>I₁ O I₁</td>
<td>I₁ O I₁</td>
<td>I₁ O I₁</td>
<td>I₁ O I₁</td>
<td>I₁ O I₁</td>
</tr>
<tr>
<td>I O I</td>
<td>10 Beats</td>
<td>12 Beats</td>
<td>16 Beats</td>
<td>20 Beats</td>
<td></td>
</tr>
<tr>
<td>Rupaka Tala</td>
<td>O I₁</td>
<td>O I₁</td>
<td>O I₁</td>
<td>O I₁</td>
<td>O I₁</td>
</tr>
<tr>
<td>O I</td>
<td>6 Beats</td>
<td>7 Beats</td>
<td>9 Beats</td>
<td>11 Beats</td>
<td></td>
</tr>
<tr>
<td>Janpe Tala</td>
<td>I₁ U O</td>
<td>I₁ U O</td>
<td>I₁ U O</td>
<td>I₁ U O</td>
<td>I₁ U O</td>
</tr>
<tr>
<td>I U O</td>
<td>7 Beats</td>
<td>8 Beats</td>
<td>10 Beats</td>
<td>12 Beats</td>
<td></td>
</tr>
<tr>
<td>Triputa Tala</td>
<td>I₁ O O</td>
<td>I₁ O O</td>
<td>I₁ O O</td>
<td>I₁ O O</td>
<td>I₁ O O</td>
</tr>
<tr>
<td>I O O</td>
<td>8 Beats</td>
<td>9 Beats</td>
<td>11 Beats</td>
<td>13 Beats</td>
<td></td>
</tr>
<tr>
<td>Ata Tala</td>
<td>I₁ I₁ O O</td>
<td>I₁ I₁ O O</td>
<td>I₁ I₁ O O</td>
<td>I₁ I₁ O O</td>
<td>I₁ I₁ O O</td>
</tr>
<tr>
<td>I₁ I₁ O O</td>
<td>12 Beats</td>
<td>14 Beats</td>
<td>16 Beats</td>
<td>18 Beats</td>
<td>22 Beats</td>
</tr>
<tr>
<td>Eka Tala</td>
<td>I₁</td>
<td>I₁</td>
<td>I₁</td>
<td>I₁</td>
<td>I₁</td>
</tr>
<tr>
<td>I</td>
<td>3 Beats</td>
<td>5 Beats</td>
<td>7 Beats</td>
<td>9 Beats</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. *Sapta talas* with *jathi* variations and *tala* strokes indicated.⁴

Most of the common *talas* used in Carnatic music are derived from this chart. Some are known by more common names; for example, *chatusara triputa tala* is typically called *adi tala* (eight beats). Figure 54 presents *adi tala* metrically with the *tala* strokes in *anga* notation.

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³ There is no hard rule, but usually rhythmic style adheres to related subdivisions. The mixing of *nadai* is uncommon, but it can occur in the context of percussion *soli*.

⁴ This chart was explained to me by Amrit Nataraj, one of my *kanjira* teachers in Bangalore, Karnataka, India, in January 2005. The term *sapta* means seven. With *jathi* variations, thirty-five of these basic *talas* are possible in Carnatic music. Hindustani music has a different *tala* system.
Another group of talas, known as chapu talas, are those derived from folk music. Chapu talas are shown in only two types of strokes, anudhrutha and dhrutha. Table 3 includes the five chapu talas with strokes and beats indicated.

<table>
<thead>
<tr>
<th>Chapu Talas</th>
<th>Beats</th>
<th>Strokes &amp; Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tisra Chapu Tala</td>
<td>3</td>
<td>Clap Clap Wave</td>
</tr>
<tr>
<td>(Rupaka Chapu Tala)</td>
<td></td>
<td>1 2 3</td>
</tr>
<tr>
<td>Chatusra Chapu Tala</td>
<td>4</td>
<td>Clap Clap</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1-2 3-4</td>
</tr>
<tr>
<td>Khanda Chapu Tala</td>
<td>5</td>
<td>Clap Wave Wave</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1-2 3 4-5</td>
</tr>
<tr>
<td>Misra Chapu Tala</td>
<td>7</td>
<td>Wave Wave Clap</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1-2 3-4 4-5 6-7</td>
</tr>
<tr>
<td>Sankeerna Chapu Tala</td>
<td>9</td>
<td>Clap Clap Clap</td>
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<tr>
<td></td>
<td></td>
<td>1-2 3-4 5-6 7 8-9</td>
</tr>
</tbody>
</table>

Table 3. Chapu talas.

Understanding the nadai in conjunction with the tala beats is necessary to understand the calculative processes used in Carnatic rhythm. The total number of subdivisions (nadai) per cycle is used to determine the possible outcome of rhythmic phrasing. While adi tala represents eight beats, with chatusra nadai (four subdivisions per beat) the total number of subdivisions per cycle remains eight. If the nadai were tisra in adi tala, then this would indicate subdivision of groups of three per beat or related subdivision per beat such as six or nine, but the total number of beats would remain eight. Nadai are often shown in shorthand with numbers indicating tala beats followed by dashes or commas for nadai (1 - - = tisra or three including the number), but this is not prescribed and varies greatly between teachers. I have even seen phrases written in solfège that do not indicate the nadai, making the reliance on oral tradition important for accurate interpretations of musical phrases in descriptive notations. Solfège systems also vary with some making use of full syllables while others use merely the first letter of a known syllable.

5 If the nadai were tisra in adi tala, then this would indicate subdivision of groups of three per beat or related subdivision per beat such as six or nine, but the total number of beats would remain eight. Nadai are often shown in shorthand with numbers indicating tala beats followed by dashes or commas for nadai (1 - - = tisra or three including the number), but this is not prescribed and varies greatly between teachers. I have even seen phrases written in solfège that do not indicate the nadai, making the reliance on oral tradition important for accurate interpretations of musical phrases in descriptive notations. Solfège systems also vary with some making use of full syllables while others use merely the first letter of a known syllable.

one cycle of *adi tala* would be thirty-two. The total number of subdivisions is used mathematically to construct rhythmic phrases. When the *nadai* varies, the total number per cycle will also change, as will all of the subsequent rhythmic phrasing because the mathematical relations are typically symmetrical. For example, if a section of a composition featured cycles of *adi tala* with a *tisra nadai* (three subdivisions per beat), the total number of subdivisions would then be twenty-four per one cycle of eight beats. Rhythmic theory in Carnatic music is highly mathematical with a variety of calculative processes employed for desired rhythmic results that may involve addition, subtraction, or division.

**Compositional Structure of Kriti**

A *kriti* is a kind of Carnatic devotional song that makes up the bulk of the repertoire performed in Carnatic concerts. Only one *kriti* will be considered a “main piece” during a concert that can last from ninety minutes to five hours. The performance of such a piece involves seven main sections as follows: *alapana, pallavi, anupallavi, charanam*, soloist improvisation, *thani avarthanam* (percussion improvisations), and *pallavi*. Listeners can follow the basic structure in a vocal concert by following the repetitive lyrics that change at the different sections. In an improvised solo performance during a Carnatic music concert, the *kanjira* player and other percussionists on stage employ several cadential formulae that signal the ending of the improvisation and the beginning of a final coda-like ending of the entire solo performance. These cadential formulae involve commonly known or recognizable patterns such as *aridhi, pharan, mora*, and *korvat*. Examples of these in several *talas* will show the calculative processes that Carnatic percussionists employ on the concert stage. The calculative processes shown in these rhythmic figures add, subtract, or divide subdivisions in symmetrical or asymmetrical ways. The main sections from the *kriti Vathapi Ganapathim Bhajeham* by the composer Muthuswami
Dikshitar (1775–1835) are listed below to demonstrate the seven-part form of *kriti* structure when performed as a “main piece.”

*Alapana* (free-rhythm improvised introduction by soloist with drone)

*Pallavi* (short text, repeated with greater ornamentation, ensemble enters)

*Anupallavi* (new longer text, repeated with greater ornamentation)

*Charanam* (new and much longer text with most complex ornamentation)

Soloist Improvisations

*Thani Avarthanam* (percussion solos)

*Pallavi* (brief restatement as ending)

The *pallavi* is also typically restated once after the *anupallavi* and *charanam*. With an understanding of Carnatic *tala* and the song structure in which a *kanjira* improvisation can occur, analyses of the musical phrases can be presented showing further detail.

**Musical Analysis of Kanjira Improvisation in Thani Avarthanam**

The *thani avarthanam* is the featured percussion solo in the performance of a main piece *kriti* in a Carnatic music concert. The percussion solo is improvised from its start to feature the performer’s virtuosity. Some of what Carnatic *kanjira* players improvise at the beginning of a *thani avarthanam* can be described in Western notation with the exception of the ornamentation. In order to show the correct relationship of *tala* beats, subdivision, and rhythmic style, transcriptions in Western notation can become overly dense, can disguise the true phrasing of the music, and may be difficult to read. I feel such a musical translation is important in identifying

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7 *Vathapi Ganapathim Bhajeham* is classified as a *vinayaka kriti*, which is a devotional to the Hindu deity Ganesh, the remover of obstacles. Starting a concert by observing Ganesh is somewhat traditional depending on the feelings of the soloist. The piece is also a good vocal warm-up due to the types of melodic phrases used that gradually involve a wider vocal range as the piece progresses. The piece is in *raga hamsadhwani* and *adi tala* (eight beats). Carnatic *raga* can have a different ascending and descending pitch order, but this pentatonic *raga* employs the same order. If the starting pitch were C (assuming western intonation), then the pitch order would be as follows: C, D, E, G, B — C, B, G, E, D, C. *Kriti* that are not considered a “main piece” will not feature the more lengthy improvisational sections.
the complexity of the improvisation and demonstrates the need for the use of Carnatic solfège to better represent what analyses may show.

Figures 55A-C show a transcription of the first twenty cycles (in adi tala, chatusra nadai) of the improvisation section at the start of a thani avarthanam (percussion solo within a large structured concert piece) by kanjira master Govinda Rao Harishankar (1958–2002). He uses a single hand to play the kanjira producing only two timbres, a low-tuned resonant timbre called dum (that is frequently ornamented through bending the pitch) and a closed, non-resonant timbre in the center called ka. Beneath the syllables in the transcription are numbers representing how the timbres are executed in terms of the finger technique. There are a total of three fingerings represented as follows: 1 = index finger for dum, 2 = thumb and index finger together for ka, and 3 = middle, ring, and little fingers together also for the ka timbre. By separating the performance hand into two sections (2 and 3, respectively), the performer can rotate a single hand in the center of the membrane to execute the rapid repetitions of the closed ka timbre. Other Carnatic percussionists playing membranophones and idiophones achieve this with the use of both hands.

The inclusion of the timbral syllables and performance technique are essential in demonstrating one aspect of this instrument’s complexity. Although some of the timbral syllables overlap with those used in the South Indian rhythmic solfège system, solkattu, they are not the same; here, they represent the timbres by name in order to show the particular strokes used. The development and use of a solfège system that represents rhythmic phrases for percussionists was a necessity as they typically play dense passages of the same timbres. By

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8 The transcription is of an excerpt of “Grand ‘Finale’” by Karaikudi R. Mani and his Sruthi Laya ensemble from the cassette Grand “Finale”, Gayathri GA 4001 & 4002, 1988, released in Chennai only.

9 The holding hand is used to execute the ornamentation with some of the fingertips applying pressure to the membrane either simultaneously as it is percussed or just afterwards. This is done to change the un-tuned pitch of the dum to differentiate it from repetitions of that same timbre.
utilizing various syllables for such passages, the phrases can be recited much more readily than with the timbre syllables only. Such syllabic phrases will be shown in greater detail later in this chapter as having both musical and cultural value.\(^\text{10}\)

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\(\text{10}\) The term *konnakol* is used for concert performances of *solkattu*. When percussionists recite the *solfège* phrases on the stage, the syllables used can be slightly different from the learned *solkattu* form to accentuate the inherent beauty of the phrase.
Figure 55B. Cycles 8–13 of a *kanjira* improvisation by G. Harishankar.
The published recording analyzed was also a live televised event of which I was able to secure a DVD-R from my ghatam teacher T.V. Vasan (1949-2010). One of my kanjira teachers, B. Shreesundarkumar, knew the entire solo from memory and played along perfectly in sync with the video. With his help over the period of one month, I was able to play a cycle from the video, have him play it back slower while I transcribed it, and ask questions about timbral, rhythmic, and technical accuracy to be sure I was representing the phrases correctly in notation. Upon reaching cycle twenty during the course of a month of working together, he suddenly exclaimed, “What is this wasting of time!?” I soon discovered that many Carnatic musicians in southern India have a preference for performance skills that outweighs their value of scholarship.
The transcription is helpful in communicating some of the complex syncopated rhythmic phrasing common in Carnatic *kanjira* performance practice. The phrasing of fine subdivisions such as the syncopated thirty-second notes in measures 4, 6, 13, and 14 shows great complexity in musical execution. However, this type of analysis is limited in scope and fails to represent a vital conception in phrasing.

The problem with Western notation is that rhythms are notated and beamed together as related to a beat structure within a meter, the customary way of organizing Western rhythmic phrases. When Carnatic rhythms are notated in this manner, the phrasing is marred because the phrasing of Carnatic rhythms often sounds independent to the *tala*. When reading the Western notation in Figures 55A-C, the meter will typically be the reference point with the subdivision and syncopation executed from that perspective. This breaks the continuity of the Carnatic phrasing, which is often independent in musical sound to the *tala*. As such, another system of analysis must be used to offer understanding of what Carnatic percussionists are actually doing and thinking when they perform. The South Indian rhythmic *solfège* known as *solkattu* (or *konnakol* when performed on the stage) will be used to show aspects of *kanjira* performance practice.

By presenting phrases in what I refer to as *Solfège Form*, one can readily see the structure of a given musical phrase. Since Carnatic rhythm makes use of a great variety of calculative processes, these are much more apparent in *Solfège Form* than in Western notation. However, the rhythmic placement of the *solfège* within the *tala* is not apparent in *Solfège Form*. In order to show this, the rhythmic analyses are presented from the perspective of the *tala* detailing rhythmic placement and will accompany each example. These two systems together yield greater clarity and understanding of the musical sophistication but have also been valuable in revealing
deeper cultural structures at work beneath the surface of the music. Such understanding would not have been possible if traditional Western musical analysis was the only analytical tool employed.

**Structure of Solfège and Rhythmic Phrasing**

Calculative processes play a large part in the rhythmic phrasing of Carnatic percussionists, and the written form of the solfège yields clarity on the phrasing variances. For example, a phrase of five in three different speeds within a steady tempo is common in many of the talas. The numbers two, three, and five commonly appear in many types of rhythmic structures in all talas used for Carnatic music. The reductive phrasing of this example of adi tala is shown more clearly written in Solfège Form than in Western notation:

\[
\begin{align*}
- & - Ta - - Di - - Gi - - Na - - Thom - - = 17 \\
Ta & - Di - Gi - Na - Thom - \\
Ta & Di Gi Na Thom \\
& = 10 \\
& = 5 \\
& = 32 TOTAL \\
& \text{(or one cycle)}
\end{align*}
\]

The numerical analysis offers some understanding of the calculative processes these musicians employ regarding subdivision. As mentioned previously, these processes may be additive, subtractive, and/or by division. Another example of calculative rhythmic phrasing would be to divide sixteen subdivisions into three groups of five with a gap or rest included:

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12 Analysis of the numerology and Hindu symbolism embedded within Carnatic rhythm will be detailed later in this chapter.

13 Timbrally, the syllables ta, di, gi, and na represent the same sound, ka, while thom represents dum. When performed in this manner, a very clear phrase of five is heard in three speeds. The independence in sound of this phrase is of utmost importance. Percussionists know where the tala falls within this phrase. They do not necessarily feel the phrase to the pulse of the tala.

14 It is mainly the percussionists that employ these calculative processes in their rhythmic phrasing. Bharata natyam dancers also use similar rhythmic devices but have a separate system of solfège for this. Melodic instrumentalists learn yet another solfège system centered on melody. While some of their repertoire may contain calculative processes, it is primarily the percussionists that feature this mathematical approach in South Indian Carnatic music.
Subdivisions
- Ta Di Gi Na Thom = 6
- Ta Di Gi Na Thom = 5
- Ta Di Gi Na Thom = 5
= 16 TOTAL

If the above phrase were performed in adi tala, then it must be played from the fifth beat if the goal is to create excitement as a kind of small cadence leading to beat one of the next cycle.

When written in a strict fashion showing subdivision and rests with numerical analyses, the solfège system offers a better understanding of the phrases. Each phrase’s function can readily be seen in the music, be it a single phrase that speeds up, reduces, or is additive. The calculative processes can likewise be extrapolated and diagramed with more clarity than music notation because the shape of the phrases can be more clearly viewed with solfège. I also assert that the use of this solfège is necessary in identifying recurring motifs that are evidence of a deeper cultural structure.

My experience with percussion teachers in southern India was such that not all were able to write in so detailed a fashion. Many would write the syllables without commas or dashes for nadai or tala markings, as it was assumed those would be learned orally. When asked about the absence of this in the writing, not all of my informants were able to conceptualize in the same manner. A more complete understanding was arrived at by combining the data gathered from these field informants.

With this system for presenting rhythmic phrases, comprehension of where in the tala such phrases occur required further rhythmical analysis. I then developed a tala grid with the syllables placed according to nadai within the tala. This rhythmical analysis shows the beats of the tala with dashes indicating the subdivision (nadai). The solfège syllables are written beneath, showing the precise placement rhythmically. The dashes in the solfège line indicate rests in
duration, with syllables in bold showing the start of each line from the *solfège* form. By combining these two written systems, both the phrasing and rhythm can be understood with clarity. This graphic form is important for musical and semiotic analyses that can provide understanding of the kind of logic and structure at work on both musical and cultural levels in Carnatic music. An example of this rhythmical analysis with the original *solfège* form appears below to demonstrate the necessity of this methodology in detailing the *kanjira thani avarthanam*.

*Figure 55A-C* shows in Western notation how a *kanjira* improvisation in a *thani avarthanam* begins. Detailed musical analyses with examples of the subsequent sections of a

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15 By semiotic, I mean the identification of and interpretation of recurring signs or symbols found within the musical structure that have a deeper cultural meaning.
kanjira improvisation are necessary to further understand the complexities and the underlying semiotic representations.

If there is more than one percussionist in the ensemble, each will perform an improvisation of undetermined length. After each instrument has been featured, the percussionists typically play a koraippu, which is a call and response section that reduces the length of each percussionist’s play. The standard formula for this in adi tala would be two cycles (or sixteen beats), each followed by one cycle each, then half a cycle (four beats each), then two beats each, and finally one beat each. Sometimes the ensemble will also trade half beats. The form of the tala cycle must be kept intact during this passage. For example, if there were four percussionists trading half beats starting on beat one of the cycle, they would have to continue trading half beats until the entire eight beats of adi tala were accounted for (four times of trading half beats would equal eight beats or one cycle of adi tala). The accompanying percussion section of a Carnatic concert is hierarchical and will always be led by the mridangam. The ghatam is considered second with the kanjira and morsing third and fourth, respectively.16

After the main percussion improvisation and koraippu sections, a pharan is performed, which consists of fast phrases of mostly closed, non-resonant timbres that are repeated as a preparation for the other performers that the percussion solo is concluding. This section contrasts with the previous sections of the thaniavarthanam in that there is less forward momentum. The pharan will usually feature a kind of reduction phrase structure that can start at a length of two beats that repeats twelve times for three cycles. The second section with only four beats that is

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16 I will discuss hierarchy and politics among Carnatic musicians and ensembles in context in the final chapter of this dissertation. There is almost never a traditional Carnatic concert context in which the kanjira is the only percussion soloist. Sometimes the status of a performer can yield flexibility in the hierarchy. The number of percussionists is flexible and involves a mridangist, who typically occupies the highest position within the percussion hierarchy, with any combination of the three remaining standard instruments from two or three to four players.
repeated six times for three cycles. These parts are followed by a climaxing third section of four beats, which repeats four times for two cycles with the entire pharan lasting eight cycles. Figure 56 below shows a pharan in _adi tala_; the underlined syllables indicate duration of double the speed of those syllables not underlined. In Western terms, the underlined phrases can be interpreted as thirty-second notes while syllables not underlined are sixteenth notes (with dashes as rests respectively).

**Pharan in _Adi Tala_ in Solfège Form — Eight Cycles Total**

### Part 1

<table>
<thead>
<tr>
<th>Num</th>
<th>Ki</th>
<th>Tha</th>
<th>Ta</th>
<th>Ka</th>
<th>Na</th>
<th>Tum</th>
<th>Ki</th>
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### Part 2

<table>
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<th>Ka</th>
<th>Ta</th>
<th>Ri</th>
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Figure 56 below shows a pharan in _adi tala_; the underlined syllables indicate duration of double the speed of those syllables not underlined. In Western terms, the underlined phrases can be interpreted as thirty-second notes while syllables not underlined are sixteenth notes (with dashes as rests respectively).
Part 3

Ta Ri Ki Ta  Tum
Ta Ri Ki Ta  Tum
Ta Ri Ki Ta  Tum
Ta Ri Ki Tha Ta Ka
Ta Ka Ta  Ri Ki Tha Ta Ka

Ta Ri Ki Ta  Tum
Ta Ri Ki Ta  Tum
Ta Ri Ki Ta  Tum
Ta Ri Ki Tha Ta Ka
Ta Ka Ta  Ri Ki Tha Ta Ka

Ta Ri Ki Ta  Tum
Ta Ri Ki Ta  Tum
Ta Ri Ki Ta  Tum
Ta Ri Ki Tha Ta Ka
Ta Ka Ta  Ri Ki Tha Ta Ka

Ta Ri Ki Ta  Tum
Ta Ri Ki Ta  Tum
Ta Ri Ki Ta  Tum
Ta Ri Ki Tha Ta Ka
Ta Ka Ta  Ri Ki Tha Ta Ka

Rhythmical Analysis

Part 1 (features a phrase of two beats, repeated twelve times for three cycles)

1  –  –  –  2  –  –  –
Num  –  Ki  Tha  Ta  Ka  Na  Tum  Ki  Tha  Ta  Ka

3  –  –  –  4  –  –  –
Num  –  Ki  Tha  Ta  Ka  Na  Tum  Ki  Tha  Ta  Ka

5  –  –  –  6  –  –  –
Num  –  Ki  Tha  Ta  Ka  Na  Tum  Ki  Tha  Ta  Ka

7  –  –  –  8  –  –  –
Num  –  Ki  Tha  Ta  Ka  Na  Tum  Ki  Tha  Ta  Ka
Part 2 (features a phrase of four beats, repeated six times for three cycles)

<table>
<thead>
<tr>
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<th>Ki Tha Ta Ka</th>
<th>Na</th>
<th>Ki Tha Ta Ka</th>
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<thead>
<tr>
<th>Num</th>
<th>Ki Tha Ta Ka</th>
<th>Ta</th>
<th>Ri</th>
<th>Ki Tha Ta Ka</th>
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</table>
Part 3 (features a hemiola phrase in four beats, repeated four times for two cycles)

1

Ta Ri Ki Ta Tum Ta Ri Ki Ta Tum Ta Ri Ki Ta

3

Tum Ta Ri Ki Tha Ta Ka Ta Ka Ta Ka Ri Ki Tha Ta Ka

5

Ta Ri Ki Ta Tum Ta Ri Ki Ta Tum Ta Ri Ki Ta

7

Tum Ta Ri Ki Tha Ta Ka Ta Ka Ta Ka Ri Ki Tha Ta Ka

1

Ta Ri Ki Ta Tum Ta Ri Ki Ta Tum Ta Ri Ki Ta

3

Tum Ta Ri Ki Tha Ta Ka Ta Ka Ta Ka Ri Ki Tha Ta Ka

5

Ta Ri Ki Ta Tum Ta Ri Ki Ta Tum Ta Ri Ki Ta

7

Tum Ta Ri Ki Tha Ta Ka Ta Ka Ta Ka Ri Ki Tha Ta Ka

Start of Mora

1 (start of next cycle)
Dit

Figure 56. Pharan in adi tala.17

17 The pharan, mora, korvais, and aridhi presented in this dissertation were all collected from my studies of solkattu with Erode K.S. Nagarajan. These phrases were originally transmitted to him under his studies with Sri Umayalpuram K. Sivaraman.
The pharan functions as an ending preparation signaling device in the thani avarthanam. Its repetitive nature, particularly during the first three cycles, clearly stands out from the musical style featured previously. The length of this repetitive phrase is static in the lack of development when compared to the improvised phrases that precede in Figures 55A-C. The difference between the first, second, and third parts of the pharan are to function as a more slowly moving phrase in terms of development. In terms of numerology, the numbers two and three appear in the structure of a pharan with regard to the number of repetitions as parts one and two repeat for three cycles each and part three repeats for two cycles. The semiotic representations of two and three also appear in the internal structure as part one features a two-beat phrase with an even smaller subdivision of two if the phrase were analyzed at the half beat level. Part two features an internal structure that doubles this with the use of four beats in a three plus three plus two pattern. Part three features an internal structure of three with regard to the hemiola that crosses beats. The emphasis on doubling the phrasing in part two and using a triple-based phrasing in part three suggest a symmetrical logic suitable for semiotic interpretation. Zoomorphic symbolism from nature also pervades Carnatic music with calculative processes based on inspiration from natural shapes, such as the tail of a cow (known as gopucha yati). The slow-moving and unfolding of the pharan, in contrast with all other sections of the percussion solo, suggests to me the meandering of a river, which is another important icon in Hinduism. After detailing musical intricacies, the use of Hindu symbolism embedded within these musical structures will be explained. This will allow the reader to first grasp the musical concepts before considering these cultural aspects.
Musical Analysis of Mora in Thani Avarthanam

Following this section is the mora, which has a six-part structure that reduces, building the excitement in a kind of tension and release. It functions as a secondary ending signal after the pharan. The mora is also easily identified by other ensemble members in the Carnatic tradition. Figure 57 provides an example of a mora in adi tala in solfège form with rhythmical analysis.

**Mora in Adi Tala in Solfège Form — Four Cycles Total**

<table>
<thead>
<tr>
<th>Dit – Tam</th>
<th>Ki Tha</th>
<th>Ta Ka Ta Ri</th>
<th>Ki Tha Ta Ka</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ta Ka</td>
<td>Thom</td>
<td>Tam</td>
<td>Ki Ta Ta Ka Ta Ri</td>
</tr>
<tr>
<td>Dit – Tam</td>
<td>Ki Tha</td>
<td>Ta Ka Ta Ri</td>
<td>Ki Tha Ta Ka</td>
</tr>
<tr>
<td>Ta Lan –</td>
<td>Gu</td>
<td>Dhin – Na</td>
<td>–</td>
</tr>
<tr>
<td>Ta Lan –</td>
<td>Gu</td>
<td>Thom – –</td>
<td>–</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dit – Tam</th>
<th>Ki Tha</th>
<th>Ta Ka Ta Ri</th>
<th>Ki Tha Ta Ka</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ta Ka</td>
<td>Thom</td>
<td>Tam</td>
<td>Ki Ta Ta Ka Ta Ri</td>
</tr>
<tr>
<td>Dit – Tam</td>
<td>Ki Tha</td>
<td>Ta Ka Ta Ri</td>
<td>Ki Tha Ta Ka</td>
</tr>
<tr>
<td>Ta Lan –</td>
<td>Gu</td>
<td>Dhin – Na</td>
<td>–</td>
</tr>
<tr>
<td>Ta Lan –</td>
<td>Gu</td>
<td>Thom – –</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Dit – Tam</th>
<th>Ki Tha</th>
<th>Ta Ka Ta Ri</th>
<th>Ki Tha Ta Ka</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ta Ka</td>
<td>Thom</td>
<td>Tam</td>
<td>Ki Ta Ta Ka Ta Ri</td>
</tr>
<tr>
<td>Dit – Tam</td>
<td>Ki Tha</td>
<td>Ta Ka Ta Ri</td>
<td>Ki Tha Ta Ka</td>
</tr>
<tr>
<td>Ta Lan –</td>
<td>Gu</td>
<td>Dhin – Na</td>
<td>–</td>
</tr>
<tr>
<td>Ta Lan –</td>
<td>Gu</td>
<td>Thom – –</td>
<td>–</td>
</tr>
</tbody>
</table>

| Ta Ka     | Thom   | Tam         | Ki Ta Ta Ka Ta Ri | Ki Tha Ta Ka |
|-----------|--------|-------------|-------------|
| Ta Lan – | Gu     | Dhin – Na   | –            |
| Ta Lan – | Gu     | Thom – –    |–            |

**Rhythmic Analysis**

**Part 1 (four two-beat phrases for one cycle)**

<table>
<thead>
<tr>
<th>1</th>
<th>–</th>
<th>–</th>
<th>2</th>
<th>–</th>
<th>–</th>
<th>3</th>
<th>–</th>
<th>–</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dit – Tam</td>
<td>Ki Tha</td>
<td>Ta Ka Ta Ri</td>
<td>Ki Tha Ta Ka</td>
<td>Ta Ka</td>
<td>Thom</td>
<td>Tam</td>
<td>Ki Ta</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4</th>
<th>–</th>
<th>–</th>
<th>–</th>
<th>5</th>
<th>–</th>
<th>–</th>
<th>6</th>
<th>–</th>
<th>–</th>
<th>–</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ta Ka Ta Ri</td>
<td>Ki Tha Ta Ka</td>
<td>Dit – Tam</td>
<td>Ki Tha</td>
<td>Ta Ka Ta Ri</td>
<td>Ki Tha Ta Ka</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7</th>
<th>–</th>
<th>–</th>
<th>–</th>
<th>8</th>
<th>–</th>
<th>–</th>
<th>–</th>
<th>–</th>
<th>–</th>
<th>–</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ta Lan – Gu</td>
<td>Dhin – Na</td>
<td>Ta Lan – Gu</td>
<td>Thom – –</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Part 2 (repeat of part one)

Dit – Tam Ki Tha Ta Ka Ta Ri Ki Tha Ta Ka Ta Ka Thom Tam Ki Ta

Part 3 (same phrase with reduced ending for seven beats)

Dit – Tam Ki Tha Ta Ka Ta Ri Ki Tha Ta Ka Ta Ka Thom Tam Ki Ta

Part 4 (reduced opening phrase and ending, three beats starting on beat eight)

Dit – Tam Ki Tha Ta Ka Ta Ri Ki Tha Ta Ka Ta Lan – Gu Thom – – –

Part 5 (second half of original opening phrase, two beats starting on beat three)

Ta Ka Thom Tam Ki Ta Ta Ka Ta Ri Ki Tha Ta Ka

Part 6 (variation on original ending phrase, four beats staring on beat five)


Dhin – Na – Thom – Ta Lan – Gu Dhin – Na –

Final Korvai

1 (start of next cycle)
Thom

Figure 57. Mora in adi tala.
The six-part *mora* structure employs an opening phrase that is one cycle in duration, in this case eight beats, which is repeated for part two, totaling two cycles or sixteen beats. Part three employs the first half of the opening phrase with a reduced part of the ending theme, effectively reducing the overall duration of the phrase, in this case from eight beats to seven. Part four reduces the opening phrase in conjunction with the previously reduced ending, resulting in a variation of further reduction to three beats. Part five presents the second half of the opening phrase for thematic variation and a further reduction in phrase duration lasting only two beats. Part six is cadential in that the ending phrase is presented three times over the remaining four beats of the cycle, with the last syllable ending on beat one of the next cycle. The overall structure of the *mora* lasts only four cycles of *adi tala*, which is exactly half the duration of the *pharan* presented previously — this represents the number two. The *mora* is balanced in the presentation of sixteen beats of thematic material and sixteen beats of variation. The musical style of the *mora* is more active and faster moving than the *pharan*. Numerological culture is also present in the overall structure of the *mora*. While the *pharan* is in three parts, the *mora* is in six, doubling the length. Part four is three beats in duration, while part five is two beats. Part six of the *mora* involves an internal phrase of three. The numbers two and three also permeate throughout the *mora* and its faster pace suggests a river with a stronger current. While the *pharan* and *mora* include semiotic representations, it is in the *korvai*, the final section of the percussion feature, where these are most laden.

**Musical Analyses of Korvais in Thani Avarthanam**

Following the *mora* is the final *korvai*, a complex rhythmic cadential device that functions as the final climax of the *thani avarthanam*. This is typically played three times with the final repetition featuring the most complex variations to build excitement and demonstrate virtuosity.
By presenting analyses of several korvais in various talas, I can more clearly illustrate the variety of calculative processes inherent in the percussion improvisations of Carnatic music. The multiplicities of semiotic representations are also most evident, as my analyses will demonstrate.

The structure of a korvai is typically in two parts, a theme followed by an expression of the ta di gi na thom phrase. They can be longer in having multiple themes but will always end with an expression of ta di gi na thom. A korvai in rupaka chapu tala (three beats) shows this basic structure in Figure 58.

**Korvai in Rupaka Chapu Tala in Solfège Form**

<table>
<thead>
<tr>
<th>Ta Ka Di Na Thom –</th>
<th>= 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ta Ka Di Na Thom –</td>
<td>= 6</td>
</tr>
<tr>
<td>Ta Ka Di Na Thom –</td>
<td>= 6</td>
</tr>
<tr>
<td>Ta Di – Gi Na Thom</td>
<td>= 6</td>
</tr>
<tr>
<td>Ta Di – Gi Na Thom</td>
<td>= 6</td>
</tr>
<tr>
<td>Ta Di – Gi Na Thom</td>
<td></td>
</tr>
<tr>
<td>= 36 subdivisions</td>
<td></td>
</tr>
</tbody>
</table>

Figure 58. Korvai in rupaka chapu tala.

In this example, the phrasing is symmetrical with each line equal to six subdivisions. Each of the six lines of six subdivisions total in thirty-six subdivisions for the korvai. Since rupaka chapu tala is three beats with the default starting nadai being chatusra (four subdivisions per beat), a single cycle has a value of twelve subdivisions. To determine the number of tala cycles required by this phrase with the starting position on beat one, the performer must divide the total number of subdivisions of the entire phrase, in this case thirty-six, by the number of subdivisions in a single cycle, in this case twelve, for a result of three. In context, the korvais do not always start or cadence on beat one, nor should they. The melody of a piece may begin at any position within the tala cycle, and the soloists and accompanists must phrase all of the cadential patterns so that they fall at that starting point of the melody. The calculative procedures are an integral part of Carnatic music structure most typically mastered by the percussionists, but they are not
unknown among vocalists and instrumentalists. Melodic soloists will learn some of this material by learning compositions that employ them through their own melodic solfège system. For the purposes of clarity, examples of korvais will be shown starting on beat one of a given tala cycle with an additional solfège syllable ta added after the phrase to show where beat one of the next cycle falls (the cadence). In context, an additional syllable will always be added to arrive at the desired point within the tala cycle dictated by the starting position of the melody of a given composition.

An additional consideration is that these calculative processes are in part learned and in part improvised on the stage. The theory of how to calculate Carnatic rhythms is an important developmental skill to master since musicians typically do not rehearse for Carnatic concerts. Each musician must know enough collectively known repertoire that they are competent in the concert context. Typically nothing is discussed about what will be played beyond the starting pitch. All of the performers are expected to instantly recognize what piece is being played and know how to accompany from the start of the soloist’s opening phrases. Calculative perception is necessary because, if a piece starts between beats one and two, then the percussionists and melodic accompanists must phrase so that their cadences land at that point even at the climax of a thani avarthanam and the ending of composition.

The types of phrasing in korvais can feature a broad variety of calculative processes that may also be thought of as zoomorphic shapes. Figure 59 presents a korvai that features reduction by two subdivisions per line in rupaka chapu tala. This is also an example of a zoomorphic representation of the tail of a cow (gopucha yati).

---

18 In Carnatic music, soloists typically train to sing at one pitch that best suits their voice. This is communicated to all musicians beforehand so they arrive with instruments suitable for that pitch. Composition titles, composers, ragas, and talas are sometimes announced during a Carnatic concert but not always.
**Solfège Form**

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ta</td>
<td>Dit</td>
<td>Ta Ka Di Na</td>
<td>Ta Ka Tam</td>
<td>= 12</td>
<td></td>
</tr>
<tr>
<td>Dit</td>
<td>Ta Ka Di Na</td>
<td>Ta Ka Tam</td>
<td>= 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ta Ka Di Na</td>
<td>Ta Ka Tam</td>
<td>= 8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ta Di – Gi Na Thom</td>
<td>= 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ta Di – Gi Na Thom</td>
<td>= 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ta Di – Gi Na Thom</td>
<td>= 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= 48 total subdivisions = 4 cycles

**Rhythmical Analysis**

1 –  –  – 2 –  –  – 3 –  –  –
**Ta** – Dit – Ta Ka Di Na | Ta Ka Tam –

1 –  –  – 2 –  –  – 3 –  –  –
**Dit** – Ta Ka Di Na | Ta Ka Tam – **Ta** Ka

1 –  –  – 2 –  –  – 3 –  –  –
Di Na Ta Ka Tam – **Ta** Di – Gi Na Thom

1 –  –  – 2 –  –  – 3 –  –  –
**Ta** Di – Gi Na Thom | **Ta** Di – Gi Na Thom

1 (start of next cycle)
**Ta**

*Figure 59. Korvai in rupaka chapu tala showing reduction of opening phrase.*

In the rhythmical analysis, the start of each line of the *solfège* form is in bold for locating each line more easily within the analysis. This indication is also to demonstrate where the stress of the phrasing should be if recited or performed. The phrases should sound independent of the *tala*. A typical Western perspective would be to stress where the *tala* falls because of how meter and beaming within notation is prescribed in music theory. Such stress would destroy any sense of Carnatic phrasing in the music; and as such, Western notation of Carnatic music should be avoided. The *solfège* form shows clearly what the phrase is doing while the rhythmical analyses (the *tala* grid) demonstrates where in the *tala* cycle these phrases fall with regard to subdivision.
Another important aspect of how many korvais work is the midpoint of the tala cycle, which is most often the point at which the ta di gi na thom endings fall, particularly in the chapu talas. Figure 60 demonstrates this point midway through the twelve subdivisions in the third cycle, directly between beats two and three where the ending begins. This phenomenon effectively divides the tala cycle in two equal parts, showing another calculative process at work and another semiotic representation of the number two. Figure 60 shows us the shape of the korvai utilizing both reduction and additive processes in rupaka chapu tala.

_Solfège Form_

\[
\begin{align*}
Ta – Dit – Ta Ka Di Na Tam – &= 10 \\
Dit – Ta Ka Di Na Tam – &= 8 \\
Ta Ka Di Na Tam – &= 6 \\
Ta Di – Gi Na Thom &= 6 \\
Ta Ka Ta Di – Gi Na Thom &= 8 \\
Ta Ka Di Ku Ta Di – Gi Na Thom &= 10 \\
&= 48 \text{ total subdivisions} = 4 \text{ cycles}
\end{align*}
\]

_Rhythmical Analysis_

1 – – – 2 – – 3 – – –
Ta – Dit – Ta Ka Di Na Tam – Dit –

1 – – – 2 – – 3 – – –
Ta Ka Di Na Tam – Ta Ka Di Na Tam –

1 – – – 2 – – 3 – – –
Ta Di – Gi Na Thom Ta Ka Ta Di – Gi

1 – – – 2 – – 3 – – –
Na Thom Ta Ka Di Ku Ta Di – Gi Na Thom

1 (start of next cycle)
Ta

Figure 60. Korvai in rupaka chapu tala showing reduction and addition.

In this example, the symmetrical nature of the reduction and addition can be seen in the solfège form. The opening phrase is reduced by two subdivisions in each line while the ending adds two subdivisions for each line. This symmetrical structuring results in the ending of the
korvai starting at the midpoint in the tala. This effectively divides a tala cycle in half from which the five-syllable ending ta di gi na thom is repeated three times. The zoomorphic design of the reduction and addition are inspired by natural shapes found on cow-tails, which tend to taper before flaring outward. These types of rhythmic structures are referred to by Carnatic percussionists as gopucha yati.\(^{19}\) This korvai features the cow symbolically and the numbers two (midpoint and reductive and additive phrasing), three (tala beats, repetition of a korvai three times, and repetition of ending three times), and five (ending syllables).

Figures 61-62 show another calculative aspect to korvais in which certain numbers may relate various talas. The example in Figure 61 is shown in adi tala (eight beats) with the total number of subdivisions of the phrase being ninety-six. The total number of subdivisions in one cycle of adi tala (assuming the default start of chatusra nadai = four subdivisions per beat) equals thirty-two. The number ninety-six indicates three cycles of adi tala, but ninety-six is also divisible by twelve, indicating that this phrase can be performed in eight cycles of rupaka chapu tala (three beats). This means that any korvai totaling ninety-six subdivisions can be utilized in either adi tala or rupaka chapu tala.

**Solfège Form**

\[
\begin{align*}
\text{Dit} &- \text{Tam} & \text{Ki} & \text{Tha} & \text{Ta} & \text{Ka} & \text{Ta} & \text{Ra} & \text{Ki} & \text{Tha} & \text{Ta} & \text{Ka} & \text{Dhin} & - & - & - & = 16 \\
\text{Tam} & \text{Ki} & \text{Tha} & \text{Ta} & \text{Ka} & \text{Ta} & \text{Ra} & \text{Ki} & \text{Tha} & \text{Ta} & \text{Ka} & \text{Dhin} & - & - & - & - & - & = 16 \\
\text{Ta} & \text{Ka} & \text{Ta} & \text{Ra} & \text{Ki} & \text{Tha} & \text{Ta} & \text{Ka} & \text{Dhin} & - & - & - & - & - & - & - & = 16 \\
\text{Ta} & \text{Di} & - & \text{Gi} & \text{Na} & \text{Thom} & \text{Ta} & - & - & - & - & - & = 12 \\
\text{Ta} & \text{Di} & - & \text{Gi} & \text{Na} & \text{Thom} & \text{Ta} & \text{Di} & - & \text{Gi} & \text{Na} & \text{Thom} & \text{Ta} & - & - & - & - & - & = 18 \\
\text{Ta} & \text{Di} & - & \text{Gi} & \text{Na} & \text{Thom} & \text{Ta} & \text{Di} & - & \text{Gi} & \text{Na} & \text{Thom} & \text{Ta} & \text{Di} & - & \text{Gi} & \text{Na} & \text{Thom} & = 18 \\
\end{align*}
\]

Three cycles of adi tala or eight cycles of rupaka chapu tala = 96 subdivisions

\(^{19}\) Gopi meaning cow while yati means patterns based on geometric shapes.
Rhythmical Analysis in Three Cycles of Adi Tala

1 – – – 2 – – – 3 – – – 4 – – –
Dit – Tam Ki Tha Ta Ka Ta Ri Ki Tha Ta Ka Dhin – Ta – Tam – –

5 – – – 6 – – – 7 – – – 8 – – –
Tam Ki Tha Ta Ka Ta Ri Ki Tha Ta Ka Dhin – – Ta – – Tam – – –

1 – – – 2 – – – 3 – – – 4 – – –
Ta Ka Ta Ri Ki Tha Ta Ka Dhin – – Ta – – – Tam – – –

5 – – – 6 – – – 7 – – – 8 – – –
Ta Di – Gi Na Thom Ta – – – – Ta Di – Gi

1 – – – 2 – – – 3 – – – 4 – – –
Na Thom Ta Di – Gi Na Thom Ta – – – – Ta Di

5 – – – 6 – – – 7 – – – 8 – – –
– Gi Na Thom Ta Di – Gi Na Thom Ta Di – Gi Na Thom

1 (start of next cycle)
Ta

Figure 61. Korvai of ninety-six subdivisions in three cycles of adi tala.

In this example, the phrase employs double-speed phrases (indicated by the underlines). When counting the total number of subdivisions per line, two of these are counted as one subdivision because of the default start at chatusra nadai (four subdivisions per beat). When a phrase is doubled to twice the speed, the eight subdivisions take the same duration of four at nadai level. This is an important concept to understand in how this Carnatic music theory works. The ending of this korvai also starts at the midpoint of the tala on beat five of cycle two. The structure of the ending features the ever-present ta di gi na thom five-syllable phrase three times in the repetition with variation. The structure of this korvai is another example of the zoomorphic gopucha yati (or “cow-tailing” in the vernacular), and numerological symbolism with the numbers two (in the variance of phrasing between the opening and ending themes and the midpoint of the cycle), three (each theme being constructed of three thematic lines, repetition of a korvai three times, and repetition of ending three times), and five (ending syllables).
Rhythmical Analysis in Eight Cycles of *Rupaka Chapu Tala*

```
1 2 3
Dit  Þ Tam  Þ Ta  Þ Ka  Þ Ta  Þ Ri  Þ Ta  Þ Ka  Dhin  Þ Ta
1 2 3
Tam  Þ Tam  Þ Ki  Þ Tha  Þ Ta  Þ Ka  Þ Ta  Þ Ri  Þ Ta  Þ Ka  Dhin
1 3
Ta  Þ Tam  Þ Ta  Þ Ka  Þ Ta  Þ Ri  Þ Ki  Þ Tha  Þ Ta  Þ Ka
1 2 3
Dhin  Þ Ta  Þ Ki  Þ Tha  Þ Ta  Þ Ka  Þ Ta  Þ Ri  Þ Ki  Þ Tha  Þ Ta  Þ Ka
1 2 3
Ta  Þ Di  Þ Gi  Þ Na  Þ Thom  Þ Ta
1 3
Ta  Þ Di  Þ Gi  Þ Na  Þ Thom  Ta  Þ Di  Þ Gi  Þ Na  Þ Thom
1 3
Ta  Þ Di  Þ Gi  Þ Na  Þ Thom  Ta  Þ Di  Þ Gi  Þ Na  Þ Thom
1 (start of next cycle)
Ta
```

Figure 62. *Korvai* of ninety-six subdivisions in eight cycles of *rupaka chapu tala*.

Although the *talas* are different between Figures 61-62, the phrase is the same and will end at the same desired point (in this case, beat one) because the subdivisions of the phrase are equal to a common number between the two *talas*. This type of numerical relationship is important in understanding how Carnatic percussionists think and apply the same methodology across different *talas*. In this example, the ending does not start on the midpoint of the *tala*. Rather, it starts midway through the total number of *tala* cycles, indicating that midpoints through cycles and phrases are important musical conceptions, which is also a manifestation of the number two.

Regardless of what *tala* may be in use, certain numbers will be significant to the musical phrasing. Two, three, and five are perhaps the most significant. *Korvai* typically have two parts.
and are always repeated three times in a Carnatic concert context. The use of the five-syllable phrase *ta di gi na thom* is what defines a *korvai*; it must appear in some variation after the opening phrase and also be repeated three times. In Figures 61-62, even though the *talas* vary from *adi tala* (eight beats) to *rupaka chapu* (three beats), the phrase *ta di gi na thom* is repeated three times in each *korvai*. Figures 63-64 demonstrate the continued semiotic presence of the numbers two, three, and five despite the *talas* being *khanda chapu* (five beats) and *misra chapu* (seven beats).

*Solfège Form*

<table>
<thead>
<tr>
<th></th>
<th>Tan – Gu</th>
<th>Di Na Tan – Gu</th>
<th>Ta Ka</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Ta Di Gi Na Thom</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

**= 30 subdivisions or three cycles of khanda chapu tala**

*Rhythmical Analysis*

\[
\begin{array}{cccccccc}
1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \\
\text{Tan} & \text{Di} & \text{Na} & \text{Tan} & \text{Gu} & \text{Ta} & \text{Ka} & \\
1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \\
\text{Di} & \text{Na} & \text{Tan} & \text{Gu} & \text{Ta} & \text{Di} & \text{Gi} & \text{Na} \text{Thom} \\
1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \\
\text{Ta} & \text{Di} & \text{Gi} & \text{Na} \text{Thom} & \text{Ta} & \text{Di} & \text{Gi} & \text{Na} \text{Thom} \\
\end{array}
\]

1 (start of new cycle)

Ta

Figure 63. *Korvai in khanda chapu tala.*

In previous examples, *rupaka chapu tala* and *adi tala* both involved a *nadai* (subdivision) of four. In Western terms, this is the rhythmical equivalent of the meters three-four and eight-four, respectively. For *khanda chapu tala* (five beats), the *nadai* is two subdivisions per beat, making this *tala* the equivalent of five-eight in from a Western perspective. This indicates that

---

20 *Khanda chapu tala* is shown with a single clap indicating beats one-two followed by two waves for beats three and four-five, respectively.
the total number of subdivisions for a single cycle of this *tala* would be ten (twice the number of beats). Hence, one can divide the thirty subdivisions of the phrase by the ten subdivisions for the *tala* to determine that there are three cycles of the *tala* to execute this phrase. The adherence to *ta di gi na thom*, five strokes repeated three times, is not only part of the music theory but is also of cultural significance as this phrase appears in all forty-five *korvais* that I have collected in four different *talas*. Also significant is the point at which the ending begins, which is again at the midpoint of the *tala* between beats three and four. In my analysis of the rhythmical values in the *Solfège* Form above, I noted that the opening lines exhibit an additive value of two subdivisions each, with line 1 being three subdivisions, line 2 being five, and line 3 being seven. The ending phrase starts two subdivisions less than the previous line, from seven back to five. The continued emphasis on the midpoint of a *tala* cycle, effectively dividing it into two equal parts, and the additive phrase development, the repetition of the *korvais* and its ending three times each, and the beat structure and ending phrase involving the number five suggest that the continued use of this numerological orientation has significance beyond musical value.

*Solfège Form*

\[
\begin{align*}
\text{Ta} – \text{Di} – \text{Gi Na Thom} & \text{Tam} = 14 \\
\text{Ta} – \text{Di} – \text{Gi Na Thom} & \text{Ta} – \text{Di} – \text{Gi Na Thom} \text{Tam} = 21 \\
\text{Ta} – \text{Di} – \text{Gi Na Thom} & = 7 \\
\text{Ta} – \text{Di} – \text{Gi Na Thom} & = 7 \\
\text{Ta} – \text{Di} – \text{Gi Na Thom} & = 7 \\
\text{Ta} – \text{Di} – \text{Gi Na Thom} & = 56 \text{ subdivisions} \\
\text{(or four cycles of misra chapu tala)}
\end{align*}
\]
Rhythmical Analysis

Figure 64. Korvai in misra chapu tala.\(^{21}\)

Figure 64 shows a korvai constructed entirely from variations of ta di gi na thom in the seven-beat misra chapu tala. This tala again employs a nadai of two (making this the equivalent of the Western meter seven-eight), resulting in fourteen subdivisions total for a single cycle of this tala. In this case, the ta di gi na thom phrase is made up of seven subdivisions, but it is important to understand how such a phrase will be heard in the actual performance. No matter what the micro-phrasing of the subdivisions of ta di gi na thom are in any tala and in any korvai, it will always retain an orientation of five. This is largely because of the sound of the phrase often makes use of only two timbres or the emphasis of the five syllables in highly elaborate variations. On the percussion instruments are used to execute this phrase — the non-resonant timbre ka is used for the first four syllables of the solfège phrase ta di gi na, while thom is the resonant timbre dum. Although the subdivisions and structure of the tala revolve around seven, the number five manifests as a semiotic icon. The ending of this korvai also starts at the midpoint, which once again divides the tala cycle in half between beats four and five and

---

\(^{21}\) Misra chapu tala is shown starting with two waves for beats one and two-three, a clap for beats four-five, and a second clap for beats six-seven.
highlights the significance of the number two. The ending is repeated three times, and the thematic material is composed of two sections with two lines and three lines respectively.

**Musical Analyses of Korvai Variations in Thani Avarthanam**

The performance practice of korvai in Carnatic music concerts calls for three repetitions each time a korvai is performed. At the climax of the thani avarthanam, the longest and most complex korvai will be utilized. The final repetition typically features the inclusion of double-speed variations of parts of the original korvai. Despite the complexity of the musical rhythm, the internal structure of the original korvai and its semiotic representations are kept intact.

Figures 65-68 are typical variations of korvais in the four most common talas in Carnatic music.

**Solfège Form — Original**

\[
\begin{align*}
\text{Ta} & - \text{Dit} - \text{Ta Ka Di Na Tam} - = 10 \\
\text{Dit} & - \text{Ta Ka Di Na Tam} - = 8 \\
\text{Ta Ka Di Na Tam} - & = 6 \\
\text{Ta Di} & - \text{Gi Na Thom} = 6 \\
\text{Ta Ka Ta Di} & - \text{Gi Na Thom} = 8 \\
\text{Ta Ka Di Ku Ta Di} & - \text{Gi Na Thom} = 10 \\
& = 48 subdivisions or 4 cycles
\end{align*}
\]

**Solfège Form — Variation**

\[
\begin{align*}
\text{Ta} & - \text{Dit} - \text{Na Ka Ta Ri Ki Tha Ta Ka Tam} - = 10 \\
\text{Dit} & - \text{Na Ka Ta Ri Ki Tha Ta Ka Tam} - = 8 \\
\text{Na Ka Ta Ri Ki Tha Ta Ka Tam} - & = 6 \\
\text{Ta Di} & - \text{De Re Ki Ta Thom} = 6 \\
\text{Ta Ka Ta Di} & - \text{De Re Ki Ta Thom} = 8 \\
\text{Ta Ka Di Ku Ta Di} & - \text{De Re Ki Ta Thom} = 10 \\
& = 48 subdivisions or 4 cycles
\end{align*}
\]

**Rhythmical Analysis**

\[
\begin{align*}
1 & - - - 2 & - - - 3 & - - - \\
\text{Ta} & - \text{Dit} - \text{Na Ka Ta Ri Ki Tha Ta Ka} & \text{Tam} - & \text{Dit} - \\
1 & - - - 2 & - - - 3 & - - - \\
\text{Na Ka Ta Ri Ki Tha Ta Ka} & \text{Tam} - & \text{Na Ka Ta Ri Ki Tha Ta Ka} & \text{Tam} - \\
\end{align*}
\]
The use of the Hindu semiotic representation from the original korvai is shown in the solfège form in Figure 65. The gopucha yati reduction is intact with only certain groups of syllables changed to a finer subdivision. This is common practice among Carnatic percussionists where standard phrases of four nadai are replaced with double the number of syllables at double the speed. In this case, ta ka di na (four at a sixteenth-note value) is replaced with na ka ta ri ki thakaka (eight at a thirty-second-note value, shown with an underline); likewise, gi na is replaced with de re ki ta. The variations of ta di gi na thom are still based on the original five strokes and are still repeated three times but only the first four syllables/strokes are doubled as de re ki ta da di gi na while thom retains its full value as a single syllable/stroke. The semiotic aspects of the numerology are kept intact even in variation.

**Solfège Form — Original**

\[
\begin{align*}
1 & \quad - \quad - \quad 2 & \quad - \quad - \quad 3 & \quad - \quad - \\
Ta & \quad Di & \quad De & Re & Ki & Ta & \quad Thom & \quad Ta & \quad Ka & \quad Ta & \quad Di & \quad - \quad De & Re \\
1 & \quad - \quad - \quad 2 & \quad - \quad - \quad 3 & \quad - \quad - \\
Ki & \quad Ta & \quad Thom & \quad Ta & \quad Ka & \quad Di & \quad Ku & \quad Ta & \quad Di & \quad - \quad De & Re & Ki & Ta & \quad Thom \\
1 & \text{(start next cycle)} & Ta
\end{align*}
\]

Figure 65. Korvai variation in rupaka chapu tal.

**Solfège Form — Variation**

\[
\begin{align*}
Ta & \quad - \quad Dit & \quad Ta & \quad Ka & \quad Di & \quad Na & \quad Ta & \quad Ka & \quad Tam & \quad - \quad - \quad = \quad 14 \\
\text{Dit} & \quad - \quad Ta & \quad Ka & \quad Di & \quad Na & \quad Ta & \quad Ka & \quad Tam & \quad - \quad - \quad = \quad 12 \\
\text{Ta} & \quad Ka & \quad Di & \quad Na & \quad Ta & \quad Ka & \quad Tam & \quad - \quad - \quad = \quad 10 \\
\text{Di} & \quad Na & \quad Ta & \quad Ka & \quad Tam & \quad - \quad - \quad = \quad 8 \\
\text{Ta} & \quad Ka & \quad Tam & \quad - \quad - \quad = \quad 5 \\
\text{Ta} & \quad Di & \quad Gi & \quad Na & \quad Thom & \quad = \quad 5 \\
\text{Ta} & \quad Di & \quad Gi & \quad Na & \quad Thom & \quad = \quad 5 \\
\text{Ta} & \quad Di & \quad Gi & \quad Na & \quad Thom & \quad = \quad 5 \\
\hline
\text{= 64 subdivisions or 2 cycles}
\end{align*}
\]
Na Ka Ta Ri Ki Tha Ta Ka Tam – – – = 8
De Re Ki Ta Tam – – = 5

De Re Ki Ta Da Di Gi Na Thom = 5
De Re Ki Ta Da Di Gi Na Thom = 5
De Re Ki Ta Da Di Gi Na Thom = 5
= 64 subdivisions or 2 cycles

Rhythmical Analysis

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ta</td>
<td>Dit</td>
<td>Na Ka Ta Ri Ki Tha Ta Ka De Re Ki Ta Tam</td>
<td>Dit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Na Ka Ta Ri Ki Tha Ta Ka De Re Ki Ta Tam</td>
<td>Na Ka Ta Ri Ki Tha Ta Ka De Re Ki Ta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tam</td>
<td>Na Ka Ta Ri Ki Tha Ta Ka Tam</td>
<td>De Re Ki Ta Tam</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Na Ka Ta Ri Ki Tha Ta Ka De Re Ki Ta Tha</td>
<td>De Re Ki Ta Da Di Gi Na Thom</td>
<td>De Re Ki Ta Da Di Gi Na Thom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 (start of next cycle)

Figure 66. Korvai variation in adi tala.

Figure 66 presents a korvai variation in adi tala. The same principles of variation are at work in the doubling of four syllables to eight as well as the rhythmic speed. The solfège forms show another gopucha yati style phrase, and the calculative logic reduces most lines by two subdivisions followed by three for the last four lines. The ending stresses the number five with ta di gi na thom, which is repeated three times. The Hindu symbolism of the sacred cow along with the numbers two, three, and five also remains intact despite the variation of the korvai and the variance in tala.

Solfège Form — Original

<table>
<thead>
<tr>
<th>Tan – Gu</th>
<th>Di Na Tan – Gu</th>
<th>Ta Ka Di Na Tan – Gu</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Ta Di Gi Na Thom</td>
<td>5</td>
<td>Ta Di Gi Na Thom</td>
</tr>
<tr>
<td>Ta Di Gi Na Thom</td>
<td>5</td>
<td>Ta Di Gi Na Thom</td>
</tr>
</tbody>
</table>

= 30 subdivisions or three cycles of khanda chapu tala
Solfège Form — Variation

\[
\begin{align*}
\text{Tan} - \text{Gu} &= 3 \\
\text{Ki Tha Ta Ka} \text{Tan} - \text{Gu} &= 5 \\
\text{Ki Tha Ta Ka} \text{De Re Ki Ta} \text{Tan} - \text{Gu} &= 7 \\
\text{De Re Ki Ta Da Di Ki Na} \text{Thom} &= 5 \\
\text{De Re Ki Ta Da Di Ki Na} \text{Thom} &= 5 \\
\text{De Re Ki Ta Da Di Ki Na} \text{Thom} &= 5
\end{align*}
\]
= 30 subdivisions
(or three cycles of *khanda chapu tala*)

Rhythmical Analysis

\[
\begin{align*}
1 & & 2 & & 3 & & 4 & & 5 & \\
\text{Tan} & & \text{Gu} & & \text{Ki Tha Ta Ka} & & \text{Tan} & & \text{Gu} & & \text{Ki Tha Ta Ka} \\
& & & & & & & & & & & & \\
1 & & 2 & & 3 & & 4 & & 5 & \\
\text{De Re Ki Ta} & & \text{Tan} & & \text{Gu} & & \text{De Re Ki Ta Da Di Ki Na} & & \text{Thom} \\
& & & & & & & & & & & & \\
1 & & 2 & & 3 & & 4 & & 5 & \\
\text{De Re Ki Ta Da Di Ki Na} & & \text{Thom} & & \text{De Re Ki Ta Da Di Ki Na} & & \text{Thom} \\
& & & & & & & & & & & & \\
1 & & \text{Ta} (\text{start of next cycle})
\end{align*}
\]

Figure 67. *Korvai* variation in *khanda chapu tala*.

The significance of Figure 67 in *khanda chapu tala* shows the same musical theory and semiotic representations intact despite the *korvai* and *tala* variation. The calculative process in this instance varies by adding two subdivisions to each line, and the ending is still based on a phrase of five repeated three times. Additionally, the same Hindu semiotic representations continue to permeate the rhythmic structure that percussionists perform during their improvisational section of a main piece *kriti*.

Solfège Form — Original

\[
\begin{align*}
\text{Ta} & & \text{Di} & & \text{Gi Na Thom} & & \text{Tam} & & \text{=} & & 7 \\
\text{Ta} & & \text{Di} & & \text{Gi Na Thom} & & \text{Ta} & & \text{Di} & & \text{Gi Na Thom} & & \text{Tam} & & \text{=} & & 14 \\
\text{Ta} & & \text{Di} & & \text{Gi Na Thom} & & \text{Ta} & & \text{Di} & & \text{Gi Na Thom} & & \text{Ta} & & \text{Di} & & \text{Gi Na Thom} & & \text{Tam} & & \text{=} & & 21
\end{align*}
\]
= 56 subdivisions or four cycles of *misra chapu tala*
**Solfège Form — Variation**

Ta – Di – De Re Ki Ta Thom Tam – – – – – = 14
Ta – Di – De Re Ki Ta Thom Ta – Di – De Re Ki Ta Thom Tam – – – – – = 21

Rhythmical Analysis

1 – 2 – 3 – 4 – 5 – 6 – 7 –
Ta – Di – De Re Ki Ta Thom Tam – – – – –

1 – 2 – 3 – 4 – 5 – 6 – 7 –
Ta – Di – De Re Ki Ta Thom Ta – Di – De Re Ki Ta Thom

1 – 2 – 3 – 4 – 5 – 6 – 7 –
Tam – – – – – Ta – Di – De Re Ki Ta Thom

1 – 2 – 3 – 4 – 5 – 6 – 7 –
Ta – Di – De Re Ki Ta Thom Ta – Di – De Re Ki Ta Thom

1
Ta (start of next cycle)

**Figure 68. Korvai variation in misra chapu tala.**

Figure 68 displays a korvai variation in misra chapu tala with the same methods of construction as shown in the korvai variations in Figures 65-67. The opening uses the five-syllable phrase ta di gi na thom in seven subdivisions followed by seven rests totaling in fourteen, which is the total subdivision or a single cycle of this tala. The next line adds seven subdivisions making this a manifestation of three (as multiplying seven by three to get the twenty-one subdivisions). The ending is the five syllable ta di gi na thom with two extra rested subdivisions totaling seven per line, repeated three times beginning at the midpoint of a tala cycle, once again dividing the tala cycle directly in half. As presented in earlier figures, two, three, and five permeate all of the korvai, even in variations regardless of the tala variance. This numerology and the continued inspiration of sacred aspects of nature, such as the cow and the
river, are semiotic representations that reinforce deeper meanings found in Hindu philosophy. These types of icons are also present in other rhythmic structures that *kanjira* players and Carnatic percussionists perform during their improvisations, such as the *aridhi*.

**Musical Analysis of Aridhi in Thani Avarthanam**

Figures 69A-C show an *aridhi* in *adi tala*. An *aridhi* is another type of cadential phrase that is constructed completely from *ta di gi na thom* and involves advanced types of calculative processes found in Carnatic music. This particular phrase will be shown in *solfège* form with integers indicating subdivision and accompanying rhythmical analysis. A mathematical formula is presented beneath the *solfège* that explains the significance of the calculative process.

**Solfège Form with Integers**

\[
\begin{align*}
Ta^6 & \quad Di^6 & \quad Ki^6 & \quad Na^6 & \quad Tum^6 & = 30 \\
Ta^5 & \quad Di^5 & \quad Ki^5 & \quad Na^5 & \quad Tum^5 & = 25 \\
Ta^4 & \quad Di^4 & \quad Ki^4 & \quad Na^4 & \quad Tum^4 & = 20 \\
Ta^3 & \quad Di^3 & \quad Ki^3 & \quad Na^3 & \quad Tum^3 & = 15 \\
Ta^2 & \quad Di^2 & \quad Ki^2 & \quad Na^2 & \quad Tum^2 & = 10 \\
Ta^1 & \quad Di^1 & \quad Ki^1 & \quad Na^1 & \quad Tum^1 & = 5 \\
\end{align*}
\]

= 105 total subdivisions

A mathematical formula shows where to begin in the *tala* cycle to cadence on beat one:

\[
105 \div 32 = 3 \text{ with } 9 \text{ remaining}
\]

105 = total number of subdivisions of phrase
32 = total number of subdivisions in *adi tala* with *chatusra nadai*
3 = number of full *adi tala* cycles needed
9 = starting position, # of subdivisions back from beat one in an additional cycle

**Figure 69A. Aridhi in adi tala — symmetrical reduction shown with integers and math formula.**

Figure 69A illustrates the kind of mathematical calculative process that is required of percussionists in Carnatic concerts. In context, they will perform these calculations mentally in advance of executing them on the stage while simultaneously performing on their instruments.\(^22\)

\(^{22}\) Amrit Nataraj explained this phenomenon to me, stating that it is during the *pharan* where the performing is more static that this kind of mental mathematics is most likely to occur. Calculating like this allows percussionists to construct a climactic ending phrase and know exactly where to execute it within the *tala* cycle as the piece they are performing dictates.
This particular phrase starts on the fourth subdivision of beat six in adi tala. Each syllable is held for the duration of its integer with regard to subdivision. The result in sound is a highly syncopated phrase of five strokes (on only two timbres) that gradually speed up within a steady tala cycle of eight beats climaxing on beat one of the fifth cycle.

**Solfège Form Showing Subdivision**

| Ta – – – – Di – – – – Ki – – – – Na – – – – Tum – – – – |
| Ta – – – – Di – – – – Ki – – – – Na – – – – Tum – – – – |
| Ta – – – – Di – – – – Ki – – – – Na – – – – Tum – – – – |
| Ta – – Di – Ki – Na – Tum – |
| Ta Di Ki Na Tum |

**Figure 69B. Aridhi in adi tala — symmetrical reduction shown in solfège only.**

The dashes in Figure 69B indicate the number of subdivisions of rest between each stroke/timbre/syllable of this phrase. Because the gaps are so wide, the use of integers communicates these subdivisions more readily in the written form in Figure 69A. In Figure 69B, the solfège form shows the zoomorphism of the cow-tail reduction more clearly.

**Rhythmical Analysis**

1 – – – 2 – – – 3 – – – 4 – – – 5 – – – 6 – – – 7 – – – 8 – – – 

| Ta  | Di |

1 – – – 2 – – – 3 – – – 4 – – – 5 – – – 6 – – – 7 – – – 8 – – – 

| Ki | Na | Thom | Ta | Di | Ki |

1 – – – 2 – – – 3 – – – 4 – – – 5 – – – 6 – – – 7 – – – 8 – – – 

| Na | Thom | Ta | Di | Ki | Na | Thom |

1 – – – 2 – – – 3 – – – 4 – – – 5 – – – 6 – – – 7 – – – 8 – – – 

| Ta | Di | Ki | Na | Thom | Ta | Di | Ki | Na | Thom |

1 – – – 2 – – – 3 – – – 4 – – – 5 – – – 6 – – – 7 – – – 8 – – – 

| Ta | Di | Ki | Na | Thom | Ta | Di | Ki | Na | Thom |

1 (start of next cycle) 

| Ta |

**Figure 69C. Aridhi in adi tala — symmetrical reduction rhythmical analysis.**

The rhythmical analysis in Figure 69C reveals the placement of each syllable within the tala. The bold syllables indicate the start of each line of the solfège form, clarifying where in
rhythm each line of the solfège falls. This entire phrase is constructed from *ta di gi na thom* with the difference between each repetition of the phrase being one subdivision less. Despite the change in rhythmic placement, the phrase of five persists, demonstrating again the significance of this number, which permeates a great variety of rhythmic structures in Carnatic music, as my analyses have shown. The kanjira player, like other Carnatic percussionists, must master all of these forms to competently perform the *thani avarthanam*.

**Semiotic Representations of Hinduism in Carnatic Rhythm**

Hindu philosophy pervades many aspects of Carnatic music. The lyrics of all of the types of Carnatic vocal music compositions make reference to the many deities in Hinduism. These compositional forms include *geetham, kriti, varnam, mangalam, slokam, keerthanam, bhajan, swarajathi, thillana, padam, javali, ragam thanam pallavi*, and *ragamalika*, among others. The devotional aspect of Carnatic vocal music lyrics is obvious; for clarification, a few examples of this are included in Table 4.

<table>
<thead>
<tr>
<th>Composition Title</th>
<th>Composition Type</th>
<th>Composer</th>
<th>Lyric Excerpt</th>
<th>Language</th>
<th>Hindu Deity</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Bhaja Govindam</em></td>
<td><em>Ragam Thanam Pallavi</em></td>
<td>Adi Sankara (788-820)</td>
<td>“Bhaja Govindam . . .”</td>
<td>Sanskrit</td>
<td>Krishna</td>
</tr>
<tr>
<td><em>Sri Gananatha</em></td>
<td><em>Geetham</em></td>
<td>Purandaradasa (1484-1564)</td>
<td>“Sri Gananatha sindhura varna . . .”</td>
<td>Kannada</td>
<td>Ganesha as Gananatha</td>
</tr>
<tr>
<td><em>Krishna Nee Begane Baro</em></td>
<td><em>Keerthanam</em></td>
<td>Vyasarayatirtha (1460-1539)</td>
<td>“Krishna nee begane . . .”</td>
<td>Kannada</td>
<td>Krishna</td>
</tr>
<tr>
<td><em>Inka Ninnu Bonittu Na</em></td>
<td><em>Padam</em></td>
<td>Kshetrayya (1600-1680)</td>
<td>“Pannuga muvva Gopala . . .”</td>
<td>Telugu</td>
<td>Krishna as Gopala</td>
</tr>
<tr>
<td><em>Rave Himagirikumari</em></td>
<td><em>Swarajathi</em></td>
<td>Syama Sastri (1762-1827)</td>
<td>“Kanchi Kamakshi ni paadame dikki . . .”</td>
<td>Telugu</td>
<td>Kanchi Kamakshi</td>
</tr>
<tr>
<td><em>Jayamangalam</em></td>
<td><em>Mangalam</em></td>
<td>Tyagaraja (1767-1847)</td>
<td>“Mangalam Mangalam ma Ramachandru . . .”</td>
<td>Telugu</td>
<td>Rama</td>
</tr>
<tr>
<td>Vathapi Ganpathim Bhajeham</td>
<td>Kriti</td>
<td>Muthuswami Diksitar (1775-1835)</td>
<td>“Vatapi Ganapathim . . .”</td>
<td>Sanskrit</td>
<td>Ganesh as Ganapathim</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------</td>
<td>--------------------------------</td>
<td>------------------------</td>
<td>---------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Sesheshayanam</td>
<td>Slokam</td>
<td>Irayimman Thampi (1872-1856)</td>
<td>“Sri Padmanabham bhajatha . . .”</td>
<td>Sanskrit</td>
<td>Sri Padmanabha</td>
</tr>
<tr>
<td>Krishna Chandra Raadha</td>
<td>Bhajan</td>
<td>Swathi Thirunal Rama Varma (1813-1846)</td>
<td>“Krishna Chandra . . .”</td>
<td>Hindi</td>
<td>Krishna</td>
</tr>
<tr>
<td>Bhavayami Raghuramam</td>
<td>Ragamalika</td>
<td>Swathi Thirunal Rama Varma</td>
<td>“Bhavayami Raghuramam . . .”</td>
<td>Sanskrit</td>
<td>Rama</td>
</tr>
<tr>
<td>Git Dhuniku Taka Dhim</td>
<td>Thillana</td>
<td>Swathi Thirunal Rama Varma</td>
<td>“Padumanabh tumari . . .”</td>
<td>Hindi</td>
<td>Sri Padmanabha</td>
</tr>
<tr>
<td>Saaramaina</td>
<td>Javali</td>
<td>Swathi Thirunal Rama Varma</td>
<td>“Shesunivai velayu Sri Padmanabha . . .”</td>
<td>Telugu</td>
<td>Sri Padmanabha</td>
</tr>
</tbody>
</table>

Table 4. Examples of Carnatic compositions mentioning Hindu deities spanning 1000 years.

Carnatic instrumental music in South India consists primarily of instrumental interpretations of vocal compositions. The adaptations to the instruments allow for the same Hindu aesthetic to permeate the music of performers playing the vina, alto saxophone, electric mandolin (five-string), gottuvadyam, venu, nagaswaram, jalatarang, and violin. In Hinduism, it is generally believed that the Hindu deities themselves developed Carnatic music. The sruti (pitches), swara (names of the pitches), raga (modes), tala (rhythm), drone, and most of the musical instruments have associations with Hindu deities. In the percussion ensemble known as tala vadya kacheri, one of the few true instrumental Carnatic musics not based on the vocal tradition, Hindu representations are embedded in its rhythmic structure of aridhi, pharan, mora, and korvai, as previously demonstrated throughout this chapter.²³

²³ The tala vadya kacheri is a specialized concert of Carnatic percussionists including mridangam, ghatam, kanjira, morsing, and often a tala keeper. The thavil and North Indian percussion such as tabla, pakhawaj, and other percussion are not unknown in these concerts. The term jugalbandi is more appropriate for concerts that feature soloists from both Hindustani and Carnatic traditions, while “fusion” is better suited to concerts that feature instruments from outside India. To some degree, the nagaswaram ensemble has purely instrumental music, but they also perform instrumental versions of the vocal music while the tala vadya kacheri do not.
But, what do these Hindu representations embedded so deeply within the rhythmic structure indicate? The use of the zoomorphic *gopucha yati*, which adjusts the rhythmic phrase to resemble the shape of a cow’s tail, involves subtracting subdivision from the opening phrase and adding subdivision to the ending of the phrase just as the bovine appendage tapers to a point and flares out at its tip. This shape in reverse is also common as is both shapes concurrently in a single phrase. The meandering of the Ganges River across northeastern India may be another natural inspiration that may account for the structures of a *pharan* and a *mora*. Both the cow and the river are iconic in India and are deeply related to Hindu philosophy. Cows are mentioned in the ancient Sanskrit text *Rig veda* (dating from 1700-1100 B.C.E.) in hymns where they are compared to river goddesses, are symbols of wealth, and are revered for having provided for the wellbeing of people in the forms of milk, butter (*ghee*), yogurt, and dung as both fertilizer and a fuel source. The *Bhagavata Purana* (*ca.* 1000 C.E.) is another important Sanskrit text in which cows are mentioned as being raised by Krishna, who was first associated with cow herding in the *Harivamsa* (*ca.* 4th century C.E.).24 In the philosophy of Hinduism, human beings are believed to have descended from the deities, while earthly cattle are believed to have been derived from the spiritual cattle of Krishna. In contemporary Hindu society within India, the cow is protected by law, and its milk still serves as an important part of Hindu and Jain rituals such as the *abhisheka* (the pouring of cow milk on Hindu idols). Additionally, the use of cow milk, urine, and dung are important parts of various daily Hindu rituals known as *puja*. Cow milk is also offered to the serpent deity Naga and the rodent deity Karni Mata at various temples.25 Because of the sacredness of the cow in Hinduism, the zoomorphic manifestations in the art of the

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24 The *Harivamsa* is commonly attributed to Krishna Dvapayana Veda Vyasa.

25 Much of my notes on the sacred aspect of cows in India come from discussions with my wife K.S. Resmi, a Carnatic vocalist and devout Hindu from Kerala.
Carnatic percussion performance adds a spiritual character to their instrumental concerts of a repertoire not based on the vocal tradition.

In Hindu culture, water is also considered sacred for its ability to cleanse the body. Likewise, rivers are considered sacred, particularly the Ganges River. In the aforementioned *Bhagavata Purana*, the Hindu deity Vishnu is said to have caused the birth of the Ganges River (commonly referred to as Ganga by Hindus). Hindus also believe the Ganges is a goddess as its waters are thought to purify sins and serve as a release from the cycle of life and death; indeed, many deceased who are cremated have their remains deposited in the Ganges. Hindus also believe a number of other rivers are sacred. The Yamuna River, a tributary of the Ganges River located in northern India, is associated with the deities Krishna and Naga. The Sarasvati River has association with the deity Saraswati, but it has been dry since the time of the *Mahabharata* (*ca.* 4th century B.C.E.). The Godavari River lies further south and is connected to the miracles of the deity Shiva. The Narmada River in central India is believed to have come from the Ganges River. The creation myth for the Narmada River states that the Ganges took the form of a cow and moved to the central Indian location, where it became the Narmada River. The Kaveri River in southern India is believed to be an important historical figure named Kaveri whom the deity Brahma turned into a river that would wash away all sins of those who touched its waters. The Indus River that runs through Pakistan and into northern India is also a sacred body of water because of its associations with the beginnings of Hinduism in that area during the Vedic Period of India’s history (*ca.* 2000-500 B.C.E.).

Numbers have great significance in Hinduism in that they are used to express order in terms of the organization of knowledge and cosmology, as well as serving as symbols of deities. In

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26 Information on the association of rivers with Hinduism in India is from Bill Aitken’s *Seven Sacred Rivers* (New Delhi: Penguin Books, 2003).
“The Symbolic Significance of Numbers in Hinduism,” V. Jayaram’s interpretations about the religious significance of the numbers two, three, and five are detailed as,

Two, Dvi
The number two is a symbolic representation of the state of duality, which we experience objectively through our minds and the senses. It symbolizes Purusha and Prakariti (God and Nature), Brahman and Atman as two separate entities, the knower and the known, the subject and the object, the doer and the deed, the self and the not self, the bhutatman (ego or physical self) and the antaratman (the real self), Siva and Shakti, Vishnu and Lakshmi, Brahma and Saraswathi, the earth and the sky, cause and effect, the day and the night, the heaven and the hell, the good and evil, the right and wrong, knowledge and ignorance, higher knowledge and lower knowledge, life and earth, illusion and illumination, and mortality and immortality.

Three, Triah
In the grand scheme of creation, one is God and two is Nature. Together they manifest the rest of creation. One of the things that they manifest together is Rtam, which is recognized as the universal rhythm or order and regularity. Rtam is the underlying vibrations pervading the whole of creation. It manifests in many ways as the orderly progress of time and events. It is the projection of God who is a perfect being, complete in all aspects. The number three is also a symbolic representation of the Trinity . . . Brahman, Vishnu, and Siva.

Five, Panchan
Five is the symbol for the physical body and the planet earth. Of the five elements, the earth is the fifth element. Ether is the first element, the essence of God himself. Air is the second element. Fire is the third element. Water is the fourth element. Our earthly bodies are mostly composed of earth and water. In addition, there are five subtle or internal sense organs known as tanmantras, which are touch, sight, smell, sound, and taste. They are the five means to experience. The five products of a cow — milk, curds, clarified butter, ghee, and urine.27

By investigating numerology within the context of Hinduism, one can see important correlations with the philosophy expressed in the rhythm of Carnatic music. Percussionists, who may be just as devout as those who vocalize their devotion in song, have permeated their musical expression with semiotic representations of Hindu philosophy. The use of the numbers two and three in the Carnatic rhythmic structure performed by percussionists represent to me a kind of perfection in orderliness. As an expression of cause and effect from a Hindu philosophical view,

this is also an important musical developmental device. By doubling the number of subdivisions, adjusting the rates of speed, and adding or subtracting subdivisions based on the numbers two and three, *mridangam, ghatam, kanjira, thavil*, and *morsing* performers create dramatic effects in their performances.

The use of the number three is connected to natural rhythms of regularity from a Hindu philosophical view. Such rhythms permeate all aspects of life from the cycle of life and death to cycles of time (seconds, minutes, hours, days, weeks, months, years, centuries, millennia), the tides, the seasons, planting and harvests, all-important cycles in the human condition of life itself. In the rhythmic phrasing of Carnatic percussionists, the number three most often manifests through repetition. Such repetition underscores the importance of what the iconic number three symbolically represents in Hindu philosophy within the context of a Carnatic music performance. The number three can evoke the deities Brahma, Vishnu, and Shiva and symbolizes universalities in rhythm.

In Hindu philosophy, the number five represents the physicality of the human condition and its senses as a means of knowing. The number five is often used in conjunction with the number three in rhythmic phrasing by Carnatic percussionists. With the repetition of *ta di gi na thom* three times, the physicality of life and its regularity are expressed. When the ending phrase *ta di gi na thom* manifests exactly at the midpoint of a *tala* cycle, the numbers two, three, and five are activated together as a kind of hyper-rhythm expressing unique multiplicities of Hindu perfection in orderliness, regularity, and physicality simultaneously within the context of a devotional Carnatic art music concert.

Having detailed these Hindu representations, perception of such is another issue to be addressed. Carnatic percussionists are aware of the zoomorphic representations as I was
regularly taught the *gopucha yati* phrases by most teachers, all of whom identified the shape of a cow’s tail in those phrases. Other scholars have documented that the river and numerology are important aspects of Hindu symbolism. I found no evidence that the perception of these was widespread. Certainly not among the audience members for Carnatic music although many show an awareness of basic principles such as keeping *tala* or familiarity with the *raga*, basic compositional structure, or composer. It is my interpretation that the symbolic phenomena I have outlined come from Hinduism. I feel certain of this because of the sacredness of both the cow and river in Hindu culture and the fact that musicians identify the symbolic influence of the cow in their rhythmic structure. It does not make sense that ties to Hinduism would end there. The structure of the *pharan* is so different from other rhythmic structures in Carnatic music. This must mean something and to me it is the other most important symbol of the Hindu natural world, the river. That the numbers two, three, and five have significance to Hindu culture and regularly appear in the phrases of percussionists must be related. That Carnatic music is purely devotional underscores these meanings to me. That even on the innermost level, beyond the obvious use of Hinduism in lyrics or the use of musical instruments played by deities (*venu, mridangam, vina*) and the sacredness of musical tones (in the forms of drone, pitches, and ragas), there lies Hindu philosophy. That all of this symbolism is not articulated by the musicians asserts to me that this cultural structure is old and that oral tradition has preserved these aspects. In his documentary *The Story of India 1: Beginnings*, British historian Michael Wood details that some Vedic chants are in no known language — the linguistic and sound patterns of which are unknown in any other human language and music. The closest patterning was found in the natural world in birdsong. Despite this, oral tradition keeps those chants alive in Hindu culture today.  

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natural world to music, an aspect that I have shown is evident in the rhythmic structure of *kanjira* performance practice.

**Conclusion: Musical and Cultural Structures**

Through analyses of the *kanjira’s* performance practice in Carnatic music, several facets of musical and deep cultural structure have been revealed. From a musical perspective, the rhythmic style of *kanjira* playing is not represented well in Western notation. The *gestalt* of its rhythmic and improvisational style involves finely subdivided rhythms, complex syncopation, and an array of rhythmic cadential devices such as *aridhi, pharan, mora,* and *korvai.* These most often occur during the *thani avarthanam* percussion solo during a performance of a featured *kriti.* With the presentation of phrases in both *solfège* forms and rhythmic analysis that orients on the position of the *solfège* within a variety of *tala,* clarity and understanding of the performance practice detail not only musical sophistication but show deeper structures of semiotic representations of Hinduism. Such semiotic representations could have only been revealed first through detailed musical analyses where recurring motifs involving zoomorphic influences and numerological symbols were discovered. These semiotic representations include the tail of a cow, the river, and the numbers two, three, and five, all of which symbolize various aspects of Hindu philosophy. These icons were found to permeate throughout the *kanjira’s* performance practice in Carnatic concerts. More commonly known devotional aspects of Hinduism are apparent in the lyrics of Carnatic music compositions, as are the associations of various deities with the origins of pitch, drone, and various musical instruments. The deeper structure found at less obvious levels in this music, such as those realized by the percussionists, required a semiotic interpretation that gave meaning to those Hindu icons in the context of Carnatic music percussion performance. With the interpretation of those symbols, particularities of musical style
became clearer, such as the calculative processes that were based on zoomorphic and numerological inspiration from Hinduism. When some of those symbols converge and occur simultaneously, the phenomenon may be termed hyper-rhythm because of the multiplicities at work in both the structure of the music and the deeper cultural structure of Hindu representations underneath. Given that the kanjira’s origins lie far outside southern India and Carnatic music, the movement of this folk instrument from North India to a refined position in South Indian art music shows that the process of reinterpretation involved adaptations for musical and social contexts that were more predominantly Hindu.
Chapter V

THE KANJIRA IN CONTEXT: CONTINUITY AND CULTURE CHANGE

The kanjira in its traditional context involves a variety of performance practices that includes bhajan, Carnatic music, and fusion. Chapter IV used detailed analyses to show the complexity of Carnatic music practice and semiotic representations of Hindu philosophy embedded at deep cultural levels. With further investigation of the kanjira in other music contexts, such as bhajans and fusion, continuity and culture change are evident in the absence of those embedded Hindu representations. One of the reasons for this is the prevalence of social hierarchy and expected behaviors in South Indian Hindu society and the lack thereof in the fusion context. To show this, an introduction to the concept of hierarchy and how it pervades traditional Hindu society, both religiously and socially, is presented for contextual purposes.

Caste and Social Hierarchy in South India

Hinduism established a hierarchy within Indian society thereby making religion a fundamental influence in daily life. Since ancient times social hierarchy in the form of caste has defined members of society and how they could interact. Vincent Smith’s The Oxford History of India states of caste,

The existing institution of caste is peculiar to India, and is ‘the most vital principle of Hinduism,’ dominating Indian social life, manners, morals, and thought. It consists essentially in the division of Hindu mankind into about 3,000 hereditary groups, each internally bound together by rules of ceremonial purity, and externally separated by the same rules of all other groups.1

The caste system has four main hierarchical divisions known as varna: Brahmans (teachers and priests), Ksyatriyas (government and martial), Vaisyas (business), and Shudras (labor and

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A group considered too low to be included in the sacred hierarchy, Dalit or Untouchables, remains outside the caste system. Members of this group are those who perform tasks that leave them impure (such as dealing with the deceased). Those who are included in the four main categories are born into them with social position rarely changing. While Hindu society dictates inclusion in the caste varna by birth, there are even further sub-classifications in each varna referred to as jati. Members of all castes, whether determined by varna (religious) or jati (social) are expected to adhere to rules that impact everyday life such as social interaction, diet, marriage, and respecting animal life, among other aspects. Traditionally, those who broke hierarchical rules suffered punishment that could lead to severe social ostracization effectively dooming an individual for life. M.N. Srinivas stated further, “Caste is not the only part of the social structure to be permeated with religion. Even the village community and the family or joint family in which Hindus usually live are also cult groups.” He also stated further that “No consideration of the relation between the social order and Hinduism is complete without a reference to the process by which the culture of the highest groups in the hierarchy, especially the Brahmins, has spread over the entire country . . .” My aim here is to call attention to how hierarchical Hindu society is in both religious and social contexts.

In religious contexts, hierarchy is observed among the thousands of Hindu deities themselves as Brahma is considered at the apex. Below lay Saraswati, Shiva, and Yogiraj, among others. The deities can also be thought of as having abstract manifestations. Several deities are typically thought of as having alternate forms, with Brahma seen as coming from Vishnu and

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2 The division into four main castes is not always adhered to but the existence of thousands of sub-castes is factual. In order to establish the idea of hierarchy and caste, I am using the four main caste terminology because it presents clarity in the social organization of high to low.


4 Ibid., 153.
Saraswati as coming from Brahma. At the same time, all Hindu deities are said to be the same and only one. Of this hierarchy Lawrence Babb states,

... the pantheon is also a hierarchy. Some deities are superior to others: they are more powerful; their worship is more prestigious; their range of divine responsibility and jurisdiction is greater. Now I would like to suggest that in order to pose this equation in a way that is both affirmative and consistent with the realities of experienced life, it is necessary for distance to be a factor in humanity’s relationships with the gods. This, in turn, implies a divine hierarchy.5

The deities, like humans, are organized in hierarchical relationships; the hierarchy is believed to be a necessary part of the life experience of human beings.

Paying the proper respect is also an important aspect of Hindu hierarchy. Foods prepared in purity for ritual placement at the feet of deity idols are eaten by followers of that deity. In his *The Divine Hierarchy* Babb details this practice by describing his experience in India:

A Raipur lawyer assured me that if you take a quantity of food, weigh it carefully, put it before the god for a reasonable length of time, and then weigh it again, you will discover that a small portion of the mass of the offering has disappeared. If, then, the deity ‘eats’ the food that was placed on the altar, the food that is taken back for distribution is quite literally the leavings, or *jutha*, of the deity. And thus in eating this food the participants are according the most profound honor to the god.6

Such food items are often very simple dishes of cooked rice wrapped in banana leaves. This food is viewed as leftover scraps from the deity, and when eaten by followers, it is not only receiving an honor from the deity but is also a kind of defilement.

In social contexts, hierarchy is observed through complex social behaviors. Edward Harper’s “Ritual Pollution, as an Integrator of Caste and Religion,” details how individuals will defile themselves in ways that express both respect and an expression of a lower social position as “respect pollution; behavior resulting in pollution is done intentionally, in order to show

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deference and respect; by doing that which under certain circumstances would be defiling, an individual expresses his inferior position.”\textsuperscript{7} The role of hierarchy, respect, and adherence to the agreed upon rules of existence are well-established norms of religious and social Hindu society.\textsuperscript{8}

But what role does this play in Indian classical music? Social hierarchy plays an important role on Carnatic stages even when all of the musicians are of the same caste. For the \textit{kanjira} player in \textit{bhajan} performance, hierarchy plays less of a role. In the context of fusion music, hierarchy plays no role at all. The consequences of this are that deeper levels of Hindu expression are largely absent in \textit{kanjira} performances in fusion music. Furthermore, percussionists (such as the \textit{kanjira} and \textit{ghatam} players) that occupy the lower strata of Carnatic music hierarchies readily adapt to new contexts such as fusion music in which their economy and musical expression are not impacted by traditional hierarchical relationships. By examining the three musical contexts \textit{kanjira} players are typically found in — \textit{bhajans}, Carnatic music, and fusion — I hope to show how changes to the traditional performance continuity came about.

\textbf{Kanjira Use in Bhajan Performance}

\textit{Bhajans} are songs that are used to express devotion to Hindu deities that can also be used for rituals. In performance these can range from simple folk music performances at temples and homes to classical music stages where refined performances of these songs take on sophisticated ornamentation by classical artists. Obviously, the lyrics of \textit{bhajans} express Hindu culture as the excerpts below show:


\textsuperscript{8} Although hierarchy is a well-established part of Hindu culture, Hinduism and social order have not escaped continuity change. Examples of change in Hinduism include the early references and depictions of Hindu deities associated with mechanical means of transportation (\textit{vimanas}) where later in history they are depicted as associated with more earthly means of transportation from the animal world. There was also the social change in upper caste members converting to vegetarianism. See J. Govinda, “The Absence of Vāhanas in the Veda and Their Occurrence in Hindu Art and Literature,” in \textit{Change and Continuity in Indian Religion} (Berlin: Munishiram Manoharlal Publishers, 1997), 71-114.
“Jaya Guru Jaya Guru Sai Ram”

Jaya Guru Jaya Guru Sai Ram, Jagadguru Sathya Sai Ram, Brahma Vishnu Shiva Sai Ram, Parabrahma Rupa Sai Ram, Mata Pita Guru Sai Ram, Jagadguru Sathya Sai Ram.

The Hindi lyric starting with “Brahma” translates in English as “Who is the very Embodiment of Brahma, Vishnu and Shiva.”

“Anjanaya Veera Hanumantha Sura”


“Gopala Radha Lola”

Gopala Radha Lola, Murali Lola Nandlala, Gopala Radha Lola, Kesava Madhava Janardana, Vanamala Brindavana Bala, Murali Lola Nandalala. This opening Hindi lyric and title translates as “Krishna, master of the cows.”

“Satyam Jnanam Anatam Brahma”

This Hindi lyric Sathyam Jnanam Anantam Brahma translates as “O Brahma absolute eternal one.”

The lyrics of these examples evoke the names of Hindu deities and express devotion and love by the followers who write (text), compose (melody), and perform these songs. The melodies more typically performed by temple singers have a folk music quality in their absence of classical ornamentation as Figure 70 shows.
This plain melodic style is typical of bhajan performance, the exception being classical music vocalists who instill art music values in the melodic lines with ornamentation typical of that context.

In analyses of kanjira accompaniment for bhajans, Sai Kishore demonstrated many examples of typical kanjira rhythms. The transcriptions below were collected from his performances of “Jaya Guru Jaya Guru Sai Ram,” “Anjanaya Veera Hanumantha Sura,” “Gopala Radha Lola,” “Satyam Jnanam Anatam Brahma,” and others. The simple duple rhythmic phrasing is easily shown in standard notation with the letters underneath identifying the timbre with $D = \text{dum}$ (low tone) and $K = \text{ka}$ (non-resonant timbre). The Arabic numerals below the timbres indicates the performance technique with 1 indicating index finger, 2 indicating index finger and thumb striking simultaneously, and 3 indicating the middle, ring, and little fingers striking simultaneously. I have assigned each rhythm a Roman numeral for ease in identification in taking inventory of rhythms within a single bhajan and for reference, as those same patterns appear in other songs. Figures 71A-C show the kanjira rhythms used to accompany the bhajans examined.

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Pattern I appeared in every bhajan examined while II and III were also common in most.

Patterns IV-VI appeared in several bhajans, while the rest were employed individually as more elaborate variations on Pattern I.

A typical bhajan performance involves vocalists and percussionists. The song is led in a call-and-response style between a lead vocalist and group of singers while percussion accompaniment can involve a number of percussionists (solo or in a group) on kanjira, tabla, mridangam, and/or other local drums. Songs usually start slowly and increase to faster tempi by the conclusion. The recurrence of similar duple rhythms throughout all bhajans examined suggests folk music, a context where the more complex rhythmic structure of Carnatic music is absent.

In comparison to the rhythmic analyses of Carnatic kanjira performance in Chapter IV, the bhajan requires simple, repetitive duple rhythms, and improvisation is not featured. The rhythmic structures normally associated with Carnatic music are lacking in this context, with the

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percussionist’s patterns devoid of any deeper Hindu meanings. In addition, social hierarchy is not a large part of bhajan performance amongst the musicians on stage. The repetition of the song texts emphasizes the Hindu tendencies of the devotional meaning of the text. In Chapter II, some of the earliest writers referring to kanjira performance in South India witnessed bhajan performance and not Carnatic music. This indicates further that the kanjira’s origins lie in folk music and that the bhajan context serves to further that continuity.

**Kanjira Use in Carnatic Music**

The more sophisticated musical and cultural structure found within kanjira performance practice in Carnatic music involves a strict social hierarchy. Most of the musicians who play this music are Brahman caste, the highest position in the social hierarchy of Hindu society. But even among the musicians of the same caste in a Carnatic music context, a strict social hierarchy is observed. The vocal soloist occupies the highest position followed by the violinist as the melodic accompanist. In concerts where the soloist is an instrumentalist, the highest position is still occupied by the soloist (which could be either violin, vina, venu, gottuvadyam, mandolin, or alto saxophone). The percussion section comes below the melodic accompanists, with the mridangam occupying the highest position among percussionists largely because most of its timbres are tuned, and it has a long historical association with Hindu deities. This is followed by the ghatam player, whose clay pot is also tuned to the main pitch of the concert. At the bottom of this hierarchy lie the kanjira and morsing performers. The kanjira occupies a lower position in the hierarchy largely because its timbres are not tuned. Onstage, the soloist sits in the middle of the other performers. The violin as melodic accompanist occupies the position to the right of the soloist with the mridangist to the left. The other percussion instruments, when used, are also displayed according to hierarchy. The ghatam player sits just behind the violin on the right with the kanjira and morsing on the left side behind the mridangam. The economics of concert fees
are also paid according to hierarchy. Those at the top earn more while those further down get lesser amounts.

During my research in South India, my preference for the kanjira was perplexing, as senior Carnatic percussionists could not understand why I was not attracted to the mridangam first. I witnessed concerts in which older mridangam players, who were held in high esteem, could no longer play as well as some of their younger percussion colleagues. Many of the kanjira players I interviewed expressed their distaste for the hierarchy and inner politics of Carnatic music. They often felt constrained in showing their full potential as performers for fear of being blacklisted if they out-performed a mridangist in concert. One kanjira player even told me of losing all of his concert work for a year because of these politics. This hierarchy is strictly adhered to in Carnatic music today and is an extension of the expected social behavior that is prescribed in Hindu culture and society.

But this hierarchy is a modern construction, having been developed in Tamil Nadu only since the early 1900s. Concerts from earlier times were different, and it was the introduction of a kanjira player that changed expected norms in concert hierarchy and musical development in the percussion section. The earliest kanjira players in Carnatic music discussed with some reliability are those mentioned by N. Rajagopalan in A Garland (A Biographical Dictionary of Carnatic Composers and Musicians [Book 1]). But this hierarchy is a modern construction, having been developed in Tamil Nadu only since the early 1900s. Concerts from earlier times were different, and it was the introduction of a kanjira player that changed expected norms in concert hierarchy and musical development in the percussion section. The earliest kanjira players in Carnatic music discussed with some reliability are those mentioned by N. Rajagopalan in A Garland (A Biographical Dictionary of Carnatic Composers and Musicians [Book 1]).11 Kanjira Krishnamachariar (born ca. 1830) and Kanjira Radhakrishna Ayyar (born ca. 1825) are both mentioned as kanjira players by name, but their first “instrument” was actually the voice. These two individuals were vocalists known to play kanjira. Both being born in the early 1800s, their musical maturity as performers would have been about ca. 1850, with their deaths presumably in the late-1800s. Many of the published

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historical accounts I presented in Chapter II were from earlier times and in North India. By the time there is an eyewitness account of a *kanjira* in South Indian music by C.R. Day in 1891, it is to accompany a *bhajan*, a practice well known today in South India. The vocalists who played *kanjira* mentioned by Rajagopalan were most likely vocalists making use of the *kanjira* for simple accompaniment to *bhajans*. Were this so, it would be accepted in court circles, as that instrument is associated with *bhajan* performance and it is not uncommon for classical vocalists to include more ornamented performances of *bhajans* in Carnatic concerts.

Dr. V.S. Sampath Kumaracharyya mentions *kanjira* players only by name in the Mysore courts during the Wodeyar dynasty’s first two kings. He claims that during the reign of Mummudi Krishnaraja Wodeyar (1799-1868) the court assembled a wide variety of musicians including one *kanjira* player named Chittoor Radha Krishna Iyer saying only that he was an “expert khanjira vidwan” (this appears to be the same *kanjira*-playing vocalist mentioned by Rajagopalan with romanization variance). He further states that during the reign of Maharaja Chamarajendra Wodeyar (1868-1894), “Vidwan Nanjappa was a well-known *khanjira* player during this time.” There are no other details about this musician offered, but he dates from a time when the *kanjira* had developed into a Carnatic concert instrument.

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13 The Mysore court was located in Karnataka and involved a series of kings that were great patrons of the arts. Carnatic music flourished in Mysore under their rule particularly during 1800-1950 at a time when the Tanjore court (1600-1829) in Tamil Nadu had faded in importance. See Mandayam Bharati Vedavalli, *Mysore as a Seat of Music* (Trivandrum: CBH Publications, 1992), S. Seetha, *Tanjore as a Seat of Music (During the 17th, 18th, and 19th Centuries)* (Chennai: University of Madras, 2001), and Salem S. Jeyalakshmi, *The History of Tamil Music* (Chennai: University of Madras, 2003).

Pudukottai Manpoondia Pillai (1859-1922) is credited as having developed the *kanjira* to a level of sophistication unknown earlier, making its use in Carnatic music more suitable. His innovations also led to a shift in concert hierarchy. Pillai was originally a poor temple lantern bearer who studied *thavil* and then adapted his studies to the *kanjira*. He has been described as having had the unusual ability to play all patterns that normally take both hands to execute with a single hand. He is also credited with reducing the number of jingles from three sets to one and was the first to employ lizard skin on Carnatic *kanjira*. Manpoondia Pillai is also said to have furthered the rhythmic sophistication of that time. His performance ability is said to have defeated top *mridangist’s* of his time so much so that he occupied the top position in the percussion hierarchy onstage next to the soloist. His disciples included a variety of percussionists and vocalists who all had become known for their rhythmic sophistication.\(^{15}\) The innovations of Manpoondia Pillai were the beginnings of modern *kanjira* playing using a more refined single-handed technique and exploration of the timbral possibilities of lizard skin and a single pair of jingles. The organological, technical, and rhythmic changes and development he brought about renewed the *kanjira* for Carnatic music use. Anthropologist John Janzen identified this phenomenon in the Kongo area of Bantu Africa where artifacts are discarded only to be renewed in the tradition later by a younger generation.\(^{16}\) This is apparently what Pillai had achieved with his reinterpretation of the *kanjira* in Carnatic music of the late-1800s.

Manpoondia Pillai’s initial music studies were with a *thavil* player. The temple context for his musical development may be where the more advanced rhythmic style and underlying Hindu

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\(^{15}\) Rajagopalan, *A Garland [Book 1]*, 155. His disciples include Pudokottai Dakshinamurthi Pillai and Palani Subramania Pillai. Vocalists that performed with his rhythmic influences include Naina Pillai, Konerirajapuram Vaidyanatha Ayyar, and Chittoor Subramania Pillai.

symbolism in *kanjira* playing originally developed from. I feel this is so because the *thavil*, more so than any other Carnatic percussion instrument, has had a long association with temple music contexts historically, and musically it is very complex, perhaps the most complex of the Carnatic percussion instruments. It seems that Pillai had adopted that complexity and spread it to other Carnatic percussionists and vocalists of his time.

This type of exception to established hierarchical relationships in M. Pillai’s case is rare in Carnatic music. Towards the end of his life, Carnatic music underwent sweeping changes that established the modern concert hierarchy and politics in use today, these having much to do with India’s independence in 1947 and the specific identity and gender values of Tamil Brahmans. Lakshmi Subramanian’s *From the Tanjore Court to the Madras Music Academy: A Social History of Music in South India*, details how Tamil Brahmans had usurped Carnatic music as the Mughal courts fell and British rule took over. As Tamil Brahmans, who were Western educated, positioned themselves to be the new social elite in Tamil Nadu, Chennai became an important center for Carnatic music as the new patrons were those who occupied a higher social position economically and socially — lawyers, doctors, and successful businessmen. Brahmans there dominated Carnatic music in a number of movements to establish what they felt reflected their particular values of identity and gender.

In concert reviews by Tamil Brahmans, criticism was levied at performers who demonstrated rhythmic supremacy over melodic, vocalists were preferred over instrumentalists, female performers were devalued, and multiple percussionists were viewed as excessive. L. Subramanian wrote of this 1930s-1940s period:

> The construction of a new performance aesthetic for classical music was as much the product of individual initiative as it was of a collective adherence to an ethnically driven artistic identity. What primarily marked the new aesthetic impressed was the foregrounding of the solo vocalist performer an the relative
scaling down of the accompanying ensemble, whose role in musical entertainment had been more enhanced in the context of theatre. The use of multiple percussion and other accompanying instruments was part of a more robust and popular theatre mode that had entered into the domain of classical music and created a controversy. It remained for the [Madras Music] Academy to step in, address the issue and here, it followed the earlier reformist opinion widely expressed in the articles that the Daily Express had carried in the 1920s. These had identified the practices that corrupted performance of classical music, namely, their excessive use of the percussion instruments and the tendency to execute complicated combinations of notes (swara prastara) in the three octaves without much heed to melody or to the content in the compositions.  

As Tamil Brahman conservatism came to dominate Carnatic music in Madras, it enforced its own preferences as Carnatic music developed while simultaneously dealing with nationalistic issues and the growing effects of modernity. As print publishing of music for pedagogy purposes, radio broadcasting, and recording technology entered the classical music context, Tamil Brahmans had positioned themselves in powerful leading positions to assert their values as teachers, concert reviewers, policy makers, publishers, and leaders of music organizations. During the early 1900s, the vocal soloist came to dominate the musical hierarchy, with the mridangam player reasserting his position of dominance over the other percussionists. Consequently in modern Carnatic music, the kanjira player must wait for the mridangam player to signal him to begin to accompany.

A lineage of great mridangam players from the first half of the twentieth century is well documented.  

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18 See previously mentioned dissertations by Robert Edward Brown, John Russell Hartenberger, and David Paul Nelson.
instruments began to change with the rise of fusion music, a context free of the traditional restrictive hierarchy and one that offered a more robust economy.

**Kanjira Use in Fusion Music**

Fusion as a term was first used to describe a new type of electric jazz in the United States that featured a blend of influences from jazz, rock, funk, and music from both Brazil and India. Miles Davis is credited with creating the genre with his 1969 album *Bitches Brew*. His subsequent studio album, *Big Fun* in 1970, featured musicians from India (Khalil Balakrishna on electric *sitar* and Bihari Sharima on *tabla* and *tamboura*) and Pakistan (Badal Roy on *tabla*). But a “fusion” of musical influences and a change in hierarchical relationships in music was already occurring in India well before American jazz musicians were credited with this genre. To understand this, one must consider the impact of the internationalization of Indian music, the development of the film industry, the impact of Ravi Shankar and Ali Akbar Khan, the mass marketing of Indian classical music through recordings, Indian independence and the *jugalbandi* ensemble as important precursors to fusion music. These events eventually led to the international exposure for Carnatic *kanjira* and *ghatam* performers who previously occupied the lower positions of the accepted hierarchy in Carnatic music.

The internationalization of Indian music began with several Indians who travelled to Europe and the United States. One of North India’s most important writers, Rabindranath Tagore, educated in his youth in England and the winner of the Nobel Peace Prize in 1913, was also a composer and vocalist. Tagore composed over two thousand songs combining elements of Indian classical and folk musics with English, Irish, and Scottish folk musics to create a new genre. He

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was also important in establishing the first courses in Indian music at Dartington College in England in the 1930s.\(^{20}\)

Inayat Khan, from Gujarat, was a performer of *vina, sitar*, and a vocalist who performed at Columbia University in 1910 where he also lectured. He gave subsequent performances in France and Russia where he worked with composer Sergei Tolstoy to harmonize Indian songs.\(^{21}\) The work of R. Tagore and I. Khan are early examples of mixing musical styles from India and Europe.

Uday Shankar, the older brother of Ravi Shankar, was a dancer who toured the U.S.A. in 1929 as a member of a ballet troupe. He later formed his own troupe mixing elements of Indian dance styles. Performing in Paris in 1929 and again in the U.S.A. in 1937, he developed a program that combined elements of various Indian dance styles and music. What these examples show is that these individuals were grappling with the complexities of new Indian national identities as their work came to represent India abroad, though not universally accepted from within India.

North Indian performers Ali Akbar Khan and Ravi Shankar began to perform regularly in Europe and the U.S.A. between 1955 and 1971, further internationalizing Indian music. In 1955, Ali Akbar Khan performed on *sarod* with a *tabla* accompanist in New York, which led to an LP recording and appearances on the nationally broadcasted television series *Omnibus*. Khan’s success abroad served as evidence that Indian classical music recordings could be mass-marketed to new international audiences.

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Within India, the development of a thriving film industry brought aspects of Indian and Western musics together. The early film industry in Bombay, known popularly now as “Bollywood,” produced silent films from 1913 to 1930, with modern musical films developing in 1931, the first being *Alam Ara*. The soundtracks to these films, known popularly now as *filmi*, included a broad range of musical influences featuring orchestras playing a blend of Indian classical, folk, and popular musics with Western and other foreign musics. From 1931 to 1935, the film industry in India experienced rapid growth in the form of progressive attitudes by both directors and film composers towards experimentation in graphics, animation, special effects, costumes, dances, music, and sound recording techniques. Table 5 lists examples of Indian films that have soundtracks and scenes featuring a blend of Indian and Western musics, which pre-date the development of the fusion genre. Clearly, these new contexts presented opportunities for Indian musicians that were less restrictive than more traditional contexts.

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22 In 1961, Wesleyan University in Connecticut developed a South Indian music performance program. Their library contains some of the oldest live recordings of *kanjira* performers as part of a collection of reel-to-reel field recordings made and donated by the British vocalist Jon Higgins. The oldest recording of a *kanjira* player in that collection features *veeruswamy* Veeruswamy from a 1956 Hindustani and Carnatic percussion ensemble concert.


<table>
<thead>
<tr>
<th>Film</th>
<th>Music Director</th>
<th>Year</th>
<th>Music Observation</th>
<th>Vocalist</th>
<th>Actress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jawab</td>
<td>Kamal Dasgupta</td>
<td>1942</td>
<td>The song “Toofan Mail, Duniya Ye Duniya Toofan Mail” features clarinet and Western orchestra.</td>
<td>Kanan Devi</td>
<td>Kanan Devi</td>
</tr>
<tr>
<td>Barsaat</td>
<td>Ramanand Sagar</td>
<td>1949</td>
<td>The song “Hawa Mein Udt Jaaye” features Western orchestra with bansuri, and tabla accompaniment.</td>
<td>Lata Mangeshkar</td>
<td>Nimmi</td>
</tr>
<tr>
<td>Babul</td>
<td>Naushad Ali</td>
<td>1950</td>
<td>The song “Melte Hi Ankein Dil Huwa Deevana Kisi Ka” features piano, Western orchestra, Argentine tango rhythms, and tabla accompaniment.</td>
<td>Shamshad Begum and Talat Mahmood</td>
<td>Dilip Kumar and Munawar Sultana</td>
</tr>
<tr>
<td>Howrah Bridge</td>
<td>O.P. Nayyar</td>
<td>1958</td>
<td>The song “Mera Naam Chin Chin Chu” features Hawaiian steel guitar, an American swing rhythm section, and tabla accompaniment.</td>
<td>Geeta Dutt</td>
<td>Helen Jairag Richardson</td>
</tr>
<tr>
<td>Dil Apna Aur Preet Parai</td>
<td>Shankar Singh Raghuvanshi and Jaikishan Dayabhail Panchal</td>
<td>1960</td>
<td>The song “Ajeeb Dastan Hai Yeh” features guitar, accordion, drumset, and Western orchestra.</td>
<td>Lata Mangeshkar</td>
<td>Meena Kumari</td>
</tr>
<tr>
<td>Taqdeer</td>
<td>Laxmikant Pyarelal</td>
<td>1967</td>
<td>The song “Jab Jab Bahar Aaye” features piano, Western orchestra, and tabla accompaniment.</td>
<td>Lata Mangeshkar</td>
<td>Farida Jalal</td>
</tr>
</tbody>
</table>

Table 5. Indian musical films with soundtracks featuring a blend of Indian and Western musics.

Indian classical music in both North and South India is hierarchy-based in terms of soloist to accompanist to drone provider, guru to student, and master musicians to younger professionals. Both traditions use a variety of honorific terms that separate older and more experienced musicians from younger professionals. North Indian terms such as Pandit (Hindu), Ustad (Muslim) and South Indian Hindu terms such as Sangita Kalanidhi and Sangita Siromani indicate master musicians above all others. With the impact of international modernization, India’s independence, and the mass marketing of North Indian classical music, there was a need to express a more unified Indian identity. The development of the jugalbandi was an attempt to fill that need in classical music by featuring equality. The term is used to indicate performances of two or more soloists in which each artist is considered equal. These ensembles can feature musicians from Hindustani, Carnatic, or both traditions.
Duos (and occasionally trios) are common in Indian classical musics but traditionally of the same instruments and often members of the same family. Figures 72-78 show these types of non-jugalbandi ensembles, which still carry a hierarchy among soloists and accompanists.

Figure 72. Hindustani Dhrupad concert, Gundecha Brothers, Delaware Hindu Temple, 2010.²⁵

Figure 73. Carnatic concert, Carnatica Brothers, Cleveland Thyagaraja Festival, 2007.²⁶


Carnatic concert at Sri Y.G.P. Auditorium, Saxophone Sisters featuring alto saxophonists M.S. Subbalaxmi and M.S. Lavanya, mridangist M.R. Sainath, Udupi Balakrishnan on ghatam, V.V.S. Manian on kanjira, and violinist in Chennai, Tamil Nadu, India, December 30, 2005. Photo by N. Scott Robinson.

Carnatic nagaswaran ensemble with two nagaswarans and two thavil at wedding concert in Chennai, Tamil Nadu, India, 2005. Photo by N. Scott Robinson.

Figures 72-78 are necessary to establish a familiarity for the reader with these types of ensembles in Hindustani and Carnatic musics in order to understand the deviation from established traditions that jugalbandi and fusion ensembles brought about.

As recordings by Ali Akbar Khan and Ravi Shankar became more popular, the two musicians began playing and recording together as a duo by the mid-1960s. By 1966, Ravi

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Shankar had also performed with Yehudi Menuhin in England. After these events, the term *jugalbandi* was used for concerts and recordings of this type. The function of these ensembles is to demonstrate equal respect for performers of different instruments both within Hindustani and Carnatic musics through musical performance. A *jugalbandi* ensemble differs from established duo traditions in Indian classical musics because it features musicians of different instruments and often different classical music styles. David Badagnani makes important points about the political aspects of these ensembles in that it was most often producers or government-sponsored organizations, such as All India Radio, that desired these performances more so than the musicians themselves. Badagnani identifies several modes of intercultural music making, but with regards to *jugalbandi* he classifies their musical process as one of “intercultural juxtaposition.” This involves a more conversational mode of performance where Indian classical musicians would sit side by side and take turns performing in a *raga* and *tala* commonly known to both. In such a context, these musicians perform in their own respective styles. In performances where musicians from different disciplines (Hindustani and Carnatic) are brought together, the concert takes on the important political ramification as a desire to promote Indian national harmony. But these political implications rarely originated with the musicians and remain outside musical motivations. Figures 79-82 show recent examples of *jugalbandi* concerts that involve exclusively Hindustani, Carnatic, and mixed ensembles.


Figure 79. Concert promotion for Jugalbandi of Hindustani musicians.

Figure 80. Jugalbandi concert of Carnatic musicians.

Figure 81. Jugalbandi concert of Carnatic and Hindustani musicians.


Figures 79-82 demonstrate the impact of Ravi Shankar and Ali Akbar Khan’s duo performances in establishing a newer pan-Indian classical music ensemble that was adopted in both Hindustani and Carnatic music circles. This new *jugalbandi* ensemble was less restrictive and prepared


38 The impact of Ravi Shankar on the internationalization of Indian music was also felt in rock and jazz music as his direct contact with John Coltrane and George Harrison not only influenced them but a number of other artists in these genres were inspired to incorporate Indian instruments, musicians, modes, and drone, in their music. See “Tomorrow Never Knows,” “Norwegian Wood (This Bird Has Flown),” and “Within You, Without You” by The Beatles; “Paint It Black” by The Rolling Stones; “Black Mountain Side” by Led Zeppelin; “The End” by The Doors; “East-West” by The Paul Butterfield Blues Band; “Eight Miles High” by The Byrds; “Right in Two” by Tool; “India” by John Coltrane; “Icarus” by Paul Winter Consort; “North Star” by Oregon; “Trans-Love Airways” by Don Cherry; “New Light” by Codona; “Ganesha’s Jubilee Dance” by Ali Akbar Khan and John Handy; “On The Corner” by Miles Davis; “Raga Megha” by Joe Harriott and John Mayer; “Sun Love” by Irene Schweizer Trio and Dewan Motihar Trio; “Bhimpalazi (Looking East for the Blues)” by Indo British Ensemble; “Grazing Dreams” by Collin Walcott; *Sankirna* by Oriental Wind and The Karnataka College of Percussion; *Reflections* by Charlie Mariano; *Bangalore Wild* by David Rothenberg; *In Need Again* by Repercussion Unit; and *Seven Heaven* by Glen Velez; among others. Classical music composers that worked with Indian music include Henry Cowell (*Symphony No. 13 (Madras)*), Halim El-Dabh (*Hindi-yaat No. 1*), Alan Hovhaness (*Jhala, Opus 103, Nagooran*), Lou Harrison (*Suite for Violin and American Gamelan*), and John Burge (*Veena Concerto*), among others.
Indian musicians for more transnational music making with regards to fusion ensembles and *kanjira* performance.

In the United States, just after the *jugalbandi* phenomenon took hold, Miles Davis changed the direction of jazz with his electric, multi-national fusion recordings between 1969 and 1971. One result of his bands incorporating Brazilian, Indian, Pakistani, British, and American musicians was that many of those musicians would form their own ensembles that continued making other forms of multi-national fusion music. One of the most important of those ensembles was Shakti. Beginning in 1975, this fusion ensemble featured John McLaughlin on a specially designed acoustic guitar and a mixture of Hindustani and Carnatic musicians including L. Shankar (violin), T.H. “Vikku” Vinayakram (*ghatam, kanjira, morsing*), and Zakir Hussain (*tabla, percussion*). In such an ensemble, the typical hierarchy and expectations at work in Carnatic music no longer applied as all musicians were of an equal status. The popularity and success of Shakti introduced the Carnatic *ghatam* and *kanjira* to international audiences and these instruments began to be featured in ways that differed from traditional Carnatic performance practice. The focus of the group’s music was more on improvisation and interaction than on composition, and unlike a *jugalbandi*, all of these musicians performed simultaneously in an adaptive setting. Figures 83A-C are transcriptions of the Shakti piece “Happiness is Being Together” in which there is little of the deeper sophistication typical of Carnatic music. Hindu representations are largely absent from such a piece, as there are no *korvais, moras, aridhis*, or devotional lyrics in the composition.39

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39 Carnatic musicians in fusion ensembles may at times employ some of the sophisticated rhythmic style of their tradition in their improvisations. The incorporation of these in improvisations, and more so in fusion compositions, is limited in comparison to traditional Carnatic music.
Happiness is Being Together

By John McLaughlin

Figure 83A. An example of Shakti’s music, measures 1-9.
Figure 83B. An example of Shakti’s music, measures 10-17.
What defines fusion music from an Indian perspective is the incorporation of Western instrumentation with that of India. These groups also tend to feature Western musical style such as harmony, bass lines, and studio production values. We can see in Figure 83A that chord symbols are used indicating E major, F#\(^{11}/E\), G\(^{#}\), and B\(^{add4}/E\) in the Introduction in measures 1-4. The A and B sections feature the guitar and violin in harmony in 3\(^{rd}\)s. Figures 84-86 are of various fusion ensembles depicting the type of multi-national instrumentation employed.

Figure 84. Shakti featuring Carnatic, Hindustani, and jazz musicians, 1975.\(^{41}\)

Figure 85. Remember Shakti with Carnatic, Hindustani and jazz musicians, 2001.\(^{42}\)


\(^{42}\) Remember Shakti, a reformed version of Shakti since 1997, features the same blend of North and South Indian instrumentation with electric jazz guitar. The musicians are Zakir Hussain (Hindustani \textit{tabla}, percussion, Carnatic \textit{konnakol}), U. Srinivas (Carnatic electric five-string mandolin), John McLaughlin (electric jazz guitar), and Selvaganesh Vinayakram (Carnatic \textit{kanjira}, \textit{konnakol}, and occasionally \textit{ghatam} or \textit{mridangam}). \textit{Raaga Bliss}, “Remember Shakti,” last modified November 22, 2001, accessed May 23, 2013, http://www.raagabliss.com/artists/remember-shakti/.
In Figure 86 are Carnatic musicians on *kanjira*, *ghatam*, and vocals with a Swedish bass player and American electric guitarist from a 2001 performance in France. In this ensemble, the *kanjira* player must play with a bass player as part of a rhythm section, which is another Western popular music concept. Since rhythm sections are not a part of Carnatic music performance practice, the *kanjirist* must adapt to this new context. On this ensemble’s debut recording, *Good People in Times of Evil*, the *kanjirist*, Selvaganesh Vinayakram, mimics a drumset in a funk style through many of the pieces. Figure 87 shows transcriptions of the patterns he plays in three pieces on that album, “Savitri,” “Leal Souvenir,” and “Who Would You Like to Be?”

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44 A rhythm section being bass, guitar, piano, and drumset is commonly part of Western popular music contexts. The function of the rhythm section is to play in a repetitive rhythmic style of the popular genre they are performing with each instrument providing their expected role — bass outlining harmony and rhythm, piano and guitar providing harmony and rhythm, and drumset the appropriate rhythmic style.
The notation shows the main pattern played. All sixteenth notes are filled in as ghost notes in each measure on the *ka* line but left out of the notation for clarity. The pattern in measure 1 is used in all three pieces. Measures 2-4 show variations used in those pieces. These patterns are simple like those used for *bhajan* performance, but most of the rhythmic repertoire comes from Western popular music. The *kanjira* playing on this album tends to feature more of this Western style of rhythm than that typical of Carnatic music.

These newer contexts required *kanjira* and *ghatam* musicians to adapt to louder musical expectations in their accompaniment of amplified instruments and performances in larger venues. These two particular Carnatic instruments are well suited for this adaption because they are relatively simple to amplify. By placing a microphone near the back of the *kanjira* and top of the *ghatam*, all of the nuances of these instruments can readily be amplified. The *mridangam*, the drum that occupies the top position in the Carnatic percussion hierarchy, is a much softer instrument and not well suited to loud amplification because of the need to place microphones at either end of the drum, forcing the microphones to face towards one another.

The lack of the expected hierarchical relationships in Carnatic music in fusion allowed *kanjira* and *ghatam* musicians more freedom to express themselves in concerts and access to more lucrative economies in their being featured on mass-marketed audio-visual recordings and

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46 Ghost notes being a term used by percussionists for playing extremely soft subdivisions whose purpose is to make the rhythm feel fuller rather than being heard.
in international performance opportunities. The music these ensembles perform is inspired by Indian music in the use of drones, occasional free-rhythm introductions, modes suggesting raga, and brief rhythmic passages in a Carnatic or Hindustani style. The change in context, though, was not always suitable for traditional Carnatic phrasing. Generally, these ensembles tend to play music that does not have the same kinds of Hindu devotional qualities as Carnatic music does. But some of these ensembles will occasionally perform Carnatic music such as Remember Shakti’s rendition of Giriraja Sudha, a kriti by Carnatic composer Tyagaraja.\footnote{Remember Shakti, Giriraj Sudha from Saturday Night in Bombay, Verve 0141642, 2001, compact disc.} The lack of Carnatic rhythmic structures in most Indian-inspired fusion music indicates a change from previously established art music continuity. This is particularly so for younger Indian musicians who develop their skills more influenced by fusion than classical music. This is compounded by the preponderance of non-Indian instrumentalists who learn and use Indian musical instruments out of context.

Figure 88 shows a fusion ensemble from India. The same type of mixed instrumentation among Carnatic, Hindustani, and Western musics is present, but all of the musicians are from South India. These ensembles continue to be vehicles for the development of the kanjira and ghatam specifically. The press quotations at the bottom of the flyer are all focused on promoting kanjira and ghatam from which we can see the effects of the original Shakti ensemble’s popularizing these instruments outside India.
Even when the ensemble features musicians entirely from South India, the music they perform is still largely without the more sophisticated structures and Hindu symbolism found in Carnatic music. While I was studying with Subash Chandran, he asked me to prepare charts for Western musicians for an upcoming tour. His son came over to my apartment with a keyboard and played the pieces. It was a simple matter to notate the music because the pitches were readily identifiable by watching the keyboardist play. The rhythms were devoid of much of the Carnatic phrasing I detailed in Chapter IV, the intonation was Western, and there was no Carnatic ornamentation.

Figures 89-93 are examples I collected of Indian fusion composed by a Carnatic musician. All of the pieces are titled after *ragas* but other than the mode, there is little in these pieces that draws from Carnatic music. The music seems crafted to ensure that non-Indian musicians can easily read and perform with the ensemble.

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Figure 89. “Bindhumaalani,” fusion example by Indian composer.\(^{49}\)

Figure 90. “Chakravagam,” fusion example by Indian composer.  

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Figure 91. “Chala-natai,” fusion example by Indian composer.  

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Figure 92. “Hamsadhwni,” fusion example by Indian composer.

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Figure 93. “Kalyani,” fusion example by Indian composer.

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In Figures 89-93, the influence of the original Shakti ensemble of the 1970s can be seen as all of the pieces are tailored as a kind of common ground that Indian and Western musicians could perform together. This was no doubt an adaptive process that the original Shakti went through to construct material that musicians from different cultures could perform effectively with one another. This adaptive process must be a necessary aspect of most India-inspired fusion ensembles that make use of musicians from various musical traditions. Since the original Shakti’s success in the 1970s, numerous ensembles have developed performing in a similar style, most of which feature the *kanjira* to some degree. Table 6 lists fusion ensembles developed between 1970 and 2012 that feature *kanjira* performers in international performances and recordings.

<table>
<thead>
<tr>
<th>Fusion Ensemble Name</th>
<th>Year Developed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shakti</td>
<td>1970</td>
</tr>
<tr>
<td>Repercussion Unit</td>
<td>1978</td>
</tr>
<tr>
<td>Mynta</td>
<td>1983</td>
</tr>
<tr>
<td>Mangalam</td>
<td>1987</td>
</tr>
<tr>
<td>Rabih Abou-Khalil Ensemble</td>
<td>1987</td>
</tr>
<tr>
<td>Hands On’semble</td>
<td>1998</td>
</tr>
<tr>
<td>Free ~ Winds</td>
<td>1996</td>
</tr>
<tr>
<td>Remember Shakti</td>
<td>1999</td>
</tr>
<tr>
<td>Sankara</td>
<td>1999</td>
</tr>
<tr>
<td>Jonas Hellborg, Shawn Lane and V. Selvaganesh</td>
<td>2000</td>
</tr>
<tr>
<td>Ghatam S. Karthick’s Heartbeat</td>
<td>2000</td>
</tr>
<tr>
<td>Nadaka</td>
<td>2001</td>
</tr>
<tr>
<td>Beat It</td>
<td>2004</td>
</tr>
<tr>
<td>Kailasa</td>
<td>2005</td>
</tr>
<tr>
<td>Shankar Tucker and The Shruti Box</td>
<td>2011</td>
</tr>
<tr>
<td>Maya</td>
<td>2011</td>
</tr>
<tr>
<td>Rhein Percussion</td>
<td>2011</td>
</tr>
<tr>
<td>The Ninth Wave</td>
<td>2012</td>
</tr>
</tbody>
</table>

Table 6. Fusion ensembles featuring *kanjira* performers.

Another by-product of the original Shakti ensemble’s introduction of the *kanjira* to the West was the proliferation of Western percussionists who took up the instrument out of its original context. In the 1970s, American percussionist John Bergamo had travelled to South India learning *thavil, kanjira,* and *ghatam* from T.H. Subash Chandran (brother of Shakti’s
“Vikku” Vinayakram), among others. When “Vikku” Vinayakram encountered a visa problem when traveling to perform for a Shakti concert in Canada, Bergamo was called upon to fill in. Bergamo was a leading percussion educator in the U.S.A., training many young percussionists in Carnatic, Hindustani, and Western percussion. He formed percussion ensembles such as Repercussion Unit and Hands On’semble, both of which continued to incorporate Indian percussion instruments including tabla, morsing, thavil, ghatam, and kanjira in their compositions, concert performances, and recordings. Many of his students developed their own careers in multi-national percussion playing, such as Randy Gloss, Austin Wrinkle, and Andrew Grueschow, who continue to make use of Indian percussion instruments.

In 1974, American percussionist Glen Velez began studies of mridangam and kanjira with Ramnad Raghavan, who had performed briefly with Shakti. Velez went on to study frame drums from many other cultures and created a hybrid performance practice that used disparate hand drumming techniques and rhythmic styles from South India, Arab, Central Asian, and European drumming traditions as a vocabulary for improvisation. Many of his students would develop careers that would carry on his particular hybrid percussion style including Shane Shanahan and Layne Redmond, among others.

Another American percussionist who travelled to India in the 1990s studying ghatam with T.V. Vasan, mridangam with Karaikudi R. Mani, and kanjira with G. Harishankar, was Jamey Haddad. He synthesized his studies in a similar manner as had Bergamo and Velez in building a hybrid clay instrument that could function as a ghatam, tabla, and other hand drums. He also designed a hybrid tambourine called “Hadjira” that could be played with Carnatic, Arab, and

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55 N.S. Robinson, “Glen Velez: A World of Sound in His Hands,” *Modern Drummer* 24, no. 2 (April 2000), 72-76, 78-80, 82, 84, 86.
Brazilian tambourine techniques.56 Teaching at the Berklee College of Music and other institutions, Haddad also produced a school of students that carry on his individual percussion techniques and style including Matt Kilmer and Jarrod Cagwin, among others. In 1993, percussion instructor B. Michael Williams at Winthrop University composed and published the first solo for kanjira in Western notation, “Variations on a South Indian Theme,” as part of his Four Solos for Frame Drums.57 These four percussionists, John Bergamo, Glen Velez, Jamey Haddad, and B. Michael Williams, represent four unique schools of percussion playing in contemporary improvised and composed musics. Their teaching, instrument designs, published recordings, books, scores, and instructional DVDs have all contributed to building a postmodern awareness of and approach to the kanjira and other percussion instruments effectively contributing to their continued use in new contexts well outside of India. It is now common to find non-Indian percussionists with some ability to play the kanjira in musical styles that lie outside Indian contexts. In Figures 94-96 we see some of the American percussionists who adapted Carnatic instruments, rhythms, and kanjira hand drum techniques.

56 N.S. Robinson, unpublished interview with Jamey Haddad, April 21, 2002.
Glen Velez in performance with the ensemble Trio Globo, Baltimore, Maryland, U.S.A., November 9, 2003. The 
*kanjira* is mounted on a stand beneath a small drum from Brazil, the *tamborim* (on top left). When used in 
conjunction with larger frame drums, Velez is able to create the timbral range of a drumset with the low tuning of 
the *kanjira*, high tuning of the *tamborim*, and the midrange tuning of the lager frame drums. Photo by N. Scott 
Robinson.

Randy Gloss, one of John Bergamo’s premiere students, has a thriving career in world percussion as a faculty 
member at California Institute of the Arts and percussionist for Hollywood film soundtracks and digital percussion 
sampling software programs. Here he is seen teaching a *kanjira* workshop to a group of Western students at the 
North American Frame Drum Association NAFDA West, a California frame drum festival held at the REMO 
In the twenty-first century, the *kanjira* occupies an important place in unique internationally based festivals exclusively for frame drumming that have featured *kanjira* artists in concert and workshops promoting cross-cultural approaches to frame drumming. Such festivals have been occurring annually in the 2000s as the result of several frame drum organizations that hold workshops on every type of frame drumming and feature concerts of both traditional and modern frame drummers. The first of these contemporary organizations was Frame Drums Europe, organized by the Italian artist and frame drummer Gianluca Baldo, who held the annual European Frame Drummers Meeting in the early 2000s in Spain on three occasions. A second organization, Caravansary, organized by Lennie Charles, held annual frame drum festivals in England from 2005 to 2008. Another organization, Tamburi Mundi, organized by Turkish percussionist Murat Coşkun, has been holding annual frame drum festivals in Germany from 2006 to 2013 with smaller regional events in Germany, Iran, Italy, and Turkey. The Greek Frame Drums Meeting, organized by Gerasimos Siasos, held its first two events in Greece in 2008 and

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The North American Frame Drum Association, Inc. began holding regional events around the U.S.A. and Canada between 2008 to 2013. Between 2010 and 2013, Frame Drums Italia, organized by Andrea Piccioni, held annual events preceded by other Italian frame drum organizations including the Società Italiana Tamburi a Cornice, led by Paolo Cimmino, that has held the annual Meeting Italiano del Tamburello from 2007 to 2013. Other associations for frame drumming include the Japan Frame Drum Association and the National Percussion & Frame Drum Association in Taiwan. With the growth and popularity of online social networks, such as YouTube (since 2005), MySpace (since 2006) and Facebook (since 2008), among others, numerous social networking frame drum groups have formed of every type all over the world contributing to a transnational awareness of and interest in the kanjira.61

**Conclusion: Continuity and Culture Change**

A variety of processes brought the kanjira from its origins in Northern India to its place in South Indian Carnatic music and popular music outside of India. Through transculturation and diffusion the kanjira has been adopted and adapted into a variety of new contexts from its beginnings in rural folk music in North India and its use in Mughal Court musics to its arrival in South India. As its tradition was renewed in the later-1800s, it entered the new context of Carnatic music in South India where it went through a series of organological and performance practice changes. Its entrance into a context with strict Hindu social hierarchy led to not only a new level of musical sophistication but also in the manifestation of a variety of Hindu

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61 In South India, Kalaimamani G. Harishankar Admirer’s Circle is an organization dedicated to an annual celebration of kanjira master G. Harishankar, known as Kalaimamani G. Harishankar Remembrance Day, organized by Nerkunam S. Sankar since February 9, 2008. As a performer and teacher at many of these international frame drum festivals, I have witnessed firsthand the strong international interest in learning South Indian kanjira as part of a desire to develop a cross-cultural music vocabulary for non-traditional music contexts. Contributing to the transnational movement of the kanjira out of India are the international annual conferences held by the Percussive Arts Society (1976-2013), KoSA drumming camps (1995-2013), the journal Percussive Notes, and mass-media magazines Modern Drummer, Drums & Percussion (Germany), Percussioni (Italy), Batera & Percussão (Brazil), Rhythm (U.K.), Rhythm and Drums Magazine (Japan), and Drum!, among others, where Indian percussionists have been featured.
symbolisms embedded at deep cultural levels in its performance practice. During a period of
great social and cultural change in India, the *kanjira* entered newer non-Indian international
contexts as its deep ties to Hinduism were no longer present in the hands of transnational
percussionists; the *kanjira’s* traditional performance continuity had changed. To better fit a
variety of contexts and cultures that adopted it, the *kanjira’s* adaptability as a musical instrument
allowed it to change physically, musically in its performance practices, and culturally in its
intentions and meanings as an expression of twenty-first century transnational musical identity.
APPENDIX

SELECTED LIST OF KANJIRA PERFORMERS

India

Amrit, Nataraj. Kanjira player from Bangalore, Karnataka, India.

Athreya, V. Anirudh. Kanjira player from Chennai, Tamil Nadu, India.

Ayyar, Kanjira Radhakrishna. Kanjira player and vocalist from Chittoor, Andhra Pradesh, India.

Chandramouli, B.N. Kanjira player from Bangalore, Karnataka, India.

Dakshinamurthy, T.K. Kanjira player from Chennai, Tamil Nadu, India.

Gopalakrishnan, K.V. Mridangam and kanjira from Chennai, Tamil Nadu, India.

Harishankar, G. R. Kanjira player from Chennai, Tamil Nadu, India.

Kishore, Sai. Kanjira player from New Delhi, Delhi, India.

Krishnamachariar, Kanjira. Kanjira player and vocalist from Mysore, Karnataka, India.

Kumar, Ganesh [a.k.a. Natarajan Ganesan]. Kanjira player from Chennai, Tamil Nadu, India.

Kumar, Tirupur G. Sridhar. Mridangam and kanjira player from Chennai, Tamil Nadu, India.

Mani, K.V.R.S. Kanjira player from Chennai, Tamil Nadu, India.

Manian, Trichy V.V.S. Kanjira player from Tiruchirappalli, Tamil Nadu, India.

Nagarajan, V. Kanjira player from Chennai, Tamil Nadu, India.

Paramasivam, Thenkasi H. Kanjira player from Tiruchirappalli, Tamil Nadu, India.

Phalgun, Parupalli S. Kanjira player from Vijayawada, Andhra Pradesh, India.

Pillai, Dakshinamurthy. Kanjira player from Pudakottai, Tamil Nadu, India.

Pillai, Manpoondia. Kanjira player from Pudakottai, Tamil Nadu, India.

Pillai, Subramania Palani. Mridangam and kanjira player from Palakkad, Kerala, India.

Prasanna G., Guru. Kanjira player from Bangalore, Karnataka, India.
Purushotham, B.S. *Kanjira* player from Chennai, Tamil Nadu, India.

Qureshi, Fazal. *Tabla* and *kanjira* player from Mumbai, Maharashtra, India.

Ragavendra, Guru. *Kanjira* player from Chennai, Tamil Nadu, India.

Raghuram, Abhishek. *Kanjira* player and vocalist from Chennai, Tamil Nadu, India.

Rajaganesh, Alathur T. *Kanjira* player from Tiruchirappalli, Tamil Nadu, India.

Rajagopal, T.D. *Kanjira* player from Trivandrum, Kerala, India.

Ramachar, Latha. *Kanjira* player from Bangalore, Karnataka, India.

Ramachar, H.P. *Kanjira* player and researcher from Bangalore, Karnataka, India.

Rangachari, K.S. *Kanjira* player from Chennai, Tamil Nadu, India.

Saikrishnan, Thiruvayur. *Kanjira* player from Chennai, Tamil Nadu, India.

Sankar, Nerkunam S. *Kanjira* player from Chennai, Tamil Nadu, India.

Sankaran, Trichy. *Mridangam* and *kanjira* from Tiruchirappalli, Tamil Nadu, India, now located in Ontario, Canada.

Sethuraman, Papanasam S. *Kanjira* player from Chennai, Tamil Nadu, India.

Shantharam, T.Y.N. *Kanjira* player from Trivandrum, Kerala, India.

Shashikumar, T.N. *Kanjira* player from Bangalore, Karnataka, India.

Shreesundarkumar, B. *Kanjira* player from Chennai, Tamil Nadu, India.

Shyamsundar, C.K. *Kanjira* player from Chittor, Andhra Pradesh, India.

Sivaraman, Umayalpuram K. *Mridangam* and *kanjira* player from Umayalpuram, Tamil Nadu, India.

Somusundaram, Mayavaram. *Kanjira* player from Chennai, Tamil Nadu, India.

Srinivasan, Poovalur. *Mridangam* and *kanjira* player from Chennai, Tamil Nadu, India, now located in Texas, U.S.A.

Vel, Kadir. *Ghatam* and *kanjira* player from Chennai, Tamil Nadu, India.

Venkatesh, Neyveli B. *Mridangam* and *kanjira* player from Chennai, Tamil Nadu, India.
Venkatramanan, C.S. *Kanjira* player from Chennai, Tamil Nadu, India.

Vinayakram, Selvaganesh. *Kanjira* player from Chennai, Tamil Nadu, India.

Vittala, C.P. Vyasa. *Kanjira* player from Bangalore, Karnataka, India.

**Asia, Europe, Oceania, North America, and South America**

Anandan, Ganesh. Percussionist and *kanjira* player from Karnataka, now located in Germany.

Beier, Tunji. Percussionist and *kanjira* player from Papua New Guinea, now located in Australia.

Bergamo, John. Percussionist and *kanjira* player from California, U.S.A.

Brunjes, Tommy “Tommy Be”. Percussionist and *kanjira* player from New York, U.S.A.

Carro, Joshua. Percussionist and *kanjira* player from California, U.S.A.

Crafton, Randy. Percussionist and *kanjira* player from New Jersey, U.S.A.

Dutz, Brad. Percussionist and *kanjira* player from California, U.S.A.

Foreman, Brian. Percussionist and *kanjira* player from California, U.S.A.

Gloss, Randy. Percussionist and *kanjira* player from California, U.S.A.

Graham, Patrick. Percussionist and *kanjira* player from Montréal, Québec, Canada.

Guello, Luis Carlos Xavier. Percussionist and *kanjira* player from Brazil.

Guerguerian, Paul “River.” Percussionist and *kanjira* player from North Carolina, U.S.A.

Gurung, Manohar. Percussionist and *kanjira* player from Nepal.

Haddad, Jamey. Percussionist and *kanjira* player from Ohio, U.S.A.

Hellenberg, Mark “Pokey.” Percussionist and *kanjira* player from Ohio, U.S.A.

Isler, Todd. Percussionist and *kanjira* player from New York, U.S.A.

Kaul, Matthias. Composer, percussionist, and *kanjira* player from Germany.

Kilmer, Matt. Percussionist and *kanjira* player from New York, U.S.A.

Kjeldsen, Svend. Percussionist and *kanjira* from Denmark.
Lockett, Pete. Percussionist and *kanjira* player from England, U.K.

Ludin, Hakim. Percussionist and *kanjira* player from Afghanistan, now located in Germany.

Mann, Ed. Percussionist and *kanjira* player from California, U.S.A.

McKenzie, Jason. Percussionist and *kanjira* player from Florida, U.S.A.

Nyusztay, Ivan. Percussionist and *kanjira* player from Budapest, Hungary.

Okazaki, Miles. Guitarist and *kanjira* player from New York, U.S.A.

Owen, Jim “Santi.” Percussionist and *kanjira* player from California, U.S.A.

Piazza, Judy. Percussionist and *kanjira* player from California, U.S.A.

Piccioni, Andrea. Percussionist and *kanjira* player from Rome, Italy.

Protopapas, John. Musician and *kanjira* player from Pennsylvania, U.S.A.

Roberts, Mike. Percussionist and *kanjira* player from Canada.

Robinson, N. Scott. Percussionist and *kanjira* player from Maryland, U.S.A.

Shanahan, Shane. Percussionist and *kanjira* player from New York, U.S.A.

Sankaran, Suba. Vocalist and *kanjira* player from Ontario, Canada.

Shotham, Ramesh. Percussionist, *thavil*, and *kanjira* player from Chennai, Tamil Nadu, India, now located in Germany.

Spieler, Claudio. Percussionist and *kanjira* player from Austria.

Teasley, Tom. Percussionist and *kanjira* player from Virginia, U.S.A.

Thiele, Nora. Percussionist and *kanjira* player from Germany.

Turnbull, Joss. Percussionist and *kanjira* player from Germany.

Velez, Glen. Percussionist and *kanjira* player from New York, U.S.A.

Venkataraman, Karthik. *Kanjira* player from Toronto, Ontario, Canada.

Williams, B. Michael. Percussionist and *kanjira* player from South Carolina, U.S.A.

Wrinkle, Austin. Percussionist and *kanjira* player from California, U.S.A.
BIBLIOGRAPHY


**Babul.** Directed by S.U. Sunny. Bombay: Captain, 1950, DVD.


**Barsaat.** Directed by Raj Kapoor. Bombay: Yash Raj Films India, 1949, DVD.


Gay, J. Drew. *From Pall Mall to the Punjab or With the Prince in India*. London: Chatto and Windus, Piccadilly, 1876.


Hardgrave, Jr., Robert L. and Stephen M. Slawek. *Musical Instruments of North India:*


Isler, Todd. *You Can Ta Ka Di Mi This!* Brooklyn: Gerard & Sarzin Publishing Company, 2005.


_______. “The Palani Style.” *Sruti* no. 33/34 (June/July 1987), 28-29.


_______. “Three Tales from Anaitandavapuram: Paying a Price for Palani’s Artistry.” *Sruti* no. 33/34 (June/July 1987), 34-35.

_______. “Palani’s Disciples.” *Sruti* no. 33/34 (June/July 1987), 36-37.


Khan, Ghulamhusain and Munir Khan. *Jugalbandi Duet for Sitar and Sarangi with Tabla and Drone Accompaniment*. Decca DL 75100, 1968, LP.


Kumar, Shanti and Michael Curtin. “‘Made in India’: In Between Music Television and Patriarchy.” *Television & New Media* 4, no. 3 (November 2002): 345-366.


Lohr, J.J. *A Few Pictures from Chhattisgarh: and the Central Provinces of India, Illustrating the Scenery, the Social Customs of the Sathámis and the Late Famine*. Austria: J.J. Lohr, 1899.


Padmanabhan, Sudarsan. “Debate on Indian History: Revising Textbooks in California.” *Economic and Political Weekly* 41, no. 18 (6-12 May 2006), 1761-1763.


Rao, Dandamudi Ramamohan. “A Teacher Not Only of Art but Also of Values.” *Sruti* no. 33/34 (June/July 1987), 38.


Robinson, N. Scott. “Glen Velez: A World of Sound in His Hands.” *Modern Drummer* 24, no. 2 (April 2000), 72-76, 78-80, 82, 84, 86.


________. “Performing the Past, Present and Beyond: Glen Velez and Researching Frame Drum History.” *Percussive Notes* 51, no. 4 (July 2013): 30-34.


Seetha, S. *Tanjore as a Seat of Music (During the 17th, 18th, and 19th Centuries)*. Chennai: University of Madras, 2001.

Shankar, Ravi. *Improvisations and Theme from Pather Panchali*. World Pacific ST 1416, 1961, LP.

________. *Charly*. World Pacific WPS-21454, 1968, LP.


________. *Duets Sitar and Sarod*. EMI 2C062-94277, 1965, LP.


Sharif, Ja’far. *Qanoon-e-Islam, or the Customs of the Moosulmans of India; Comprising a Full and Exact Account of Their Various Rites and Ceremonies, from the Moment of Birth till the Hour of Death*. Translated by Gerhard Andreas Herklots. London: Parbury & Co., 1863.


Shureef, Jaffur (Ja’far Sharīf). *Qanoon-e-Islam, or the Customs of the Moosulmans of India; Comprising a Full and Exact Account of Their Various Rites and Ceremonies, from the Moment of Birth till the Hour of Death*. Translated by Gerhard Andreas Herklots. London: Parbury Allen & Co., 1863.


———. *Caste in Modern India*. Hong Kong: Asia Publishing House, 1962.


INTERVIEWS

Amrit, Nataraj. *Kanjira* player from Bangalore. Interviews by author, December 2005 and January 2006, Chennai, Tamil Nadu and Bangalore, Karnataka, India.


Bergamo, John. Percussionist and *kanjira* player from California. Interview by author, October 1999, Columbus, Ohio, U.S.A.

Coşkun, Murat. Turkish Percussionist now located in Germany. Interview by author via e-mail, September 2011.

Dakshinamurthy, T.K. *Kanjira* player from Chennai. Interview by author, January 2006, Chennai, Tamil Nadu, India.

Gopalakrishnan, K.V. *Mridangam* and *kanjira* player from Chennai. Interview by author, January 2006, Chennai, Tamil Nadu, India.

Gopalakrishnan, T.V. *Mridangam* player and vocalist from Chennai. Interview by author, November 2005, Chennai, Tamil Nadu, India.


Gurtu, Trilok. Percussionist from Mumbai, Maharashtra, India, now located in Germany. Interview by author, April 9, 2004, New York, New York, U.S.A.

Gurumurthy, Premee. Chair of Department of Indian Music at University of Madras in Chennai. Interview by author, September 2005, Chennai, Tamil Nadu, India.

Haddad, Jamey. Percussionist and *kanjira* player from Ohio. Interview by author, April 21, 2002, Nashville, Tennessee, U.S.A.

Hussain, Zakir. *Tabla* player from Mumbai, Maharashtra, India, now located in California. Interview by author, June 3, 2000 via telephone.

Kannan, Srirangan S. *Morsing* player from Chennai. Interview by author, January 2006, Chennai, Tamil Nadu, India.


Kumar, Ganesh [a.k.a. Natarajan Ganesan]. *Kanjira* player from Chennai. Interview by author, December 2003, Lanham, Maryland, U.S.A.
Kumar, Ravi. Instrument maker from Chennai. Interview by author, December 2005, Chennai, Tamil Nadu, India.

Mani, K.V.R.S. Kanjira player from Chennai. Interview by author, December 2005, Chennai, Tamil Nadu, India.

Manian, Trichy S. Kanjira player from Tiruchirappalli. Interview by author, January 2006, Chennai, Tamil Nadu, India.

Nagaraj, Erode. Mridangam player from Chennai. Interview by author, January 2006, Chennai, Tamil Nadu, India.

Paramasivam, Thenkasi H. Kanjira player from Tiruchirappalli. Interview by author, December 2005, Chennai, Tamil Nadu, India.

Parthasarathy, T.S. Musicologist from Chennai. Interviews by author, October and November 2005, Chennai, Tamil Nadu, India.

Purushotham, B.S. Kanjira player from Chennai. Interview by author, January 2006, Chennai, Tamil Nadu, India.

RaghuRam, AbhisheK. Kanjira player and vocalist from Chennai. Interview by author, January 2006, Chennai, Tamil Nadu, India.

Rajaganesh, Alathur T. Kanjira player from Tiruchirappalli. Interview by author, December 2005, Chennai, Tamil Nadu, India.

Rajagopal, T.D. Kanjira player from Trivandrum. Interview by author, December 2005, Chennai, Tamil Nadu, India.

Ramachar, H.P. Kanjira player and researcher from Bangalore. Interview by author, January 2006, Bangalore, Karnataka, India.

Ramachar, Latha. Kanjira player from Bangalore. Interview by author, January 2006, Bangalore, Karnataka, India.

Rangachari, K.S. Kanjira player from Chennai. Interview by author, January 2006, Chennai, Tamil Nadu, India.

Saikrishnan, Thiruvayur. Kanjira player from Chennai. Interview by author, January 2006, Chennai, Tamil Nadu, India.

Sankar, Nerkunam S. Kanjira player from Chennai. Interview by author, January 2006, Chennai, Tamil Nadu, India.

Sankar, R. Instrument maker from Chennai. Interviews by author, October and November 2005,
Chennai, Tamil Nadu, India.

Sethuraman, Papanasam S. *Kanjira* player from Chennai. Interview by author, December 2005, Chennai, Tamil Nadu, India.

Shantaram, T.K.N. *Kanjira* player from Thiruvananthapuram. Interview by author, January 2006, Thiruvananthapuram, Kerala, India.

Shotham, Ramesh. Percussionist and *kanjira* player from Tamil Nadu, now located in Germany. Interviews by author, August 2011 and August 2012.

Shreesundarkumar, B. *Kanjira* player from Chennai. Interviews by author, October and November 2005, Chennai, Tamil Nadu, India.

Somusundaram, Mayavaram. *Kanjira* player from Chennai. Interview by author, January 2006, Chennai, Tamil Nadu, India.


Vasan, T.V. *Ghatam* and *mridangam* player from Chennai. Interviews by author, September and October 2005, Chennai, Tamil Nadu, India.

Vel, Kadir. *Ghatam* and *kanjira* player from Chennai. Interview by author via Internet, April 2013.


Venkatesh, Neyveli B. *Mridangam* and *kanjira* player from Chennai. Interview by author, January 2006, Chennai, Tamil Nadu, India.

Venkatramanan, C.S. *Kanjira* player from Chennai. Interview by author, January 2006, Chennai, Tamil Nadu, India.

Vittala, C.P. Vyasa. *Kanjira* player from Bangalore. Interview by author, January 2006, Chennai, Tamil Nadu, India.
SELECTED DISCOGRAPHY

BHAJANS

Subbulakshmi, M.S. *Sri Kamakshi Suprabhatam and Other Songs in Praise of Sri Kamakshi*. EMI ECSD. 3254, 1974, LP (V. Nagarajan — kanjira).

________. *Sri Annamacharya Samkirtanas Sri Venkateswara (Balaji) Pancha Ratnamala*. EMI ECSD. 3314, 1979, LP (V. Nagarajan — kanjira).


CARNATIC


Jayashri, Bombay S. *Amritham (Carnatic Vocal)*. Inreco IP-5083, 1998, compact disc (B.S. Purushotham — *kanjira*).

Kanyakumari, A. *Sacred Gems of Thyagaraja (Pancharathna Krithis)*. Inreco IP-5256, 2004, compact disc (V. Selvaganesh — *kanjira*).


Ramani, Dr. N. and Dr. R. Pitchumani Iyer. Classical Music (Flute). Geethanjali CD SA 049, 2000, compact disc (G.R. Harishankar — kanjira).


Rao, M. Nageswara. The Ten Graces Played on the Vina. Nonesuch Explorer Series H-72027,
1969, LP (V. Nagarajan — kanjira).


Subbulakshmi, M.S. *M.S. Subbulakshmi*. Odeon S/MOAE 5012-5013-5014, 1970, LP (V. Nagarajan — *kanjira*).

________. *Carnatic Concert*. Sařēgama CDNF 147800/801, 1983, compact disc (V. Nagarajan — *kanjira*).

________. *Smt. M.S. Subbulakshmi*. Sařēgama CDNF 197701, 1994, compact disc (V. Nagarajan — *kanjira*).


________. *Guru Guha Vani (Compositions of Muthuswami Dikshithar)*. Sařēgama CDNF 157032133, 2002, compact disc (V. Nagarajan — *kanjira*).

________. *Nadamrutham: From the Music Academy Archives — Vol. 1 & 2*. Sařēgama CDNF 157034135, 2002, compact disc (V. Nagarajan — *kanjira*).

________. *Live in Russia*. Sařēgama CDNF 157100/157101, 2005, compact disc (G.R. Harishankar — *kanjira*).


Subramaniam, Dr. L. *Talavadya*. AVM Audio AVM CD-013, 1986, compact disc (G.R. Harishankar — *kanjira*).


________. *Classical Blast*. Kosmic KMD 352, 2005, compact disc (B. Shreesundarkumar — *kanjira*).


_______. Kunnakudi P. Vaidyanathan. EMI S/33SX 6049, 1985, LP (T.K. Dakshinamurthy — kanjira).


_______. Arpana. Sagar Music SM CD 9843, 2003, compact disc (Sethuraman — kanjira).


_______. Violin. Geethanjali CD SA-028 (no date given), compact disc (Madras Rangachari — kanjira).


. Dancing Drums: A Percussive Ensemble from the Temples of India. Sruthi Records (no # or date), compact disc (Parupalli S. Phalgun — kanjira).


Abou-Khalil, Rabih. *Between Dusk and Dawn*. Enja MMP-170886 2, 1987, compact disc (Ramesh Shotham — *kanjira*).


Anandan, Ganesh. *GaGi*. Fingerworks (no #), 2006, compact disc (Ganesh Anandan — *kanjira*).

Autorickshaw. *So the Journey Goes*. Tala-Wallah Records TW 003, 2007, compact disc (Suba Sankaran — *kanjira*).


Benford, Robert “Tigger.” *Talamalika: Hand Drumming and Vocal Suite in Five Parts*. Tigger Benford (no #), 2003, compact disc (Todd Isler — *kanjira*).

Bergamo, John and Ed Dorsey. *Cloud Hands (Tambo)*. Interworld Music C-903, 1990, cassette (John Bergamo — *kanjira*).


Cattaneo, Alex and Ganesh Anandan. *Asa Nisi Masa*. Rif Musique RIF 003, 2005, compact disc (Ganesh Anandan — *kanjira*).


Dva. *Anticipation*. Dva (no #), 2010, compact disc (Tunji Beier — *kanjira*).

Dyad. *Who’s Been Here Since I’ve Been Gone*. Copperspine Records (no #), 2002, compact disc (Mike Roberts — *kanjira*).

Ensemble FisFüz. *Ashuré*. Pianissimo Music PM0922, 2011, compact disc (Ramesh Shotham — *kanjira*).

Fleck, Bela and the Flecktones. *Little Worlds*. Columbia 86353, 2003, compact disc (Ganesh Kumar — *kanjira*).

Free ~ Winds. *Indian Air*. Shamrock Records 1053-2, 1999, compact disc (V. Selvaganesh — *kanjira*).


Ganesan, L.V. *Explosions*. Kosmic KMD 196, 2004, compact disc (V. Selvaganesh — *kanjira*).

GaPa. *Imaginaria*. GaPa GP 001, 2003, compact disc (Ganesh Anandan — *kanjira*).

Gopalanath, Kadri and Mani Kanth Kadri. *Dream Journey: Volume 3*. Kosmic KMD 258, compact disc (Ghatam V. Suresh — *kanjira*).


———. *Three*. HOSO220, 2005, compact disc (Austin Wrinkle — *kanjira*).

———. *Hand’stan*. HOSO4082, 2006, compact disc (Randy Gloss — *kanjira*).

———. *Cinco sobre três — fünf über drei*. HOSO550, 2012, compact disc (Pete Lockett — *kanjira*).

Haque and the Flat Earth Ensemble, Fareed. *Flat Planet*. Owl Records OWL00133, 2009, compact disc (Ganesh Kumar — *kanjira*).

Hellborg, Jonas with Shawn Lane and Selvaganesh Vinayakram. *Good People in Times of Evil*. Bardo 040, 2000, compact disc (V. Selvaganesh — *kanjira*).

Hellborg, Jonas with Shawn Lane, V. Selvaganesh, V. Umashankar, and V. Umamahesh. *Icon:*


Horizontal Vertical Band. *Spontaneous Music*. Other Media 80-7-1, 1980, 45 LP (Glen Velez — kanjira).

______ . *Direct to Disc*. Other Media 5681, 1981, LP (Glen Velez — kanjira).


Jingles & Frames. *For Gaya*. Fairylands Records (no #), 2003, compact disc (Ganesh Kumar — kanjira).


Kumar, Ganesh [Natarajan Ganesan]. *Frameful of Beauty*. Pradosh Records (no #), 2011, compact disc (Ganesh Kumar — *kanjira*).


Mangalam. *Funk Mahal*. Magnasound (no #), 1995, cassette (V. Selvaganesh — *kanjira*).

———. *Monkey Out of Shakti’s Shadow*. Magnasound (no #), 1996, cassette (V. Selvaganesh — *kanjira*).

———. *Funky Classical Indian Music*. Tiptoe TIP-888 827 2, 1997, compact disc (V. Selvaganesh — *kanjira*).


Maya. *The Power of 4*. Virgin Records (no #), 2011, MP3 (B. Shreesundarkumar — *kanjira*).

Moving Cloud. *Cuckanandy*. Go’ Danish Folk Music GO 0102, 2002, compact disc (Svend Kjeldsen — *kanjira*).

Mynta. *First Summer*. Blue Flame 50052, 2002, compact disc (Fazal Qureshi — *kanjira*).

———. *Meetings in India*. Prophone 98, 2009, compact disc (Fazal Qureshi — *kanjira*).

Nadaka. *Straight to Your Heart*. Rain Tree Records (no #), 1997, compact disc (V. Selvaganesh — *kanjira*).


Okazaki, Miles. *Mirror*. Miles Okazaki (no #), 2006, compact disc (Miles Okazaki — *kanjira*).

Oriental Wind and the Karnataka College of Percussion. *Sankırna*. Sonet SNTF 930, 1985, LP (T.N. Shashikumar — *kanjira*).


Raghavendra, Dr. Krishna. *Rare Pulse*. Crescendo CDCMMCD 7001, 2003, compact disc (Anand Iyer — *kanjira*).


Redmond, Layne. *Invoking Aphrodite*. Golden Seed Productions (no #), 2009, compact disc (Tommy Brunjes — *kanjira*).

Redmond, Layne and Tommy Brunjes. *Lotus of Light: Chanting the Chakras*. Interworld CD 930, 1999, compact disc (Tommy Brunjes — *kanjira*).

C. *Trance Union*. Golden Seed Productions CD 0100, 2000, compact disc (Tommy Brunjes — *kanjira*).

Redmond, Layne and Tadeu Mascarenhas. *Hymns from the Hive*. Golden Seed Music (no #), 2010, compact disc (Tommy Brunjes — *kanjira*).


C. *Shakti*. Verve 016 578-2, 2000, compact disc/DVD box set (V. Selvaganesh — *kanjira*).

C. *Saturday Night in Bombay*. Verve 014 164-2, 2001, compact disc (V. Selvaganesh — *kanjira*).

Repercussion Unit. *In Need Again*. CMP Records CD 31, 1987, compact disc (John Bergamo — *kanjira*).


Sankara. *Sankara: An Indian Rhythmic Ensemble*. Charsur Digital Work Station (no #), 1999, compact disc (Ganesh Kumar — *kanjira*).

Shanahan, Shane. *Shane Shanahan*. Shanahan Music (no #), 2010, compact disc (Shane Shanahan — *kanjira*).


Sharma, Roshan, with Jiwan Rai and Manohar Gurung. *Aatmiya*. Kathmandu Music Center (no #), 2008, compact disc (Manohar Gurung — *kanjira*).


Stockhausen, Marcus. *Possible Worlds*. CMP Records CD 68, 1995, compact disc (Ramesh Shotham — *kanjira*).

Tucker, Shankar. *The Shruti Box Vol. 1.5*. Shrutibox Music (no #), 2012, MP3 (B. Shreesundarkumer — *kanjira*).

Turrisi, Francesco with Andrea Piccioni and Fabio Tricomi. *Zahr*. Taquin Records TAQCD002, 2011, compact disc (Andrea Piccioni — *kanjira*).


_______. *Hurricane*. Kosmic CDNF-009, 2002, compact disc (Kesavan — *kanjira*).


_______. *Blazing Drums 2*. Times Music TDFWM 183C, 2003, compact disc (V. Selvaganesh — *kanjira*).


Vikku — 60 Years Celebration. Sony Music NR0161 2, 2001, compact disc (V. Selvaganesh — kanjira).


Wooten, Victor. *Soul Circus*. Vanguard 79785, 2005, compact disc (Ganesh Kumar — *kanjira*).

Wren, Toby. *The Carnatic Jazz Experiment*. Toby Wren (no #), 2011, compact disc (Tunji Beier — *kanjira*).

Wubbenhorst, John. *Sacred Offering*. Facing East Productions (no #), 2005, compact disc (Ganesh Kumar — *kanjira*).

Wubbenhorst, John and Facing East. *Facing Beloved*. Facing East Productions (no #), 2003, compact disc (Ganesh Kumar — *kanjira*).
SELECTED VIDEOGRAPHY


Hellborg, Jonas with Shawn Lane and the Vinayakram Brothers. *Paris: Concert at New Morning*. Bardo 243, 2001, DVD (V. Selvaganesh — *kanjira*).


________. *Masters of Percussion 2008*. Moment Records, 2008, DVD (Fazal Qureshi — *kanjira*).


Krishna, T.M. *Rasikatvam (The Experience of Carnatic Music)*. Swathi Soft (no date), DVD (B.S. Purushotham — *kanjira*).

Kumar, Ganesh [Natarajan Ganesan]. *The Art of Kanjira*. Octagonal Madness, 2005, DVD (Ganesh Kumar — *kanjira*).


Mani, Karaikudi R. “*Sruthi Laya Ensemble*.” Sruthi Laya Kendra, 2001, DVD (G.R. Harishankar — *kanjira*).


________. *The Way of Beauty*. Universal Music France 983 762 6, 2006, DVD (V. Selvaganesh — *kanjira*).

(Trichy Sankaran — kanjira).


