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# A Pedagogical and Analytical Study of the Carnatic Saxophone Performance Tradition of Kadri Gopalnath

Caleb James Carpenter

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A PEDAGOGICAL AND ANALYTICAL STUDY OF THE CARNATIC  
SAXOPHONE PERFORMANCE TRADITION OF KADRI GOPALNATH

by

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Bachelor of Music  
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## DEDICATION

This document is written in dedication to my wife, Natalie, and to my family, for their unwavering support of my journey from my very first music lessons to the present, and everything that is yet to come.

## ACKNOWLEDGEMENTS

Innumerable thanks are due to all of my teachers throughout my life as a student. To all of my band directors: Edd Powell, Chris White, Verena Mosenbichler-Bryant, Mallory Thompson, and Cormac Cannon, thank you for welcoming me into your musical communities and showing me how impactful music making could be when done in great company.

To all of my academic teachers, with special appreciation for: Michael Dodds, David Winkelman, Karen Beres, John Ferri, Kenneth Frazelle, Inna Naroditskaya, Daniel Jenkins, and Bruno Alcalde. Thank you for instilling in me a love of learning and an exploration of all the ways one can experience and enjoy music. Your expertise and inquisitiveness inspired me to focus as much on my development as an academic just as much as my development as a performer.

To my saxophone teachers: Meri Jenkins, Reese Manceaux, Taimur Sullivan, Robert Young, Clifford Leaman, and Lauren Meccia, my thanks to all of you cannot be overstated. The time and energy you invested in me is a kindness I will never cease to appreciate. You have had more of an impact on my life than I could have ever imagined. You've given me models not only for how to be a great saxophonist, but how to be a caring, compassionate, empathetic, and enthusiastic person.

Special thanks are due to Matt Hess for his willingness to help me take this project as far as it could possibly go.

## ABSTRACT

Kadri Gopalnath is a musician who achieved an exceptional level of mastery in the Carnatic musical tradition of South India, and he accomplished this playing the saxophone, a uniquely Western instrument. He was the first person to fully integrate the saxophone to the Carnatic style and was held in high esteem as a classical Indian musician. This document examines the Carnatic tradition, Kadri Gopalnath's life and work, and the modifications he made to the saxophone. Selected analyses of his performances are reviewed in the context of Carnatic pedagogy, and the significance of learning this tradition for the musicianship of a Western performer is displayed. This study guides the Western saxophonist through an understanding of Kadri Gopalnath and his musical tradition and allows them to begin their exploration of this musical style. The saxophone community is uniquely primed to be able to invest in and appreciate the Carnatic performance tradition through the gateway of Kadri Gopalnath.

## PREFACE

The study of a musical tradition outside of one's upbringing, culture, and personal identity is a difficult situation to navigate and requires sensitivity. Many considerations are needed to ensure all biases and preconceptions (or as many as possible) do not intrude upon academic study. This document focuses on a musical tradition, nationality, and ethnicity that is entirely different from that of the author. I have knowingly written this document and conducted my study of the music of South India and Kadri Gopalnath from a white, Western, anglo-centric perspective. Every effort has been made to carry out this study with a sense of respect and appreciation, always trying to avoid objectification, appropriation, and exoticism.

After completing this study, I can safely attest that Kadri Gopalnath has left behind a legacy of virtuosity on par with the greatest saxophonists of all styles of the Western tradition, from Marcel Mule to Charlie Parker. This study offers introductory insights into Gopalnath's performance tradition, but a lifetime of studying Carnatic music is required to fully understand and emulate his achievements. Just as reading solos from the Charlie Parker Omnibook<sup>1</sup> only provides a shallow, one-dimensional insight into Parker's performance, so too does this study only present a limited and precursory glance at the depth of mastery achieved by Kadri Gopalnath. Limitations notwithstanding, this document provides a valuable point of departure for the Western saxophonist interested in pursuing the music of South India via the legacy of a true master.

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<sup>1</sup> Charlie (Bird) Parker, *Charlie Parker – Omnibook*. (Winona, MN: Hal Leonard, 2009).

It should also be noted that since the Carnatic tradition is thousands of years old and largely transmitted orally, several different spellings of some concepts, names, and instruments are present. Different spellings likewise exist for similar items across regional and cultural boundaries. This study primarily uses spellings associated with South India in the main body of text, and alternate spellings are acknowledged in passing where appropriate. Variations in meanings and interpretations of certain terms and ideas may be present throughout different sources of information regarding Indian music. The Indian musical landscape is vast and cannot be comprehensively examined in any singular work. This document is necessarily limited in its scope and only presents ideas that are essential for the Western musician to gain an understanding of Carnatic music and the influences that shaped Kadri Gopalnath's performance career. As limited as it may be, a significant amount of information presumably unfamiliar to a Western reader is contained within this study. To aid in comprehension, a List of Terms is provided in Appendix A at the close of this document. Likewise, terms may be briefly described at multiple points within the document.



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## CHAPTER 1

### REVIEW OF RELATED LITERATURE

Regarding the body of Western academic literature surrounding this topic, there is a fairly high volume of works concerning Indian and Carnatic music as a whole, but very little that examines Kadri Gopalnath explicitly. Two very fine dissertations by Herbert Flanders and Nicholas Childs briefly engage with Gopalnath's life and work, but they do so with the aim of applying the musical knowledge presented in their documents to enrich Western ideals. Flanders' work considers Gopalnath, and Indian music as a whole, in order to better interpret Western-composed concert works which are based on Eastern styles.<sup>2</sup> Childs' study explores the notion of hybridity and again discusses Gopalnath with the intent of using his performance career and collaborations with other artists to better understand Western philosophical conventions.<sup>3</sup>

These studies are undeniably valuable to Western performers and help to disseminate knowledge and appreciation for Indian music and the musical traditions of other non-Western cultures. While making some connections to Western styles of music and conclusions on how learning Carnatic music improves one's overall musicianship, the primary purpose and function of this document is the study of Carnatic music in and of itself. The life and work of Kadri Gopalnath is investigated for its own inherent value and not to inform or influence any saxophone playing in a Western tradition. This study

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<sup>2</sup> Herbert Stanley II Flanders, "Engaging Hybridity: Indian Hindustani and Carnatic Practices in the Western Classical Saxophone Tradition." Doctoral dissertation, University of Georgia, 2016.

<sup>3</sup> Nicholas James Childs, "A Pedagogical Study of the Saxophone through the Lens of Acoustic Niche Hypothesis." Doctoral dissertation, Florida State University, 2019.

aims to take the Western saxophonist away from their home tradition and to engage with a style entirely new to them. This process will nourish the saxophonist as a whole musician and while this may result in improvements to some aspects of their Western-oriented performance (whether contemporary, classical, jazz, or another style) that is not the primary purpose of this work.

Candida Connolly's book *Indian Melodies for Alto Saxophone – Styles/Techniques/Ornamentation* is another valuable resource of Western literature that engages with Gopalnath and the Carnatic tradition. Connolly's work presents a brief overview of the style and provides examples of the main types of Carnatic compositions in Western notation. She acknowledges throughout the text that it is limited in scope as it does not discuss any improvised forms and is inherently unable to display the ornamentations idiomatic to Carnatic music.<sup>4</sup> It is a great point of departure for a study of the Carnatic style, but one is limited from playing the examples in Connolly's text in the same way one is limited by learning Western jazz standards from "The Real Book."<sup>5</sup> The most valuable item packaged with Connolly's work is a CD of recordings of Kadri Gopalnath playing through the examples in the book. This aural resource is crucial for understanding elements of Carnatic music which are near-impossible to notate. They must be learned by studying recordings and immersing oneself in performances of master Carnatic musicians.

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<sup>4</sup> Candida Connolly, *Indian Melodies for Alto Saxophone - Styles/Techniques/Ornamentation*. (London: Schott, 2006).

<sup>5</sup> Hal Leonard Publishing Corporation, (2004), *The Real Book*.

## CHAPTER 2

### BIOGRAPHY OF KADRI GOPALNATH

The next portion of this study will follow Kadri Gopalnath's journey from discovery of the saxophone to complete mastery of the instrument. Gopalnath was a traditional Carnatic musician to his core, but simply chose the saxophone and adapted the Western instrument to fit the stylistic and musical needs of the Carnatic tradition.

Gopalnath was born in Mangaluru (Mangalore), Karnataka, on December 6th, 1949, and died on October 11th, 2019.<sup>6</sup> His father, Sri Taniappan, was a *vidwan* (master) of the South Indian *nagaswaram*.<sup>7</sup> This is a double reed instrument that is used most frequently in ceremonial settings across many states in South India. Nagaswaram is predominantly played at Hindu weddings and other religious events at temples. The nagaswaram is a loud instrument and best suited to outdoor performances, not unlike the shawm or zurna.<sup>8</sup> Gopalnath studied the nagaswaram with his father for five years during his childhood and also studied vocal performance before being exposed to the saxophone. Gopalnath's introduction to the saxophone occurred in 1965 when he was fifteen years old and heard a performance of the Nadamuni Band (a military band) at the Mysore Royal Palace in Mysore, Karnataka.<sup>9</sup> This band was a vestige of British colonialism and

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<sup>6</sup> Aparna Sridhar, "He Was a One-Man-Band." The Times of India, October 12, 2019.

<https://timesofindia.indiatimes.com/city/bengaluru/he-was-a-one-man-band/articleshow/71546413.cms>.

<sup>7</sup> Madur, "Of Soft Notes in the Saxophone - Dr. Kadri Gopalnath ." Karnataka.com, November 9, 2011. <https://www.karnataka.com/personalities/kadri-gopalnath/>.

<sup>8</sup> Madur, "Of Soft Notes in the Saxophone."

<sup>9</sup> CV Aravind, "Kadri Gopalnath: The Man Who Brought the Saxophone Into Indian Homes." The News Minute, October 12, 2019. <https://www.thenewsminute.com/article/kadri-gopalnath-man-who-brought-saxophone-indian-homes-110400>.

was modeled after Western military bands. Along with military and ceremonial compositions, they performed *kritis*, which are long-form Carnatic pieces with organizing structures similar to Western popular music and jazz.<sup>10</sup> The ensemble notably included a saxophone player named Lakshmi Narasimhaiah, who gave Gopalnath his first lessons on the saxophone following Gopalnath's enthrallment with the instrument's sound after hearing the performance. Gopalnath's father purchased a saxophone for 800 rupees, which was a large sum of money for a working-class family to produce at the time.<sup>11</sup>

Gopalnath's first substantial teacher was the flutist and vocalist N. Gopalakrishna Iyer (1927-2019). In 1956, Iyer assisted in the founding of the Kala Nikethana (Kalaniketan) School of Music and Dance, located in Mangaluru.<sup>12</sup> The school became very influential to artistic and cultural life in Mangaluru, and Gopalnath studied with Iyer there for the first phase of his musical development. Iyer did not instruct Gopalnath on the saxophone, but continued his fundamental development in the Carnatic style through gaining proficiency in singing compositions with *swaras* (Carnatic "solfege") and reciting the rhythmic *solkattu* syllables (described in Chapter 5). The teachings of Iyer, along with the instruction from his father, gave Gopalnath a strong foundation of Carnatic skills that he would later apply to the saxophone.<sup>13</sup>

Iyer was the brother-in-law of the musician who would become Gopalnath's strongest influence, Tripunithura Viswanathan Gopalakrishnan (b. 1932), commonly referred to as T. V. Gopalakrishnan, or TVG. Gopalakrishnan comes from a family with a

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<sup>10</sup> Aravind, "Kadri Gopalnath: The Man Who Brought the Saxophone Into Indian Homes."

<sup>11</sup> Shabaka Hutchings, "Tracing the Roots: Kadri Gopalnath, a Lifetime of Pioneering Indian Carnatic Music." Le Guess Who?, July 19, 2018. <https://leguesswho.com/news/tracing-the-roots-kadri-gopalnath-a-lifetime-of-pioneering-indian-carnatic-music>.

<sup>12</sup> "Music Guru Gopalakrishna Iyer No More," Deccan Herald, December 31, 2019. <https://www.deccanherald.com/state/music-guru-gopalakrishna-iyer-no-more-790074.html>.

<sup>13</sup> "KADRI GOPALNATH: 'Saxophone Samrat.'" Sruti, no. 396 (2017): 22.

long musical history, as his father was a court musician of the Cochin Royal Family (dissolved in 1949).<sup>14</sup> T.V. Gopalakrishnan began his career as a player of the *mridangam*, the drum that serves as the main rhythmic presence in a Carnatic musical ensemble. He later went on to sing and play the violin and became a major figure in the performance and pedagogy sphere of Carnatic music.<sup>15</sup> In 1973 T.V. Gopalakrishnan took on Kadri Gopalnath as a student and assisted Gopalnath in adapting the saxophone to play Carnatic music, launching his professional performing career.<sup>16</sup>

Gopalnath's first public performance occurred in 1977 at the music festival held at the Chembai Memorial Music Center, now designated as the Chembai Memorial Government Music College.<sup>17</sup> This is a site located in the city of Palakkad, in Kerala, India. It holds heightened significance for classical Carnatic musicians as it is named for one of the most revered and influential Carnatic performers of the 20th century, Chembai Vaidyanatha Bhagavatar (1896-1974), most commonly referred to as Chembai, the name of his ancestral village. Chembai was a Carnatic singer and tutor responsible for mentoring some of the most important musicians in the first half of the century.<sup>18</sup> One of Chembai's many prominent pupils was Gopalnath's teacher at the time, T.V. Gopalakrishnan. As this was a music festival celebrating and commemorating the life and work of his teacher, Gopalakrishnan was eager to display the work he had been doing to mold Gopalnath into a serious Carnatic musician. Gopalnath was an opening act for the

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<sup>14</sup> Pramod Kumar, "'If You Can Speak, You Should Sing' Says T. V. Gopalakrishnan." *The Hindu*, June 10, 2021. <https://www.thehindu.com/entertainment/music/if-you-can-speak-you-should-sing-says-tv-gopalakrishnan/article34784145.ece>.

<sup>15</sup> Kumar, "'If You Can Speak, You Should Sing'"

<sup>16</sup> Hutchings, "Tracing the Roots"

<sup>17</sup> Kadri Gopalnath, "Adapting the Saxophone to Carnatic Music." Chembur Fine Arts Society. Reading, 2000. <http://www.carnatica.net/sangeet/saxophone1.htm>.

<sup>18</sup> Aarvalan, "Chembai: Artist With a Strong Voice and a Noble Heart." *Times of India*, September 1, 2016. <https://timesofindia.indiatimes.com/blogs/tracking-indian-communities/chembai-artist-with-a-strong-voice-noble-heart/>.



acclaimed singer Mangalampalli Balamuralikrishna (1930-2016) and his performance was successful. When Gopalnath finished the time he was allotted to play, Balamuralikrishna declined to go on stage, saying “I am always singing here. Let me listen to him. This boy is playing something special. Let him play.”<sup>19</sup> This adoration from a highly regarded singer and an opportunity to perform for an extended duration was indicative of the career success that Gopalnath was on the cusp of fulfilling.

Gopalnath’s next professional endeavor was a 1978 graded performance for All India Radio in Mangaluru. All India Radio is India’s national, state-run broadcasting system that holds auditions and gives grades to musicians in order to help deserving artists gain widespread recognition and career opportunities.<sup>20</sup> The grades range from B, B-High, A, and A-Top. The higher grades are considered prestigious and come with many opportunities for musical and career development sponsored by the state.<sup>21</sup> They are similar in scope and function to organizations like the Concert Artists Guild, Young Concert Artists, and Astral Artists in the United States.<sup>22</sup> Gopalnath’s first audition in 1978 received a B-High rating, but subsequent auditions in 1980 and 1982 received A and A-Top grades, respectively.<sup>23</sup>

1980 was a pivotal year for Gopalnath’s career, marked by his first performance at the Music Academy in Madras (now named Chennai). The Music Academy is particularly important to Carnatic music, as well as Indian dance, with a history tracing back to 1927.<sup>24</sup> After his performance in 1980 Gopalnath became a staple at the Music

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<sup>19</sup> Sridhar, “He Was a One-Man-Band”

<sup>20</sup> “Opportunities In Music,” Prasar Bharati. All India Radio, 2022. <https://prasarbharati.gov.in/opportunities-in-music/>.

<sup>21</sup> “Opportunities In Music”

<sup>22</sup> “Opportunities In Music”

<sup>23</sup> Gopalnath, “Adapting the Saxophone to Carnatic Music.”

<sup>24</sup> “History,” Music Academy Madras, 2020. <https://musicacademymadras.in/history/>.

Academy's annual music festival. Gopalnath also gained recognition and acclaim by artists outside of India and the Carnatic style in 1980. The international success can be attributed to the efforts of the music promoter Niranjan Jhaveri (1929-2010) to organize jazz festivals in India and to increase India's general musical standing on the world stage.<sup>25</sup> Jhaveri founded Jazz India, an organization dedicated to fostering jazz in India, particularly through a connection that Jhaveri found between Carnatic singing pedagogy and jazz singing techniques.<sup>26</sup>

Jhaveri was present in the audience for a performance Kadri Gopalnath gave in Bombay in 1980. After the performance, Jhaveri asked Gopalnath if he would be interested in playing with John Handy, an American jazz saxophonist who also attended the concert. Handy immediately joined Gopalnath on stage and the two musicians began playing together to the admiration and acclaim of Jhaveri and the rest of the audience.<sup>27</sup> Gopalnath had no experience with jazz and was playing within the structure of traditional *ragas* (Carnatic scalar systems, described further in this study), but Handy interwove jazz lines into Gopalnath's *ragas* to an interesting effect. This impromptu collaboration was so enticing that Jhaveri invited Gopalnath to perform with Handy at the upcoming *Jazz Yatra* in Bombay. Jhaveri was in the process of organizing this jazz festival which eventually became massively successful. It was modeled after a similar event that Jhaveri put together in 1978. "Yatra" is a significant term as it refers to a religious journey or pilgrimage to a sacred location, showing the reverence that Jhaveri was trying to instill in

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<sup>25</sup> "Niranjan Jhaveri – R. I. P. May 21, 2010," Web log. Blue Rhythm (blog), May 24, 2010. <https://bluerhythm.wordpress.com/2010/05/24/niranjan-jhaveri-r-i-p-may-21-2010/>.

<sup>26</sup> Warren R. Pickney, "Jazz in India: Perspectives on Historical Development and Musical Acculturation." *Asian Music* 21, no. 1 (1989): 35–77. <https://doi.org/10.2307/834073>.

<sup>27</sup> Pickney, "Jazz in India," 53

the jazz community in India.<sup>28</sup> This performance with Handy garnered an invitation for Gopalnath to play at the 1983 Berlin Jazz Festival and foreshadowed a successful branch of his career playing collaboratively with musicians of other styles.<sup>29</sup> He also performed in Prague and Switzerland in 1982.<sup>30</sup>

Gopalnath's celebrity continued to increase domestically alongside his international concert successes. In 1992 Gopalnath was chosen to collaborate on the Tamil language film "Duet" with composer Allah Rakha Rahman (b. 1967).<sup>31</sup> The film's director, Kailasam Balachander (1930-2014), asked for Gopalnath to compose music for many tracks in the movie's score, as one of the two main protagonists in the film plays the saxophone. Gopalnath had to present music in multiple ragas before Rahman finally settled on *Kalyanavasantam* (raga detailed in Chapter 8).<sup>32</sup> The film was successful and is still remembered, largely due to the music provided by Gopalnath. This recognition catapulted him to an even higher standing in the public eye of India.

Several landmark performances and commendations came in the next decades. He was invited to give recurring performances at the Festival Internacional Cervantino in Guanajuato, Mexico, as well as the Music Hall Festival in Paris.<sup>33</sup> The most significant international performance of Gopalnath's career was in 1994 in London when he became the first Carnatic musician to play in Royal Albert Hall for the BBC Promenade (Proms) Concert.<sup>34</sup> In 2004 he was awarded an honorary Doctorate from Bangalore University and also received the Padma Shri award from the Indian government. This prestigious

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<sup>28</sup> Pickney, "Jazz in India," 54

<sup>29</sup> Pickney, "Jazz in India," 54

<sup>30</sup> "Dr. Kadri Gopalnath," Darbar Arts Culture Heritage Trust, 2019.  
<https://www.darbar.org/artist/Dr.%20Kadri%20Gopalnath>.

<sup>31</sup> Madur, "Of Soft Notes in the Saxophone"

<sup>32</sup> Madur, "Of Soft Notes in the Saxophone"

<sup>33</sup> "Dr. Kadri Gopalnath," Darbar Arts Culture Heritage Trust

<sup>34</sup> Hutchings, "Tracing the Roots"

honor is the fourth-highest civilian award granted by the country.<sup>35</sup> Later in his life he earned monikers such as “Saxophone *Chakravarthy*,” or “Saxophone Emperor.”<sup>36</sup>

Gopalnath continued to perform and record collaborations with artists and musicians from the Western world. Two of the most notable examples of these projects are records that Gopalnath made with American flutist James Newton (b. 1953), and later with American saxophonist Rudresh Mahanthappa (b. 1971). Gopalnath’s collaboration with Newton was the album *Southern Brothers*, released in 1999. This record features five tracks that share inspiration from Carnatic ragas and Western jazz. Poovalur Srinivasan joined Newton and Gopalnath on the record as the mridangam player.<sup>37</sup>

Rudresh Mahanthappa is an American-raised child of Indian immigrants and in his early adult years became aware of the saxophone performance of Kadri Gopalnath.

Mahanthappa received a grant which allowed him to travel to India to work with, collaborate with, and learn from Gopalnath between 2005 and 2008. This culminated in their 2008 album titled *Kinsman*, which features improvisations in both Carnatic and Western styles by both saxophonists.<sup>38</sup> After the release of the album Mahanthappa and Gopalnath toured the United States performing works from the record to positive reception.

Gopalnath served as a true pioneer and innovator in his efforts to bring the saxophone into the Carnatic tradition, and part of this effort included teaching a new generation of saxophonists in this style. He took on the role of *guru* and mentored a handful of young, Indian-American saxophonists in the 1990s and 2000s. His two most

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<sup>35</sup> Sridhar, “He Was a One-Man-Band”

<sup>36</sup> Aravind, “Kadri Gopalnath”

<sup>37</sup> James Newton, *Southern Brothers*. Kadri Gopalnath and Poovalur Srinivasan. Released 1999. Water Lily Acoustics, compact disc.

<sup>38</sup> Rudresh Mahanthappa, *Kinsman*. Kadri Gopalnath and Poovalur Sriji. Recorded November 2007. Pi Recordings, compact disc.

notable students in the United States are Prasant Radhakrishnan, born in Arizona,<sup>39</sup> and Sumanth Swaminathan, born in Philadelphia.<sup>40</sup> Radhakrishnan and Swaminathan are both of Indian descent and were exposed to Gopalnath's playing and made their first connections with Gopalnath while he was touring the United States.



Figure 2.1: Gopalnath performing with his student, Prasant Radhakrishnan, in 2011.<sup>41</sup>

With both of these students, Gopalnath used an intensive method of teaching that involved many hours of one-on-one instruction in a short period of time. The “guru” model of teaching is much more involved and intensive than the teacher-student relationship in Western cultures. Instead of meeting for an hour or two once a week for lessons, gurus will invest a large amount of time into a student's development. The guru

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<sup>39</sup> Radhakrishnan, Prasant, “About.” Prasant Radhakrishnan, July 15, 2021. <https://prasantmusic.com/about/>.

<sup>40</sup> Sumanth Swaminathan, “Padmashree Dr. Kadri Gopalnath.” Sumanth's Gurus -Padmashree Dr. Kadri Gopalnath, September 15, 2016.

<sup>41</sup> Prasant, “About.”

may teach the student for several hours in the morning, send them off to practice throughout the afternoon and evening, and expect a great deal of progress by the next day. This pattern could repeat five or six days out of the week. Typically, the students traveled to India to study with Gopalnath and stayed in his home, or that of a nearby relative. They would wake up very early to begin lessons and experience guided practice throughout the day.<sup>42</sup> Radhakrishnan notes in his recollections of time studying with Gopalnath that he would be woken at 5:00 am each day to start lessons.<sup>43</sup>

Gopalnath was a very demanding teacher and recommended a high amount of practice time, telling Swaminathan that he should be practicing about six hours every day, in addition to the multiple hours each day that were dedicated to direct instruction.<sup>44</sup> Gopalnath was also a staunch advocate for performing with his students in a “trial by fire” approach, bringing them on stage at early phases of their development. When Swaminathan (at age fourteen) was in his first summer of studying with Gopalnath in India in 1998, Gopalnath took him on a two-week tour of performances in Gopalnath’s home state of Karnataka. During this tour Gopalnath would again show his fixation with rigorous practice, as he would wake up Swaminathan in the early morning in their hotels, muffle the saxophone with towels, and ask his student to begin practicing.<sup>45</sup> The dedication to practice was described by Gopalnath in an interview with B. Chandrasekhar for the Sruti Foundation, in which Gopalnath states that he would wake up at 4:00 am

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<sup>42</sup> Swaminathan, “Padmashree Dr. Kadri Gopalnath.”

<sup>43</sup> Prasant, “About.”

<sup>44</sup> Swaminathan, “Padmashree Dr. Kadri Gopalnath.”

<sup>45</sup> Swaminathan, “Padmashree Dr. Kadri Gopalnath.”

each day to begin his practice, and would typically practice a minimum of eight hours throughout the day.<sup>46</sup>



Figure 2.2: Kadri Gopalnath instructing Sumanth Swaminathan<sup>47</sup>

This vast amount of practice rivals that of Charlie Parker’s famous practice routine in his upbringing. In a 1954 interview with Paul Desmond, Parker claims that he practiced for 11-15 hours each day for a period of three to four years, during which his neighbors asked his mother to move due to the “disturbance.”<sup>48</sup> Gopalnath also had a living situation in which his practice would have disturbed his family’s neighbors, but to preempt this situation and still accommodate a massive practice schedule he periodically

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<sup>46</sup> ‘Saxophone Samrat,’” 22.

<sup>47</sup> Swaminathan, “Padmashree Dr. Kadri Gopalnath.”

<sup>48</sup> Bob Reynolds, “Paul Desmond Interviews Charlie Parker (1954).” Bob Reynolds, July 31, 2019. <https://bobreynoldsmusic.com/paul-desmond-charlie-parker/>.

lived with one of his aunts who resided in a more rural setting so he would be able to practice as much as he wished without causing trouble.<sup>49</sup>

The last decade of Gopalnath's life saw the musician become more and more beloved in his home country. He continued to receive awards and honorary titles until his passing in 2019, including *Asthana Vidwan*, which roughly translates to "Royal Master." This title of high distinction and honor was bestowed from several religious and municipal institutions in India.<sup>50</sup> Local government and artistic organizational awards he received include the Karnataka Rajyotsava, Kalaimamani, Sangeet Natak Akademi Award, Karnataka Kalashree,<sup>51</sup> Samagana Mathanga National Award, and the Chowdiah Memorial Award.<sup>52</sup> His playing was characterized by equal mastery of beautiful long lines and improvised *alapana*, as well as energetic performances of kritis. In live performance videos, he can be seen smiling at his fellow performers, and was described by his colleagues as being a kind, gentle, and spirited person. Long-time collaborators stated he was one of the few musicians who could make an audience truly enjoy sitting through an entire concert, and he was known for playing works that audiences really wanted to hear.<sup>53</sup> One of Gopalnath's children, Manikanth Kadri, is an active composer of film scores, as well as an arranger and music director in India<sup>54</sup>. Gopalnath succumbed to cardiac arrest on October 11<sup>th</sup>, 2019 at the age of 69. He left behind an irreplaceable legacy and body of work for Carnatic musicians and saxophonists alike.

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<sup>49</sup> 'Saxophone Samrat,' 22.

<sup>50</sup> Sridhar, "He Was a One-Man-Band"

<sup>51</sup> Madur, "Of Soft Notes in the Saxophone"

<sup>52</sup> "Dr. Kadri Gopalnath." Darbar Arts Culture Heritage Trust

<sup>53</sup> B. Sivakumar, "Kadri Gopalnath: Violinist A. Kanyakumari, Mridangist K. V. Prasad Recall Their Long Association with Departed Saxophonist." *The Times of India* (Bombay, India). 2019.

<sup>54</sup> Vinay Lokesh, "Every Movie Is A Challenge." *The Times of India*, December 26, 2021. <https://timesofindia.indiatimes.com/entertainment/kannada/music/every-movie-is-a-challenge-and-that-inspires-new-tunes-says-kadri-manikanth/articleshow/88491298.cms>.



## CHAPTER 3

### OVERVIEW OF CARNATIC MUSIC

In order to fully grasp the scope of Kadri Gopalnath's masterful adaptation of the saxophone to the South Indian Carnatic musical tradition, one must embark upon a basic study of the musical landscape of southern India as a whole. This contextualization will give the Western saxophone performer essential foundational knowledge to aid in applying the analyses of Gopalnath's work in following chapters to their own practice of Carnatic music.

It is important to define the reach of Carnatic music and to distinguish it from its counterpart, Hindustani music. Carnatic music is the classical music tradition of South India, while Hindustani music is the prominent tradition in the northern region of the country, as shown by Figure 3.1, produced by the Darbar Arts Culture Heritage Trust.<sup>55</sup> The main differences between Hindustani and Carnatic traditions are the different instruments used, languages of lyrics, terminology of similar musical items, and influences (or lack thereof) from other musical traditions outside of India.<sup>56</sup> Instruments closely associated with each style include the Hindustani *sitar*, *shehnai*, and *tabla*, and the Carnatic *vina* (*veena*), *nagaswaram*, and *mridangam*.<sup>57</sup> The harmonium is strongly associated with the North as a means of harmonic accompaniment, and in the 18<sup>th</sup>

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<sup>55</sup> "New to Indian Classical Music?" Darbar Arts Culture and Heritage Trust, 2023. <https://darbar.org/new-to-indianclassicalmusic>.

<sup>56</sup> Connolly, *Indian Melodies for Alto Saxophone*, 7.

<sup>57</sup> "New to Indian Classical Music?" Darbar Arts Culture and Heritage Trust

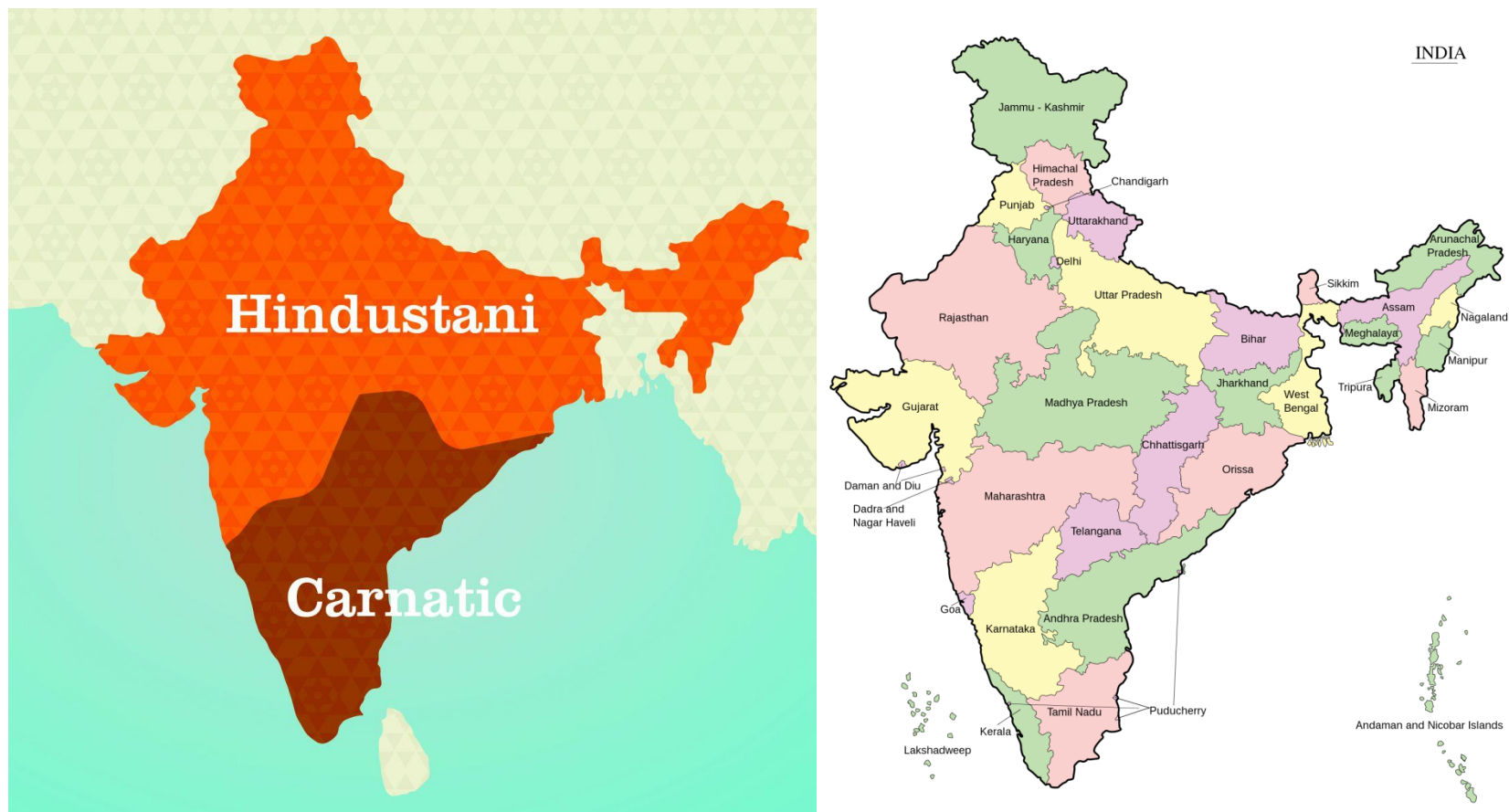


Figure 3.1: Conjoined map of India showing the division of Hindustani and Carnatic traditional borders and the states of India.<sup>58</sup>

<sup>58</sup> “New to Indian Classical Music?” Darbar Arts Culture and Heritage Trust.

century the violin was adopted by the South to serve as a solo instrument as well as melodic accompaniment.<sup>59</sup>

The languages of northern India belong to the Indo-Aryan group and the most commonly spoken language in the region is Hindi.<sup>60</sup> The languages and ethnic groups of southern India are quite diverse, but most languages spoken in the region belong to the Dravidian language group, including Tamil, Telegu, Malayalam, and Kannada. Tamil and Telegu are the languages that are most frequently used in South Indian songs.<sup>61</sup> A language that is shared among The Hindustani and Carnatic traditions, even though it is not a spoken language in the current era, is Sanskrit. Most ancient Hindu tomes are written in Sanskrit and a large portion of both Hindustani and Carnatic compositions are set to Sanskrit texts.<sup>62</sup>

Both traditions have a history several thousand years old, but the northern region of India was heavily impacted by Persian culture and music, and additionally felt the influence of the Islamic Mughals in the second millennium AD.<sup>63</sup> The influence of these outside cultures, as well as pre-existing ethnic differences and geological barriers, allowed Carnatic and Hindustani music to begin to separate into two distinct traditions between the 12<sup>th</sup> and 14<sup>th</sup> centuries.<sup>64</sup>

Musicians from the North may argue that Carnatic music is simplistic and lacks the subtleties necessary for the proper interpretation of Hindustani music. Carnatic

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<sup>59</sup> Connolly, *Indian Melodies for Alto Saxophone*, 7.

<sup>60</sup> Tanjore Viswanathan and Matthew Harp Allen, *Music in South India: The Karṇāṭak Concert Tradition and Beyond; Experiencing Music, Expressing Culture*. (New York, NY: Oxford University Press, 2004), 13-14.

<sup>61</sup> Viswanathan and Allen, *Music in South India*, 12.

<sup>62</sup> Viswanathan and Allen, *Music in South India*, 13.

<sup>63</sup> Connolly, *Indian Melodies for Alto Saxophone*, 7.

<sup>64</sup> Sowmya Acharya, "The Formation and Evolution of Carnatic Music." Acharyanet, June 15, 2021. <https://www.acharyanet.com/carnatic-music/>.

musicians counter with claims that their music is of an older and more “pure” tradition since it did not experience foreign influence, and cite its systematic organization of principles as a feature not present in Northern performance.<sup>65</sup> Hindustani music has a far greater global reach than Carnatic music, most notably due to the international fame of the Hindustani sitar player Ravi Shankar and his renowned professional and personal relationship with The Beatles’ guitarist, George Harrison. The meeting of the two musicians in 1966 and the following media attention spawned an interest in the sitar and North Indian music as a whole, but this recognition did not carry over to the unique Southern Carnatic style.<sup>66</sup>

As the origins of Western classical music are inextricably tied to the musical and cultural practices of the Christian faith, so too is South Indian music tied to Hinduism. The earliest traceable origin of Indian classical music comes from the liturgical texts of the *Vedas*, the oldest Hindu texts, completed between 1500 and 900 BCE. These texts include descriptions of instruments and contain hymns that would have been chanted in ritualistic settings.<sup>67</sup> The chanting of these hymns facilitated the rise of the seven base *swaras* of Indian music, roughly equivalent to the seven solfege syllables of Western classical music. The *swaras* (in ascending order) are represented primarily by the abbreviations of their full note names as follows, according to Candida Connolly:

“Shadja (Sa) – The sound of the peacock  
Rishabha (Ri) – The sound of the ox  
Gandhara (Ga) – The sound of the goat  
Madhyama (Ma) – The sound of the crane  
Panchama (Pa) – The sound of the cuckoo  
Dhaivata (Dha) – The sound of the frog

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<sup>65</sup> Walter Kaufmann, *The Rāgas of South India: A Catalogue of Scalar Material*. (Bloomington, IN: Indiana University Press, 1976), xiii.

<sup>66</sup> Viswanathan and Allen, *Music in South India*, 116.

<sup>67</sup> Acharya, “The Formation and Evolution of Carnatic Music.”

Nishadha (Ni) – The sound of the elephant”<sup>68</sup>

For the remainder of this study, the swaras will be referred to by these abbreviations. Ri, ga, ma, dha, and ni each have multiple variations of pitch level that allow for all 12 notes of the standard chromatic system to be utilized. These differences in expression of the swaras are called *swarasthanas* and are indicated by subscript numerals after each syllable, such as ri<sub>2</sub>, dha<sub>1</sub>, etc.<sup>69</sup> Subscript numbers serve a similar function as Western solfege’s alterations, such as fi being a half-step above fa. In the same vein, ri<sub>2</sub> is a half-step above ri<sub>1</sub>. Swara refers to the seven base syllables while swarasthana refers to all the possible incarnations of the syllables in order to express 12 chromatic pitches.

There is overlap between the three differing swarasthanas of ri and ga, and dha and ni. These are similar to Western enharmonic pitches and result in 16 individual note identifications (spellings of notes) in Carnatic music, as described by Figure 3.2.<sup>70</sup> The graphic is from a study by Sarala Padi and features alternative spellings of the swaras in regards to the spellings written in Candida Connolly’s work. The difference in spellings of the most basic element of Carnatic music is emblematic of the vast history of the Carnatic tradition and its transmission through oral, as opposed to textual, means. Sa and Pa are exceptions to the alterations of pitch expressed via subscript as the interval between them is always equivalent to a perfect fifth.<sup>71</sup> There will never be a “sa<sub>2</sub>,” or “pa<sub>3</sub>”; they only exist in one form. Sa is analogous to the Western “do” and sa serves as the pitch center for each composition.

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<sup>68</sup> Connolly, *Indian Melodies for Alto Saxophone*, 58.

<sup>69</sup> Pichu Sambamurthy, *South Indian Music*. (Madras: Indian Music Publ. House, 1994) 104.

<sup>70</sup> Sarala Padi, Spencer Breiner, Eswaran Subrahmanian, and Ram D Sriram. “Modeling and Analysis of Indian Carnatic Music Using Category Theory.” *IEEE Transactions on Systems, Man, and Cybernetics. Systems* 48, no. 6 (2018): 967–81. <https://doi.org/10.1109/TSMC.2016.2631130>.

<sup>71</sup> Ludwig Pesch, “A Brief Introduction to Carnatic Music.” [carnaticstudent.org](http://carnaticstudent.org), 2020. <https://www.carnaticstudent.org/resources/a-brief-introduction-to-carnatic-music/>.

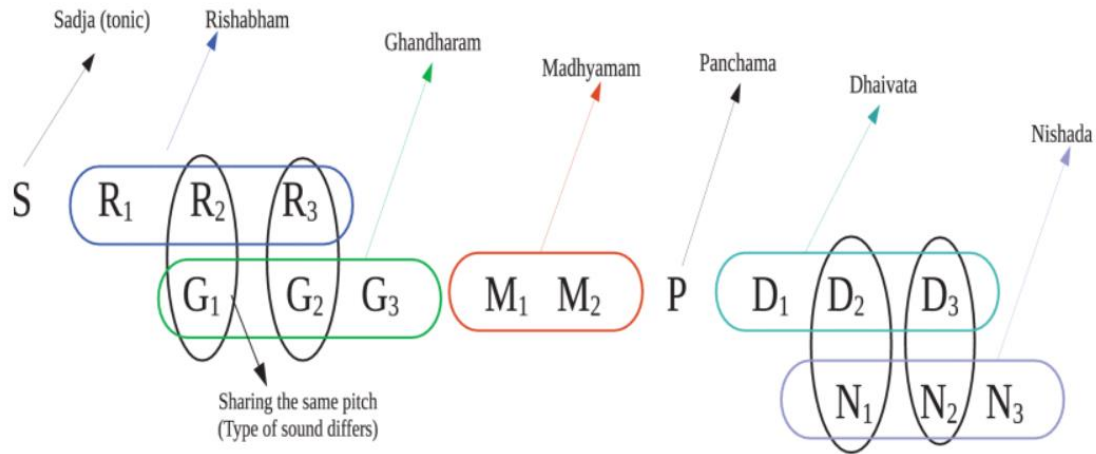


Figure 3.2: Diagram of the multiple iterations of swara syllables.<sup>72</sup>

The term “Carnatic” likely has its origins from a collection of different sources. These include geographic influences of the modern state of Karnataka, and references in ancient texts to the southern region of the Vindhyas mountains of central India as “Karnatakam.” The word “Carnatic” may also be derived from the Sanskrit word of “karneshuathathi,” which translates to “pleasing to the ear.”<sup>73</sup> The Sanskrit term “Karnataka Sangitam,” referring to music that is “codified” or “traditional,” is another etymological source for the naming of the Carnatic tradition.<sup>74</sup>

One of the most important individuals in the development of Carnatic music was a composer named Purandara Dasa (1484-1564) who is colloquially referred to as the “Father of Carnatic Music.”<sup>75</sup> Purandara Dasa (sometimes spelled with names combined as *Purandaradasa*) created hundreds of pedagogical exercises for melodic and rhythmic training, some of which will be described further in this study. Purandara Dasa composed thousands of devotional songs (*bhajans*) as well as simple melodies (*gitams*) for the purpose of training young musicians that are still widely used in Carnatic education to the

<sup>72</sup> Sarala Padi, “Modeling and Analysis of Indian Carnatic Music Using Category Theory.”

<sup>73</sup> Acharya, “The Formation and Evolution of Carnatic Music.”

<sup>74</sup> Pesch, “A Brief Introduction to Carnatic Music.”

<sup>75</sup> Viswanathan and Allen, *Music in South India*, 52.

present day.<sup>76</sup> Purandara Dasa's main motivation for the codification of Carnatic studies was to respond to the growing influence of Persian and Mughal cultures impacting North Indian music. This firm establishment of pedagogical practices and the first large body of compositions is what distinguished Purandara Dasa as the progenitor of contemporary Carnatic music, as well as beginning the clear separation of Carnatic music from Hindustani.<sup>77</sup>

Indian classical music benefitted from a similar system of royal patronage as its counterpart in Europe between the 16<sup>th</sup> and 20<sup>th</sup> centuries. Purandara Dasa composed his critically important gitams, bhajans, and all of his pedagogical exercises while under the patronage of the Vijayanagara Empire, which ruled most of southern India between 1336 and 1646.<sup>78</sup> There was also an Indian tradition analogous to Western convents in which women, usually of low social class, were permitted to be educated, write poetry, compose music, and practice dance. This class was called the *devadasi* and translates to “servants” (*dasi*) “of god” (*deva*). The devadasi practice originated in the Chola dynasty beginning in, at the latest, the 9<sup>th</sup> century.<sup>79</sup> These women were engaged in the service of both royal courts and Hindu temples and were ritually married to a particular Hindu god to whom they would dedicate their service and work. This marriage formalized the devadasi's existence outside of marriage boundaries and essentially marked them as widows. Marriage to a living person traditionally limited a woman's activity to what was permitted by their husband and the societal expectations of a wife. After the decline of the patronage system, and the devadasi as a whole, in the late 19<sup>th</sup> and early 20<sup>th</sup>

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<sup>76</sup> Viswanathan and Allen, *Music in South India*, 52.

<sup>77</sup> Connolly, *Indian Melodies for Alto Saxophone*, 7.

<sup>78</sup> Acharya, “The Formation and Evolution of Carnatic Music.”

<sup>79</sup> Viswanathan and Allen, *Music in South India*, 70.

centuries, women musicians were not commonly accepted into the emerging modern concert tradition. It was not until the middle to late 20<sup>th</sup> century that it became commonplace and accepted for women to be great improvisers, soloists, and leaders of Carnatic ensembles.<sup>80</sup> Women of the devadasi made their greatest contributions to the field of Carnatic music via their compositions intended for dance, called *javalis*, *padams*, and *tillanas*.<sup>81</sup> Compositions of these styles typically end Carnatic concerts, as will be discussed further in Chapter 7 of this study.

Following the significance of Purandara Dasa and the great composers of the devadasi, three artists active in the late 18<sup>th</sup> and early 19<sup>th</sup> centuries greatly contributed to the repertory of Carnatic music and shaped the tradition into how it is observed and practiced today. These composers, collectively known as “The Trinity,” are Syama Sastri (1762-1827), Muttusvami Dikshitar (1776-1835) and, most importantly, Saint (Sri) Tyagaraja (1767-1847).<sup>82</sup> The importance of these composers to South Indian culture and music cannot be overstated. They are treated with an equivalent, if not greater, sense of reverence in India as the composers of the First Viennese School in the West. The Trinity belonged to the highest social caste of India, the Brahman caste, which comprises only five to seven percent of the population. Being born into this social class allowed the composers the opportunity to learn Sanskrit and to study the Vedas.<sup>83</sup> This level of education was not granted to the lower castes. The composers of the Trinity wrote exclusively in Sanskrit and Telegu, avoiding the Tamil language as it was associated with

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<sup>80</sup> Viswanathan and Allen, *Music in South India*, 72.

<sup>81</sup> Viswanathan and Allen, *Music in South India*, 73.

<sup>82</sup> Pesch, “A Brief Introduction to Carnatic Music.”

<sup>83</sup> Viswanathan and Allen, *Music in South India*, 20-21.



and only spoken by lower castes.<sup>84</sup> It was common for composers and other artists in the Brahmin caste to choose a personal deity to whom they would dedicate their work. The expression of this devotion in the Hindu faith is known as *bhakti*. Most of the music composed by Tyagaraja was written for his chosen deity, Rama, and the works describe Tyagaraja's emotional state during worship and his relationship of faith with Rama.<sup>85</sup>

Although there were composers writing music in Tamil earlier in Carnatic history, including Muttuttandavar (ca. 1525-1600), the language did not see broad acceptance and use in Carnatic music until a targeted campaign in the 1930s to advocate for its inclusion in the tradition. Much of the music for Muttuttandavar's Tamil-language compositions was lost, with only the text remaining. As part of the campaign for inclusion and expansion of Tamil music in the Carnatic sphere, contemporary composers were commissioned to write musical lines to accompany Muttuttandavar's original texts.<sup>86</sup> The efforts associated with this campaign aimed to distance Carnatic music from the complicated and contemptuous caste system of the past and allow for greater participation in Carnatic music by the South Indian population as a whole.<sup>87</sup>

The three most important structural elements of all varieties of Carnatic compositions are *raga*, *tala*, and *sruti* (shruti). The closest vocabulary available in Western musical theory for these terms is scalar collections (*raga*), rhythmic organizations and cycles (*tala*), and pitch (*sruti*).<sup>88</sup> *Raga* and *Tala* are the melodic and rhythmic components of Carnatic music. Unlike Western music, there is no change in *raga* or *tala* during a piece of music in the Carnatic style. Once these elements have been

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<sup>84</sup> Viswanathan and Allen, *Music in South India*, 19.

<sup>85</sup> Viswanathan and Allen, *Music in South India*, 23.

<sup>86</sup> Viswanathan and Allen, *Music in South India*, 24.

<sup>87</sup> Kadri Gopalnath spoke the Tamil language, and the film he provided music for which catapulted him into fame in the public eye ("Duet," discussed in Chapter 1) was a Tamil language film.

<sup>88</sup> Acharya, "The Formation and Evolution of Carnatic Music."

established, they do not change in any form throughout the entire composition.<sup>89</sup> Sruti encompasses many different aspects of pitch, but one of the primary interpretations of sruti is that of a drone that is sustained throughout a composition.<sup>90</sup> This drone is played on whichever pitch the primary soloist uses as their “sa.” A religious, or at least spiritual, connection exists between the constant presence of a single drone and the chanting of the syllable “om” used during meditation and prayer.<sup>91</sup> The drone sruti is frequently performed by the *tambura*, a long-necked chordophone, by a “sruti petti,” (a bellows-operated aerophone) or the sruti can be rendered by an electronic tone generator (sometimes called a “sruti box”).<sup>92</sup> Both raga and tala encompass complicated and idiomatic systems which will be discussed in detail throughout this study in the following chapters.

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<sup>89</sup> Viswanathan and Allen, *Music in South India*, 34.

<sup>90</sup> Viswanathan and Allen, *Music in South India*, 29.

<sup>91</sup> Flanders, “Engaging Hybridity,” 67.

<sup>92</sup> Viswanathan and Allen, *Music in South India*, 32.

## CHAPTER 4

### RAGA

In the most general possible sense, a raga is the collection of swaras, usually organized in a scalar fashion, that make up the available pitches of a certain composition.<sup>93</sup> While there are some ragas that are directly equivalent to Western modes and scales, the swath and scope of ragas far exceeds the major, minor, and modal systems of scales and pitch organizations in Western music. Ragas carry more significance for musicians than simple collections of pitches; raga comes from the root Sanskrit word “ranj” and translates to “color” or tinges of shading.<sup>94</sup> Ragas represent the feeling and tone of a particular composition, and have unique emotional connections to different seasons, days, family members, personal occasions, and religious events.<sup>95</sup>

The term “raga” was first used in a treatise on Indian classical music attributed to Matanga Muni from the ca. sixth – eighth centuries, called the *Brihaddeshi*.<sup>96</sup> The concept of ragas may have existed before Matanga’s time, but they were not codified and organized until the writing of his seminal work.<sup>97</sup> This text is the first to describe the names of the swaras by the first syllable of their full name, thus creating the abbreviations used today (sa, ri, ga, ma, pa, dha, ni). The *Brihaddeshi* also includes descriptions of the swaras being divided into twelve equal parts to split the octave, as well as further writing

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<sup>93</sup> Connolly, *Indian Melodies for Alto Saxophone*, 7-8.

<sup>94</sup> Viswanathan and Allen, *Music in South India*, 42.

<sup>95</sup> Viswanathan and Allen, *Music in South India*, 43.

<sup>96</sup> Viswanathan and Allen, *Music in South India*, 42.

<sup>97</sup> Sambamurthy, *South Indian Music*, 80.

regarding the microtonal pitch inflections used by Carnatic musicians.<sup>98</sup> There are examples of earlier texts (including the *Puspasutra*, ca. fifth to second centuries BCE) which describe songs being classified based on whether they contained five, six, or seven notes, but the intervals between these note groupings are not defined.<sup>99</sup>

There are hundreds of ragas used in Carnatic music and thousands of theoretical ragas, which exist via extrapolations but have not been incorporated into modern performance traditions.<sup>100</sup> Most ragas were formally classified in the 18<sup>th</sup> century by the composer and theorist, Govindacharya. Govindacharya identified 72 ragas that use all seven swaras in both ascent (*arohana*) and descent (*avarohana*) with no breaks in form or sequence. These ragas were coined as *melakarta ragas*, translating literally to “king of the court.”<sup>101</sup> One of the most common melakarta ragas, and customarily the first taught to students, is called *mayamalavagaula*.<sup>102</sup> Mayamalavagaula is the 15<sup>th</sup> melakarta raga and has no Western equivalent. If “sa” is set to C, the notes of mayamalavagaula are C, Db, E, F, G, Ab, B, and C. This raga is used in training because it is constructed of two symmetrical sets of intervals built from sa (C) and pa (G). These are a half step, augmented second, and half step. The depiction of ragas in Western notation is inherently limited and does not fully capture all of the aspects that give a specific raga its identity. As mentioned above, a raga encompasses more than a static collection of notes. Ragas carry emotional and cultural associations that are beyond the realm of any notation, and the graces and ornaments that exist within each raga (described further in this section) are exclusively transmitted through aural means.

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<sup>98</sup> Acharya, “The Formation and Evolution of Carnatic Music.”

<sup>99</sup> Kaufman, *The Ragas of South India*, xv.

<sup>100</sup> Connolly, *Indian Melodies for Alto Saxophone*, 8.

<sup>101</sup> Connolly, *Indian Melodies for Alto Saxophone*, 8.

<sup>102</sup> Viswanathan and Allen, *Music in South India*, 53.

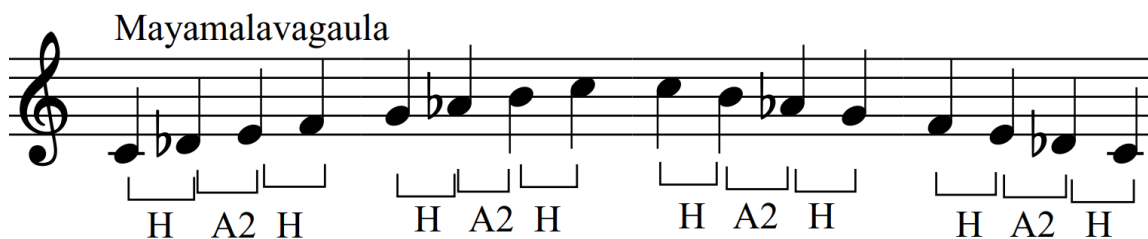


Figure 4.1: Raga mayamalavagaula.

The melakartas are known as “parent” ragas, and “child” (*janya*) ragas are the groups of ragas that use the “parent” forms as starting points to branch off into their own creation. Walter Kaufman’s 1976 text, *The Ragas of South India, a Catalogue of Scalar Material*, is a valuable source for studying ragas, particularly janya ragas. Kaufman’s work lists each of the 72 melakarta ragas and many of their offshoot janya ragas. Over 2,000 janya ragas are illustrated in Kaufman’s volume.<sup>103</sup> Figure 4.2 is a visual representation of the melakarta ragas, grouped into 12 *chakras* of six ragas each. The first 36 melakarta ragas use  $ma_1$  and the second 36 use  $ma_2$ .<sup>104</sup> The janya ragas can take several forms and harbor unique attributes. These include *asampurna* ragas, which are “incomplete,” meaning they do not contain all seven swaras in either arohana or avarohana.<sup>105</sup> *Vakra*, meaning “crooked” ragas, are some of the most interesting as they begin their scalar motion in one direction, briefly change directions, and then turn back to follow their original path.<sup>106</sup> *Bhashanga* refers to ragas that have a “foreign” swara appearing rarely throughout the composition.<sup>107</sup>

<sup>103</sup> Kaufman, *The Ragas of South India*, x.

<sup>104</sup> *The Hindu*, 2015. “Rhythms From the Gods,” December 31, 2015.

<https://www.thehindu.com/features/kids/more-about-the-suddha-madhyama-melakartha-ragas/article8049774.ece>.

<sup>105</sup> Connolly, *Indian Melodies for Alto Saxophone*, 8.

<sup>106</sup> Viswanathan and Allen, *Music in South India*, 43.

<sup>107</sup> Connolly, *Indian Melodies for Alto Saxophone*, 8.

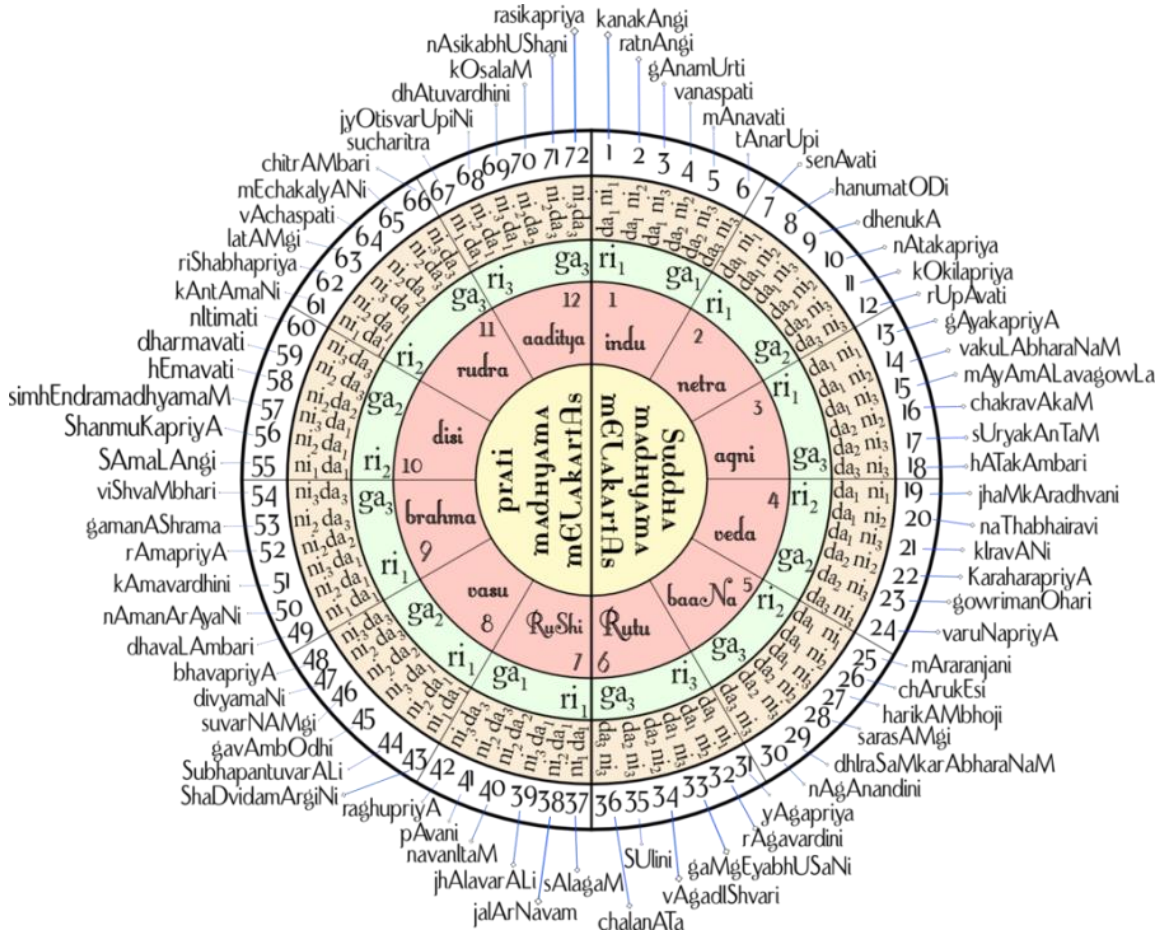


Figure 4.2: Visual representation of the 72 melakarta ragas, grouped into 12 chakras.<sup>108</sup>

A crucially important musical feature that contributes to the expressive identity of a raga is the *gamaka*. Gamaka translates to “grace” or “gracefulness” and is the embellishment or ornamentation found on certain swaras throughout any given raga.<sup>109</sup> The first formal written description of gamakas in their relationship to the identity of a raga and the theoretical codification of gamaka likewise came from the writings of Matanga Muni.<sup>110</sup> Gamakas are not optional musical decisions to be added at a performer’s discretion, but fundamental and required to be performed on certain swaras

<sup>108</sup> *The Hindu*, “Rhythms of the Gods.”

<sup>109</sup> Viswanathan and Allen, *Music in South India*, 47.

<sup>110</sup> Sambamurthy, *South Indian Music*, 135.

in each raga to facilitate proper execution.<sup>111</sup> Carnatic performers do not consider ragas to be rendered with fidelity if they do not feature the integral gamakas. In each raga there are some swaras that will be performed without gamakas, but others that require a particular gamaka. These are not consistent throughout all ragas; a ga may take a gamaka in one raga, but not in the next.<sup>112</sup> Some gamakas will only be applied to the notes in the arohana (ascent) of a raga and others only in the avarohana (descent).<sup>113</sup> However, even in the case of swaras not taking a strong gamaka, they will still be embellished to some extent. This results in the “continuous curve of Indian classical music,” as described by P. Sambamurthy. A passage from the *Natya Shastra*, a third-century treatise on the arts attributed to the scholar Bharata Muni, describes the importance of gamaka as such: “Music without gamaka is like a moonless night, a river without water, a creeper without flowers, a lady without ornaments, and a flower without smell.”<sup>114</sup>

Carnatic theorists have presented multiple interpretations for all potential varieties of gamakas that are present in the style, ranging from six to 22. Certain gamakas are suited only to string instruments, like the veena, and some are only applicable to the voice.<sup>115</sup> Of these multiple interpretations of gamaka, there are three main types of gamakas found in all facets of Carnatic music. *Kampita* refers to oscillations or shakes of the swara, *jaru* are slides or glissandi, and *janta* are stresses.<sup>116</sup> Vibrato is used both vocally and on instruments throughout the Carnatic ensemble, but it is not a ubiquitous musical component as it is in Western art music of the Common Practice repertory.

Gamakas are particularly difficult for the Western performer to accommodate as they are

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<sup>111</sup> Connolly, *Indian Melodies for Alto Saxophone*, 8.

<sup>112</sup> Viswanathan and Allen, *Music in South India*, 47.

<sup>113</sup> Sambamurthy, *South Indian Music*, 138-139.

<sup>114</sup> Sambamurthy, *South Indian Music*, 133.

<sup>115</sup> Sambamurthy, *South Indian Music*, 135-137.

<sup>116</sup> Viswanathan and Allen, *Music in South India*, 47.

learned aurally (as is most Carnatic music), and any written records of gamakas that may exist in a piece of music are very sparse. The pedagogical notation used in both Hindustani and Carnatic music, *sargam*, only shows the swaras to be performed and their duration indicated by commas, lines, and other symbols surrounding the syllables. Gamakas are not included in this notation and must be learned primarily through listening and other aural dissemination from teacher to student.<sup>117</sup>

The jaru gamakas (slides and bends) encompass microtonal variations of pitch that can be difficult for Western performers to identify. These microtonal inflections stem from the 22 srutis system of pitch organization that is no longer prominent in contemporary Carnatic performance.<sup>118</sup> In the system of 22 srutis, discernable pitches are placed between the 12 notes of the Western chromatic scale at uneven intervals. While 22 is the smallest number of srutis that are conceptualized in these spaces, some theorists describe even higher numbers of microtonal pitches.<sup>119</sup> These pitches are not analogous to quarter tones (as far as quarter tones are used in Western contemporary music) since they do not fall 50 cents higher or lower than any given fundamental note.<sup>120</sup> Professional Carnatic musicians are acutely aware of these microtonal shadings and use them in their performance as part of the execution of gamakas.

*Sancara* and *Prayoga* refer to small phrases (collections of two or more particular swaras) that are critical in conveying the emotional content of each raga. As has been described, it would be inappropriate and not fitting of the Carnatic style to perform a swara without its needed gamaka, and so too would it be uncouth to perform a raga and

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<sup>117</sup> Connolly, *Indian Melodies for Alto Saxophone*, 8.

<sup>118</sup> Sambamurthy, *South Indian Music*, 100.

<sup>119</sup> Sambamurthy, *South Indian Music*, 100.

<sup>120</sup> Sambamurthy, *South Indian Music*, 103.



not include renditions of sancara and prayoga. These short phrases are important signifiers of the feeling, the *gestalt* of each raga, described by Carnatic musicians and listeners as *bhava*.<sup>121</sup> Sancara and prayoga also help astute listeners of Carnatic music identify the raga that they are listening to, as it is not part of the performance culture of South India to hand out programs or announce what is being played from the stage. The musicians simply begin their music and the phrases they highlight help the audience know what raga and which composition they are hearing.<sup>122</sup> Musicians try to be as accurate as possible in the phrases they play in a specific raga as it is seen as a negative in the culture to play something that may even remotely suggest the presence of another raga.<sup>123</sup> Most commonly, the sancara and prayoga will be performed in an improvisatory section, known as *alapana*, at the beginning of each composition.<sup>124</sup> *Alapa* and *alapati* are alternative spellings of *alapana* and all terms refer to the exposition of a raga.<sup>125</sup>

It is considered a pleasurable part of the concert experience for audience members to determine what raga the musicians are playing. There is a strong sense of communication between the performers and listeners, and an astute audience member will derive great joy from being able to correctly identify the raga in question when rare or infrequently performed ragas are used. It is a collaborative puzzle in which both parties take part.<sup>126</sup> Some musicians became known for performing works in certain ragas, and even took on the raga as part of their name. The most famous of these musicians was Todi Sitaramayya. The raga *todi* was so integral to this musician's identity as a performer that he not only took it as part of his name, but also leveraged his

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<sup>121</sup> Viswanathan and Allen, *Music in South India*, 48.

<sup>122</sup> Viswanathan and Allen, *Music in South India*, 48.

<sup>123</sup> Sambamurthy, *South Indian Music*, 6.

<sup>124</sup> Viswanathan and Allen, *Music in South India*, 49.

<sup>125</sup> Sambamurthy, *South Indian Music*, 7.

<sup>126</sup> Sambamurthy, *South Indian Music*, 11.

performance of the raga when he was in need of settling a debt. It was considered a trustworthy payment for Sitaramayya to withhold performing his raga until the debt was paid.<sup>127</sup> Todi Sitaramayya is reputed to have once sung the todi raga for eight consecutive days on one occasion.<sup>128</sup>

In each raga, there are particular swaras that hold special contextual significance. The swaras serve a direct function in each composition and are interpreted in a manner that reflects this functionality by the performer. The following list is neither exhaustive nor ubiquitous, but contains some commonly described functional swaras according to Viswanathan and Allen:

“Jiva swara – life giving or soul giving swara  
Graha swara – initial note, a swara used to begin melodic ideas  
Nyasa swara – ending note, a swara on which phrases come to rest.  
Dirgha swara – a swara that is prolonged  
Amsa Swara – A swara that occurs frequently  
Alpa swara – a swara voiced only sparingly or in passing”<sup>129</sup>

Functions will change from raga to raga, so each swara does not serve the same function in every context.<sup>130</sup> Ga in one raga may be the jiva swara, but ga may not serve that function in a different raga. Jiva swara is the functional term most frequently used by Carnatic musicians.

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<sup>127</sup> Sambamurthy, *South Indian Music*, 5.

<sup>128</sup> Sambamurthy, *South Indian Music*, 15.

<sup>129</sup> Viswanathan and Allen, *Music in South India*, 51.

<sup>130</sup> Viswanathan and Allen, *Music in South India*, 51.

## CHAPTER 5

### TALA

The metric and rhythmic cycle that is present throughout an entire composition is referred to as the *tala*. As stated in Chapter 3, the speed of the tala does not change throughout a work. This is in opposition to Hindustani music, which may experience shifts in what is perceived as the “pulse” or “tempo” within a single work. Carnatic talas are consistent in regards to their beat patterns and the speed of the passing of these beats (tempo). Changes of musical energy and the perception of time are achieved through alterations in the subdivision of the beat, not the beat itself.<sup>131</sup> Individual beats in a tala are called the *aksaras* and the larger groupings of aksaras that make up any given tala are called *angas* (translates directly to “limbs”). For example, the tala of “Adi” is an eight beat cycle conceptualized as 4 + 2 + 2, so each beat is an aksara and the groupings of 4, 2, and 2, are the angas.<sup>132</sup> A complete cycle of a tala is called an *avarta*.<sup>133</sup>

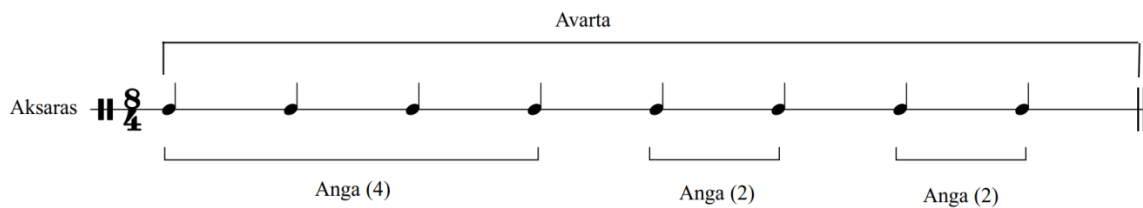


Figure 5.1: Conceptualization of adi tala.

<sup>131</sup> Viswanathan and Allen, *Music in South India*, 35.

<sup>132</sup> Viswanathan and Allen, *Music in South India*, 35.

<sup>133</sup> Sambamurthy, *South Indian Music*, 26.

Carnatic rhythmic organization is centered around five different numbers that govern both the overall structure of the tala as well as the potential subdivision of each beat; these numbers apply to both aksara and anga. They are four, three, seven, five, and nine (represented in the order they were accepted by Carnatic theorists).<sup>134</sup> They constitute the *jatis*, or families, of talas. Each tala is based on one or more of these numeric organizations. Similar to the swaras that make up the pitch composition in Carnatic music, divisions of the talas are conceptualized through a system of syllables called *solkattu*. The five jatis and their corresponding solkattu syllables are described by Viswanathan and Allen as follows:

“4 Caturasra ‘four-sided’ – *ta ka di mi* (or) *ta ka jo nu*  
3 Tirsa “three-sided – *ta ki ta*  
7 Misra “mixed” – *ta ki ta / ta ka di mi*  
5 Khanda “broken” – *ta ka / ta ki ta*  
9 Sankima “all mixed up” – *ta ka di mi / ta ka | ta ki ta*”<sup>135</sup>

These solkattu syllables are used by both percussionists and players of melodic instruments in the Carnatic tradition to build a solid rhythmic foundation. It is crucial for performers to be able to keep track of the composition’s progress throughout the rhythmic cycle as the performance moves along.

The method that is used by Carnatic musicians to track the cycle of the tala of a given work is through a system of hand gestures known as *kriya*. Kriya involves showing each anga, or sub-grouping, of the tala through a combination of claps and waves with the hands and a systematic tapping of the fingers. It is customary for these claps (or slaps) and finger taps to take place on the top of the thigh, or against the palm of the opposing hand. Historically, it was discouraged of women to count the tala on their thigh—it was

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<sup>134</sup> Viswanathan and Allen, *Music in South India*, 35.

<sup>135</sup> Viswanathan and Allen, *Music in South India*, 35-36.

seen as improper, and behavior only acceptable for a man—but this convention is falling out of favor as the Carnatic tradition moves away from its previously held gender stereotypes.<sup>136</sup> Finger tapping begins with the pinky and progresses to the opposite side of the hand through the ring, middle, and index fingers, as well as the thumb. If the anga contains more than seven aksaras, counting loops back around from the thumb to the pinky and continues onward.<sup>137</sup> The naming conventions for the hand gestures of the kriya are *anudrutam* for one beat of the hand, *drutam* for the combination of a beat and a wave, and *laghu* for the beat of the hand and the initiation of a finger tapping grouping beginning with the pinky.<sup>138</sup> The physical gestures of kriya are combined with solkattu syllables to form a holistic and immersive relationship with rhythm in Carnatic performance.

Using kriya to mark and follow the tala of a composition is not exclusive to performers. Audience members at Carnatic performances follow the patterns of the tala using the gestures of the kriya in the same way that Western audiences may clap on the backbeat while attending a jazz or rock concert.<sup>139</sup> Continuing to use adi tala as an example, the kriya would be as follows (with each indication representing one aksara): clap, pinky, ring, middle, clap, wave, clap, wave (4 + 2 + 2).<sup>140</sup> Cycles of claps followed by finger taps convey longer angas, while single or paired claps and waves show smaller angas of one or two aksaras. In the performance videos used as the basis for transcription in Chapter 8, Kadri Gopalnath can be observed momentarily returning to the hand gestures of the kriya when he is not actively playing the saxophone.

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<sup>136</sup> Viswanathan and Allen, *Music in South India*, 74.

<sup>137</sup> Viswanathan and Allen, *Music in South India*, 37.

<sup>138</sup> Connolly, *Indian Melodies for Alto Saxophone*, 9.

<sup>139</sup> Viswanathan and Allen, *Music in South India*, 36.

<sup>140</sup> Viswanathan and Allen, *Music in South India*, 37.

A common practice to create rhythmic intrigue and forward motion in Carnatic performances is to double and then triple the speed of recitation of solkattu syllables while keeping the pulse of the tala consistent. In Western notation of a duple rhythm, this would take the form of quarter notes, then eighth notes, then sixteenth notes. This compression of rhythm is referred to as “second speed” and “third speed.”<sup>141</sup> In talas such as adi, that contain an even number of beats, the doubling and redoubling of speeds is relatively simple and is described in Western notation in Figure 5.2.

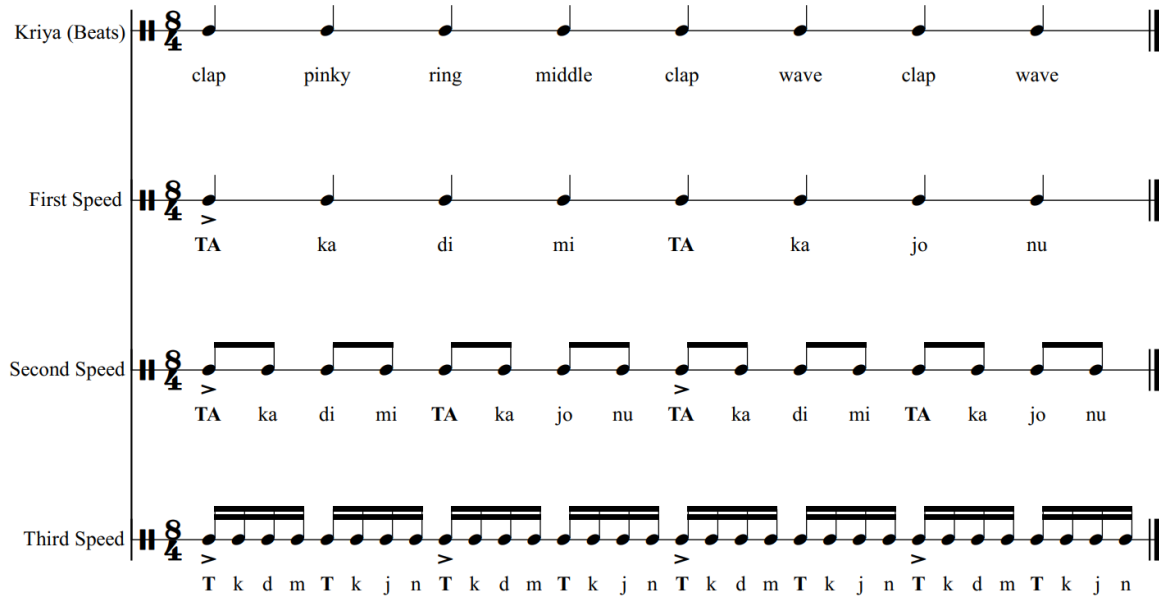


Figure 5.2: Exercises in multiple speeds in adi tala.

The notation in Figure 5.2 presents the actions of the kriya in the first stave. Syllables used for recitation in this exercise are *ta ka di mi / ta ka jo nu*. The first syllable of each anga (grouping) is in bold and capitalized. An accent represents the beginning of a repetition of each pattern of eight syllables. In first speed each syllable occurs over the space of one aksara (beat) and is expressed by one action of the kriya. This pattern takes

<sup>141</sup> Viswanathan and Allen, *Music in South India*, 38.

an entire cycle of the tala to complete. In second speed the pattern occurs twice, and in third speed it repeats four times.

In talas based on odd numbers this practice becomes exponentially more complicated. When a tala based on seven is doubled and redoubled the solkattu syllables become offset from the beat. Figure 5.3 displays a second and third speed example in *misra* tala. The organization of this graphic is the same as Figure 5.2, with the first stave representing the kriya and beat pattern, and the subsequent staves showing the increases in speed. Bold and capitalized syllables represent the angas and accents show beginnings of each repetition of the pattern of syllables.

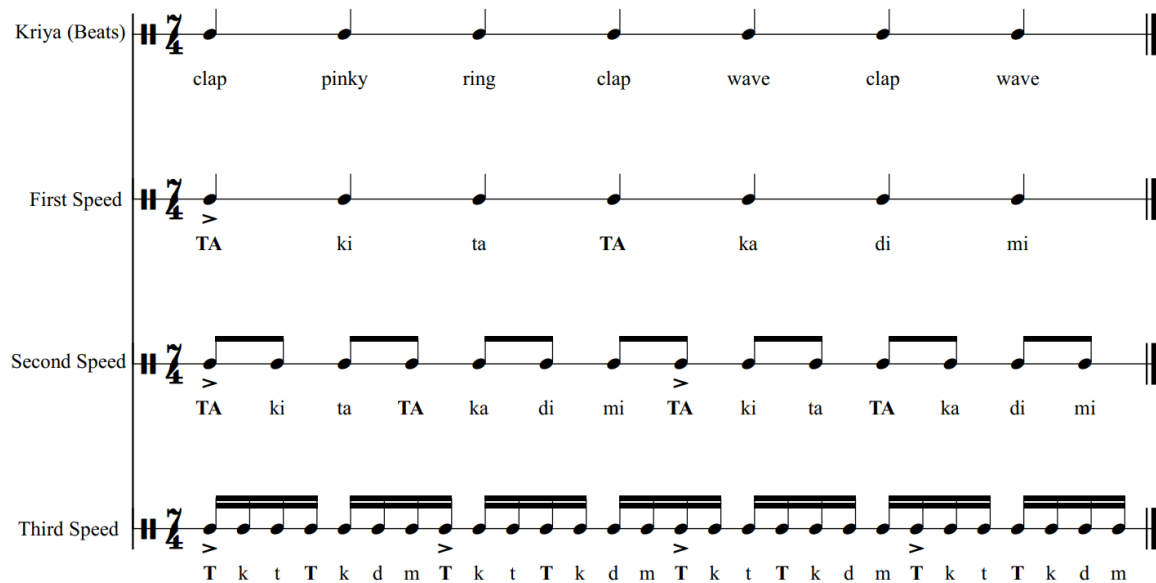


Figure 5.3: Exercises in multiple speeds in *misra* tala.

As can be observed, the doubling of the odd-numbered pattern of syllables (*ta ki ta / ta ka jo nu*) creates a displacement between the seven-note pattern over the even-numbered subdivisions of each beat. This pattern still occurs once in first speed, twice in second speed, and four times in third speed. The resolution of the rhythmic displacement

at the end of a tala cycle in second or third speed is a greatly satisfying musical experience.<sup>142</sup> The accentuation of these groupings demands a high level of rhythmic fidelity and skill by the performer as well as proficiency in the naming of the solkattu syllables. This is how Carnatic musicians (Gopalnath included) create varying levels of musical energy within a composition in which the “tempo” does not change.

After a learner of Carnatic music has a stable understanding of both raga and tala, exercises are introduced that combine both elements of the tradition and lead the student towards successful performance of full compositions. The works that are taught to the learner to achieve this goal of integration of pitch and rhythm are etude-like exercises called *sarali varisai*. These pedagogical compositions were introduced by Purandara Dasa during his lifetime.<sup>143</sup> The *sarali varisai* are in adi tala and allow students to practice singing with correct swaras, accurate pitch (sruti), and in time with the pattern of the tala.

*Janta Varisai* exercises are introduced at this stage of a student’s development and focus on repeating the same swara twice in a row with increased emphasis on the second iteration.<sup>144</sup> *Alankara* compositions are rhythmic training exercises in talas of longer cyclic forms which necessitate strong rhythmic integrity by the learner.<sup>145</sup> The raga that most of the training compositions are set to (including *sarali varisai*, *janta varisai*, and *alankara*) is *mayamalavagaula*.<sup>146</sup> *Sarali varisai* compositions are also performed at second and third speed as the student gains competency with both raga and tala. If a student is capable of performing these works, they are well-suited to begin to practice and perform more complicated compositions and can begin to incorporate

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<sup>142</sup> Viswanathan and Allen, *Music in South India*, 41.

<sup>143</sup> Viswanathan and Allen, *Music in South India*, 51.

<sup>144</sup> Connolly, *Indian Melodies for Alto Saxophone*, 21-22.

<sup>145</sup> Connolly, *Indian Melodies for Alto Saxophone*, 23.

<sup>146</sup> Viswanathan and Allen, *Music in South India*, 53.



improvisation into their study. The progression from simple devotional songs (chants and hymns) to rhythmically complex compositions allows a student to naturally develop within the Carnatic style and internalize the idiosyncrasies of this tradition. Western learners pursuing this style of music are encouraged to take a similar approach and learn simple compositions first before attempting to practice complex works and to improvise within the system of raga and tala.

## CHAPTER 6

### MECHANICAL MODIFICATIONS TO THE SAXOPHONE

To faithfully interpret the intricacies and peculiarities of Carnatic music, Kadri Gopalnath heavily altered the typical mechanical construction of the alto saxophone. Gopalnath make this account of his modifications in a lecture given at conference on Carnatic wind instruments held in 2000, organized by the Chembur Fine Arts Society of Mumbai (formatting kept consistent with a transcription of the lecture):<sup>147</sup>

#### **“Adaptations to the instrument:**

The Saxophone as it is used in Western music has a range of 3 1/2 octaves. It basically produces staccato notes as required in Western music. Construction-wise, the instrument has almost been perfected, due to the high quality reeds used in the mouth-piece and general workmanship. The holes in the Saxophone are operated through metallic rods, which are manipulated by the fingers. Leather pads give an airtight coverage over the holes. But the operation of the keys which lift or bring down the pads produces distinct staccato notes. In addition, there is provision (by the operation of other levers) to open/close some holes. This enables one to traverse 3 1/2 octaves on this instrument. A good quality Saxophone (imported) will costs [sic] about Rs. 2 lakhs.

#### **Modifications to suit Carnatic music:**

During my experimentation, I realized that for the gamaka-oriented Carnatic music, the western construction will not do. Further, in our music the range is seldom more than 2 octaves. Some modifications were called for in order to produce gamaka-s and remove the superfluous attachments for enhanced range. Accordingly, I have made the following modifications to my Saxophone:

1. Some openings which facilitate attaining base notes (mandra/anumandra) have been blocked because the levers operating them were interfering with my fingering and in any case, those notes are not needed.
2. The rigid metallic connecting-rods which operate the keys have been replaced by tough, elastic rubber strings.

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<sup>147</sup> Gopalnath, “Adapting the Saxophone to Carnatic Music”

3. The leather pads at the bottom of the keys which open/close the holes have been replaced by felt pads with a convex surface.

Despite the substantial success achieved, I must put on record that some difficulties persist. For instance, there is a problem while playing Prati Madhyama and Sadharana Gandhara. Further, I have knowingly accepted a range reduction effectively, which I find is good enough for almost all kritis. Another feature is that I play generally on B-flat which is a convenient key on the Saxophone. All the salient features of the Saxophone as well as the modifications made by me will be demonstrated during the conference to show how the gamaka-s and other nuances peculiar to Carnatic music can be effectively produced.”<sup>148</sup>

This is a vital text to understand how one who plays the saxophone and wishes to explore this music of the Carnatic style should approach their Western instrument. The most important Carnatic idiom that Gopalnath wishes to make easier with these changes is the production of the gamaka. As noted by Gopalnath at the beginning of his explanation, the saxophone, in its traditional construction, is well suited to playing distinct and discernable pitches. The mechanical change that impacts the clarity of pitch, and therefore allows for the alteration of pitch needed for playing gamakas, is the replacing of the pads with felt. This change softens and blurs the edges of the saxophone tone and helps it blend better with the instruments used in a Carnatic ensemble.

The felt pads are further in design from most modern saxophone pads, which use hard leather fitted with metal resonators for the purpose of giving the instrument a high degree of projection. Gopalnath’s alterations are intended to make the saxophone more flexible, subtle, gentle, and fit into the intimacy of the Carnatic ensemble. Performances in the Carnatic style occur in private homes just as frequently as the concert hall, so it is vital that the instruments are not overwhelming in performances in tight spaces where amplification is not required. The voice is the most important instrument for Gopalnath to be able to match in timbre, but the changing of the pads to felt also moves the

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<sup>148</sup> Gopalnath, “Adapting the Saxophone to Carnatic Music”

saxophone's sound closer to the violin, veena, and flutes typically used in Carnatic groups.<sup>149</sup> The instruments described above are naturally quite soft in volume, so Gopalnath did everything he could to lessen the projection and extraneous noise of the saxophone.

Below are photographs of Gopalnath in performance with saxophones that show clear alterations. The most visible change is the removal of the palm keys of the left-hand stack, particularly the high Eb (C2)<sup>150</sup> and F (C4) keys. The instruments displayed do not natively carry the high F# (C5) key. It is likely that Gopalnath favored instruments that had simpler construction to begin with as an instrument that he appears playing in many performances does not feature the high F (C4) or F# (C5) key. Most Carnatic musicians and singers only perform in the range of two octaves, from low pa to a high pa two octaves above, and Gopalnath was therefore not concerned with playing in the extreme upper register.<sup>151</sup>

It is common for soloists to choose their own personal sa (their “tonic”) that lasts for their lifetime based on vocal range, and Gopalnath's interpretation of this convention was that he used concert Bb (written G) as his fixed sa.<sup>152</sup> This means he exclusively played from low D below the bottom of the treble clef staff to the high D two ledger lines above treble clef. A significant majority of Gopalnath's playing occurred between G at the bottom of the treble clef staff and the G above the staff, which is referred to as the *madhyama stayi*, or the primary octave.<sup>153</sup> Since he did not play above this high D it would be logical for him to remove the palm keys above D (C1) to give more space for

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<sup>149</sup> Acharya, “The Formation and Evolution of Carnatic Music”

<sup>150</sup> Jean-Marie Londeix, William Street, and Anna Street, *Hello! Mr. Sax Ou, Paramètres Du Saxophone*. (Paris: Editions Musicales Alphonse Leduc, 1989), 21.

<sup>151</sup> “New to Indian Classical Music?” Darbar Arts Culture and Heritage Trust

<sup>152</sup> Gopalnath, “Adapting the Saxophone to Carnatic Music”

<sup>153</sup> Viswanathan and Allen, *Music in South India*, 59.

fingering accommodations and to lighten the instrument to make it more comfortable to play in a seated position without a neck-strap. Figure 6.4 clearly shows the left-hand stack of the saxophone and the presence of only one palm key, C1. Gopalnath's aesthetic modifications to his saxophone are likewise notable in the following images. In addition to affixing bangles, jewels, and colorful emblems to the body of the saxophone, he replaced the pearls of the left-hand stack with coins and buttons, as observable in Figure 6.4.



Figure 6.1: Wide view of a performance photograph in the *New York Times*' obituary article.<sup>154</sup>

<sup>154</sup> Giovanni Russonello, "Kadri Gopalnath, 69, Dies; Brought the Saxophone to Indian Music." *The New York Times*, October 31, 2019. <https://www.nytimes.com/2019/10/31/arts/music/kadri-gopalnath-dead.html>.



Figure 6.2: Close-up from *New York Times* photograph showing the lack of C3 and C5<sup>155</sup> keys.<sup>156</sup>

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<sup>155</sup> Londeix, *Hello! Mr. Sax Ou, Paramètres Du Saxophone*.

<sup>156</sup> Russonello, "Kadri Gopalnath, 69, Dies"





Figure 6.3: Photograph from *The Hindu*'s obituary article showing Gopalnath's unique left hand position.<sup>157</sup>

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<sup>157</sup> Narendra Kusnar, "Kadri Gopalnath, Saxophone Legend." *The Hindu*, October 18, 2019. <https://www.thehindu.com/entertainment/movies/kadri-gopalnath-the-saxophone-legend/article29737192.ece>.



Figure 6.4: Close-up showing the removal of all palm keys except C1 and aesthetic modifications to the left-hand stack.<sup>158</sup>

It seems as though Gopalnath may not have been completely satisfied with the modifications he made to his own instruments, or at least the instrument on which he spent the majority of his career performing. In a 2014 article published in the Indian newspaper *The Hindu* explains, Gopalnath purchased a saxophone manufactured in 1914 that he further modified.<sup>159</sup> The article refers to the instrument as a “German Silver Cannonball Saxophone.” Gopalnath’s attraction to this instrument is stated to be the narrower bore than modern instruments and the smaller size of this particular saxophone.<sup>160</sup> These reductions in the bore size and overall dimensions of the saxophone reduced the air capacity Gopalnath needed to play, which he remarked as being a positive change. More importantly, the saxophone played with a softer, more rounded, and gentler

<sup>158</sup> Darbar Festival, “Kadri Gopalnath | Raga Hamsadhwani | Saxophone.” YouTube video, 3:50. May 2, 2021. <https://youtu.be/r4j7GqneRx8>.

<sup>159</sup> Ranjani Govind, “Gopalnath Hits A High With 100 Year Old Sax.” *The Hindu*, February 9, 2014. <https://www.thehindu.com/news/cities/bangalore/kadri-gopalnath-hits-a-high-with-100yearold-sax/article5668511.ece>.

<sup>160</sup> Govind, “Gopalnath Hits A High With 100 Year Old Sax.”



sound than more modern instruments.<sup>161</sup> Saxophones manufactured after the mid 1950's (particularly after the introduction of the Selmer Mark VI in 1954) had markedly different internal construction.<sup>162</sup>

Gopalnath's saxophone acquired in 2014 most likely had an internal bore in the shape of a parabolic cone, meaning the sides of the bore were slightly rounded and acoustically resulted in a softer, darker tone. The bore construction from the Mark VI onward (even for manufacturers other than Selmer Paris) features internal sides that are straightened and allowed for a more focused and projecting sound.<sup>163</sup> The sound concept from the 1914 instrument would match the softer timbres of instruments present in a Carnatic ensemble, such as the tambura, violin, veena, voice, and mridangam. Gopalnath also praised the placement of the pads and keys, which were closer together on the instrument manufactured in 1914 than the saxophone Gopalnath had previously been using in performances. Gopalnath purportedly purchased the instrument from an unspecified antique musical instrument store in South Carolina, United States.<sup>164</sup>

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<sup>161</sup> Govind, "Gopalnath Hits A High With 100 Year Old Sax."

<sup>162</sup> Douglas Pipher, "History Notes #10: The Mark VI." Selmer Paris Saxophones, March 3, 2022. <https://www.selmer.fr/en/beyond-the-sound/category/selmer/history-notes-mark-vi>.

<sup>163</sup> Pipher, "History Notes #10: The Mark VI."

<sup>164</sup> Govind, "Gopalnath Hits A High With 100 Year Old Sax."



Figure 6.5: Kadri Gopalnath pictured with the 1914 “German Silver Cannonball Saxophone.”<sup>165</sup>

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<sup>165</sup> Govind, “Gopalnath Hits A High With 100 Year Old Sax.”



Figure 6.6: Close-up of the 1914 instrument showing Gopalnath's removal of C2 and C4 and filling in the exposed tone holes.<sup>166</sup>

Figures 6.1 – 6.6 show Gopalnath's unique left hand position. His wrist is held quite high and his fingers remain close to the top of the left-hand stack of keys at a sharply vertical angle. Gopalnath mentions in several pieces of literature that he removed keys because they interfered with his fingering choices and their absence increased his comfort while playing. It is highly likely that one of the fingering strategies he used was slides between middle written B, Bb and A. Since Gopalnath's personal sa was written G and these pitches are used very frequently in the common ragas of Carnatic music a more direct manner of fingering is useful. The performance of gamakas around these pitches (particularly the jaru gamakas) would be much easier to execute in a manner imitating

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<sup>166</sup> Govind, "Gopalnath Hits A High With 100 Year Old Sax."

vocal performance via sliding from the bis fingering than using the side Bb key.

Gopalnath's vertical left hand position also allows for smoother jaru gamakas between B, A, and G. The removal of the left-hand palm keys above high D allowed Gopalnath to have more flexibility in his hand position to better accommodate the idiosyncrasies of the Carnatic style.

It is notable that later in Gopalnath's career he interacted with saxophones that were less altered than described and pictured above. Gopalnath appears in several press photographs featuring instruments that do not appear to have undergone any alterations. It is not clear if Gopalnath simply used these instruments for promotional photographs or if he actually used them for performances. All performance videos the author has observed are played on instruments with clearly removed keys and appear to be of older methods of construction. There is no available writing or information on whether or not he encouraged his students (Swaminathan<sup>167</sup> and Radhakrishnan<sup>168</sup>) to alter their modern instruments or to acquire antique instruments that fit closer to the sonic aesthetics of Carnatic music. However, in all photographs, videos, and online press materials his students are pictured with instruments that appear to be of modern construction and do not display any visible modifications. Their instruments have all palm keys attached (up to high F#/C5) and one photograph included in the "Gallery" of Swaminathan's website clearly shows the pads of his saxophone, which appear to be white leather with metal resonators.<sup>169</sup> Prasant Radhakrishnan can be observed performing on modern instruments with no visible modifications in Figure 2.1 and in the "Press" page of his professional

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<sup>167</sup> Swaminathan, "Padmashree Dr. Kadri Gopalnath."

<sup>168</sup> Prasant, "About."

<sup>169</sup> Sumanth Swaminathan, "Gallery." Sumanth Swaminathan, September 27, 2016. <https://www.sumanthswaminathan.com/gallery/>.

website.<sup>170</sup> Swaminathan and Radhakrishnan have been contacted by the author regarding their study with Kadri Gopalnath, but at the time of publication they have not responded to the inquiry.

Figures 6.7 and 6.8 show Gopalnath holding instruments of undoubtedly modern construction. Both clearly display the palm keys up to high F# (C5) and exhibit the larger bore size and more spread-out key placement that are not present in the instruments shown in Figures 6.1 – 6.6. The instruments in Figures 6.7 and 6.8 appear to be heavily influenced by the manufacturing standards established in the latter half of the 20<sup>th</sup> century.<sup>171</sup> It is unlikely that Gopalnath used these instruments in performance as he would have had no interest in the extended range offered by keys up to high F# (C5)<sup>172</sup> for the two reasons of his personal playing range not going past high D (C1) and these keys interfering with his unique hand position that wraps more fully around the left-hand stack. Whether or not Gopalnath ever performed on these newer instruments, it is clear from his personal writings and interviews, as well as the abundance of video recordings of him playing on older models of saxophones that do not feature high palm keys, that he strongly preferred early 20<sup>th</sup> century models of saxophones. These feature a smaller and more rounded bore and simplicity of construction that suited the needs of his chosen style.<sup>173</sup>

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<sup>170</sup> Prasant Radhakrishnan, “Press.” Prasant Radhakrishnan, March 20, 2018. <https://prasantmusic.com/press/>.

<sup>171</sup> Pipher, “History Notes #10: The Mark VI.”

<sup>172</sup> Londeix, *Hello! Mr. Sax Ou, Paramètres Du Saxophone*.

<sup>173</sup> Govind, “Gopalnath Hits A High With 100 Year Old Sax.”



Figure 6.7: Press photograph used in promotion for Gopalnath's 2018 performance at *Le Guess Who?*<sup>174</sup>

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<sup>174</sup> Hutchings, "Tracing the Roots: Kadri Gopalnath





Figure 6.8: Close-up of photograph used in the *National Herald's* obituary article for Kadri Gopalnath.<sup>175</sup>

### Reproduction of Alterations

In an attempt to match the timbre and unique sonic qualities of Kadri Gopalnath's modified instruments, Matt Hess (saxophone repair specialist of "Saxocentric") was asked to assist in carrying out similar modifications on an instrument owned personally

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<sup>175</sup> "Renowned Saxophonist and Padma Shri Awardee Kadri Gopalnath Passes Away." *National Herald*, NH Web Desk. October 11, 2019. <https://www.nationalheraldindia.com/india/renowned-saxophonist-and-padma-shri-awardee-kadri-gopalnath-passes-away>.

by the author. The primary modifications were multiple changes to the materials of the pads and removal and plugging of specific keys. A Yamaha YAS-580AL (Allegro) was used in the experimental procedures described below.

After describing the materials that Gopalnath used to cover tone holes as “felt pads with a convex surface,”<sup>176</sup> Hess suggested that the most direct way to achieve something close to this would be to simply remove the leather covering of the pads already in place on the saxophone. Construction of modern saxophone pads consists of a solid backing to adhere to the key cup, a layer of felt, and a leather covering with a plastic or metal resonator to create an air-tight seal. The method of removing the leather surface and exposing the felt layer below would require no additional materials and could be completed quickly by an experienced technician. This would also remove the resonators of the pads allowing for a further subdued sound to match the color of Gopalnath’s sound. In this initial phase of alteration Hess removed the C2, C4, and C5 keys from the saxophone, filled in the exposed tone holes with hard-curing putty, and covered them with metallic disks of a similar aesthetic to the coverings found in Gopalnath’s instruments. C3 (high E) was not removed as Gopalnath used this key frequently in conjunction with the left-hand first finger (B) to play middle D in rapid passages. This practice is described further in Chapter 8. Figures 6.9 – 6.13 (photos by the author) depict the saxophone in this state.

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<sup>176</sup> Gopalnath, “Adapting the Saxophone to Carnatic Music”





Figure 6.9: Removal of leather coverings and resonators of pads.



Figure 6.10: Removal and plugging of the C5 (high F#) key.





Figure 6.11: Removal and plugging of C2 and C4 keys (high D#/Eb and F).



Figure 6.12: Removal of leather pad covering to expose felt layer.





Figure 6.13: Close-up of felt layer showing loose weave.

During the play test of the saxophone, with the leather removed from the pads and the felt underneath exposed, it became clear that this particular strategy would not be feasible. The only notes that were playable were middle C#, C, B, and Bb. All notes below middle Bb would not produce a tone. It was Hess' conclusion that the felt used below the leather pad consisted of too loose of a weave of material and was letting too much air escape for pitches that require more than a few closed tone holes to be played. If Gopalnath was in fact using felt as the actionable component of his saxophone pads, it was not the felt exposed by removing leather coverings.

Matt Hess presented two possible options to move forward with the aim of producing a functional saxophone that carried the sonic and aesthetic qualities of the instruments of Gopalnath. The first was to punch circular shapes out of a tighter weave of felt and affix them to the key cups to create a potentially air-tight seal. This would be a labor-intensive solution as it would require traveling to a craft store and finding high quantities of felt in varying degrees of tightness and density, cutting them to the correct shapes to properly fit all sizes of key cups, and finding an appropriate adhesive to secure the felt to the key cups. This process would not necessarily yield a saxophone that was any more playable than our first attempt and may require multiple rounds of pad replacements and trials to find the felt that would fully function.

To avoid the hassle presented by this first option, Hess' and the author chose to pursue Hess' second suggestion. This idea was to use pre-produced foam pads instead of any type of felt. Using foam pads instead of felt moved farther away from Gopalnath's methods, but using the pads immediately available to Hess (produced by Tru-Seal and

marketed as “Zen” pads)<sup>177</sup> ensured a proper fit and guaranteed playability. Because the Zen pads are made of foam they form a securely air-tight seal while not giving the saxophone as much projection as standard hard leather pads. They are professional quality pads and Hess remarked that many reputable teachers and performers in the United States have had their instruments fitted with these pads to great satisfaction. He informed the author that while instruments utilizing these pads function well, they feel a bit muffled and tonally subdued as compared to industry standard hard leather pads.<sup>178</sup>

Hess replaced the exposed felt pads with Zen pads and did not affix any resonators to these added pads. The pads below the D key were not replaced as these notes are not used by Gopalnath in performance.<sup>179</sup> The result of applying Zen pads without resonators yielded a sound that closely matched the timbre of Gopalnath. The instrument has softer, rounder, and somewhat huskier tonal characteristics than unaltered modern saxophones. It is unclear which mouthpiece and reed combination was used by Gopalnath, but the author found that pairing a mouthpiece with a large chamber and open facing, along with filed reeds, produced a sound similar to Gopalnath’s. A Meyer 5M and D’Addario Reserve 3.5 reeds were used by the author to obtain the tone most fitting to Carnatic performance. Figures 6.14 – 6.16 depict the foam “Zen” pads and their application to the test instrument.

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<sup>177</sup> “Thin Firm Zen Saxophone Pads w/o Resonators,” Tru-Seal. 2020.  
[https://www.trusealpads.com/products/43/Zen\\_Thin\\_Saxophone\\_w/o\\_R](https://www.trusealpads.com/products/43/Zen_Thin_Saxophone_w/o_R)

<sup>178</sup> Personal correspondence with the author.

<sup>179</sup> Gopalnath, “Adapting the Saxophone to Carnatic Music”

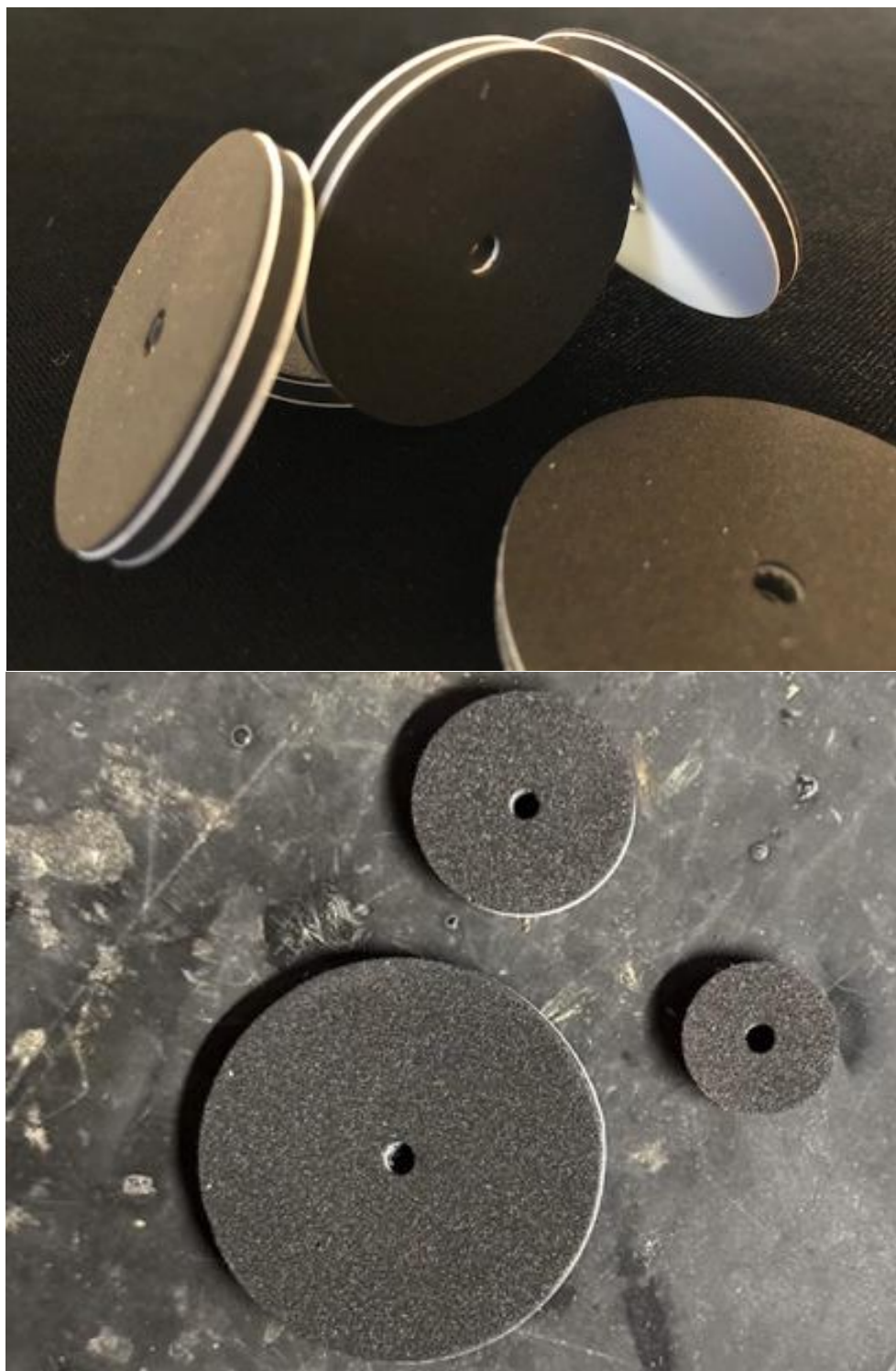


Figure 6.14: “Zen” pads, foam pads applied without resonators.<sup>180</sup>

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<sup>180</sup> “Thin Firm Zen Saxophone Pads w/o Resonators,” Tru-Seal.





Figure 6.15: Foam pads applied to the right-hand stack of the test instrument.



Figure 6.16: Foam pads applied to the left-hand stack of the test instrument.

## CHAPTER 7

### THE CARNATIC CONCERT

An understanding of the format of Carnatic concerts will aid the learner in contextualizing transcriptions of Gopalnath's performance and to more appropriately apply the examples found below to their own practice. Carnatic ensembles are small in size, and can range from just a pair of performers to up to ca. seven.<sup>181</sup> The core makeup of the group is a melodic soloist, a melodic accompanist, and a player of rhythmic accompaniment, most often using the mridangam (double-headed drum). If a sruti box is not being used to produce the drone of "sa," (the "tonic") a musician will be responsible for providing the drone throughout the composition using the tambura. An additional rhythmic accompaniment player may be present using the *kanjira* drum, the *ghatam* (a clay pot tuned to create specific pitches), or the *morsing*, a jaw harp.<sup>182</sup>

Gopalnath played the role of the melodic soloist, and he performed for decades with his melodic accompanist, violin player Avasarala Kanyakumari, and his rhythmic accompanist, mridangam player K. V. Prasad.<sup>183</sup> All musicians in a Carnatic ensemble sit cross legged on either a raised platform, or simply on rugs on the ground, depending on the setting.<sup>184</sup> It is common for ensembles to come together in impromptu settings for concerts in private homes, with or without an audience, and this experience is replicated

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<sup>181</sup> "New to Indian Classical Music?" Darbar Arts Culture and Heritage Trust

<sup>182</sup> Vaswanathan and Allen, *Music in South India*, 29.

<sup>183</sup> Sivakumar, "Kadri Gopalnath: Violinist A. Kanyakumari, Mridangist K. V. Prasad Recall Their Long Association with Departed Saxophonist."

<sup>184</sup> "New to Indian Classical Music?" Darbar Arts Culture and Heritage Trust

in formal, ticketed concerts.<sup>185</sup> The small size of the ensemble coupled with the practice of sitting together in an intimate setting has its origins in South India's history of royal courts which served as patrons to musicians. The term *kutcheri* (kacceri) translates directly to “court” and most contemporary Carnatic concerts are interchangeably referred to as a kutcheri concert, or simply as “a kutcheri.”<sup>186</sup>



Figure 7.1: Kadri Gopalnath in a standard Carnatic ensemble.<sup>187</sup>

The kutcheri concert, as it is described below, was not formalized until the middle of the 20<sup>th</sup> century. The singer Ariyakkudi Ramanuja Ayyangar (1890-1967) conceived of a format for concerts that kept up with the changing interests and tastes of listeners which were developing alongside the growing ubiquity of commercial recordings and the radio.<sup>188</sup> Although there was some resistance among musicians toward recording their performances and broadcasting over the radio, it was clear that this was a fundamental shift in the consumption of music and not a passing fancy. Radio broadcasts featured shorter pieces with less drawn out improvisatory sections which allowed people to

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<sup>185</sup> Vaswanathan and Allen, *Music in South India*, 59.

<sup>186</sup> Pesch, “A Brief Introduction to Carnatic Music.”

<sup>187</sup> Darbar Festival, “Kadri Gopalnath | Raga Hamsadhwani | Saxophone.” YouTube video, 0:27. May 2, 2021. <https://youtu.be/r4j7GqneRx8>.

<sup>188</sup> Pesch, “A Brief Introduction to Carnatic Music.”

consume the music in smaller portions.<sup>189</sup> Ayyangar was growing as a musician in the 1920s and gaining notoriety at the same time that radio and recording technology was introduced to the masses. He noticed that listeners were not incredibly engaged with live Carnatic performances at the time and sought to make concerts more interesting to contemporary audiences.

The underlying idea of the concert format he standardized is to program a higher number of smaller works of varying styles and speeds, and to move between them quickly to keep the audience's attention.<sup>190</sup> Ayyangar's typical concert began with a small selection of *varnams* (short, etude-like works), followed by *kritis* (verse-chorus forms) of alternating styles and speeds, then the "main attraction" of the concert, an extended *kriti* that featured long sections of improvisation and embellishment and could last between 30-45 minutes. This featured *kriti* was followed by a handful of shorter *kritis*, and finally the concert would end with collections of "light" music, consisting of the dance composition styles of *padams*, *javalis*, or *tillanas*.<sup>191</sup> These concerts could last from a minimum of two hours to up to four (or more) hours.<sup>192</sup> Improvised music may take up to one third of the total time of a concert.<sup>193</sup> While Ayyangar moved performances of the Carnatic style away from its roots as courtly music, he did so with the intent of keeping the integrity of the music as intact as possible. Ayyangar can directly trace his pedagogical history through generations of gurus back to Tyagaraja himself, and he held a reverence for the tradition that propelled him to create a concert

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<sup>189</sup> Vaswanathan and Allen, *Music in South India*, 87.

<sup>190</sup> Vaswanathan and Allen, *Music in South India*, 87.

<sup>191</sup> Vaswanathan and Allen, *Music in South India*, 90.

<sup>192</sup> Vaswanathan and Allen, *Music in South India*, 56.

<sup>193</sup> Sambamurthy, *South Indian Music*, 1.

format that resonated with as many listeners as possible.<sup>194</sup> Gopalnath shared the sentiment of tailoring his concerts to the desires of the audience and is remembered as a performer who was entertaining and engaging throughout an entire performance.<sup>195</sup>

It is notable that there are many performance traditions in southern India outside of the kutcheri concert tradition. While Kadri Gopalnath did not participate in these types of ensembles, he had a deep respect for the musicians who performed in them. The most visible type of ensemble outside of the classical Carnatic medium is the *periya melam*, known as the “large” or “great” ensemble. This is a group of male musicians who served as counterparts to the *devadasi* in Hindu temples. The *periya melam* can also be referred to as a “temple ensemble.” The instruments involved in this group are primarily the *nagaswaram*, the double-headed *tavil* drum, a *srutti petti* drone box, and small cymbals called *talam*.<sup>196</sup> The *periya melam* ensemble plays a critical role in many ceremonial and religious events in Hindu life and can also be found performing in concert settings.

The most important *periya melam* musician of the 20<sup>th</sup> century was Tiruvavadudurai Natesa (T. N.) Rajarattinam Pillai (1898-1956).<sup>197</sup> He was a *nagaswaram* player of such virtuosity and renown that he near-singlehandedly elevated the status of the *periya melam* from lower-class service providers to revered artists. He was an early adopter of playing for recording sessions and radio broadcasts and this helped his celebrity and influence over the musical landscape of South India flourish.<sup>198</sup> *Periya Melam* ensembles traditionally performed standing up (or walking) and in garments that exposed some or all of their chests. Rajarattinam Pillai used his high status

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<sup>194</sup> Vaswanathan and Allen, *Music in South India*, 89.

<sup>195</sup> Sivakumar, “Kadri Gopalnath: Violinist A. Kanyakumari, Mridangist K. V. Prasad Recall Their Long Association with Departed Saxophonist.”

<sup>196</sup> Vaswanathan and Allen, *Music in South India*, 81.

<sup>197</sup> Vaswanathan and Allen, *Music in South India*, 83.

<sup>198</sup> Vaswanathan and Allen, *Music in South India*, 85.

to advocate for periya melam groups to perform in the same conditions as kutcheri concerts. As early as 1939 he was responsible for leading an ensemble that gained the privilege to perform seated and wearing high quality silk shirts.<sup>199</sup> Kadri Gopalnath viewed the nagaswaram and its vidwans (including his father) with sincere reverence, and this attitude was shaped by the prominence of Rajarattinam Pillai. Gopalnath is quoted in an interview with *The Times of India* stating “The nagaswaram is the king of all instruments. I, Kadri Gopalnath, am declaring this. You can produce great human feelings with it. Nobody can sing like the nagaswaram, no one can play like it.”<sup>200</sup> Rajarattinam Pillai was famous for his ability to play rapid and technical passages with clarity and ease, and this is undoubtedly a trait that Gopalnath adapted into his own performance practice.<sup>201</sup>

## Compositions

There are numerous types of compositions in the Carnatic tradition, and the following section will explain each of the important styles that have not been detailed earlier in this study. Brief summaries of all types of compositions will be provided as a point of reference. The composed music described here is categorically referred to as *kalpita sangita*, and improvised music (discussed in Chapter 8) is *manodharma sangita*.<sup>202</sup> Figure 7.2 displays several popular types of compositions (some discussed further in this document) and groups them into whether they are fully composed works, entirely improvised, or if they contain elements of improvisation and composed music.

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<sup>199</sup> Vaswanathan and Allen, *Music in South India*, 84.

<sup>200</sup> Sridhar, “He Was a One-Man-Band.”

<sup>201</sup> Vaswanathan and Allen, *Music in South India*, 86.

<sup>202</sup> Sambamurthy, *South Indian Music*, 1.



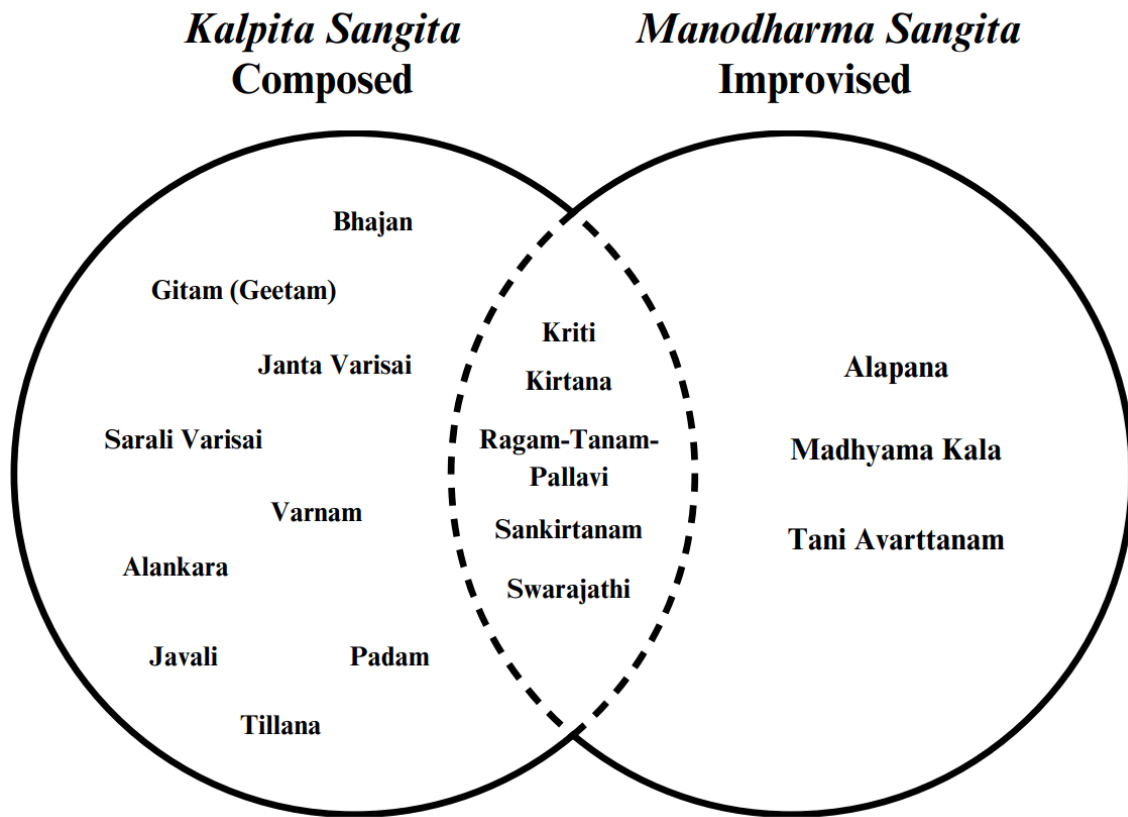


Figure 7.2: Comparative display of composed and improvised music.

The most technically simple compositions are bhajans and gitams (*geethams*), which are devotional in context and are akin to Western chants or hymns. These are introduced to a student after they have shown proficiency with scalar and rhythmic exercises, being sarali/janta varisai and alankara, respectively (detailed in Chapter 5).<sup>203</sup> The etude-like varnams that traditionally open a Carnatic concert are learned after the devotional songs and fundamental exercises. Slightly more complex compositions known as *swarajathis* are taught to the learner next, which are rhythmic in nature as they were originally written to accompany dance and show the mastery of the dancers' footwork.<sup>204</sup> The *sankirtanam* is very similar to the swarajathi in form and function, and both of these

<sup>203</sup> Connolly, *Indian Melodies for Alto Saxophone*, 7.

<sup>204</sup> P. Ananthakrishna, "Swarajathi." Carnatic Connection, April 13, 2021.

<https://carnaticconnection.wordpress.com/2021/01/02/compositional-forms-in-carnatic-music/>.



styles of composition came to be codified in the works of the fifteenth century composer Tallapaka Annamacarya (1424-1503)<sup>205</sup> Swarajathis introduce the *pallavi* and *charana* to the student, which is analogous to a verse-chorus pattern.<sup>206</sup>

Pallavi and charana (*caranam*) translate to “sprouting” and “feet” respectively.<sup>207</sup> The pallavi can be interpreted as a main theme or motif that recurs between each stanza-like caranam. The pallavi summarizes the gestalt of the work and each caranam expands upon the idea introduced by the pallavi in a descriptive and emotional way.<sup>208</sup> “Pallavi” as a term is an amalgamation of the first syllable of three words which describe its construction, being *padam* (words), *layam* (time) and *vinyasam* (variations). The pallavi is built up of words and syllables that are set to a strict time and undergoes variation at the discretion of the performer.<sup>209</sup>

The compositional style of the sankirtanam and swarajathi experienced innovation during the 16<sup>th</sup> and 17<sup>th</sup> centuries as composers began to include a third element to its structure, called the *annupallavi*, which translates to “continuation of the sprouting.”<sup>210</sup> This new section is placed between the pallavi and caranam. The resulting musical form became known as the kriti, the most widely performed type of Carnatic work in the contemporary era and the centerpiece of Carnatic concerts. The basic layout of the formal sections of a kriti is as follows: Pallavi, anupallavi, pallavi reprise, caranam, pallavi reprise (ABA’CA’).<sup>211</sup> The kriti is also the type of composition in which musicians perform the most improvisation, giving them a vehicle to show their virtuosity.

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<sup>205</sup> Vaswanathan and Allen, *Music in South India*, 15.

<sup>206</sup> Connolly, *Indian Melodies for Alto Saxophone*, 7.

<sup>207</sup> Vaswanathan and Allen, *Music in South India*, 15.

<sup>208</sup> Ananthakrishna, “Swarajathi.”

<sup>209</sup> Sambamurthy, *South Indian Music*, 23.

<sup>210</sup> Vaswanathan and Allen, *Music in South India*, 15.

<sup>211</sup> Vaswanathan and Allen, *Music in South India*, 15.

Improvisations are performed before, during, and after the main, pre-composed body of music in each kriti and will be detailed in Chapter 8. Melodic soloists may repeat individual lines of a kriti as many times as they please, adding melodic embellishments and ornamentations through each repetition.<sup>212</sup>

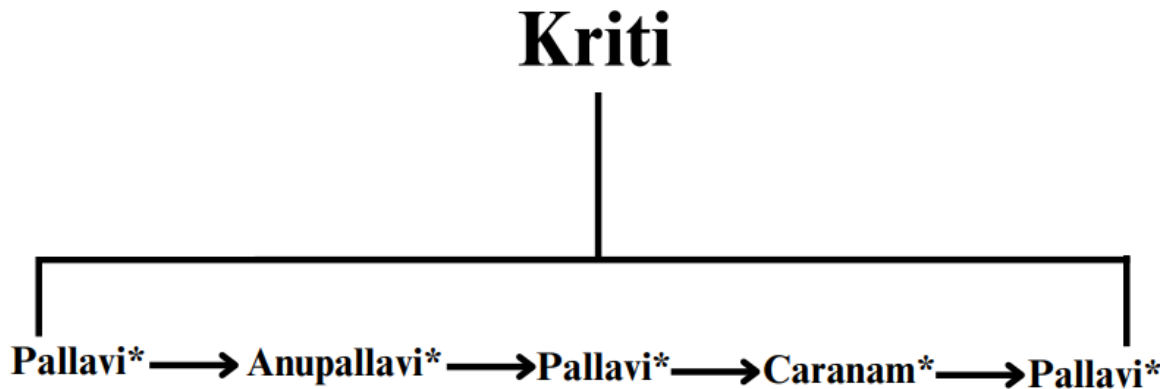


Figure 7.3: Diagram of a kriti.

A variation of the kriti is the *kirtana*, which is a more simplified incarnation of a kriti and devotional in nature. Tyagaraja is one of the most-performed composers of concert-oriented kritis, but in his lifetime these simpler kirtanas would have been what he performed most frequently. He engaged in the practice of *uncavritti bhajana*, in which he and his disciples would travel door-to-door and sing devotional works as a form of blessing a home. These lighter works are still heard in religious settings involving both solo and congregational singing.<sup>213</sup> As stated previously in this study, the styles of dance music derived from the devadasi tradition, the padam, javali, or tillana, are typically sung at the end of a kutcheri concert.

Candida Connolly's work *Indian Melodies for Alto Saxophone* is a valuable resource for the saxophonist as it provides Western notation for examples of each of these

<sup>212</sup> Vaswanathan and Allen, *Music in South India*, 65.

<sup>213</sup> Vaswanathan and Allen, *Music in South India*, 16-17.

compositional styles.<sup>214</sup> The work does have limitations, as the expression of these melodies in Western notation is inherently reductive and cannot accurately depict the intricacies of gamaka and other stylistic inflections present in Carnatic music. The notation is simplistic and not representative of how a Carnatic musician would actually perform each work. This is analogous to “The Real Book” of jazz standards; the volume is a helpful tool for learning melodies and understanding the most basic elements of a jazz standard, but to perform the work exactly as it is on the page would be stylistically inappropriate.<sup>215</sup>

Every type of composition featured in a Carnatic concert comes from a vocal history and pedagogy and is originally written for the voice. Each work is either set to unique lyrics or to the names of swaras in the case of educational works like varnams and sarali/janta varisai. Kadri Gopalnath learned all of these works both vocally (via singing swaras) and on his instrument and it is imperative that the Western learner go through this pedagogical process as well in order to express music of the Carnatic style with integrity.<sup>216</sup>

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<sup>214</sup> Connolly, *Indian Melodies for Alto Saxophone*.

<sup>215</sup> Hal Leonard Publishing Corporation, (2004), *The Real Book*.

<sup>216</sup> Connolly, *Indian Melodies for Alto Saxophone*, 4.

## CHAPTER 8

### TRANSCRIPTION AND ANALYSIS

This chapter will describe the types of improvisation involved in the Carnatic tradition (particularly the improvisation involved in performance of the kriti), and use transcriptions of Gopalnath's live concerts and commercial recordings to inform one's exploration of improvisation and performance in this style. The methodology and educational process for learning the idiosyncrasies of Carnatic improvisation is markedly similar to a student's progression in the genre of Western jazz. Listening to expert performers and understanding their navigation of different compositional styles, rhythmic cycles, and melodic conventions provides a deeper understanding of the genre.

#### **Improvisational Types**

Improvisation (*manodharma*) is deeply connected to the history of Carnatic music. In pre-colonial India the predominant variety of musical performance was *manodharma sangita*, improvised music, and the skill of a performer as an improviser was what built reputations and careers.<sup>217</sup> At this time, the popular compositional type was not the kriti as it is today, but a form called *ragam-tanam-pallavi*. This was a style rooted in improvisation as several different types of improvised phrases are performed in succession around a limited amount of pre-written text.<sup>218</sup> A performance of *ragam-tanam-pallavi* always begins with an extended melodic *alapana* improvisation, and this is

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<sup>217</sup> See Figure 7.2 for musical forms based on whether they are pre-composed, improvisation, or a mixture of the two.

<sup>218</sup> Vaswanathan and Allen, *Music in South India*, 81.

the form of improvisation that is most prominent in contemporary concerts. Alapanas are played before composed music to set the mood of the performance and introduce the raga that an upcoming kriti will be based in to both the audience and the other performers on stage.<sup>219</sup> Figure 8.1 displays the improvisational forms, described further in this chapter, which precede and follow a kriti.

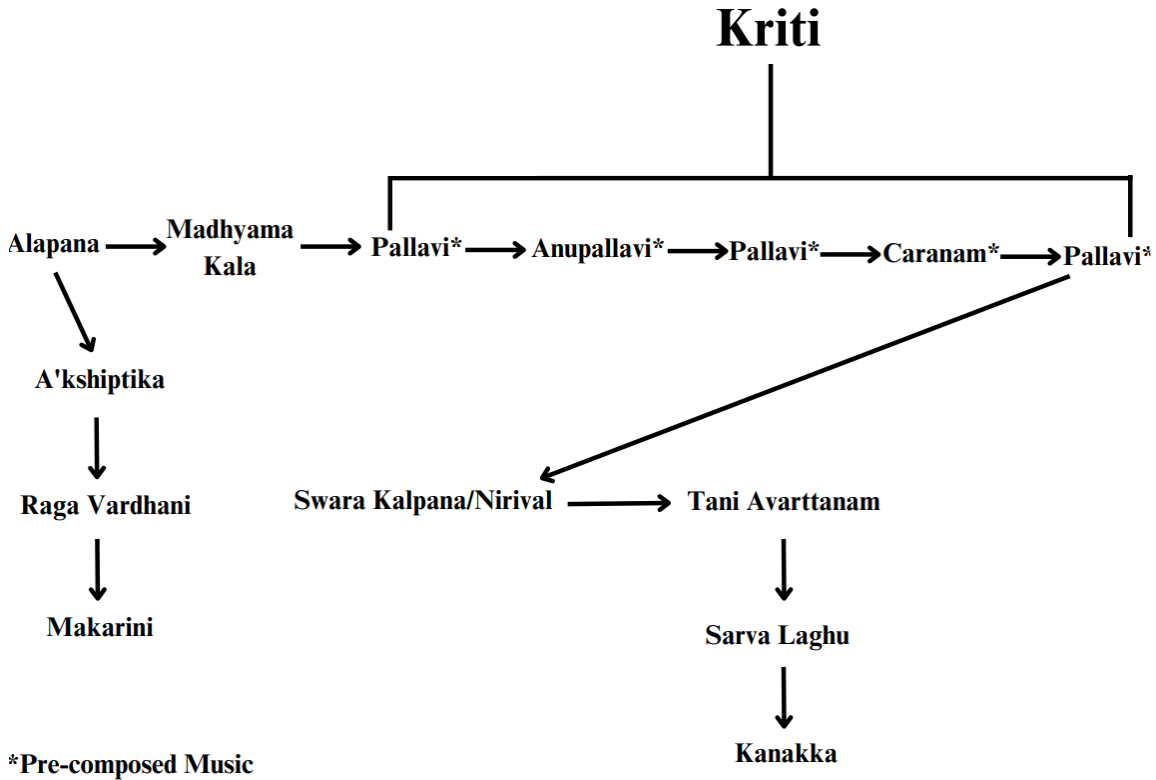


Figure 8.1: Diagrama of a kriti with improvised sections preceding and following.

If an alapana is relatively brief and simply introduces the main ideas and phrases of a raga it is referred to as *sangraha alapana*, and if it is a longer exposition that fully explores vast musical possibilities within the raga it is known as *sanpuna alapana*.<sup>220</sup> Audience members attend concerts with equal anticipation for hearing pre-composed

<sup>219</sup> Vaswanathan and Allen, *Music in South India*, 60.

<sup>220</sup> Sambamurthy, *South Indian Music*, 7-8.

music and the rendering of creative and unique alapana.<sup>221</sup> The listening populace of South India becomes familiar with musical structure and individual compositions (even if they are not a professional musician) through frequent attendance of concerts and via the religious associations of Carnatic music. Many of the works that are performed in concerts have religious and ceremonial connections which make them recognizable to the general public.

Alapanas are not restrained by regular pulses or rhythmic structures as the main melodic performer is completely unaccompanied, save for the tanpura (or other drone producer). The melodic accompanist may play a few responsorial lines during the main artist's alapana, but this is brief and not intended to take attention away from the soloist. There is no mridangam player at this point in the performance and no tala has taken effect so alapanas tend to be strikingly melismatic.<sup>222</sup> Alapanas contain three main sections: the introduction (*A'kshiptika*), main body (*raga vardhani*), and conclusion (*sthayi* or *makarini*).<sup>223</sup> The *a'kshiptika* (also known as *a'yittam*) serves to reveal the identity of the raga and give clear distinctive features of the raga. *Raga vardhani* (or *karanam*) itself is divided into four sections, each of which builds in intensity in regards to both range and speed. Typically *vardhani* will begin in a lower range and at a slow tempo, then ascend in range and increase in speed towards the conclusion of the alapana. The *makarini* commonly features successive phrases centered on each individual swara of the raga. The musician will place every swara as either the highest or lowest pitch in a phrase and

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<sup>221</sup> Sambamurthy, *South Indian Music*, 3.

<sup>222</sup> Vaswanathan and Allen, *Music in South India*, 62.

<sup>223</sup> Sambamurthy, *South Indian Music*, 10.

return to it before moving on to a phrase built upon the next swara. This conclusion section allows the performer to display their full vocal or instrumental range.<sup>224</sup>

An improvisational section that may be found after the sthayi/makarini and before the beginning of the kriti is music referred to as *madhyamakala*, or music in a “medium tempo.” This section helps move the audience from the lull of listening to free-flowing melodic lines into music with stable rhythm. The madhyamakala has a perceivable tempo and musicians focus on rhythmic elements in their improvisation.<sup>225</sup> Music in the madhyamakala is customarily sung using the syllables of the swaras, again preparing the audience for music with a more regular structure and organization. The inclusion of madhamakala brings the full layout of an alapana to the following:

“A’kshiptika  
Raga Vardhani  
Stage I  
Stage II  
Stage III  
Stage IV  
Sthayi/Makarini  
Madhyamakala”<sup>226</sup>

After the main soloist has played as long of an alapana as they please, usually including some featured sancara and prayoga phrases, they may invite the melodic accompanist to perform an alapana as well. At the end of the last alapana the main soloist will gesture to the rest of the ensemble to bring in the rhythmic accompanists and begin the kriti proper.<sup>227</sup> Alapanas may be relatively brief if they are preceding a shorter work, or quite extended depending on if they are introducing the “main” kriti of a concert. It is a

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<sup>224</sup> Sambamurthy, *South Indian Music*, 10-15.

<sup>225</sup> Sambamurthy, *South Indian Music*, 15-16.

<sup>226</sup> Sambamurthy, *South Indian Music*, 20.

<sup>227</sup> Vaswanathan and Allen, *Music in South India*, 61.

general guideline among Carnatic musicians that a performance of alapana does not exceed the kriti that is to follow. The length of the alapana should be relative to the length of the work that it is introducing.<sup>228</sup> While every performer will play pre-composed compositions and improvisatory music, there are specialists for each branch. Experts of playing composed music are *kirtana vidvans* (vidwan) and experts of improvisation are *pallavi vidvans*.<sup>229</sup>

Improvised sections are present both during and after the kriti. While in performance of the main body of the kriti, soloists will repeat lines of text from the kriti at their pleasure and embellish the melody in an improvisational style. They indicate when they will move on to the next line of the kriti, in a similar manner to how jazz musicians communicate passages of solo choruses.<sup>230</sup> After all lines of the kriti have been performed, several improvisational styles are practiced which expand upon chosen lines of the text. *Nirival* is the type of improvisation in which one line of the kriti (usually taken from the caranam) is given new melodic settings in immediate succession. *Nirival*'s primary concern is filling up cycles (avartas) of the tala with unique melodic lines that circle back to the original line of text.<sup>231</sup> *Swara Kalpana* is a rhythmic and melodic improvisation that uses the syllables of each swara in its rendering as opposed to neutral syllables or pre-composed lyrics. *Swara kalpana* ("invented" or "created" swaras) still use a line, or a couple of words, from the kriti as a point of reference and return, but swara

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<sup>228</sup> Sambamurthy, *South Indian Music*, 8.

<sup>229</sup> Sambamurthy, *South Indian Music*, 4.

<sup>230</sup> Vaswanathan and Allen, *Music in South India*, 65.

<sup>231</sup> Sambamurthy, *South Indian Music*, 44.



kalpana is relatively free in nature.<sup>232</sup> Performers may choose to perform nirival and swara kalpana at their own discretion.

The nirival and swara kalpana sections are similar in terms of improvisational style, but differ in a few key ways. Nirival keeps the full text of a line of the kriti but the soloist will create new melodic settings, as stated above. Nirival is a longer form of improvisation, with each new variation on the line taking multiple cycles of the tala. Melodic soloists and accompanists will take turns performing new melodic settings and build upon the ideas presented by their colleagues. Swara kalpana is most notable for its use of the “solfege” syllables for swaras as opposed to lyrics and is easily identifiable when the soloist is a singer. The rate of interplay between the main soloist and melodic accompaniment is drastically increased during swara kalpana, with exchanges happening within a small number of beats, as opposed to complete cycles of the tala. Swara kalpana only briefly returns to material from the kriti and gives the performers opportunity to create interesting rhythmic and melodic motives that are elaborated upon between the soloist and accompanist.<sup>233</sup>

The melodic accompanist displays a high degree of musicianship and adeptness in the style by being able to instantly reproduce the melodic lines initiated by the soloist or to create complimentary lines. Their job is made even more difficult by the social and cultural convention that they must not upstage the main soloist. They play in a way that supports the primary soloist through a playful call and response, but they must not create any kind of musical competition.<sup>234</sup> Many Carnatic performances are put together with little preparation or planning on the performers’ part and the musicians may not even

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<sup>232</sup> Vaswanathan and Allen, *Music in South India*, 66.

<sup>233</sup> Vaswanathan and Allen, *Music in South India*, 66-67.

<sup>234</sup> Vaswanathan and Allen, *Music in South India*, 66-67.

know each other immediately preceding a concert. Musicians are expected to know a repository of music (“standards” of the repertoire) and be able to quickly adapt to the musical stylings of their new-found colleagues.<sup>235</sup> Kadri Gopalnath was fortunate to have a melodic accompanist, violinist A. Kanyakumari, with whom he performed for decades. Gopalnath and Kanyakumari developed a musical and improvisatory repartee that was emblematic of the skill of the musicians in this tradition.<sup>236</sup>

*Tani avarttanam* is the rhythmic performer’s version of the *alapana* as it is an extended solo performed on the *mridangam* (staple percussion instrument) and placed at the end of a *kriti*.<sup>237</sup> Each *tani avarttanam* is divided into two sections, the *sarva laghu* (“time flow”) and *kanakku* (calculation)<sup>238</sup>. While the entire *avarttanam* solo will follow the cycle of the *tala*, it is most easily observed by the listener in *sarva laghu*. This section employs quasi-melodic elements which help to reinforce the flow and feeling of the *tala*. *Kanakku* sections of the *avarttanam* are opportunities for *mridangam* players to display their proficiency in rhythmic complexity, and these “calculated” sections can make it difficult to perceive the regular flow of time. The percussionist will intentionally play musical ideas that disguise the *tala* and employ rhythmic displacement to muddle the perception of the *tala*. This leads to great musical satisfaction (often expressed via open applause by both the performers and audience members alike) when the solo is “resolved” and a clear feeling of the *tala* returns.<sup>239</sup> The *kanakku* section relies on the idea of “rhythmic dissonance,” or the offsetting of the beat (*aksara*) from an easily discernable

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<sup>235</sup> Vaswanathan and Allen, *Music in South India*, 83.

<sup>236</sup> Sivakumar, “Kadri Gopalnath: Violinist A. Kanyakumari, Mridangist K. V. Prasad Recall Their Long Association with Departed Saxophonist.”

<sup>237</sup> Vaswanathan and Allen, *Music in South India*, 61.

<sup>238</sup> Vaswanathan and Allen, *Music in South India*, 68.

<sup>239</sup> Vaswanathan and Allen, *Music in South India*, 68.

pattern. The resolution of this dissonance is what makes mridangam improvisations so intriguing.

## Transcription

This section contains transcriptions of Kadri Gopalnath's performances, both commercial recordings and recorded live concerts, completed by the author. These transcriptions are transposed and presented in concert Eb, showing the written notes that Gopalnath played on his instrument. Copies in concert pitch are found in Appendix C. The first transcription is an alapana in the raga *hamsadhwani* performed by Kadri Gopalnath at the Darbar Festival in London, UK, in 2011.<sup>240</sup> Raga hamsadhwani is comprised of sa, ri<sub>2</sub>, ga<sub>3</sub>, pa, ni<sub>3</sub>, and sa, in both arohana (ascent) and avarohana (descent). With written G as sa the raga is G, A, B, D, F#, G. Hamsadhwani is a the 54<sup>th</sup> janya raga of the 29<sup>th</sup> melakarta raga (*dhirasankarabharanam*). It excludes ma and dha and has similarities to the Western major pentatonic scale but replaces scale degree six (dha) with scale degree seven (ni).<sup>241</sup> Compositions in hamsadhwani are often used to begin concerts as it is considered an energetic, majestic, and positive raga.

It is not feasible to identify all sections of the alapana form as described above in this chapter (a'kshiptika, raga vardhani, and sthayi) as these elements are flexible and may or may not be present in every performance of an alapana. This alapana does follow the general outline expected in a performance by beginning in a slow manner and low in the saxophone's range, then gradually increasing in both speed and pitch level until passing the alapana to the melodic accompanist. The presence of a steady pulse is heard as Gopalnath's lines become more and more active, implying the onset of madhyamakala

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<sup>240</sup> Darbar Festival, "Kadri Gopalnath | Raga Hamsadhwani | Saxophone." YouTube video, 0:33-3:50. May 2, 2021. <https://youtu.be/r4j7GqneRx8>.

<sup>241</sup> Kaufman, *The Ragas of South India*, 423.

(middle tempo, structured meter). The janta (emphasis) variety of gamaka is marked by the text “janta” above, in which Gopalnath places repeated stress on the indicated pitch. Jaru gamakas (slides) are indicated by the falls and bends before, between, and after specific notes, and kampita gamakas (oscillations) are indicated by grace notes. Grace notes are not an ideal performance indication for kampita gamakas as grace notes (in a Western sense) are easily discernable and clearly played, which is not the case for kampita gamaka. Grace notes are simply the closest Western notational tool to give the performer an idea of where the gamakas are being applied, not a direct indication of how they should be performed. There is less tonal clarity when performing kampita gamakas; these ornaments are derived from vocal performance and should thusly be rendered in a smooth, eliding fashion. Jaru gamakas are approximate and contain microtonal inflections, and recordings (listed in Appendix B, as well as the footnotes) should be referenced when a Western player is attempting to reproduce this idiom.

There is a high degree of interplay between Gopalnath and the violin player throughout the performance, an achievement which is notable as the violin player in the recording is not A. Kanyakumari, but Jyotsna Srikanth. Srikanth is able to accurately echo and/or paraphrase the melodic lines played by Gopalnath; she transcribes and reinterprets in real time. The transcription displays instances of momentary pauses by Gopalnath which allow Srikanth to respond to the idea he just presented. These responses from the violin are transcribed with small note-heads. Instances of the violin playing drone pitches while Gopalnath is actively playing are not included in the transcription. As Gopalnath’s alapana closes, the interplay between the saxophone and violin becomes more rapid. The collaboration present in this recording between Gopalnath and Srikanth

is exemplary of the musicianship of Carnatic performers and displays the exceptionally high level of proficiency and adaptability inherent to this tradition.

## Raga Hamsadhwani



Figure 8.2: Raga Hamsadhwani with written G as sa.

Written E is used by Gopalnath in this alapana, which is outside of the raga, but it is used in passing and at such speed to avoid interfering with the identity of the raga.

Fingering choices regarding middle D are indicated in Figure 8.3 by either “C3,” indicating Gopalnath used a shortened fingering with the first finger of the left hand and C3, or “full,” indicating Gopalnath fingered the note with the full fingering. These fingerings are active until the other fingering is indicated. Gopalnath uses the short fingering (with C3) when the D is the highest note in the line he is currently performing. If the phrase ascends past D he uses the full fingering. He also uses the full fingering when playing middle D for a longer amount of time, or playing it with a notable articulation. This practice follows with standard Western saxophone performance idioms of using “short” fingerings for middle D when a performer wishes to blend the timbre of that note to music in the lower range. Aside from the few accents and tenutos marked in Figure 8.3, all other playing is smooth and florid with very little articulation. This is indicative of the vocal style Gopalnath is replicating. Rhythms are only intended to capture the relative length of the notes performed by Gopalnath to other notes in the

excerpt. This transcription was notated without barlines as there is no explicit underlying metrical structure.

## Alapana in Raga Hamsadhwani

Kadri Gopalnath

0:33

Pulse (Janta) Violin

5 Violin 3 (Janta)

8 Violin (Jaru)

11 C3 Violin

14 (Jaru)

16 Violin (Jaru) Full

19 C3 Full Violin C3

22 Violin C3 Violin Violin

25 Violin Violin

28 Full Violin Violin

2

31 Violin Violin Full

34 Violin (Jaru) Full (Janta)

36 Violin Violin 3

38 6

40 Violin 3

43 3 Violin (Jaru)

46 Violin

48 Violin (Jaru)

50 Violin 3 Violin 3

53 Violin Violin Violin Violin 3 Violin

56 Violin C3 Violin Full

58 3 Violin Violin 3

60 C3 Full (Violin playing with saxophone)

62 6 6 6 6

64

66 3 C3

67 Full

69 Violin C3 Janta

72 C3 Violin 3 Violin Begins Alapana

Figure 8.3: Transcription of Kadri Gopalnath's alapana in raga hamsadhwani.<sup>242</sup>

Next is a small collection of transcriptions of Gopalnath's improvisatory figures on the niraval section of a kriti by Tyagaraja, titled "Nadaloludai." This performance

<sup>242</sup> Darbar Festival, "Kadri Gopalnath | Raga Hamsadhwani | Saxophone." YouTube video, 0:33 – 3:50. May 2, 2021. <https://youtu.be/r4j7GqneRx8>.



comes from the same 2011 concert as Figure 8.3, presented by the Darbar Festival in London, UK, and the melodic accompanist performing with Gopalnath is again Jyotsna Srikanth.<sup>243</sup> The improvisations transcribed are most likely from performances of *nirival* and not *swara kalpana* due to the rate of interplay between the saxophone and violin. Both performers are taking two complete cycles of the *tala* to render new melodic settings of a line from the *kriti*. If the performers were improvising in the style of *swara kalpana* there would be much less temporal space between their melodies. “Nadaloludia” is set to *rupaka tala* and each cycle takes six *aksaras* (beats) to complete. This can be notated in 6/4 time in Western notation. Each line of music does not represent continuous performance by Gopalnath, but rather two *avartas* of the *tala* which are interspersed with responses by Srikanth of the same length. Timing indications are given above each figure for reference.

“Nadaloludia” is written in *raga kalyanavasantham*, which has differing construction between the *arohana* and *avarohana*. *Kalyanavasantham* is the fourth *janya raga* of the 21<sup>st</sup> *melakarta raga* (*kirivani*).<sup>244</sup> The *swaras* of the *arohana* are *sa*, *ga*<sub>2</sub>, *ma*<sub>1</sub>, *dha*<sub>1</sub>, *ni*<sub>3</sub>, and *sa*. *Ri* and *pa* are omitted from the *arohana*. The *avarohana* contains all *swaras* and follows as such: *sa*, *ni*<sub>3</sub>, *dha*<sub>1</sub>, *pa*, *ma*<sub>1</sub>, *ga*<sub>2</sub>, *ri*<sub>2</sub>, and *sa*.<sup>245</sup> The *avarohana* is analogous to the Western harmonic minor scale. If written *Ga* is *sa*, the notes of *kalyanavasantham* are G, Bb, C, Eb, F#, G, G, F#, Eb, D, C, Bb, A, and G, as depicted in Figure 8.4.

<sup>243</sup> Darbar Festival, “Dr. Kadri Gopalnath | Kalyanavasantham | Saxophone.” YouTube video, 0:28 – 1:13. July 25, 2021. [https://youtu.be/\\_2hcQ\\_65jZM](https://youtu.be/_2hcQ_65jZM).

<sup>244</sup> Kaufman, *The Ragas of South India*, 255.

<sup>245</sup> Kaufman, *The Ragas of South India*, 255.



Figure 8.4: Raga Kalyanavasantham with written G as sa.

Gopalnath displays immense technical virtuosity and fluidity throughout the examples presented in Figure 8.5. The aksaras are moving at roughly 172 – 178 beats per minute and Gopalnath is evenly performing subdivisions of four notes or more within these aksaras. Gamakas are not as present in the faster niraval as compared to the alapana found in Figure 8.3. This follows with Carnatic tradition as the niraval is primarily concerned with filling cycles of the tala through active melodic gestures and there is less time and space to render delicate gamakas. Gopalnath does use some F naturals during this section which falls outside of the raga, but they are used in ornamental ways and do not muddle the identity of the raga. The sequentially ascending lines Gopalnath plays in lines three, four, and five of Figure 8.5 are indicative of gestures he performs frequently in his improvisations across different compositions. These melodic sequential passages start near the bottom of the saxophone's range within the given raga and climb through the raga back to sa and the recurring line from the kriti which anchors all improvised music within the playing of niraval.

# Improvisations on "Nadaloludai"

Raga Kalyanavasantham

Tyagaraja/Gopalnath

0:28 Emphasizing Sa and Dha

Return to line of Kriti

3

0:44

Return to line of Kriti

3

0:53 Ascending sequence through raga

Return to line of Kriti

7

1:01 Ascending sequence through raga

Return to line of Kriti

9

1:09 Ascending sequence through raga

Return to line of Kriti

Figure 8.5: Transcription of Gopalnath's nirival lines in raga kalyanavasantham.<sup>246</sup>

Four additional lines of nirival performed by Gopalnath from his 2000 recording titled "Gem Tones" are transcribed below. These melodic ideas are from track five, "Om Shambo Shiva Shambo," which was composed by Dayananda Saraswati and set to raga *revati* and adi tala (eight beats per cycle).<sup>247</sup> Revati is the 15<sup>th</sup> janya raga derived from the second melakarta raga (*ratnangi*) and is has unique swaras in both arohana and

<sup>246</sup> Darbar Festival, "Dr. Kadri Gopalnath | Kalyanavasantham | Saxophone." YouTube video, 0:28 – 1:13. July 25, 2021. [https://youtu.be/\\_2hcQ\\_65jZM](https://youtu.be/_2hcQ_65jZM).

<sup>247</sup> Kadri Gopalnath, *Gem Tones*. Avasarala Kanyakumari, M. R. Sainatha, and Bangalore Rajasekar. Released 2000, Globe Style, compact disc.

avarohana.<sup>248</sup> The arohana is sa, ri<sub>1</sub>, ma<sub>1</sub>, pa, ni<sub>2</sub>, and sa, and the avarohana is sa, ni<sub>2</sub>, dha<sub>1</sub>, pa, ma<sub>1</sub>, ga<sub>1</sub>, ri<sub>1</sub>, and sa. These swaras are described in Western notation in Figure 8.6, and with sa as written G the raga follows as: G, Ab, C, D, F, G, G, F, Eb, D, C, Bbb, Ab, and G.<sup>249</sup>



Figure 8.6: Raga revati with written G as sa.

Intrigue in revati comes from the closeness of sa, ri, and ga in the avarohana, which are all a half-step apart. Gopalnath again displays astounding dexterity in this example as the aksaras of the tala are passing at ca. 196 beats per minute. The kampita (grace/oscillation) gamakas performed in this excerpt are moving at remarkable speed. Adi tala is an eight beat cycle and can be loosely displayed in Western notation with the 8/4 time signature. Gopalnath's niraval lines predominantly embellish sa and pa, always ending on sa before passing the line to the violin. The blank measures represent reciprocations performed on the violin by A. Kanyakumari. Kanyakumari again displays the highly adaptive musicianship of the melodic accompanist, as they immediately play back the intricate lines in real time. The transcriptions begin at 2:26 in the recording.

<sup>248</sup> Kaufman, *The Ragas of South India*, 17.

<sup>249</sup> Kaufman, *The Ragas of South India*, 17.

# Improvisations on "Om Shambo Shiva Shambo"

Raga Revati

Saraswati/Gopalnath

The image displays four staves of musical notation in treble clef, 4/4 time, representing improvisations on the song "Om Shambo Shiva Shambo" in Raga Revati. The notation includes various musical symbols such as notes, rests, and ornaments (gamakas). Above the first staff, the text "2:26 Embellishing Pa and Sa" is written, and "Kampita gamaka" is written above the second staff. Above the third staff, "Jaruga gamaka, emphasizing Ni" is written. Above the fourth staff, "Sa, to Pa, descending back to Sa" is written, and "Kampita gamaka" is written above the fifth staff. The notation includes various musical symbols such as notes, rests, and ornaments (gamakas). The first staff shows a sequence of notes with a "3" below it. The second staff shows a sequence of notes with a "5" below it. The third staff shows a sequence of notes with a "5" below it. The fourth staff shows a sequence of notes with a "7" below it. The fifth staff shows a sequence of notes with a "7" below it.

Figure 8.7: Transcription of Gopalnath's niraval lines in raga revati.<sup>250</sup>

The transcriptions presented in this study represent a minuscule fraction of Gopalnath's recorded output, and this area is promising for further study. Gopalnath has collaborated on numerous recordings with artists of different backgrounds and has a large repository of recorded live concerts. The creation of a comprehensive body of transcriptions, similar to the "omnibooks" of Western jazz transcription, is a worthwhile endeavor that is deserving of Gopalnath's improvisational output. The Darbar Festival produces high-quality performance videos of Gopalnath's concerts, but at the time of publication full-length records are behind a paywall and the items that are publicly

<sup>250</sup> Gopalnath, *Gem Tones*.

available are edited down from the original full performances. There are valuable moments in these public recordings, but transcribing from Gopalnath's commercially produced output would allow for a complete picture of his performance practice throughout a full composition. Some of his commercial recordings are over 30 minutes long and this is more indicative of the amount of embellishment, elaboration, and improvisation which occurs at Carnatic concerts. Appendix C contains recommended recordings for further study.

## CHAPTER 9

### CONCLUSIONS, SIGNIFICANCE TO WESTERN PERFORMERS

The study of Kadri Gopalnath's performance career and Carnatic music in general is greatly beneficial to Western musicians. Understanding and internalizing unique musical traditions, such as the music of South India, enriches one's musicianship on a fundamental level. This is especially true for saxophonists who may use Gopalnath as a direct avenue for exposure to this style, but the ideas presented in this work apply to any performer of a Western tradition.

The rhythmic features of Carnatic music exemplified by the solkattu syllables used by mridangam players (ta ki ta, ta ka di mi, etc., described in Chapter 5) are already in use in undergraduate aural skills curricula in the United States, including the University of South Carolina. While there are slight changes in the syllables (ta ki *da* for subdivisions of three instead of the solkattu ta ki *ta*), the basic functions of the rhythmic methods are the same. Solkattu syllables place subdivisions of a beat in consistent locations and allow the student to conceptualize rhythm in a musically intuitive way. The practice of performing Carnatic compositions at the "second speed" and "third speed" are unique challenges which seldom appear in Western compositions.<sup>251</sup> Students who are proficient in tracking the tala through its cycles and can accurately compress and augment rhythms through the practice of multiple "speeds" will be over-prepared for most rhythmic gestures found in Western music.

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<sup>251</sup> Viswanathan and Allen, *Music in South India*, 38.

The raga system of Carnatic music is complex and top-level professional musicians are expected to be well versed in the 72 primary melakarta (parent) ragas as well as the endless janya (child) ragas.<sup>252</sup> These scalar collections have endless configurations and each present their own unique challenge to the student in both musical and technical aspects. Every raga must be navigated technically appropriately, but also must convey the emotional language of the raga, the bhava.<sup>253</sup> The ragas have extra-musical components which are equally as important to the Carnatic listener as the collection of notes used. While the swath of ragas and the tradition they embody is extensive, a Western performer may still approach the style without being overwhelmed by the amount of material by following the pedagogical approach initiated by Purandara Dasa. By progressing through simple devotional songs, more involved rhythmic and melodic compositions, and finally kritis, a Western learner follows a natural track which leads them to proficiency. It takes a lifetime for professional jazz musicians to learn all of the “standard” tunes, and in the same way it takes years for someone to achieve mastery in the playing of ragas in the Carnatic style.

The gamakas present in each raga necessitate an extreme level of attention to detail and subtlety in musical performance. Gamakas not only include grace notes or shakes, but inflections of pressure on specific notes as well as slides and bends between pitches. Performers must achieve a high level of control in order to fully display the idiosyncrasies of the gamaka, especially when attempted on the saxophone. By nature of closed tone holes and mechanical construction intended for projection and clarity, rendering subtle changes in pitch and smooth, graceful ornaments is markedly difficult on

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<sup>252</sup> Kaufman, *The Ragas of South India*, x.

<sup>253</sup> Viswanathan and Allen, *Music in South India*, 48.



the saxophone. Gamakas cannot be accurately displayed in Western notation; they can only be written in general and reductive terms. To fully understand and incorporate these gamakas into one's performance of Carnatic music, diligent listening of masters, such as Kadri Gopalnath, must be undertaken. A student must approach this listening practice with a high level of musical scrutiny, carefully considering how each gamaka is rendered and how it contributes to the overall impression of the raga. While this document replicates some of the physical modifications to the saxophone that Gopalnath applied to his personal instruments, these alterations are not explicitly necessary for accurate performance of gamaka and other musical inflections found in Carnatic music.

Close study of Carnatic music engages with pitch accuracy and reproduction in a way not typically encountered in Western musical traditions. All Carnatic musicians sing the compositions they perform, even if they are primarily an instrumentalist.<sup>254</sup> The practice of singing compositions using the swara syllables and the lyrics requires each student to have an acutely attuned ear and a strong sense of pitch, especially considering the slight variations in pitch that are prevalent in Indian music. While microtones are not explicitly stated in the construction of commonly performed ragas (i.e., notes which describe a raga fall within the 12 chromatic pitches available on a Western keyboard) many of the gamakas and ornaments are microtonal in nature.

As described earlier in this work, sruti is the concept of pitch that can take on multiple meanings in Carnatic music. It can refer to the drone which is present in all compositions, but it can also describe the smallest interval of pitch delineation. As Western musicians continue to listen to and engage with Carnatic music they will develop this acute sense of pitch at the microtonal level. Pitch differences may be

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<sup>254</sup> Kumar, “If You Can Speak, You Should Sing”

difficult to hear when listening to a singer or string instrument, such as the veena or violin, but the microtonal falls and slides are more easily discerned by a Western saxophonist when listening to Kadri Gopalnath.

Improvisation as it is rendered in the alapana, niraval, and swara kalpana represent the highest level of integration of all of the musical elements described in this study. Manodharma sangita, improvised music in all of its forms, necessitates mastery of ragas, tracking of the tala, and an understanding of the stylistically appropriate passages and phrases used in Carnatic music. Musically convincing improvisation requires close study of performers, including Kadri Gopalnath and all of his gurus, and any other Carnatic musicians one may be interested in. The benefits of practicing musical improvisation in regards to one's whole musicianship is encompassed in numerous studies and academic works, but the most fundamental benefits include improved creativity and fluency in one's musical performance. Christina Larsson's literature review of the benefits of improvisation in music education and musical performance (from the *British Journal of Music Education*) provides a point of departure for further study of improvisation's musical and educational benefits.<sup>255</sup>

Practicing improvisation engages all aspects of musical creation and gives the Carnatic student the opportunity to integrate what they have learned from this study. Transcription of improvisations performed by Kadri Gopalnath included in this work provide short examples of how a master of the style approaches improvisation, but the amount of transcription provided is limited and cannot hope to represent the entirety of improvisation in the Carnatic style. Transcription is most beneficial when carried out

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<sup>255</sup> Christina Larsson, and Eva Georgii-Hemming. "Improvisation in General Music Education – a Literature Review." *British Journal of Music Education* 36, no. 1 (2019): 49–67. <https://doi.org/10.1017/S026505171800013X>.

personally by the learner and this is the avenue that the author encourages those interested in performing Carnatic music to pursue. Appendix C lists recordings recommended for further study of Gopalnath's recorded output.

The legacy of Kadri Gopalnath's performance career provides the Western saxophonist a musical inroad to Carnatic music and how it may be implemented on a Western instrument. An understanding of the history, associated culture, and musical elements of the Carnatic style combined with study of Gopalnath's performance career establishes a foundation for life-long study. It is not feasible to fully describe a 3,000-year-old musical tradition in this work, or any single document, or to become proficient in this style in a limited amount of time. As with learning any style of music, full competency in the Carnatic tradition can only be achieved through years of study, listening, and immersion. Saxophonists are benefited by Kadri Gopalnath's pioneering career and legacy, and it is my hope that some may use this document to launch their study of his life, performances, and the music of South India.

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## APPENDIX A

### LIST OF TERMS

<i>Aksaras</i>	Individual beats within the tala.
<i>A'kshiptika</i>	Introduction section in an alapana.
<i>Alankara</i>	Rhythmic training exercises in complex talas.
<i>Alapana</i>	Free, melismatic improvisational music played before a composition.
<i>Angas</i>	“Limbs,” larger groupings of aksaras within the cycle of a tala.
<i>Annupallavi</i>	“Continuation of the sprouting,” section of a composition which originated in the kriti.
<i>Anudrutam</i>	One beat of the hand in the tracking of the tala through kriya.
<i>Arohana</i>	Ascending path of swaras within a raga.
<i>Avarohana</i>	Descending path of swaras within a raga.
<i>Avarta</i>	One complete cycle of a tala.
<i>Bhajans</i>	Simple, devotional songs implemented in early stages of musical training.
<i>Bhakti</i>	Expression of devotion in the Hindu faith.
<i>Bhashanga</i>	Ragas which include a “foreign” swara.
<i>Bhava</i>	Gestalt or overall feeling of a raga.
<i>Brahman</i>	Highest social caste of India, many prominent composers belong to this caste.
<i>Brihaddeshi</i>	Sixth-eighth century CE text attributed to Matanga Muni first describing ragas.
<i>Caranam</i>	“Feet,” section of a composition after the pallavi.

<i>Carnatic</i>	Pertaining to the music and culture of southern India.
<i>Chakras</i>	12 groupings of six ragas which further classifies the melakarta ragas.
<i>Chakravarthy</i>	“Emperor.”
<i>Devadasi</i>	“Servants of god,” female members of Hindu temples well-versed in literature and the arts.
<i>Drutam</i>	Combination of a beat and a wave in the tracking of the tala through kriya.
<i>Gamaka</i>	“Graces,” ornamentations applied to specific notes in a raga.
<i>Ghatam</i>	Idiophone made of a clay pot and used as secondary rhythmic accompaniment.
<i>Gitams</i>	Pedagogical compositions for young Carnatic performers.
<i>Hindi</i>	Primary language spoken in northern India.
<i>Hindustani</i>	Pertaining to the music and culture of northern India.
<i>Jatis</i>	“Families” of tala, based on the number of aksaras within each cycle.
<i>Janta</i>	Type of gamaka characterized by stresses.
<i>Janta Varisai</i>	Etude-like composition focusing on repeating a swara twice in a row and emphasizing the second.
<i>Janya</i>	“Child” ragas derived from the 72 melakarta ragas.
<i>Jaru</i>	Type of gamaka characterized by slides or glissandi.
<i>Javalis</i>	Type of dance compositions usually performed at the end of Carnatic concerts.
<i>Kalpita Sangita</i>	Pre-composed music in the Carnatic tradition.
<i>Kampita</i>	Type of gamaka characterized by oscillations or shakes.
<i>Kanakku</i>	“Calculated” part of the tani avarttanam, rhythmic figures are highly complex.
<i>Kanjira</i>	Membranophone used as secondary rhythmic accompaniment in Carnatic music.

<i>Kannada</i>	Dravidian language spoken in southern India, official language of Karnataka.
<i>Kirtana</i>	Simpler version of kriti, more devotional in nature.
<i>Kriti</i>	Long-form compositions best suited to foster improvisation.
<i>Kriya</i>	Physical metering of the anga of a tala through claps, finger taps, and waves.
<i>Kutcheri</i>	“Court,” format of a Carnatic concert used to the present day.
<i>Laghu</i>	Sequence of a beat and successive finger tapping in the tracking of the tala through kriya.
<i>Manodharma Sangita</i>	Improvised music in the Carnatic tradition.
<i>Madhyama Stayi</i>	“Primary octave” of a Carnatic performer’s playing range
<i>Madhyama Kala</i>	Improvised music of a medium tempo performed after the alapana and before the kriti.
<i>Makarini</i>	Closing section in an alapana.
<i>Malayalam</i>	Dravidian language spoken in southern India, official language of Kerala.
<i>Melakarta</i>	72 “parent” ragas which contain all swaras in both ascent and descent.
<i>Morsing</i>	Jaw-harp used in Carnatic music as secondary accompaniment.
<i>Mridangam</i>	Double-sided Carnatic membranophone, used for rhythmic accompaniment.
<i>Nagaswaram</i>	Carnatic double reed aerophone, primarily used in ceremonial settings.
<i>Niraval</i>	Improvisational type in which one line of a kriti is repeated with new melodic settings.
<i>Padams</i>	Type of dance compositions usually performed at the end of Carnatic concerts.
<i>Pallavi</i>	Preliminary sections of a composition (“sprouting”), also improvised music around a pre-composed theme

<i>Periya Melam</i>	“Temple ensemble,” outdoor ensemble associated with religious and cultural events.
<i>Prayoga</i>	Small musical phrases which convey emotional content within a raga.
<i>Puspasutra</i>	Fifth-second century BCE text describing pre-raga pitch classifications.
<i>Raga</i>	Pitch collections (scales) used in both Hindustani and Carnatic music.
<i>Ranj</i>	Sanskrit word meaning “color” or “shading” from which raga is derived.
<i>Sancara</i>	Small musical phrases which convey emotional content within a raga.
<i>Sangraha</i>	Alapana that is brief and only introduces main ideas of a raga.
<i>Sankirtanam</i>	Complex compositions originally written to accompany dance.
<i>Sanpurna</i>	Alapana that is extended and explores all musical possibilities.
<i>Sanskrit</i>	Sacred, classical language of Hinduism, many compositions are composed in Sanskrit.
<i>Sarali Varisai</i>	First exercises which combine raga and tala for an early-stage learner.
<i>Sargam</i>	Pedagogical notation of Carnatic music, displays swaras by their first letter.
<i>Sarva Laghu</i>	“Time flow,” part of the tani avarttanam that is easily followed and simplistic.
<i>Shehnai</i>	Hindustani double reed aerophone.
<i>Sitar</i>	Hindustani chordophone, most prominent melodic string instrument.
<i>Solkattu</i>	Syllable system used in counting and organizing rhythmic subdivisions.
<i>Sruti</i>	Sustained drones, distinctions of pitch level.
<i>Sruti Petti</i>	Bellows-operated aerophone used to produce a drone (sruti box).
<i>Swarajathis</i>	Complex compositions originally written to accompany dance.
<i>Swara Kalpana</i>	Rhythmic and melodic improvisation which uses syllables of the swaras.

<i>Swaras</i>	“Solfege” syllables used to describe the seven fundamental notes.
<i>Swarasthanas</i>	Use of subscript numerals to indicate 16 possible formations of swaras.
<i>Tabla</i>	Hindustani membranophone, twin hand drums.
<i>Tala</i>	Rhythmic cycles governing Carnatic compositions.
<i>Talam</i>	Small cymbals used in Periya Melam ensembles.
<i>Tambura</i>	Long-necked lute which provides a continuous drone in Carnatic performance.
<i>Tamil</i>	Dravidian language spoken in southern India, official language of Tamil-Nadu.
<i>Tani</i> <i>Avarttanam</i>	Improvisation of the rhythmic performer at the end of a composition.
<i>Tavil</i>	Double-headed membranophone used in Periya Melam ensembles.
<i>Telegu</i>	Dravidian language spoken in southern India, official language in Andhra Pradesh and Telangana.
<i>Tillanas</i>	Type of dance compositions usually performed at the end of Carnatic concerts.
<i>Uncavritti</i>	Devotional performance practice in which musicians traveled door-to-door to sing to worshippers.
<i>Vakra</i>	“Crooked” ragas which briefly change direction in their ascent or descent.
<i>Vardhani</i>	Main body section of an alapana.
<i>Varnam</i>	Etude-like composition which begins most Carnatic concerts.
<i>Vedas</i>	Ancient Hindu texts (1500 – 900 BCE), contain hymns and chants.
<i>Vidwan</i>	Master teacher or guru.
<i>Vina (veena)</i>	Carnatic chordophone, long-neck lute used as a melodic instrument.
<i>Yatra</i>	Religious pilgrimage to a sacred location.

## APPENDIX B

### RECOMMENDED RECORDINGS

For longevity and consistency, a Google Drive folder is linked [here](#) containing files of each performance transcribed in Chapter 8. The Darbar Festival's [YouTube](#) channel is a valuable resource for Carnatic music, but most videos in its library are edited down from full performances. The full concerts are available on the festival's [website](#), but a paid subscription is required for access.

Kadri Gopalnath's recorded output is extensive, both of commercial recordings and professionally produced and released live performances. Due to the large size of material from Gopalnath, the author suggests the recordings below as starting points for listening, transcribing, and further individual study. These recordings present fragments of Gopalnath's career from early phases through the 21<sup>st</sup> century. Information for each recording can be found in their corresponding entry in the Bibliography of this document. All are commercially produced recordings and are available on music streaming platforms at the time of publication.

*Gem Tones* (1992)

*Divine Melodies* (Recorded 1997, released 2012)

*Sri Tyagaraja's Pancharatna Kritis* (2000)

*Kinsman* (2008, featuring Rudresh Mahanthappa)

*Chidanandam* (2009, live performance recording)

## APPENDIX C

### TRANSCRIPTIONS IN CONCERT PITCH


Below are copies of the transcriptions presented in Chapter 8 of this document transposed to concert pitch for any reader who does not play the saxophone but wishes to engage with the material.

## Improvisations on "Om Shambo Shiva Shambo"


Raga Revati

Saraswati/Gopalnath


2:26 Embellishing Pa and Sa Kampita gamaka




3 Jaru gamaka, emphasizing Ni



5 Jaru gamaka, emphasizing Ri



7 Sa, to Pa, descending back to Sa Kampita gamaka





# Alapana in Raga Hamsadhwani

Kadri Gopalnath

0:33

Pulse (Janta) Violin

5 Violin 3 (Janta)

8 Violin (Jaru)

11 C3 Violin

14 (Jaru)

16 Violin (Jaru) Full

19 C3 Full Violin C3

22 Violin C3 Violin Violin

25 Violin

28 Full Violin Violin

2

31 Violin Violin Full

34 Violin (Jaru) Full (Janta)

36 Violin Violin 3

38 6

40 Violin 3

42 3

44 Violin (Jaru)

Violin 47 Violin

49 (Jaru) Violin

51 3 Violin 3

53 Violin Violin Violin

55 Violin Violin Violin C3 Violin Full

58 Violin

60 C3 Full (Violin playing with saxophone)

62 6 6 6 6

63

64

66 C3

67 Full

69 Violin C3 Janta

4

72 C3 Violin 3 Violin Begins Alapana

# Improvisations on "Nadaloludai"

Raga Kalyanavasantham

Tyagaraja/Gopalnath

0:28 Emphasizing Sa and Dha

Return to line of Kriti

3 0:44

Return to line of Kriti

5 0:53 Ascending sequence through raga

Return to line of Kriti

7 1:01 Ascending sequence through raga

Return to line of Kriti


9 1:09 Ascending sequence through raga

Return to line of Kriti

## APPENDIX D

### DEGREE REQUIRED RECITAL PROGRAMS

#### DMA Degree Required Solo Recital 1



UNIVERSITY OF  
**SOUTH CAROLINA**  
School of Music

*presents*

**CALEB CARPENTER, saxophone**  
in  
**DOCTORAL RECITAL**  
with  
**Claudio Olivera, piano**  
**Matthew Booth, piano**

**Tuesday, January 18, 2022**  
**6:00PM • Recital Hall**

<i>Holy Roller</i> (1997)	Libby Larsen (b. 1950)
<i>Migrations</i> (2019)	Nebal Maysaud (b. 1995)
<i>Fantasia</i> (1948) Animé Lentement Trés animé	Heitor Villa-Lobos (1887-1959)
<i>Duduk I</i> (2000)	Gabriel Erkoreka (b. 1969)
<i>Solitude of Stars</i> (2020)	Stacy Garrop (b. 1969)
<i>Chant</i> (1991; revised 2002)	Augusta Read Thomas (b. 1964)

*Mr. Carpenter is a student of Dr. Clifford Leaman.  
This recital is presented as a partial fulfillment of the  
Doctor of Music Degree in Performance.*

DMA Degree Required Chamber Recital (Performed with the Doclé Reed Quintet in  
residency at the University of Florida)

Doclé Reed Quintet  
Guest Artist Recital  
Collaboration with the University of Florida Composition Studio

Friday, March 25<sup>th</sup>, 2022  
MUB101 Recital Hall, School of Music  
5:10PM

### Program

The Passion of Alan Turing Jordan Alexander Key

Sweet Moments Before Night Falls Jane Kozhevnikova

5 Short Pieces For Reed Quintet Chris Shelton

Intermission

Dissonant Relief Michael Papa

The Invention of Routine Diogo Carvahlo

convergence Dalton H. Regnier

DMA Degree Required Solo Recital 2



UNIVERSITY OF  
**SOUTH CAROLINA**  
School of Music

*presents*

**CALEB CARPENTER, saxophone**  
**in**  
**DOCTORAL RECITAL**

**with**  
**Matthew Booth, piano**

**Monday, October 3, 2022**  
**7:30PM • Recital Hall**

*Cadenza* (1974)

Lucie Robert  
(1936-2019)

*San Antonio* (1994)  
The Summons  
Line Dance  
Couples' Dance

John Harbison  
(b. 1938)

*Les Folies d'Espagne* (1701)

Marin Marais  
(1656-1728)

*Dam Mwen Yo* (2016)

Nathalie Joachim  
(b. 1983)

*Incantation and Dance* (1942)

William Grant Still  
(1895-1978)

*Caleb Carpenter is a student of Dr. Clifford Leaman. This recital is  
presented in partial fulfillment of the requirements for the Doctor of  
Musical Arts degree in Performance.*



*Presents*

**CALEB CARPENTER**  
In  
**DOCTORAL RECITAL**

With  
**CLAUDIO OLIVERA, piano**

Monday, April 10 • 4:30 p.m. Recital Hall

*Der Hölle Nachklang I (1992)* Dmitri Terzakis  
(b. 1938)

*Sonata for Oboe and Piano, FP 185 (1962)* Francis Poulenc  
(1899-1963)  
*Elégie*  
*Scherzo*  
*Déploration*

*Sonate (1970)* Edison Denisov  
(1929-1996)  
*Allegro*  
*Lento*  
*Allegro Moderato*

*Devadeva (1842)* Swati Tirunal  
(1813-1847)

*Adiós Nonino (1959)* Astor Piazzolla  
(1921-1992)

*Caleb Carpenter is a student of Dr. Clifford Leaman.  
This recital is presented in partial fulfillment of the requirements for the  
Doctor of Musical Arts degree in Performance.*