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Almost Unison : Returns to the Unfamiliar in Rajna Swaminathan's *Of Agency and Abstraction*

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by

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The Thesis of Varun Rangaswamy is approved, and it is acceptable in quality and form for publication on microfilm and electronically.

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In this paper, I explore the making and recording of "Offering," the first track of Rajna Swaminathan's 2019 debut album *Of Agency and Abstraction.* Performed by RAJAS, a set of musicians who are differently situated in diverse musical practices, the album provides an opportunity to understand and imagine improvisational possibilities across cultural space. Rather than trying towards an understanding of technical details, I use an examination of Swaminathan's improvisational strategies, tensions between notation and enacted sound, and

the varying musical subjectivities of the members of RAJAS to inform a broader theorization of musical liminality. While Swaminathan's work is oftentimes characterized as a point of intersection between "Indian music" and "Jazz," I would like to propose a more fluid reading, one that does not take any named musical tradition as a prior truth. As such, I focus on how "Offering" exists liminally amidst the multiple and specific stylistic tendencies of the musicians who perform it rather than as an intersection of separate, originary wholes. Further, using the critical theory of Homi Bhabha and Gayatri Spivak as a theoretical framework and building on the scholarly work of Vijay Iyer, Elisabeth Le Guin, and George Lewis, this analysis posits *Of Agency and Abstraction* as a model for musical theorization that is grounded in the body.

NOTE ON TRANSLITERATION

In this paper, I spell Sanskrti-based and Dravidian-based words by following the International Alphabet of Sanskrit Transliteration (IAST). However, if a word appears multiple times, only the first instance of that word is written with diacritics.

INTRODUCTION

As a mrudangam player, Rajna Swaminathan is well versed in some of the many practices of South Indian percussion improvisation—like those associated with Karnāṭak music (also spelled Carnatic, Karnatic, Karnatik)—having played many years in what is considered the global hub of Karnatak music, the Madras Music Festival, which takes place every December. Having grown up in Maryland, Swaminathan has navigated multiple spheres of existence, musically and otherwise, travelling to India year after year to participate as a professional mrudangam accompanist in winter and summer concert series, while also participating in diasporic musical contexts in the U.S.

Karnatak music is often referred to as a type of South Indian classical music. As Amanda Weidman has noted, however, the term "classical" as it applies to Karnatak music was borrowed from terminology used to describe European art music when India was a colony of Great Britain.[1] As what we understand today to be Karnatak music developed under British colonial rule, Weidman reminds us that it is, in fact, a colonial music, inextricable from European influence, *that it never wasn't a hybrid music*. Even as a "classically trained" professional mrudangam player, Swaminathan was always a hybrid musician.

It is from this already exponentially variegated musical subjectivity that Swaminathan reaches toward musical exchange, improvising with musicians in Jazz/creative music scenes who are themselves multifaceted in their cultural referentiality. The other musicians who are heard in *Of Agency and Abstraction* include: Anjna Swaminathan (violin), María Grand (saxophone), Miles Okazaki (guitar), Stephan Cump (double bass), Ganavya Doraiswamy (voice), and Amir

[1] Weidman, Amanda. *Singing the Classical, Voicing the Modern: The Postcolonial Politics of Music in South India.* Durham: Duke University Press. 2006. Print.

ElSaffar (trumpet) (although Doraiswamy and ElSaffar are not heard on the first track, "Offering"). Swaminathan put this collective of musicians together around 2013 in the crosshairs of her own musical transitory period away from the Karnatak establishments of Madras toward the creative music scenes of New York City. Similarly, each of these musicians were, and are currently also constantly navigating through their own complex intersections of musical practice, cultural meaning, and geographic authenticities. While the mrudangam, in its physical appearance and particular sound, often still acts as a point of reference, gesturing to an "original" South Indian art, Swaminathan's use of the instrument reaches beyond loci of geographical authenticity, instead acknowledging the diasporic nature of her particular subjectivity and embracing the transformative potential latent in the tensions of cosmopolitan collaboration.

CHAPTER 1: THE ARTISTS

The music in *Of Agency and Abstraction* is constituted by the multiple strands of musical practice that the members of RAJAS carry with them. Importantly, it is not that each of them carries a singular or primordial state of "culture," but that each of them individually carries multiplicitous, constantly moving histories, which, when brought together, exponentiate into a hybridized collection of already hybrid beings. Now, in addition to the word hybrid, which has several weighted intellectual genealogies attached to it, I would like to describe the musicians of RAJAS as *ambiguous*, not clearly signifying any one history that can be neatly packaged into a singular term like "Indian music" or "Jazz" or "Fusion." This is not to suggest that each of these terms is equivalent in their broadness or reductive deployment, but that all of them, like the musicians they are so often used to describe, are metonyms of several histories that intertwine and may even contradict each other; histories of freedom, collectivism, collaboration, colonialism, oppression, individualism. With nothing clearly defined, all the musicians' practices act as fluids, diffusing across borders of signification, tenuously balancing between the overlaps and gaps between each other, which is what makes at least a brief exploration of the poly-situatedness of their personal musical backgrounds essential to an analysis of this album.

In an interview I conducted with Swaminathan, I asked her what happened when she improvised with musicians who were unfamiliar with Karnatak musical forms. In her response, she offered a corrective, clarifying that the musical practices that collided in her improvisations with others in the creative music scene—particularly the musicians who now form RAJAS—were not completely foreign to each other, that those improvisations were hardly the first meeting point of those musics:

> I mean, it's not really alien to them […] it was a fairly cosmopolitan crowd […] it was people who had been exposed to these things, so it was not beyond their grasp. For folks

> like Miles Okazaki, guitarist, he had studied kanjira [percussion instrument often played in Karnatak music] for ten years […] there was a fluency in at least having listened to a lot of music, whether it was Hindustani or Karnatak music. The idea of an ālāpana, or an open-ended, out-of-time improvisation, was not something outside of what they would be able to understand and participate in. I never felt like I had to explain it.

Miles Okazaki, the guitarist of RAJAS, is not the only member who is fluent in more than one modality of musicking. María Grand works in jazz circles in New York as a saxophonist and a vocalist, while also creating various forms of visual art. Anjna Swaminathan, Rajna's sister, is a violinist who is trained in the style of South Indian Karnatak music, but who has also been commissioned to compose pieces for the Del Sol String Quartet and International Contemporary Ensemble; additionally, she is a theater artist and dramaturg, versed in the South Indian dance style of Bharata Nāṭyam, and participates in multimedia artistic projects[2]. Stephan Crump has navigated in his life through classical European musical pedagogy, punk and rock experimentation, and collaboration in Jazz and creative music. All of these ambiguous musical allegiances contribute to the way "Offering" refuses the signs of designation.

Swaminathan's artistry works *against* certain tides of multiculturalism that emphasize dichotomous thinking, essentializations, and myths of origin, but it does so by working *towards* a landscape of cameraderie and loving vulnerability. She positions her music in the interstices of cultural discourse, embracing uncertainty as a central characteristic of her practice, in particular, "states of uncertainty or surrender that enable us to receive alternative modes of being" (Swaminathan 2021). Swaminathan has used states of rhythmic instability and compassionate listening as modes of musical discourse, always settling the slightly unsettled groove, adjusting to the musical changes that others bring. She takes a compassionate approach toward collective

[2] https://www.anjnaswaminathan.com/interdisciplinary

improvisation, citing a conversation that took place in a rehearsal between RAJAS's double bassist Stephan Crump and their violinist Anjna Swaminathan:

> I remember in one rehearsal he [Stephan] was just assuring Anjna that they could play anything, and they would find a way to meet and make it work. I was also trying to hear that as an ethic that could be really present throughout the ensemble, which is: you can play anything, there's no mistake, really. And that goes for rhythm too. You can find a way to exist in the form and maybe you're not exactly with everybody, but we will catch you, we will find a place for it, and we'll make it work.

Settled yet unsettled, the improvisational philosophies practiced in RAJAS point toward a perpetually aspirational stance, always trying for a stability that is never fully there while also embracing the inevitability of slight disjuncture. Such a stance allows for a glimpse at what Swaminathan calls "cracks in the foundation," gaps in the communication across multiple cultural spaces, or the incompleteness of a singular approach that necessitates the addition of another.

In its nascent stage, RAJAS did not consist of all the same musicians who are on this album. Swaminathan began improvising with and composing for various collectives of musicians in New York City in 2013, trying to converse with musicians in New York's Karnatak music and creative music scenes. In those dialogues, she experimented with putting common Karnatak compositional forms, improvisational forms, and various other creative models into new contexts. She usefully refers to these models as "inherited forms." In my interview with her, Swaminathan recalled:

> I was really inspired by my experiences in the creative music scene, and I was wondering if something similar could happen within what I was seeing at that time as Indian classical music and its shared vocabulary *and finding a way out of the shared vocabulary* and actually trying to do something different with the inherited forms. (My emphasis)

Swaminathan considered a method of nuancing what already existed in her body, the ways of musicking she inherited through her embodied mrudangam playing. But in order to nuance and even complicate those inherited forms, Swaminathan expressed in our interview how she felt the first few musical configurations and concerts she experimented with lacked a sense of "contention":

> It still felt locked into structures that everybody was familiar with […] that first concert was an eye-opener for me to be like, well, this isn't going to work if we're all able to fall back on familiar language because that's just going to be convenient. We really have to be challenged […] I remember talking to George Lewis […] he brought up this word, contention. And I think that's kind of what I discovered in that moment, which was that there wasn't enough contention in that group of musicians. There wasn't an element of needing to look at the music in a different way. All the concerts after that, I slowly worked to tweak the configuration of instrumentation and I had people from other backgrounds, mostly people that I knew from the creative music scene, brought in alongside these musicians I knew from the Karnatak scene in New York, and slowly it started to become like a hybrid ensemble. I had some compositions that we would just try out, or [we would] embellish on a kriti or a tillana [compositional forms familiar to musicians involved in Karnatak music practice] or something like that. So, it started out in that way of trying to deal with sort of familiar forms but maybe improvising with them in a new way […]

As a way of reaching towards a more harmonious common vernacular, Swaminathan emphasized the importance of difference, even contradiction. In her attempts to facilitate multiple grounded musical dialogues across cultural space and time, Swaminathan not only expected contention but actively tried to engage with it. Importantly, rather than subscribing to pure oppositionalities, Swaminathan finds an opening (or openings) to improvised alterity through the contradictions and contentions that must arise from diasporic musical discourse. I am reminded here of Homi Bhabha's orientation towards political agonism. For Bhabha, what he calls the "temporality of negotiation," as opposed to negation, informs a "historical connectedness between the subject and object of critique," an acknowledgement that it is impossible to identify any original meeting point, that the Self/Other, Occident/Orient, East/West

binaries have always been entwined in a complex set of overlapping contradictions. This "progressive reading," as Bhabha puts it, "is crucially determined by the adversarial or agonistic situation itself; it is effective because it uses the subversive, messy mask of camouflage and does not come like a pure avenging angel speaking the truth of a radical historicity and pure oppositionality" (Bhabha 1994). The musical contention Swaminathan desired does not come from any cleanly defined distinction between separate musical histories, but from the infinite and subtle possibilities offered by the uncertainty inherent in the interaction of multiply displaced musical subjectivites.

CHAPTER 2: THE EVOLUTION

The circumstances around the creation of "Offering" must be understood as manifold. On the one hand, the piece has certain reference points that recall musical forms and styles associated with Karnatak music; on the other hand, those references cannot be neatly situated in any one historical instance or any one characteristic of a musical tradition. For instance, "Offering" is written in the rāga[3] Gāvati. The way ragas are sung often involves slides and oscillations in pitch, difficult to imitate on an instrument like the piano,[4] which is precisely the instrument Swaminathan used to compose the piece. Furthermore, the form of the piece was ambiguous from the start. In our interview, she spoke about how "Offering" was originally a commission from a dance company, how they asked her to write a *pushpānjali,* or the music that accompanies the first dance of a Bharata Natyam performance. As she wrote the piece, however, it ended up taking the form of a *varṇam,* a compositional form common in Karnatak music performance:

> I was commissioned to write this piece for a dance company, and I originally recorded it with myself on piano and mrudangam and Anjna on violin. We sort of co-composed it and it was supposed to be a pushpanjali, and I ended up doing it in [a varnam] format for some reason. This was a dance company that did some mix of Bharata Natyam and modern dance. They just gave me that prompt, I don't think it had to be in that format, so this is the format I ended up going with. It just sort of happened organically. I was playing around with some shapes on the piano…it was very pianistic, definitely, trying to deal with that raga [Gavati] but dealing with shapes that wouldn't normally be dealt with if you're singing it. It's not a very singable melody.

Swaminathan references the vocality of Karnatak music, playing with the tension between using the voice to sing a raga and using the piano to play a raga. More than just a transference of instrumentation, the doubling of the raga Gavati in the piano with mrudangam and Karnatak

[3] A *rāga* is a type of melodic structure that is organized into scalar patterns and idiomatic phrases; there are thousands of ragas in existence, each of which has a name.
[4] A later part of this paper will go into a deep explanation of what a raga really is and how it is used.

violin ambiguates the cultural referentiality of instrumentation, making it multifold. Such ambiguation can also been seen in the ways Swaminathan altered the make-up of RAJAS. When the group settled into its current configuration, it started playing Swaminathan's compositions, including "Offering," which at that point had already signifcantly morphed from its initial conception. From the beginning an experiment in unsettled form and instrumentation, "Offering" bears a fluid ontology, ambuigating its own identity by evading strict categorization. Since the piece had been performed multiple times at the moment the album was made (as were all of the other tracks), the making of the album was used as an opportunity to record and document the pieces RAJAS had been playing for four or five years. "Offering," along with the other eleven pieces on the album, had gone through half a decade of iterations before ending up as a part of these recordings; it is a documentation of only one instance of the piece, an instance that can capture neither its own long and complicated history nor the variegation of the histories it signifies. The circumstance around the making of "Offering" already lent itself toward a sense of ambiguity, a slippery evasion of *thisness*, not quite one thing or another, but floating in between many things, blurring the lines of signification.

Further complicating the matter, the raga Gavati is considered to be a "borrowed" raga, borrowed from Hindustani music, a similar Indian musical practice, but one that claims a different set of histories. The melodic content, just like the musicians who perform that content, is already hybrid before it even becomes part of the piece. A technically and culturally complex raga, ambiguous in terms of its geographical allegiances, Gavati sets up an appropriate platform for Swaminathan to exponentiate the hybridity already present in her musical materials and her performance group.

In order to thoroughly examine "Offering," an understanding of some fundamental Karnatak musical concepts will be necessary, namely *rāga* and *tāḷa.* Often insufficiently translated as some versions of "melodic scheme" and "rhythmic cycles," respectively, raga and tala are complex modalities used as both pedagogical tools and theoretical frameworks to *understand* and *manifest* coherent melodic structures and rhythmic phrasing. In "Offering," Swaminathan draws on these types of "inherited forms" in addition to various compositional and improvisational forms. As these key concepts are integral to "Offering," the following pages will be dedicated to a more complex understanding of some of the musical frameworks and genealogies at work in the piece.

CHAPTER 3: WHAT IS TALA

Tala usually refers to rhythmic cycles that employ hand gestures as a way of keeping time during performance, but it is also a way of establishing, disturbing, and recallibrating grooves in particular ways. Before discussing that, though, let us gain a technical understanding.

During a performance, singing artists keep time with their hands and instrumentalists will usually keep time with their left foot. However, instrumentalists will always learn the hand gestures first. In order to understand tala, we will first look at the type of hand gestures that are involved.

There are three main terms that refer to the different classes of hand gestures: anudrhtam, dhrtam, and laghu. Anudhrtam refers to a clap of the hand (we can call this a 'beat'). Dhrtam refers to a beat followed by a wave of the hand. Laghu refers to a beat followed by a variable number of finger counts (always starting with the pinky).

There are five types of laghus, each of which differs by its amount of finger counts: we call this class of different laghu types, jāti.

Table 3.1

Chaturashra gati	beat followed by 3 finger counts (4 total counts)
Tishra gati	beat followed by 2 finger counts (3 total counts)
Mishra gati	beat followed by 6 finger counts (7 total counts)
Khanda gati	beat followed by 4 finger counts (5 total counts)
Sankeerna gati	beat followed by 8 finger counts (9 total counts)

It is important to note that each of these words (chaturashra, tishra, etc.) refers to the *total counts,* and not to just the finger counts. So chaturashra means 4, tishra means 3, and so on.

Anudhrtams, dhrtams, and laghus are combined to create seven distinct formulas that a tala can follow, and these formulas of hand gestures are also referred to themselves as talas.

Table 3.2

Dhrūva tala	1 laghu, 1 dhrtam, 2 laghus
Maṭhya tala	1 laghu, 1 dhrtam, 2 laghus
Rūpaka tala	1 dhrtam, 1 laghu
Jhampa tala	1 laghu, anudhrtam, 1 dhrtam
Tripuṭa tala	2 laghus, 2 dhrtams
Aṭṭa tala	2 laghus, 2 dhrtams
Ēka tala	1 laghu

Each of these formulas must be filled with one of the five jātis (chaturashra, tishra, mishra, khaṇḍa, or saṇkeerṇa), otherwise it is just a formula and it does not make practical sense.

For example, if we apply Chaturashra jāti [1 beat followed by 3 finger counts] to Dhrūva tala [1 laghu + 1 dhrtam + 2 laghus], we get: [(1 beat + 3 counts) + (1 beat + 1 wave) + (1 beat + 3 counts) + (1 beat + 3 counts)]

If we add up all the individual parts, we see that Chaturashra jāti Dhrūva tala is a 14-beat cycle.

Since we have 5 jātis and 7 talas, and each of the 5 jātis can be applied to each of the 7 talas, this yields 35 types of talas.

There is one more classification type, that of gati. We can think of gati as subdivisions, or how many counts we can divide up each beat into. The five types of gati correspond to the five types of jati:

Table 3.3

Chaturashra gati	4 subdivisions
Tishra gati	3 subdivisions
Mishra gati	7 subdivisions
Khanda gati	5 subdivisions
Sankeerna gati	9 subdivisions

Each gati corresponds to a set of spoken syllables. These syllables are known as solkaṭṭu, (or konnakkol, depending on what region/practice in India one is referring to). They are as follows:

Table 3.4

Chaturashra gati	ta-ka-dhi-mi
Tishra gati	ta-ki-ṭa
Mishra gati	ta-ka-dhi-mi-ta-ki-ṭa
Khanda gati	ta-ka-ta-ki-ṭa
Sankeerna gati	ta-ka-dhi-mi-ta-ka-ta-ki-ṭa

Let us take the two most common talas used in Karnatak music performance: Ādi tala and Rūpaka tala (this is separate from the "Rupaka tala" in the list of formulas above!).

Adi tala is a cycle of eight beats. Using the mathematical configuration listed above, we can formulate a cycle of eight beats as Chaturashra Jati Triputa Tala: [(1 beat + 3 finger counts) + (1 beat + 1 wave) + (1 beat + 1 wave)] or [4 + 2+ 2], which is a total of 8.

Rupaka tala is a cycle of three beats (again, different than that "Rupaka tala" in the list of tala formulas above). We can formulate such a cycle as Tishra Jati Eka Tala: [1 beat + 2 finger counts] or [1 + 2] , which is a total of 3. However, in practice, the hand gestures for this Rupaka tala are usually changed to: [(anudhrtam) + (dhrtam)] or [(1 beat) + (1 beat + 1 wave)].

The "beat" or pulse in a Karnatak music concert is usually provided in complex rhythmic patterns from a mrudangam artist (other percussion instruments that function in the same way include kanjira, ghatam, and tavil). The grooves, or *naḍais,* that a mrudangam artist plays are rooted in sets of spoken phrases—using solkattu—that are taught and learned aurally/orally. These phrases can be anywhere from 4 beats long to 40 or 50 or 60 beats long, or more. A mrudangam player will usually learn a large set of codified phrases in every tala, all of which are memorized, as well as a set of ending phrases, called *korvais.* A korvai is a longer set of solkattu that is used as a cue to end the current section and begin the next one, a cue that can happen during through-composed performance as an accompanist as well as during improvisations, both solo and group. In the small intricacies of nadais and korvais, adjustment is often necessary. In the recording of "Offering" we can often hear subtle movements, what Vijay Iyer might call "microrhythmic expression" (2002). In my interview with her, Swaminathan touched on this herself, speaking about how she was,

> …trying to find an approach in my body of how to relate to the instrument while relating to the ensemble while holding the form in my body so that I could know if somebody was out of place or if things needed to be adjusted. You kind of develop that sensibility in a Karnatak music setting because you have to be so attentive to being in the same place. And if there are these waverings of the tala among the ensemble, you start to get used to callibrating to these small movements or adjustments.

Swaminathan considers her mrudangam playing as an elastic grid, a stable yet malleable "basket," as she called it. She uses the mrudangam as a kind of glue, stabilizing the instabilities, yet allowing for micro-departures from the fabric. She sees that role for herself as a mrudgangam player in a polymusical setting as producing a grounding "so the players could feel free to depart and I would be the cohesive force" (Swaminathan). Indeed, understanding how "Offering" departs from inherited forms while also building a kind of creative coalition, how it supports and cares for the tensions inherent in what Swaminathan calls "diasporic play," is dependent on a

combined knowledge of the active musical and ethical practices of the musicians involved, in addition to technical understanding of those very inherited forms.

CHAPTER 4: PITCH SPACE IN KARNATAK MUSIC

Now, in order to understand raga, we will need a basic grasp of how pitch space is organized in Karnatak musical practice. And in order to do that, we must start with two crucial terms: *shruti* and *svara.* Both originating in Sanskrit, these words can be translated roughly as "hearing" or "ear,"[5] and "sound,"[6] respectively (though both have numerous translations). As a starting point, musically, we can think of shruti as "pitch" and svara as "note."

Just as in Western classical music pitch organization, pitch in Karnatak music is theoretically organized around twelve equally spaced notes within an octave. Also paralleling Western classical music pitch organization, those twelve notes are collapsed into seven note-names, which are called *svaras.* For the sake of an initial understanding, we can think of svaras as a kind of solfege, corresponding to Western solfege (Do, Re, Mi, Fa, Sol, La, Si). The full names of the seven svaras are as follows: Shadja(m), Rishabha(m), Gāndhāra(m), Madhyama(m), Pancama(m), Dhaivata(m), Nishāda(m).[7] Each of these names is abbreviated to its first two (or three in the case of Dhaivata) letters: Sa, Ri, Ga, Ma, Pa, Dha, Ni. (Later, we will use conventional Karnatak notational practice, abbreviating each svara even further to its first letter).

To understand how svaras work, let us think of them as scale degrees, with Sa as our first scale degree. If we map the seven svaras onto scale degrees, they can be defined as shown in Table 4.1. If we let Sa correspond to the pitch-class C, we can re-list our seven svaras mapped onto the seven Western note names as shown in Table 4.2.

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[5] Apte, Vaman Shivram. "श्रुति." *The Practical Sanksrit-English Dictionary.* Arya Vijaya Press, Pune, 1890, p. 1061.

[6] Apte, Vaman Shivram. "स्वरः" *The Practical Sanksrit-English Dictionary.* Arya Vijaya Press, Pune, 1890, p. 1160.

[7] These words are pronounced in some South Asian languages *without* the "m" at the end (i.e., Kannaḍa), and in other South Asian languages *with* the "m" at the end (i.e., Tamiḻ).

Table 4.1

Scale Degree 1	Sa
Scale Degree 2	Ri
Scale Degree 3	Ga
Scale Degree 4	Ma
Scale Degree 5	Pa
Scale Degree 6	Dha
Scale Degree 7	Ni
(Octave)	(Ṡa)

Table 4.2

C	Scale Degree 1	Sa
D	Scale Degree 2	Ri
E	Scale Degree 3	Ga
F	Scale Degree 4	Ma
G	Scale Degree 5	Pa
A	Scale Degree 6	Dha
B	Scale Degree 7	Ni
(C)	(Octave)	(Ṡa)

Though I have chosen C for simplicity, Sa does not have to correspond to C. Usually, the pitch that Sa corresponds to is determined by a performer's possible vocal range, or an instrument's possible physical resonance. (The shadjam in "Offering," for example, is D because Swaminathan's mrudangam is tuned to D.)

In order to understand how the twelve tones in an octave are collapsed down to seven svaras, we will investigate the opposite—how the seven svaras expand into the twelve tones in an octave. In order to account for all twelve tones, some of the seven svaras need to correspond to more than one pitch. Importantly, the svaras Sa and Pa each only ever correspond to one pitch;

this is partly why they are considered the most stable svaras of the seven. Each of the other svaras—Ri, Ga, Ma, Dha, and Ni—can correspond to either two or three pitches.

Continuing with our Sa-to-C correspondence, we can start by mapping out the twelve chromatic note-names conventionally used in Western classical music.

C Db D Eb E F F# G Ab A Bb B (C)

Figure 4.1

Since there is always only one version of Sa and one version of Pa, we can map those immediately.

C	Db	D	Eb	E	F	F#	G	Ab	A	Bb	B	(C)
Sa							Pa					(Sa)

Figure 4.2

There are three versions of Ri and three versions of Ga. In conventional Karnatak notational practices, svaras are abbreviated even further to just the first letter of each. Accordingly, we can label the three versions of Ri and Ga as: R1, R2, R3; and G1, G2, G3. If our Sa is C, then: R1 is Db, R2 is D, and R3 is D#; G1 is Ebb, G2 is Eb, and G3 is E.

R1 — Db G1 — Ebb

R2 — D G2 — Eb

R3 — D# G3 — E

Another way to think about this tone corresponence is in terms of scale degrees. Recall that we can think of Ri as the second scale degree and Ga as the third. If Ri is the second scale degree and corresponds to D in the scale degree chart (*Figure* 2), then we can say the three versions of the svara Ri correspond to three versions of the Western note-name D—Db, D, and D#. If Ga is the third scale degree and corresponds to E in the scale degree chart, then we can say

that the three versions of the svara Ga correspond to three versions of the note-name E: Ebb, Eb, E.

Importantly, there are two overlaps in tone correspondence: R2 and G1 correspond to the same tone (since D and Ebb are technically the same pitch); R3 and G2 correspond to the same tone (since D# and Eb are technically the same pitch).

Similarly, there are three versions of Dha and three versions of Ni (we will come to Ma later). We can label these in the same fashion: D1, D2, D3; and N1, N2, N3. If our Sa is C, then: D1 is Ab, D2 is A, and D3 is A#; N1 is Bbb, N2 is Bb, and N3 is B.

D1 — Ab N1 — Bbb

D2 — A N2 — Bb

D3 — A# N3 — B

Notice that we find the same overlaps between Dha and Ni that we found between Ri and Ga. D2 and N1 are the same pitch (A and Bbb), and D3 and N2 are the same pitch (A# and Bb). In fact, the entire tone correspondence for Dha and Ni is the same as the tone correspondence for Ri and Ga, just transposed up a fifth (*Figures 5 and 6).* Accordingly, we can think of Sa, Ri, Ga as one trichord, and Pa, Dha, Ni as another trichord. These two trichords have the same pitch organization; one is simply a transposition of the other.

Finally, we have Ma. There are only two versions of Ma, M1 and M2. If our Sa is C, then: M1 is F, and M2 is F#. There are no overlapping tones for either Ma.

M1 — F

M2 — F#

We have now accounted for all seven svaras and all twelve tones.

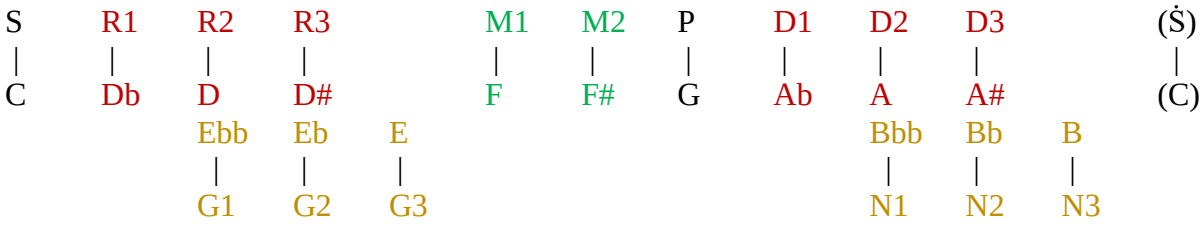

Figure 4.3

What we see here is the middle or main octave (a dot above the letter is used to denote that a svara is in the octave above, and a dot below is used to denote that a svara is in the octave below). Since the multiple versions of the seven svaras correspond to each of the twelve tones in the octave, and there are four overlapping tone correspondences, this yields sixteen *iterations* of the seven svaras: S, R1, R2, R3, G1, G2, G3, M1, M2, P, D1, D2, D3, N1, N2, N3. On the following page, you will find a chart that maps all of the seven svaras onto all of the twelve tones in an octave. I have provided two different versions of the same mapping; please refer to whichever one you find more intuitive.

What we have just derived are the twelve *svarasthānas*, the twelve theoretical/nominal positions or slots that a svara can occupy. In musical practice and performance, however, sung svaras do not always fall neatly into these slots, but can oscillate around them, inflect onto or away from them, or even occupy a pitch slot other than its own. In order to understand how this happens, we will investigate the concept of *raga.*

All of the conceptual equivalences I have made across Western classical music theory and Karnatak music theory (equal temperment, solfege) are tenuous and must be complicated (as they are in the following pages). These comparisons are intended *only as an entry point* to understanding and cannot be thought of as truly conceptually equivalent.

CHAPTER 5: WHAT IS A RAGA

Often insufficiently translated as "scale" or "mode," the word *raga* is a complex melodic concept that involves many facets, including pitch collections, pitch order/direction, particular inflections/oscillations, characteristic combinations of notes, compositional styles, specific intonations, and emotional associations. The sixteen iterations of the seven svaras showed above are combined and permuted in various ways to produce thousands of unique collections of upward and downward scalar patterns. We can split these scalar patterns into two broad categories: (1) those with all seven svaras going up and going down in order and exactly once each way, and (2) those with duplications of svaras, omissions of svaras, or "zig-zagged" orderings of svaras either upward, downward, or both. As an example, let us take the raga Kharaharapriya. This raga consists of the following upward (*ārohaṇa*) and downward (*avarohaṇa*) scales:

RAGA KHARAHARAPRIYA:

Arohana:	S	R2	G2	M1	P	D2	N2	Ṡ
Avarohana:	Ṡ	N2	D2	P	M	G2	R2	S

Figure 5.1

Given C as our Shadjam, we can map these onto Western note-names and scale-degrees:

Arohana:	S	R2	G2	M1	P	D2	N2	Ṡ
	C	D	Eb	F	G	A	Bb	C
	1	2	3	4	5	6	7	1^{va}
Avarohana:	Ṡ	N2	D2	P	M	G2	R2	S
	C	Bb	A	G	F	Eb	D	C
	1^{va}	7	6	5	4	3	2	1

Figure 5.2

The scalar patterns of this raga—the arohana and avarohana—when viewed on paper, resemble the Dorian scale, one of the Ancient Greek modes. However, when sung in an appropriate South Indian vocal style, there are many pitch inflections, oscillations, and movements associated with and applied to each svara. Each of these movements is a type of *gamaka*. There is no standard notation for writing down how gamakas sound, not least because what is sounded has immensely subtle and intricate shifts in pitch and duration which can only be learned aurally. For this reason, included in this thesis is a recording of myself singing the arohana and avarohana of Kharaharapriya as it appears on the page and another recording of myself singing the arohana and avarohana in a style commonly heard in Karnatak music practice (you will also hear a digital version of the tanpura, or the drone consisting of the svaras Sa, Pa, and the Sa an octave above).

While there is no notation that can fully or accurately capture the various intricacies involved with such a vocal practice, I will attempt a kind of drawing of the voice, solely to demonstrate a glimpse of the logic of gamakas.

A representation of gamakas might be drawn like this (alternate colors are used for each successive svara; a dot is used for where, sonically, the svara starts; and arrows are used to denote the direction of the oscillation):

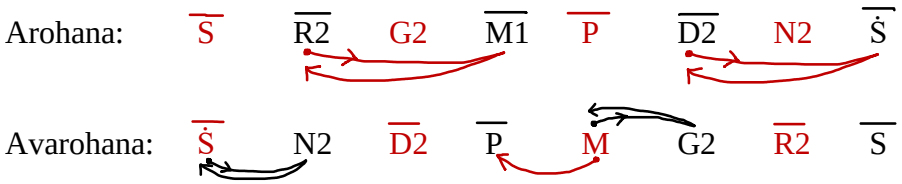

Figure 5.3

As can be seen visually above, gamakas produce a complex relation between written sound and enacted sound. In some cases, like N2 in the arohana or upward scale, the theoretical

svarasthāna or nominal pitch position is not actually heard; instead, while *saying* what is written, "Ni," what is *heard* is an oscillation between D2 and Ṡ. N2 acts as a kind of theoretical fulcrum around which the sounded svara sways. Put another way, N2 technically corresponds to the pitch Bb, or scale-degree 7, but what we hear instead is an oscillation between A and C, or scale-degrees 6 and 1^{va}, never actually sonically landing on the *note that is being sung,* N2/Bb/scale-degree 7.

The arohana and avarohana together provide a kind of melodic scheme upon which a musician can improvise and compose. There are many kinds of improvisational and compositional forms in Karnatak musical practice. *Ālapana,* for instance, is an unmetered melodic improvisation, usually sung on syllables that contain no semantic meaning (na, da, ta, ra) that serve only as articulations of phrases or key turning points in the improvsation. Importantly, the arohana and avarohana are not the only parameters that determine the melodic content of an alapana. There are usually specific phrases and combinations of svaras that are encoded into pedagogy; a student will learn aurally—as I did—from their teacher certain phrases that are appropriate in or idiomatic to a particular raga, as well as paradigms for which phrases follow other ones and how to connect them melodically, which I have demonstrated using a recording of myself singing a brief alapana in Kharaharapriya.

In the recording, we immediately hear gamakas that I did not sing in the arohana and avarohana. The first thing I sing is a small oscillation between Ri and Ga (or scale-degrees 2 and 3), which is not found in the above representations of Kharaharapriya's arohana/avarohana. Additionally, at 0:12 we hear another new gamaka. This gamaka starts on what sounds like Dha (or A, or scale-degree 6), oscillating very slightly above it and back to it. The interval of the oscillation is actually ambiguous, something slightly smaller than a semitone; as such, the actual

frequency interval (whether it's a 1/4-tone, a 1/6-tone, a 1/8-tone, etc.) may change from artist to artist, or even within the same artist's performance. What this shows is that while the arohana and avarohana provide a basic model for gamakas in the raga, they do not exhaust all possibilities of gamakas. In fact, they are barely a starting point. Some gamakas, like the one at 0:12, arise from improvisatory practice. Nevertheless, they are still part of the gamakas encoded into pedagogy. In other words, students still learn such gamakas as ones that constitute the identity of a raga. I did not create this gamaka through my improvisation. I learned it from my teachers as a gamaka that one sings in the raga Kharaharapriya and then used it in my improvisation; it is a part of Kharaharapriya's melodic lexicon even though it is not sung in the arohana or avarohana. Gamakas that have arisen out improvisation in performance become codified over many years of repetition and reproduction: the same gamaka is sung many times by the same artist, the same gamaka is sung many times by multiple artists, the same gamaka is taught and passed down through teaching. Such a process of reproduction, codification, and inheritance produces a musical syntax that becomes essential to the identity of any given raga, creating a lineage of melodic specificity that emerges in shades in "Offering."

Gamakas are also codified through composition. Through-composed song forms, usually with lyrics, work together with the arohana/avarohana and improvisatory syntax to produce a larger network of possibilities for how a raga can (or should) sound. One such song form is the *varnam.* A varnam's function in pedagogy is usually to introduce a student to the "sound" of a raga, to its particular gamakas and phrases, as well as how to connect those phrases; so, through-composed songs like varnams share a pedagogical function with improvisation and codified scalar patterns.

CHAPTER 6: THE VARNAM

A varnam is written in two parts, the first part containing two major sections—*pallavi* and *anupallavi*—and the second part containing one major section—*caraṇa*—and all three sections contain lyrics. A smaller section called the *muktāyī svara* usually follows the anupallavi and is sung using svaras, not lyrics. The third major section, the carana usually has multiple smaller sections (usually between three and six) appended to it—*ciṭṭasvaras*—which are also sung using svaras instead of lyrics.

PART 1

Pallavi

Anupallavi
    Muktayi svara

PART 2

Carana
    Cittasvara 1
    Cittasvara 2
    Cittasvara 3
    Cittasvara 4

Figure 6.1

Just as gamakas as written on paper or as encoded into the arohana/avarohana are not the same as gamakas in performance, so too is the performed form of a varnam quite different than its written form. Varnams are usually performed in three speeds. Instead of performing all the sections one after another the way it is written, the pallavi is sung twice in the first speed, the anupallavi twice in the first speed, and the muktayi svara once in the first speed. Then, instead of continuing to the carana, the performer returns to the pallavi, singing it in the second speed, twice as fast. After singing that twice, the performer sings the anupallavi twice in the second speed, then the muktayi svara once in the second speed. Then, the performer returns to the

pallavi again, singing only the first line in the first speed. This constitutes the first part. The second part begins with the carana being sung in the third and final speed. Counteruintuitively, this speed is actually one and a half times the first speed, so it is faster than the first speed but slower than the second speed. After singing the carana twice, the performer sings each cittasvara, but returns to the carana in between each one, ending with a final repetition of the carana after the last cittasvara. So, the performed form is as follows:

PART 1

Pallavi (twice in 1st speed)

Anupallavi (twice in 1st speed)
    Muktayi svara (once in 1st speed)

Pallavi (twice in 2nd speed)

Anupallavi (twice in 2nd speed)
    Muktayi svara (once in 2nd speed)

First line of pallavi (once in 1st speed)

PART 2 (all in 3rd speed, which is 1.5x 1st speed)

Carana (twice)
    Cittasvara 1
Carana
    Cittasvara 2
Carana
    Cittasvara 3
Carana
    Cittasvara 4
Carana

Figure 6.2

While this is a standard model for how to perform a varnam, performances of varnams can vary in how many cittasvaras they have, the number of times the sections are repeated, or the organization of speeds.

CHAPTER 7: OFFERING

"Offering" loosely follows the form of a varnam. From now on, I will refer to the names of varnam sections ("pallavi," "anupallavi," etc.) in quotation marks because, crucially, the piece *is not a varnam*, by which I mean its form does not fully satisfy—nor does it intend to fully satisfy—the role a varnam plays in conventional Karnatak musical practice or pedagogy. The only way "Offering" satisfies the function of a varnam is in its use as a starting point, the kicking off of the concert, the first track of the album. Simultaneously, "Offering" considers the varnam form both musically and culturally as a place of departure, a kind of incubatory framework which must morph given the transnational, transgeographical contexts of the musicians. To use the way Gayatri Spivak describes the perpetually shifting ontology of reading a text in her preface of Derrida's *Of Grammatology*, we can think of "Offering" as producing "a simulacrum of an 'original' that is itself the mark of [a] shifting and unstable subject…using and being used by a language that is also shifting and unstable" (Spivak, xii). "Offering" gestures toward some kind of "original," even though that origin is itself a lack of origin, thus presenting itself as a morphed and unstable "original" through Swaminathan's musical and practical language of uncertainty. Swaminathan plays with this idea of origin by referring to the varnam form by continually departing from it. In the passage that follows I will highlight the ways in which "Offering" adheres to and departs from the conventional form of a varnam, what the effects of those adherences and departures are, and their potential musical, cultural, and political implications.

It is important to note that the written score of "Offering" functions as more of a guideline or framework for the performers. The score is vague in a few ways. No instrumentation is specified, no dynamics are included, no articulations (beyond ties) are written, and there is no

line for a mrudangam to read and play. In other words, Swaminathan does not create a notation for herself. The written score is not designed to be played by a standardized group of instruments the way, for instance, a string quartet is. It only serves as a tool for Swaminathan's specific group, RAJAS, to use in its semi-improvised performances of "Offering." With that in mind, I will be using the score as a reference point to demonstrate the tensions between written sound and enacted sound as well as the ways the score somewhat resembles the form of a varnam, always understanding that the piece is not constituted by any means by the score alone.

Let me start by identifying the discrepancies between the written score and the recording. Immediately, we hear the bass line in bars 1-8 played once alone by the double bass and guitar, after which we hear the violin and saxophone play the music written in the top two staves in bars 1-8. These 8 bars, labeled letter A, are played twice, but the music written immediately afterward at letter B is not heard immediately afterward in the recording. Instead, the group enters an improvisatory section, not notated in the score. Near the end of this improvisatory section, Swaminathan and Okazaki do a metric modulation on the mrudangam and guitar, converting the Chaturashra Gati,what we might think of as sixteenth notes in one beat, into Tishra Gati, three notes per beat, but at the second speed, so six notes per beat. They then take this Tishra Gati, sixteenth-note triplets in one beat, and turn them back into Chaturashra Gati, but keeping the proportion of notes the same while increasing the speed of the beat. They turn the sixteenth-note triplets into sixteenth notes in one beat, increasing the tempo by a factor of 1.5. Around the 3-minute mark, the violin and saxophone enter and play again the music written in the score, continuing at letter B. In the rest of the recording, the music that is heard can be followed in the score, although the group returns to letter B in between each "SWARA," a repetition that is not notated. Altogether, the form as heard in the recording looks like this:

(*Intro)*

Letter A (twice)

Group Improvisation for 16 bars
Guitar/Mrudangam improvisation for 28/30 (with metric modulation)

Letter B (twice)
SWARA 1 (twice)
Letter B
SWARA 2 (twice)
Letter B
SWARA 3 (once)
Letter B
SWARA 4 (once)
Letter B
(Coda/Outro)

Figure 7.1

If we consider the first notated section, letter A as a "pallavi," we see that in the place of an "anupallavi" and "muktayi svara," the group improvises. We can think of letter B as the "carana" and each "SWARA" section as a "cittasvara." Recall that in the varnam form, the carana is sung in between each cittasvara, a pattern that follows in "Offering." On the next page, I have juxtaposed the standard form of a performed varnam with the form of "Offering," visually demonstrating the symmetries, hopefully further facilitating a comparison between the two. Perhaps the biggest departure from varnam form is the replacement of an "anupallavi" and "muktayi svara" with an improvisatory section, as all varnam sections are fully through-composed. Additionally, neither the "pallavi" nor the "anupallavi" (the improvised section) is repeated twice as fast in the second speed. These two departures from varnam form—the absence of both a through-composed anupallavi/muktayi svara and the second speed—become instances of what Swaminathan calls "*apertures*, spontaneous or intentional openings to the otherwise, born from gaps in knowledge, practice, and possibility" (Swaminathan 2021). These "gaps" are

able to be produced only in the collective. The combined wanderings of each artist's improvisation are only able to produce gaps because of the tension between their embodied knowledges and practices, the space across which they must travel to reach one another in musical exchange. We hear fragments of the melody in the guitar, violin, and saxophone meandering among one another offering each other space to be heard. Indeed, each of those players, Miles, María, and Anjna, respectively, bring to that improvisation each of their own embodied practices. We hear it in Anjna's gamakas, in Miles's rhythmic precision, in María's peculiar treatment of pitch bends and intonation. By replacing a through-composed "anupallavi" and "muktayi svara" with an improvisatory section, Swaminathan welcomes the expression of these embodied practices, and the group together creates an opening, an aperture, for multiple differently informed musical readings to meet and exist alongside one another. The uncertainty of improvisation provides a space where the musicians can become vulnerable and balance together across carefully knit cross-sections of sound. That uncertainty provides a way to relate to those sounds and the meanings they may denote in a new way, in a new context. Swaminathan takes already hybrid musicians and materials, and hybridizes them even further, blurring the boundaries of where one cultural stream ends and another begins. This exponentiation of hybridity reaches beyond such classical dialectics as Self/Other, Mind/Body, East/West, Occident/Orient, intentionally evading clear identifications of "Karnatakness," "Jazzness," "Indianness," "Europeanness." RAJAS, through its collaborative environment, performs a balancing act that is at once choreographed and impromptu. A practice of rigorous deep listening and musical commitment undergirds a buoyant musical promiscuity that refuses to accept a *place*. Through Swaminathan's inheritance of this compositional form, she allows it to morph in

the process of its displacement. It is in that very process that the inherited form simultaneously breaks down and grows in renewal.

PART 1	PART 1
Pallavi (twice in 1st speed)/	*(Intro) Letter A (twice)/*
Anupallavi (twice in 1st speed) / . . .	*Group Improvisation for 16 bars /*
Muktayi svara (once in 1st speed)/ . .	*Guitar/Mrudangam improvisation for 28/30 bars(with metric modulation) /*
Pallavi (twice in 2nd speed) /	*Improvisation…*
Anupallavi (twice in 2nd speed) /	
Muktayi svara (once in 2nd speed) /	
First line of pallavi (once in 1st speed /)	
PART 2 (all in 3rd speed, which is 1.5x 1st speed)	PART 2 (all 1.5x 1st speed)
Carana (twice) /	*Letter B (twice) /*
Cittasvara 1 /	*SWARA 1 (twice) /*
Carana /	*Letter B /*
Cittasvara 2 /	*SWARA 2 (twice) /*
Carana /	*Letter B /*
Cittasvara 3 /	*SWARA 3 /*
Carana /	*Letter B /*
Cittasvara 4 /	*SWARA 4 /*
Carana /	*Letter B /*
	(Coda/Outro) /

Figure 7.2

"Offering" is written in the raga Gāvati. To understand the melodic structure of the raga Gavati, we will go through a similar process as the one shown above for Kharaharapriya. (Because Swaminathan's mrudangam is tuned to a D, not a C, we will take D as our shadjam this time) First, the arohana and avarohana:

RAGA GAVATI (with D as Sa):

Arohana:	S	M1	P	N2	Ṡ
	D	G	A	C	D
	1	4	5	7	1^{va}

Avarohana	Ṡ	D2	M1	P	G3	M1	R2	Ṇ2	S
	D	B	G	P	F#	G	E	C	D
	1^{va}	6	4	5	3	4	2	7_{vb}	1

Figure 7.3

Like with Kharaharapriya, included with this thesis a recording of myself singing the arohana and avarohana of Gavati without gamakas, then with gamakas.

Attempting to "draw" the sound of Gavati's arohana/avarohana *with gamakas*, as I did with Kharaharapriya's, may look like this:

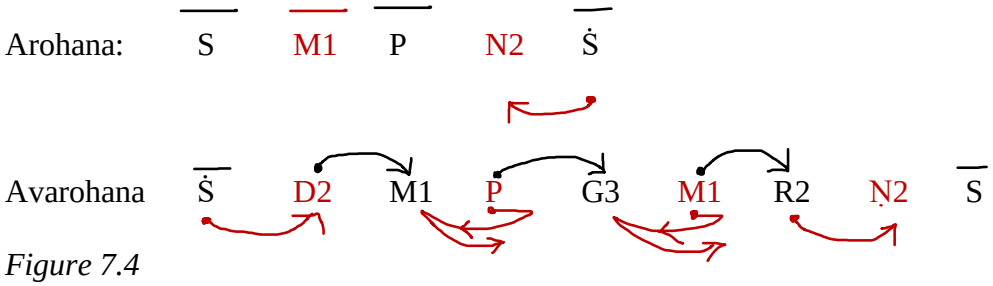

Figure 7.4

Notice how the arohana and avarohana here are more complicated, with certain svaras being absent in both, zig-zag orderings (P-G-M-R-N-S) in the avarohana, as well as the avarohana reaching beyond the middle octave into the lower one (Ṇ2). Because the arohana/avarohana is part of what determines the melodic structure of the raga, there are certain rules encoded here as to how svaras can be ordered in performance. For example, the phrase, P-M-G-R-S, is not idiomatic to Gavati because it is not part of the avarohana. Rather, the phrase, P-G-M-R-Ṇ-S, should be sung instead. Likewise, even though altogether the raga does contain all seven svaras, the phrase, S-R-G-M-P, would not be idiomatic as it is not found in the arohana. Instead, something like, S-M-P-G-M-R, would be more appropriate.

We can see the melodic structure play out immediately in the first two beats of the score: D-D-G-A-C-C. Simplified: D-G-A-C. In svaras: S-M-P-N. Part of the character of Gavati is introduced, its arohana. Because (Anjna) Swaminathan is a Karnatak trained violinist, she plays Gavati the raga with all of its gamakas. Interestingly, (Rajna) Swaminathan composes the other instruments at various moments doubling or tripling (Anjna) Swaminathan's playing, but without the gamakas. For instance, in the "pallavi," bars 1-8, the top line of the score is played by Swaminathan on the violin as a line in Gavati while the second line is played by Grand (saxophone) and Okazaki (guitar) without any gamakas. In other words, Grand and Okazaki play the *svarasthanas,* the nominal positions of the svaras as they are theoretically "slotted." The two lines on the score are notated as unisons. But when the oscillated and inflected svaras are played simultaneously with their corresponding stationary svarasthanas, they are heard as an *approximate unison.* They are almost playing the same thing, but not quite. In bars 16-17, Grand and Okazaki once again play the svarasthanas while (Anjna) Swaminathan plays Gavati gamakas. While the score is notated as eighth notes tied to a quarter note tied to a half note, a five-line staff notational representation of what (Anjna) Swaminathan plays would look quite different. In the figures below, I have reproduced bars 16-17 as notated in the score juxtaposed with a notation I have created that attempts to get a more precise representation of what Swaminathan is playing. As discussed before, because gamakas are learned aurally and never written with precise notation, they can have very subtle differences from musician to musician; more importantly, the same musician playing the same gamaka twice may not sound exactly the

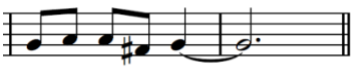

Figure 7.5

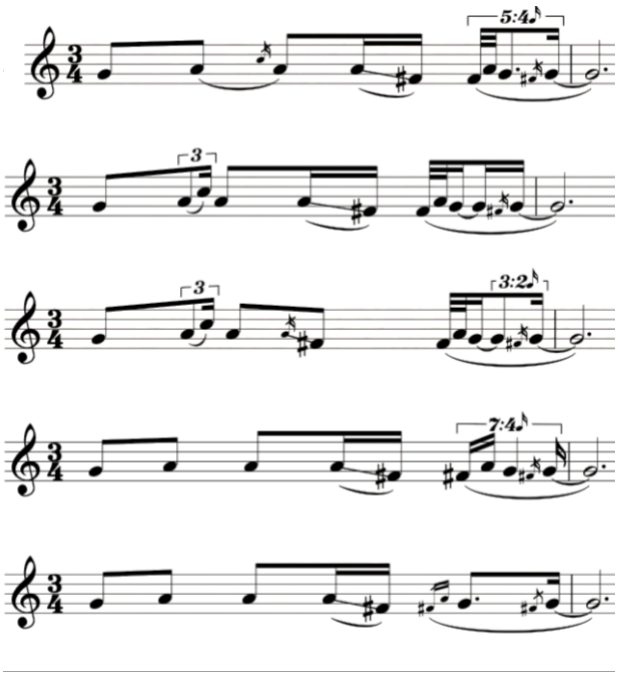

Figure 7.6

same. Accordingly, I have included multiple possible notational representations of what Swaminathan plays in bars 16-17. The only purpose of this exercise is to demonstrate the particularity and insufficiency of the score. It is particular because it is written for specific practitioners with specific skills; the person who wrote the notation has an intimate understanding of the practices of the musicians she wrote it for. It is insufficient because this recording of "Offering" as well as its multiple performances were made possible because of multiple working methods of collaboration and musical adjustment, not solely through written notation. The multiple alternative representations I have offered (which, of course, are in no way exhaustive—in fact, the possibilities are literally infinite) can show versions of the multiple times Swaminathan plays that phrase, but it can also show multiple versions of only one time they play that phrase. The expressive capability of such subtle rhythmic changes, similar to those Iyer formulates as "microtiming," allows for a fluid ontology of the piece, never sitting rigidly or

getting, as (Rajna) Swaminathan put it in our interview, "calcified." The piece becomes a morphing sense of constant aspirations toward *almost* unisons.

This almost unison, as I have called it, happens in multiple ways. In the "pallavi," (Anjna) Swaminathan and Grand and Okazaki are almost unison in their delivery of the notes, but in bars 3-5 in particular, the written notation itself becomes two different lines. This happens again in the "carana" in bars 9-12, as well as in the third "cittasvara" between the violin and the double bass in bars 36-37 and 46-49. In these bars, an important ambiguity arises: is the second line harmonizing the first line, or vice versa? We might ordinarily answer a question like this by paying attention to something like register, but the registers of the three instruments overlap, none is always clearly above or below the others (octave displacement is another liberty the performers take when following the score). The answer to this question is unclear, ambiguous. On the score, the two lines flow from unison to heterophony back to unison. At times, the line exists *notationally* as one thing. At other times, the line is crucially split, existing neither in the violin or saxophone alone, neither in the guitar or double bass alone, but in between contours of the multiple lines.

Furthermore, Swaminathan's choice to come in and out of the form of a varnam creates another type of almost unison, what I might consider a kind of formal unison. The form correlates quite strongly to that of a varnam in its correlary "pallavi" and "carana" sections, but also significantly departs in its replacement of the usual anupallavi and muktayi svara with an improvisatory section. This relationship reflects what Elisabeth Le Guin describes in her book *Boccherini's Body* as the "macro-level…*dispositio,*" or broader form designed through deliberation, and the "micro-level…*inventio,*" the finer characteristics of the music arising through embodied, kinesthetic action (Le Guin, 34). While the subtle and infinite possibilities of

(Anjna) Swaminathan's playing I have transcribed above are produced through highly personalized embodied movement, the formal unison (Rajna) Swaminathan creates is based on a more deliberate deisgn. However, Swaminathan expresses yet again her orientation towards calculated instability by including in her deliberate design an improvisation. Furthermore, the compositional form of the varnam that constitutes her design is itself not a fixed formula; the "original" is itself always in flux. What Gayatri Spivak calls the "lack at the origin" is exemplified in the fact that the "original" form of the varnam can contain a different number of cittasvaras in different compositions and different lengths of caranas; not only is it itself already unstable and ambiguous, never fixed and never exactly the same, but the traditional form of the varnam and the form of "Offering" are in fact informing each other, not participating in a linear movement from past to present (Spivak, xvii). Swaminathan explodes the ambiguity of signification, always creating a critical slippage between already unstable inherited forms and the already unstable diasporic condition. The inherited form is not fixed in the past. Rather, the terms of varnam form are actively changing by participating in present (or future) diasporic play.

Finally, Swaminathan crucially does not include a tanpura in any track on the album, displacing a central signifier of Karnatak "sound." However, because the mrudangam does ring out a clear pitch from its right side (always tuned to the shadjam in Karnatak concerts), there is a faint pitch center, but not a clear assertion of a shadjam. By not clearly asserting the shadjam through an omnipresent drone of some kind—whether through a tanpura or something else—Swaminathan introduces the possibility to depart from it. In conventional Karnatak practice, the tanpura carries with it a heavy sense of embrace, simultaneously comforting and warm and difficult to release oneself from. The shruti provides a rich tapestry of familiarity and sonic support, a bed of sound upon which the music can float, but it also has an intense gravity, pulling

every melody towards the svaras it eternally drones: Sa, Pa, Sa. It provides a home, but one that is resistant to change. Swaminathan blurs the location of this familiar home. The shadjam shifts within the song, a process found rarely (if ever) in conventional Karnatak musical practice. And I am not speaking here only of modulation, of changing the fundamental pitch so a new melody can occur in relation to it. Rather, there are moments in "Offering" in which a sustained note draws toward itself a sense of stability and finality. For instance, in bar 37, the double bass sustains a low G for three beats, longer than any other note in the score, while the violin floats up to a B two octaves above. The long low G in the double bass implies a shadjam, a settling, but the following bar immediately reasserts D as the shadjam, outlining the arohana of Gavati (D-G-A-C-D). Similarly, the piece itself ends on G. In the very last bar, at the end of the last repetition of the "carana" after the fourth "cittasvara," the group plays what is written followed by a short ending phrase, but significantly, the pitch from mrudangam is absent in the last several seconds of the recording. Without providing the implication of D as Sa through the pitch of her mrudangam, Swaminathan blurs the location of that home even further, which allows the group (primarily in this case the violin and double bass) to settle on Ma, or G, without any other referrent to draw them back to D. Stable in themselves, those bars of local, ephemeral implications at a change in shruti introduce the possibility of destabilizing the pitch center. Conversely, in the space of destabilization, in that space of uncertainty and blur, Swaminathan offers points of stillness and clarity, not only melodically, but also formally and rhythmically, as well as through her collectivized performance practice. In the unstable changes from duple to triple, improvisatorily navigating through asymmetrical rhythms and almost unisons, the members of RAJAS rely on each other for musical support to coordinate a common end point, embracing an unfamiliar home in the midst of constant, non-linear motion. Whether through the

interlocking rhythms of the nadai, or the returns to unison from split lines, or the brief but morphed semblances of inherited forms, uncertainty yields to the vulnerability of cameraderie and trust. RAJAS manages something seemingly impossible, returning to a place they have never been to before.

Given these qualities, what "Offering" makes clear is that its ontology as a piece of music cannot be fully encapsulated in one score, one recording, one performance. Rather, the multiple sites of musicking—the live performances, the recording sessions, the improvisation sessions, the notations, the conversations during and in between rehearsals, the embodied training of the involved musicians, the inherited forms they bring with them—all of these and more are constantly reconfiguring and being reconfigured to manifest an uncertain whole, one that can and will reorient itself at any moment. Swaminathan's musical practice prioritizes the body, creating pathways for the people, the musicians who bring multiplicitous histories with them, pathways that are always being reconsidered, recontextualized, and revised. *Of Agency and Abstraction* refuses a rigid and established place, instead vying for a way of being that is always in motion, always blurred, and consequently always open to transformation. When one seeks out clear signifiers of an unmistakable "Karnatak-ness" or "Jazz-ness," Swaminathan's music blurs itself, always evading discursive sedimentation. Her music manages not to fall into any distinct category of genre while also clearly establishing *that it bears relationship to* multiple histories. Not only does "Offering" avoid nationalistic allegiance to any single musical regime, but it also complicates the notion of musical transcendence itself; it challenges the notion that music can define itself by transcending the people who create it, that it can ever be autonomized apart from human action, that it can ever exist as abstraction without human agency to drive it. This is not to deny that musical sound is capable of bearing mystery and magic, or that musical experience can

indeed feel spiritually disembodied and transcendent, which is one of the many reasons we practice and perform in the first place. It is only to ground that magic ultimately in the labor and love of human beings.

BIBLIOGRAPHY

Apte, Vaman Shivram. *The Practical Sanskrit-English Dictionary.* Arya Vijaya Press, Pune, Maharashtra. 1890.

Artvoice. "Rajna Swaminathan – "Of Agency And Abstraction" – Out April 26th on Biophilia Records," *Artvoice,* 15 Feb. 2019, https://artvoice.com/2019/02/15/rajna-swaminathan-of-agency-and-abstraction-out-april-26th-on-biophilia-records/

Bhabha K., Homi. *The Location of Culture.* Routledge, London. 1994. Print.

Blumenfeld, Larry. "'Of Agency and Abstraction' by Rajna Swaminathan Review: Improvisation Is Her Lifeblood." *The Wall Street Journal,* 25 Apr. 2019, https://www.wsj.com/articles/of-agency-and-abstraction-by-rajna-swaminathan-review-improvisation-is-her-lifeblood-11556215570

Collins, Jez. "Meditations of Life Shine Brightly on Rajna Swaminathan's Brilliant Debut Album." *PopMatters,* 8 May 2019, https://www.popmatters.com/rajna-swaminathan-agency-abstraction-2636341340.html

Considine, J.D.. "Rajna Swaminathan: Of Agency and Abstraction (Biophilia)." *Jazz Times,* 29 Jun. 2019. https://jazztimes.com/reviews/albums/rajna-swaminathan-of-agency-and-abstraction-biophilia/#:~:text=Rajna%20Swaminathan%20is%20a%20virtuoso,of%20Indian%2Dflavored%20jazz%20albums

Dutt, Ela. "Late April In The Big Apple, Feast Of Indian Classical Fusion." *News India Times,* 17 Apr. 2019, https://www.newsindiatimes.com/late-april-in-the-big-apple-feast-of-indian-classical-fusion-2/

Guin, Elisabeth Le. *Boccherini's Body: An Essay in Carnal Musicology.* University of California Press, 2005.

In Tandem, director. *In Tandem: Interview with Rajna Swaminthan.* YouTube, 24 Mar. 2021, https://www.youtube.com/watch?v=GZsPMvs1G30&ab_channel=InTandem

Iyer, Vijay. "Embodied Mind, Situated Cognition, and Expressive Microtiming in African-American Music." *Music Perception: An Interdisciplinary Journal,* Vol. 19, No. 3. University of California Press, 2002.

Lewis, George. "Improvised Music after 1950: Afrological and Eurological Perspectives." *Black Music Research Journal,* Vol. 16, No. 1. Columbia College Chicago and University of Illinois Press, 1996.

Massari, Paul. “The rhythmatist.” *The Harvard Gazette,* 13 May 2021, https://news.harvard.edu/gazette/story/2021/05/rajna-swaminathan-searches-for-the-beats-that-bring-worlds-together/

Spivak, Gayatri. 1976. Preface. In: Derrida, Jacques. *Of Grammatology.* Corrected Edition. Baltimore and London. Johns Hopkins University Press.

Swaminathan, Rajna. “Time, Virtuosity, and Ethics Otherwise: Queer Resonances for Diasporic Play.” *Harvard University*, Harvard University, 2021, pp. 3–41.

Weidman, Amanda. *Singing the Classical, Voicing the Modern: The Postcolonial Politics of Music in South India.* Durham: Duke University Press. 2006. Print.