FINDING COMMON GROUND:
Uniting Practices in Works for Hindustani and Western Art Musicians

photo by Robin Miniter

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April 4, 2014

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PREFACE: The Pebble and the String

On a temperate February night in 2012, I sat packed tightly among hundreds of listeners at the open-air amphitheater at Ishanya Mall in Pune, India, at the opening concert of the Baajaa Gaajaa Festival. Baajaa Gaajaa, which, literally translated from Hindi, means "go on and play, go on and sing" is a yearly, four-day festival notorious for its innovative programming of renowned classical Hindustani musicians alongside musicians from popular and folk genres (both Indian and otherwise), many of whom specialize in outstanding inter-genre collaboration[1]. The guest of honor that evening was Javed Akhtar, one of India's most celebrated poets. In the spirit of the festival's mission, Akhtar recounted a beautiful allegory:

> *"You must have seen children playing with a string and a pebble. They're tying a string to a pebble and they start spinning it over their head. And slowly they keep leaving the string, and it makes a bigger and bigger circle. Now, this pebble is [innovation][2]. It wants to move away. But the string is the tradition, the continuity of the tradition. It is holding [the pebble]. But if you break the string, the pebble will fall. If you remove the pebble, the string cannot go that far. This tension of tradition and [innovation] are in a way contradictory, but as a matter of fact, it is a synthesis: you will always find the synthesis of tradition and [innovation] together in any good art."*[3]

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[1] Its Artistic Directors are singer Shubha Mudgal and tabla player Aneesh Pradhan.
[2] In this particular version, the statement actually says "revolt against the tradition", but in other versions of it, he uses the word "innovation", which I recall was the word he used at this event.
[3] This exact quote is excerpted from Javed Akhtar's interview in the movie *The Story of Film* (2011), but is a common story that Akhtar tells.

Akhtar's words have been ringing in my mind since that concert. This ideological tug-of-war between the polarity and symbiosis of tradition and innovation must be addressed within every art form. But it can be even more pronounced when art forms cross-pollinate. Tradition in one area can be seen as innovation in another. There are multiple masters to please, but also multiple avenues for exploration, multiple possible solutions to the same questions. The innovation is not simply measured in the increase in diameter of one circle made by a pebble on a string; rather, it is concentrated in that shared, middle space in the Venn diagram of two separate sets of pebbles on strings. The diameters are not always the same length; the focus within each individual rendering can shift greatly. But each instance of collaboration creates one more spot of light that illuminates a nascent but growing universe, as it continually coalesces in that middle ground.

Over the past four years, my work as a composer has centered around facilitating collaboration between Hindustani (North Indian) classical musicians and Western art musicians. My passion for this work has been rooted in my deep respect for both the Hindustani and Western art music traditions, and my hunger for self expression and innovation through the medium of musical composition. In my work, I strive to create environments where musicians of both disciplines are able to work from their own firm grounding in their primary discipline, while finding methods for communication with musicians from the other tradition. If they are able to feel grounded within their 'inner-circle' of expertise, they will feel more confident releasing the string a few inches further.

The rewards of creating such music are innumerable. Musical communication between these disparate groups serves as a catalyst for exploration and greater understanding not only of one another's music, but of its accompanying culture. It also illuminates, for each set of musicians, perspectives that are less explored or prioritized within their own tradition. The methods by which the inevitable musical incongruity is addressed begins to generate a new hybrid vocabulary with a broad range of expressive possibilities, which serve not only to enrich the collaborations from which they are generated, but also the range of expression of each artist who participates in them, even in the context of their own tradition.

I hope that by gathering and contextualizing creative strategies by some of the best composers working in this field today, this thesis will contribute to the growth of that nascent universe in the overlapping space between the two orbiting pebbles.

INTRODUCTION: A Brief History of Indian Presence in Western Music

Note: Hindustani Music vs. Indian Classical Music. As "Hindustan" is one common name by which Indians refer to their country, it might be inferred that the term 'Hindustani Classical Music' is interchangeable with the term 'Indian Classical Music'. However, Hindustani music represents only one of India's two vibrant classical music traditions[4]. While Hindustani music is prevalent in the north of the country, Carnatic music is the predominant classical form in the south. These traditions differ substantially in terms of language, notation, ornamentation, form, names and classification of *raag* and *taal*, and many other crucial components[5].

Throughout its history, India has been ruled by many foreign bodies. Starting with the Afghans and Turks who established the Delhi Sultanate in the late thirteenth and fourteenth centuries, India's history of foreign reign also included the establishment of the Mughal Empire by the Muslim invaders from Central Asia from the mid-sixteenth to early-eighteenth centuries, and was then under British colonial rule from 1858-1947[6]. In every case, the foreign influence of India's rulers was felt much more acutely in the north of the country than in the south. Musically, this meant that the Hindustani tradition, which was practiced and developed in the courts of the ruling classes between the thirteenth and fourteenth centuries, has evolved over the following centuries to incorporate and accommodate a variety of

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[4] There are also hundreds of vibrant folk traditions throughout India, the most notable being those from Rajasthan and Bengal. These folk traditions are well known on the world stage as well, but will not be discussed here.
[5] The principles of *raag* and *taal* are defined and discussed in Chapter 1.
[6] Metcalf 100 & 220

foreign musical tastes[7]. While Carnatic music is considered among Indians to be the purer of the two Indian traditions, perhaps, the evolution of Hindustani music to appeal to a wide range of audiences is also what has spurred its earlier rise to popularity and sustained recognition around the world.

While there have certainly been many interesting and fruitful Carnatic/Western collaborations, especially in recent years, this thesis will focus on Hindustani/Western collaboration. However, it is impossible to leave Carnatic music out of the mix entirely. Especially when these collaborations take place in the West, musicians who are trained in Hindustani music often opt to utilize Carnatic musicians in their works, simply because there is a small (though growing) pool of highly qualified Indian musicians who are capable of serving as collaborators for Western composers, and the Carnatic musician may be the best available Indian musician. For this reason, I use the term "Indian music" when referring to situations in which there are instances of both Hindustani and Carnatic music.

Overview: Instances of Hindustani Music in Western Art Music.

Throughout the history of Western art music, and most prominently in the last 150 years, there have been many instances of appropriation of Indian elements into works of Western concert music. These references range from vague exoticism to comprehensive attempts to integrate techniques and devices from Hindustani music into works for an ensemble of Western instruments. After formal establishment of the East India Company in 1600, the notion of India began to enter the Western European consciousness and was reflected in increasing instances in music of

[7] Wade 3

composers in Western Europe, in direct correlation with how much was known about India in Europe at that time. The first references, around the turn of the eighteenth century make reference to India only in name, and even then, only to indicate a foreign, non-European locale. In the mid-eighteenth century, after India's formal colonization by Britain, French composers such as Massenet, Bizet and Delibes provided more colorful and musically supported (though still highly orientalized[8]) versions of India in their operas. However, it was not until almost a century later, in the music of Messiaen**,** that actual theoretical concepts from Hindustani music began to be assimilated by Western composers.

Until the 1960s, there had been only isolated instances of reference to India and its music in Western art music. But in concurrence with what Pandit Ravi Shankar termed "The Great Sitar Explosion" of 1966-67 in the popular music world, many early proponents of minimalism were able to study extensively with Hindustani musicians which resulted in a more comprehensive knowledge of Hindustani Music in both theory and practice. This concentrated study allowed for a deeper integration of Hindustani concepts into their compositions, because instead of being constrained to the limited written documentation of Hindustani music, they were able to access it more fully it through practice. Many Hindustani musical

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[8] The term 'orientalism' has famously been defined by Edward Said as a flattening of the perception of Arabs in the Western world to, "others, objects of study, stereotyped in negative terms, significant not for the factual data or truth they bear but for their usefulness in reinforcing the dominance of British, French and Americans." (Bierman 68). As used in this thesis, the term does not carry the same degree of severity. It refers to the flattening out of the perception of Indian music in the West, and its use as an invigorator of Western music rather than as an authentic reference to Indian music. However the use of the term itself it does not engage the political implications of such a usage.

structures contributed to the foundations of minimalism, and consequently, the minimalist integration of these concepts has earned Hindustani music a prominent and respected place in contemporary Western art music.

Indian Orientalism in Eighteenth and Nineteenth Century Opera. In 1600, Queen Elizabeth signed a charter forming the East India Company, which was established for the purpose of exporting India's products to England[9]. After that date, spices, and later fabrics from the Indian subcontinent were increasingly available in Britain and eventually continental Europe. Over the next centuries, as these products became widely accessible, and as more information about the country of their origin became available, artistic representations of India in Europe began to appear across many mediums. In Western art music, the most discernible references to India took the form of opera. The first of these operas were Henry Purcell's *The Indian Queen* (1695) and Jean Phillipe Rameau's *Les Indes Galantes* (1735), both of which betrayed a heavily orientalist approach to the characterization of India[10]. However, a century and a half later, and a few decades after India became a colony of Britain, Leo Delibes's opera *Lakme* (1883) was premiered. While *Lakme*'s plot is derived from two novels by authors who had actually travelled to the subcontinent, it still contains what Derek Scott characterizes in his article "Orientalism and Musical Style" as many markers of an "Orientalist musical code"[11], and does not begin to approach an accurate representation of Indian music.

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[9] Metcalfe 44
[10] In the sense of Said
[11] Scott, Orientalism and Musical Style, pg 310

Accuracy of representation of Indian culture was not the aim of any of these operas. The goal of these works was not for connoisseurs of Indian classical music to recognize their own musical traditions within Western depictions. The same can be said for all musical references that fall under the category of 'orientalism'. In Edward Said's seminal work on this subject, he argues that "…[w]e need not look for correspondence between the language used to depict the Orient and the Orient itself, not so much because the language is inaccurate, but because it is not even trying to be accurate. What it is trying to do… is at one and the same time to characterize the Orient as alien and to incorporate it schematically on a theatrical stage whose audience, manager and actors are for Europe, and only for Europe."[12] Therefore, as Scott suggests, the purpose of Orientalist references are "…not to imitate but to represent."[13]

Scott goes so far as to provide an exhaustive list and descriptions of over thirty techniques used in a battery of vague (non-country specific) orientalism. While some are used to evoke slightly different cultural areas than others, many are used across the board as signifiers of non-Western-ness. Among the textures used to evoke India are bare harmony with octave doubling, ornamented melodic lines, elaborate "ah!" melismas for voice, sliding or sinuous chromaticism, (for example, snaking downwards on cor anglais), the use of double reeds for melody, tambourine and little bells, dissonant grace notes, and augmented seconds and fourths in melodic passages.[14] Indian musicians themselves are often aware of some of these

[12] Said 71-72.
[13] Scott 326
[14] Scott 327

Western perceptions of their music. Gaurav Mazumdar, the Hindustani musician with whom I studied in Delhi, noted that Westerners usually requested to study *raags* like Ahir Bhairav and Tori, both of which contain a flatted second scale degree and at least one interval of an augmented second[15]. The first *raags* taught to students of Hindustani music[16] often have some similarity (perhaps coincidentally) to Western scales and modes, but Mazumdar mentioned how eager his Western students were to move into the ones that sounded more 'Indian'.

This incorporation of the oriental notion of 'Indianness' in opera has appeared within a smattering of operas after *Lakme*, both in France and abroad. The most notable example is in Nikolai Rimsky-Korsakov's opera *Sadko* (1896), where the character of an Indian guest sings the aria *Hindu-Lied*. The aria contains no elements of actual Hindustani music, but rather a chromatic descending vocal line (clearly falling within Scott's description of general oriental devices above), which emphasizes the constant oscillation between the major and minor modes that occurs in the harmony.[17]

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[15] While the term 'augmented second is a Western term, which he did not actually use, it was clear to me that this was what he meant.

[16] For example: Yaman (containing the same notes as Lydian mode), Kalyan (containing the same notes as a major scale) and Aasavari (containing the same notes as a minor scale) – however, though the main notes are the same, they are navigated very differently. A full description of raga is given in Chapter 1.

[17] In an interesting side note: Kaikhosru Sorabji, a composer of Indian heritage who was born and lived in England, wrote a beautiful and complex piano piece entitled "Pastiche on the Hindu Merchant's Song" based on Hindu Lied (part of a set called Three Pastiches, the other two being on the Chopin's Waltz Op 64#1 "Minute Waltz" and the Habañera from Carmen). Because of Sorabji's heritage, we might be led to believe that the fantasy elevated Hindu Lied from the level of orientalism to a knowledgeable incorporation actual Hindustani elements. However, Sorabji had no documented training or exposure to Indian music, and the fantasy evokes even less of a sense of non-Westernness than the aria on which it is based. Perhaps this was

While oriental references to Indian music appear to be innocent representations of an unknown culture, the negative effects of reducing an entire complex cultural milieu to a flattened and largely inaccurate stock characterization of a musical 'other' can not be ignored. The first comprehensive history of India for Western readers was James Mill's three volume set *The History of British India*, published in 1817. Mill, who had never visited India, worked for the East India company as an Imperial Administrator, receiving and editing transmissions from India for the company[18]. His book, which was considered the leading history of India for many decades thereafter, is now known for its embarrassingly self-righteous and scathing attacks on the culture and customs of Indians. The first notions many Europeans had of India developed from reading Mill's widely disseminated writings, and perhaps served to develop their views of Indians as one of the "weaker races" or "backwards classes"[19]. These attitudes may have spilled into the musical realm as well. As Scott points out, oriental tendencies in music often tell us "not about [foreign people], but about our attitude toward them."[20] For example a wordless vocalise sung by an Indian character in an opera often has the subtext of characterizing "…the 'emotional' Easterner, the lack of verbal content pointing to a contrast with the [speaking] 'rational' Westerner."[21] These representations,

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Sorabji's intention – if orientalism gives listeners a false sense of understanding of the sounds of a non-Western music, Sorabji's Pastiche serves to remind the listener not to become to comfortable with such reductive assumptions.

[18] Zastoupil 32

[19] Common phrase still used (though decreasingly so) in India

[20] Scott 330

[21] Scott 310

however innocuous they may seem on the surface, can subconsciously shift attitudes towards foreigners in negative directions.

On the other hand, the effects of orientalization are not unanimously negative. Musical Impressionism, which attributed much of its source material from orientalism notions of the East had a much more positive effect, inviting audiences into luscious, exotic sound worlds and opening up curiosity about the cultures by which they were inspired.

Hindustani Taal in the Music of Messiaen. An almost opposite approach to Hindustani music was taken up later by Oliver Messiaen (1908-1992). While his predecessors made use of audible, surface-level, orientalist techniques that refer to the music of an ambiguous cultural 'other', unsupported by any formalized study of the music of the tradition, Messiaen seriously investigated Hindustani musical concepts. However, he assimilated them only at an abstract, structural level, where the resultant music contained no traces of the culture from which it originated.

Messiaen is considered "…the first Western composer to investigate Indian rhythmic patterns or *taals* and to use them consciously in his work."[22] He drew his information about concepts of Hindustani *taal* from a thirteenth-century treatise entitled *Sangitaratnakara*[23], by the Hindustani music theorist Sargadeva. The treatise describes a number of *taals* in use at that time, and exposes their rhythmic structure and basic metric divisions in a mathematical breakdown. In the article "Messiaen's Rhythmical Organization and Classical Indian Theory of Rhythm", Mirjana Simundza reduces Messiaen's application of Indian rhythmic concepts to

[22] Simundza 117
[23] Literally translated: that which sheds light on music

three techniques. These are: "1. [T]he use of authentic *talas*[24] in their unaltered basic form as time cycles which can be repeated, 2. [C]hanging the *talas* according to the principles he learned from exploring them, and 3. [A]pplying the principles which were the result of exploring other rhythms, inventions of the composer himself and principles adopted from other sources."[25] Essentially, Messiaen started with the basic rhythmic divisions of the *taal* given in the treatise, and then applied concepts of additive rhythm (which will be discussed later in this thesis) and rhythmic augmentation, (an operation that substantially subverted the audibility of the prescribed *taal*), to achieve his own unique rhythmic language. Even when the *taal* itself was not altered, he used different *taal*s in succession, obscuring altogether the concept of a rhythmic *cycle* as a recurring structural element.[26] (While, perhaps it could be posited that Messiaen did think about the use of cycle in his music, his methodology of incorporation of cyclic structures would be unrecognizable to a Hindustani musician, due to the layering of conflicting cycles upon one another and the absence of a steadily articulated pulse.)

While Messiaen's approach to rhythmic organization was certainly unique in the West, it was only abstractly inspired by true concepts of Hindustani *taal*. It appears that the majority of Messiaen's information came from Sargadeva's single written document, dating from over 700 years earlier. This source would have

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[24] The words taal and tala are used interchangeably. For a full description of the reason for these two transliterations of the same term, see the footnotes of Chapter 1.

[25] Simundza 127

[26] A thorough discussion of Messiaen's treatment of these taals in such works as the *Quartet for the End of Time*, the *Turangalila Symphony* and the *Catalog of Birds* can be found in the latter half of Simundza's article.

served, for practicing Hindustani musicians of Messiaen's time, as little more than a historical artifact, which is evidenced by the fact that most of the *taals* mentioned have not been in common use for hundreds of years[27]. Furthermore, it seems that Messiaen picked only the *taals* that felt the most removed from Western metric concepts. For instance, he was particularly enamored with the *taal* ragavardhana whose metric breakdown is a very asymmetrical division of 1-1½-1-6. It appears that he was using these *taals* as a catalyst for new rhythmic ideas in his own music, selecting them for their difference from current Western musical conceptions of rhythm and their usefulness in furthering his own concepts of rhythm, rather than their importance within the Hindustani tradition[28]. Many of the most commonly used *taals* in the current Hindustani practice have more regular metric divisions and can be superimposed upon standard Western time signatures, which perhaps would have made them less appealing to Messiaen. Their closer resemblance to Western meters would allow less potential for innovation within his work.

Perhaps the more pressing issue is that Messiaen does not make use of the *taal* in its full form. On the surface, a *taal* is a meter with certain internal divisions, (a concept that coincides with the Western concept of meter), but beyond that, a *taal* is a bare-bones structure for specific improvisational patterns and techniques – a subtly stratified rhythmic environment with many shades of internal gradation[29]. The metrical divisions (known in Hindustani musical terms as the *theka*) are the

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[27] It is further debatable whether the taals Messiaen chose were even commonly used during the period in which the *Sangitratanakara* was written.
[28] It is clear how a two-level non-retrogradable rhythm could be easily made out of the metrical divisions in this taal by repeating the divisions in reverse.
[29] A more detailed description of taal and its realization can be found in Chapter 1.

scaffolding upon which the real meat of the *taal* sits. Messiaen completely disregards these subtleties, assimilating only the basic metric divisions, which would be akin to using only the syntax and grammar of a certain language without taking into account the meaning and connotation of the words. Perhaps this is due to Messiaen's lack of formalized study Hindustani music with a *guru*. Western music theory can be learned much more successfully from written material than Hindustani music theory can, and these subtleties, which Hindustani musicians consider vital to their conception of rhythm and meter, could not have been adequately imparted in that ancient treatise. While this lack of formal training certainly gave Messiaen the freedom to interpret the limited information he had with unchecked freedom and assimilate the concepts in a way that served his own musical goals, the resultant music cannot be considered to be related to the practice of Hindustani music.

Appropriation of Hindustani Techniques in 1960s Minimalism. The early minimalist movement of the 1960s, as personified by Philip Glass, LaMonte Young and Terry Riley, represented another step towards the meaningful integration of Hindustani structures into works of Western art music. The incorporation of Indian music and culture into the Western popular culture of the 1960s precipitated an increasing presence of Indian music in the West, and musicians of all Western genres began to consider its use in their music. Also, because of the interest of the West in Indian music, many top-tier Indian artists began moving to America, affording Western musicians the opportunity for intense and prolonged study with

these masters.[30] All three of these early minimalist composers studied Hindustani music for many years: Glass with sitarist Pt. Ravi Shankar and Ustad Alla Rakha, and Young and Riley with vocalist Pt. Pran Nath[31]. Different elements of the Hindustani tradition spoke to each of the three composers, but each approach was informed by a great deal of knowledge and sensitivity to the original art form and, "…in some way 'summed up' crucial musical points for each"[32] in their own compositional process.

Phillip Glass grew interested in the Hindustani concept of additive rhythm while working as an orchestrator for a French film which was scored by Ravi Shankar and tabla player Alla Rakha. While each musical tradition is based on a large-scale metrical scaffolding[33], the local-level rhythms are filled out differently. Western music uses a divisive rhythmic approach, dividing and subdividing each beat into progressively smaller note values, whereas Hindustani music uses an additive approach, first creating rhythmic/melodic patterns, and then sequencing those patterns to create larger phrases. The latter is often perceived as having a hemiola-like effect when scored in Western notation, but the Hindustani conception of rhythm allows for these multiple layers of rhythmic complexity to exist simultaneously without the sense of stark rhythmic juxtaposition with which Westerners conceive hemiola. It is difficult to show this subtle variation in rhythmic perception in notation. The example on the left uses two sets of five beats and two sets of three beats to fill in the measure. Western musicians looking at this figure,

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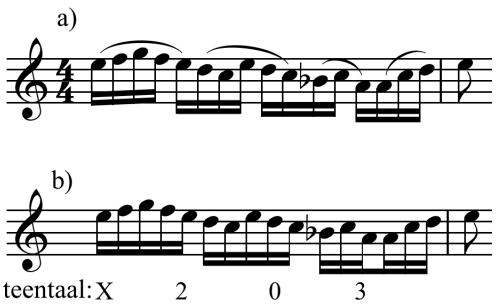
[30] Welch 179
[31] ibid.
[32] ibid. 181
[33] Western music: measure or even hypermetric measure, and Hindustani: taal



even with phrase marks, are likely to put moderate emphasis on each subdivision in the bar (a). Because the meter is always audibly articulated in Hindustani music, Hindustani musicians are more likely to interpret the phrasing in the second manner (b), to create a sense of rhythmic layering between the melody and the meter rather than for the melody to respond directly to the meter.

Glass's opera *Satyagraha* builds its structure upon additive (and inversely, subtractive) rhythmic progressions. Premiered in 1980, *Satyagraha* is the story of Mahatma Gandhi's struggles in South Africa superimposed upon the Hindu religious story of Arjuna's struggle in the Bhagavad Gita. In addition to the subject matter and text choices (portions of the libretto are Sanskrit verses from the Bhagavad Gita), Glass constructs the music based on rhythmic cycles that depend upon both additive and subtractive rhythms, as well as the use of other rhythmic devices such as *tihai* and the return to a *mukhra* (both of which will be discussed later in the thesis)[34].

Glass's contemporary, LaMonte Young, was initially drawn to the musical stasis provided by the drone of the tanpura in Hindustani music. His Trio for Strings starts with three overlaid drones (one in each of the instruments), which continue uninterrupted and without the addition of any other music for the first five minutes of the piece. Later on, Young's studies with Pt. Pran Nath[35] piqued his interest in

[34] Welch 191

[35] Pt. Pran Nath was a proponent of the Kirana Gharana, which emphasizes specific and nuanced tunings. A later disciple of this gharana is Michael Harrison, whose

alternate tunings, and specifically the just intonation tuning system. His five hour piece, *The Well-Tuned Piano* (1964), attempted to address the musical possibilities of that system in the same way that Bach's *Well-Tempered Clavier* had addressed the possibilities of the well tempered tuning system. The beginning of the work is structured like a Hindustani *aalap*[36], with the individual phrases centering around important intervals generated by the alternate tuning.[37]

Even though both Glass and Young had a deeply cultivated appreciation for Hindustani music which came from years of study with a luminary in the field, and even though the influence that study had on them was immense, the music they wrote can still be categorized as a very advanced form of appropriation[38]. As in the use of *taal* by Messiaen, the concepts may be present as structural organizing principles, but the result is completely stripped of any semblance of the music from which those processes were generated.

The only minimalist composer whose music seems to transcend this categorization is Terry Riley. Riley is himself an accomplished khayal singer, and

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music will be discussed later in the thesis. A gharana (which comes from the Hindi word "ghar" meaning "home" is the loose equivalent of a "school" (i.e. Second Viennese School) in Western music.) Gharanas started as specific styles of performance that developed within a particular musical family, but since the dissolution of the Mughal courts in India and the movement of many musicians to large urban centers, study within the traditions of these gharanas has opened up to any capable student able to pay for lessons.

[36] the beginning section of a raag elaboration: a slow, unmetered exposition of each note of a raag

[37] Welch 184

[38] While I could not seem to locate Said's specific definition of this term, it is used in this thesis to indicate the lifting of musical material or principles out of a culture for one's own gain. While the composer usually boasts a direct connection between this material and Hindustani music, the aural result would be completely unrecognizable to a Hindustani musician.

collaborated often with a group of his creation by the same name[39]. His compositional style privileged improvisation over rigid notation, and, like both Glass and Young, valued repeating cycles over the common Western notion of beginning-middle-end. His work *Rainbow in Curved Air* is an example of such a structured improvisation that makes use of rapid rearticulation of pitches in a way that he considered reminiscent of a mantra[40]: the meaning of the individual notes, when repeated to such an excessive degree, became less important than the constancy of their sound.

Riley's string quartet, *Mythic Birds Waltz* (1984) makes use of Hindustani techniques not only as strategies of formal construction, but also as audible surface textures throughout the piece. These textures include melodic ornamentation originating from sitar performance technique, such as grace notes, slides and plucked sounds (which, in principle, resemble Western string technique, but are used in a way that clearly evoke Hindustani music). Riley also constructs the quicker melodies using additive rhythmic cells, ending them with *tihais* that are somewhat obscured but still recognizable as such. On the deeper structural level, cyclical construction is used within and between sections as the defining generative element of form.

Like Messiaen, all three of these composers were aware of the structural principles which organized Hindustani music, but they were also aware of the sound world that those structural principles generated. Furthermore, the organizing

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[39] Common practice style of Hindustani vocal music. Khayal means 'thought' or 'imagination', which refers to the highly improvisatory aspects of the style in relation to the older style, Dhrupad, which is more prescribed.
[40] Welch 187

principles of minimalism bore greater similarity to Hindustani music than did the music of Messiaen, in that minimalist music, like Hindustani music, was considered "…more a process than an object… a verb rather than a noun…a view that contrasts with the conception of a musical work as a fixed creation that has prevailed in Western art music for centuries."[41]

Effects of Orientalism on the Orientalized. However, the question that was initially raised in relation to early orientalist opera remains: For whom is this music being written? In the case of all the works presented thus far, it is clear that a connoisseur of Hindustani music would not have been the targeted audience. In fact, it is unlikely that, even in the most recent music by minimalist composers, there would have been more than a token handful of Hindustani musical connoisseurs in the audience. Whether the aim of the music is to present a vague orientalized notion of an Indian 'other' or to appropriate techniques of Hindustani music (however skillfully or sensitively) into Western compositions, it is unlikely that a Hindustani musician would be able to locate any semblance of their musical tradition in any of the aforementioned music, even if it was expressly pointed out (with, perhaps, the exception of Riley's work for an extremely astute listener). In all my reading, I have found no Indian accounts of any of this music[42] – perhaps Indian musicians are simply unaware of this body of work, but perhaps they do know it and are unable to locate or identify with the Indian elements in the musical texture.

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[41] Rowell 229-230

[42] On the other hand, I have come across some Indian accounts of more widely known Western art music, such as that of Beethoven and Debussy.

The danger of this type of use of the music of one culture in another is best described in the introduction to the book *Western Music and its Others* by David Hesmondhalgh and Georgia Born: "There is no lack of studies of Western music's long history of borrowing from and evoking non-Western cultures and musics… The act of borrowing from other musical cultures has been portrayed as primarily an open minded and empathic gesture of interest in and fascination with marginalized musics. Such a perspective holds the danger of treating non-Western cultures purely as a resource for the reinvigoration of Western culture." [43]

In every piece of music mentioned thus far, I cannot imagine that the intent of the orientalization or appropriation is a malicious one. In fact, there is an inherent wonder and fascination in the exoticization of another culture that makes for incredibly alluring art. However, it is important to note that the allure extends only to the audience for which it was intended. It is an entirely different experience to view a work of art from the vantage point of the exoticized culture. And it is difficult, from that vantage point, not to feel one's culture being stereotyped, flattened or exploited. Exoticism is not a commentary based on deep knowledge or understanding, but a perpetuation of recognizable stereotypes of one culture within another.

Perhaps the fact that there were very few practitioners or connoisseurs of Hindustani music in European countries up until the last half century, and that the small population that may have resided in those countries did not have positions of authority, allowed orientalist representations of their culture to go unchecked in

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[43] Hesmondhalgh/Born, *Western Music and Its Others,* pg 8

elite Western art forms. But in today's world, this strategy of appropriation is no longer plausible.

Starting around the 1970s, an explosion in Indian immigration began in America that is still in progression today[44]. In 1980, there were roughly 361,000 Indian immigrants living in America, and that number has increased by over 100% a year, putting the most recent estimate at 2.8 million Indian immigrants in the US in 2010: just under 1% of the US population[45]. In addition, Indian immigrants have risen to the top of many of the most coveted professions in America: One third of the engineers working in the technology industry in Silicon Valley, as well as 7% of CEOs of Silicon Valley based companies are Indian[46]. Indians have also become prominent figures in medicine and journalism, and increasingly in politics. They have an average household yearly income of $88K, which is the highest income of all ethnic minority groups in the United States today[47]. People in this socio-economic demographic are often listed as benefactors in concert programs of symphony orchestras, and hold season tickets to major venues of Western art music in their cities.

Concerts of Hindustani music are common in America, especially in cities with larger and more diverse populations. They are usually very well attended by the immigrant Indian population, as well as their first-generation American children. However, there is hardly any attendance by Indians at concerts of Western art music. This is unsurprising, considering that the aesthetic values of Indian music project

[44] 2010 US Census data
[45] 2010 United States Census
[46] ibid.
[47] ibid.

very different emphases than its Western counterpart. In addition, any orientalized representation of India in music within Western art music, which may initially serve as a draw to Indians with the means to attend such concerts, may end up proving insulting or unintelligible to them.

A large untapped potential audience of cultured Indians and Indian-Americans in existence in America, who are likely to be drawn in by Western art music that represents their culture in an informed and thoughtful manner. The increasingly globalized world we inhabit desperately calls for an increasingly sensitive vocabulary for the musical integration of cultures – one that truly pays respect to both cultures, and that draws the audience for each type of music into the concert hall together. It should not be about representing one culture as a pawn in the game of another, but rather an empathic gesture which creates two worlds that flow equally into one another.

Inclusion of Hindustani musicians in other Western genres

One of the greatest steps forward that composers of Western art music can take toward creating music that feels authentically Indian is the inclusion of Indian musicians in their compositions. While, of course, the inclusion of Indian musicians does not guarantee the quality of a composition, it does address issues of authenticity in a way that has not been addressed in any of the previously discussed music. An Indian musician in a piece of Western music will be sensitive to the misrepresentation of their own musical culture, and even having this musician present will shift the perspective of the composer and other musicians involved.

Instead of focusing purely on the utilization of Indian musical principles in a Western setting, the musical challenges become 1) finding common ground that allows the Indian musician to participate actively in the work, 2) establishing an effective method of musical communication with that musician, and 3) making that musician feel comfortable enough to be able to express the full range of his or her ability in the work. To be sure, there are many difficulties inherent in this sort of collaboration that are not present in a work for a strictly Western ensemble. However, these are exactly the difficulties that are inherent in all cross-cultural dialogues. While the exploration of these difficulties may prove trying, they certainly merit the effort, because finding ways to negotiate them is essentially the work of diplomacy.

While Western art music has recently begun to embrace the inclusion of Hindustani musicians into their music, other Western musical genres have an established tradition of such incorporation. In popular culture, the Beatles began a rich tradition of collaboration with Hindustani musicians. A genuine relationship between jazz and Indian music dates as far back as jazz legends John Coltrane and Miles Davis. Currently, a wide variety of high-quality, high-profile crossover work is being done in both these fields, such as A.R. Rahman's music for the 2008 film Slumdog Millionaire, and the most recent album release by 2014 MacArthur Fellow, pianist Vijay Iyer.

Western Popular Music. In December 1965, the Beatles released "Norwegian Wood", featuring George Harrison on the sitar[48]. This marked the first

[48] Lavezzoli 171

time a sitar had ever been used in a widely-heard Western pop song[49]. Its presence created what legendary sitar player Ravi Shankar referred to as "The Great Sitar Explosion" of 1966-1967[50]. Many other rock groups began to use the sitar in their work, which brought the instrument, and consequently the genre of Hindustani music itself, into a highly visible place within American popular music culture. Since that point, almost fifty years ago, there have been numerous successful collaborations between proponents of popular Western genres and Hindustani musicians. Aerosmith's song *Taste of India* (1997) includes a collaboration with sarangi player Ramesh Mishra. Tabla player Zakir Hussain's group Tabla Beat Science, which released three albums from 2000 to 2003, includes many notable Western popular musicians. In addition, the compositions of DJ Cheb-i-Sabah and Indian music director Charanjit Singh often explore the integration of Hindustani and Western popular sounds in an electronic context.

In recent years, India's most highly acclaimed film composer A.R. Rahman has become the emblem for Indian/Western popular collaboration, turning out multiple hits in over 130 films to date[51]. His music combines the chordal structure of popular Western music with Bollywood-style vocals and rhythms[52]. He is best known for his Academy Award-winning music for the movie Slumdog Millionaire (2008), which included a variety of Hindustani-trained musicians as well as

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[49] Farrell, Reflecting Surfaces 193
[50] Lavezzoli 171
[51] IMDB: http://www.imdb.com/name/nm0006246/#composer (accessed Nov 24, 2013)
[52] Most Bollywood playback singers have had solid Hindustani training. Unlike the music scene in the West, Indian film music and classical music are much more integrated in terms of technique and sound required for performance.

English/Sri Lankan rapper M.I.A. Another rich and growing resource for such collaborations today is the MTV-sponsored show Coke Studio, which began in Pakistan in 2008, and now has additional branches in India and the Middle East. Coke Studio is the cornerstone of unique inter-genre musical collaborations between a variety of South Asian and Western genres. Nitin Sawhney and Clinton Cerejo are among the show's most successful collaborative artists who work specifically with Hindustani and Western musicians.

The presence in both Western popular music and Hindustani music of a clear melody in the front of the texture, and the use of steady and consistent percussion to articulate the meter are traits that may have led to the abundance and continued success of such collaborations. In his detailed study of the Indian-influenced music of The Beatles, David B. Reck notes that "[t]he functioning layers of the musical texture in Indian music – melody/drone/percussion – are similar to those of Western pop music, especially rock: melody (vocal and lead guitar)/harmony (back-up vocals, rhythm guitar and bass)/percussion (drum set)."[53] In addition to Reck's observations, the predictability of the phrase structure in Western pop music gives both the clear melody and articulated rhythm a framework that is easily audible to Hindustani musicians, and often fits comfortably within a Hindustani *taal*, providing a tangible frame of reference for the Hindustani musicians. In fact, the body of music that Hindustani musicians refer to as 'fixed compositions', including *bandishes*[54] or

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[53] Reck 94

[54] Songs with words that serve as the focal point of a raag elaboration (for more information, see Chapter 1)

bhajans[55] are marked by similarly regular phrase lengths. Because these elements exist in the same place in the texture of both genres, the ear of a Hindustani musician is drawn to the corresponding elements in popular music.

A simple example is in "Norwegian Wood", where the sitar melody at the beginning of the song that is later set to English words is a melody in Raag Khamaj[56]. The sitar melody can easily be interpreted by the sitar player in the *taal* Dadra, which is comparable in weighting and structure to the Western meter of 6/8. While George Harrison himself played the sitar on the recording, it could have easily (and perhaps more expertly) been performed by a Hindustani sitar player. A year later, after beginning studies with Ravi Shankar, Harrison produced a more sophisticated blend of Hindustani and Western popular styles in the song "Within You, Without You"[57]. In addition to the band and a Western string section (eight violins and three celli), the song makes use of Hindustani musicians on the sitar, swarmandal and dilruba (melodic instruments), tabla, and tanpura (drone instrument) [58]. Harrison created a musical environment that was comfortable for these musicians through the use of Raag Kafi for the melodic material, and two common Hindustani *taals* (*teentaal* and *jhaptaal*). Each portion of the melody fits into its respective *taal* in a way that directly parallels a Hindustani *bandish*[59], making it completely interpretable using only Hindustani vocabulary.

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[55] Devotional songs with religious texts where the bulk of the improvisation occurs only on the smallest scale, in the transitions between individual notes
[56] Farrell 194
[57] From Sgt. Pepper's Lonely Hearts Club Band album (1967)
[58] Farrell 196
[59] For a definition of taal, see Chapter 1. The teentaal (16-beat cycle) portion of the song begins its melody on beat 7, which is around the area of the khali (beat 9) and

However, the absence of these elements and their similar placement in Western art music leaves Hindustani musicians with nothing familiar to follow on the musical surface.

Jazz. If Western popular music and Hindustani music share a similar placement of elements in the musical texture, jazz overlaps even further with Hindustani music due to its additional structural similarities. Farrell writes, "Attempts at fusion between the two musics have usually been based on exploiting the superficial similarities they share on a structural level: improvisation, complex and syncopated rhythmic patterns, the paramount importance of the soloist, and the solo as an intense means of personal expression," noting also that, "…the composed sections are scant and are used primarily as jumping-off points for lengthy extemporizations."[60] In addition to these similarities, both Hindustani music and jazz are structured by cycles rather than by a carefully mapped trajectory of beginning/middle/end, as is the case for a great deal of Western art music. While the cycles of jazz are based on a harmonic progression, whereas the cycles of Hindustani music are based on a rhythmic *taal*[61], these elements are each used in

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reaches the point of greatest melodic weight at the Sam (the following beat 1). The jhaptaal (10-beat cycle, divided into 2-3-2-3) portion of the song places more deliberate weight on the four bigger divisions, due to the asymmetrical division of the taal, and therefore the need to confirm the strong beats. Both of these are typical placements of bandish melodies, as I have seen from my work in this field. Farrell fails to see this melodic similarity to a traditional bandish in the case of the teentaal passage, and states that the use of taal in this location, "serves no structural purpose here, except that it sounds indian" (Farrell 197). Aside from the similarity of melodic weight to a bandish melody, the taal is a practical necessity as a guide for the tabla player.

[60] Farrell 190

[61] A taal can vary in length, but for a rough means of comparison, it may range from about 1 to16 Western 'measures' in length, depending on the speed and amount of

the same way, as high-level organizing principles in their respective genre. Because these elements provide the same type of structural scaffolding upon which the music is built, one style can be grafted into the other with relative ease, and performers of each discipline can easily agree upon structure and then improvise in their own style.

Proponents of Indian-Jazz integration are numerous and varied. They include old masters such as Miles Davis and John Coltrane in the 1950s, who developed a style of modal improvisation that was perfectly suited to integration with Hindustani elements. In the sixties and seventies, Don Ellis and his Hindustani Jazz Sextet and the Indo-Jazz fusions of John Mayer and John McLaughlin's group Shakti were notable attempts to bring together performers from both traditions within the common structures between the genres.[62] In the past decade, first-generation Indian-American jazz musicians such as saxophone player Rudresh Mahanthappa and pianist Vijay Iyer have been drawing on their firm foundation in jazz along with their early exposure Indian musical traditions to develop their unique vocabulary, which often include collaborations with Indian musicians. On the other side of the spectrum, Indian-American sitarist Neel Murgai, who also has a strong foundation in jazz, approaches similar collaborations as one of the Hindustani musicians within his own ensemble.

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beats in the taal. The longer taals are comparable in length and scale to a jazz tune, though it is more likely that 2-4 taal cycles would be the equivalent of an entire jazz tune .

[62] Farrell 190 – note that L. Shankar was a Carnatic violinist, but his work was so significant that it deserves to be mentioned here.

While many jazz musicians, even those who studied Hindustani music extensively, implemented only the principles of Hindustani music in their own work, there was also a variety of music that went a step further, and was scored for ensembles that included Hindustani musicians. John Mayer's Indo-Jazz Suite uses two groups of five instruments: (1) alto sax, trumpet, piano, bass and drums and (2) sitar, tabla, tanpura, flute and harpsichord. The organizing principles can be interpreted in a Hindustani way, using Raags Megh and Gaud Sarang and *taals* Keherwa and Jhaptaal. They can also be interpreted in a Western way, using Mixolydian in place of Raag Megh and an alternation between Lydian and Ionian modes in place of Raag Gaud Sarang, and using two measures of 4/4 to equal a cycle of the 8-beat *taal* Keherwa and two measures of 5/4 to equal a cycle of the 10-beat *taal* Jhaptaal . While a much more detailed discussion of the mechanics of this piece is available in Farrell's article, the basic structure of the piece allows the two groups to be in constant communication, by remaining on ground that is common to both styles[63]. Alternating sections are played by the two different groups and are connected by interludes on the flute. The flute is performed, in this piece, by a Western player, but its sound occupies a prominent space in both the sonic worlds of Hindustani music and jazz.

John McLaughlin's group Shakti (active from 1975 to 1977) took Indian-Jazz fusion a step further by creating a group of musicians well-versed in one another's traditions. The all-star group consisted of McLaughlin (jazz guitarist), Zakir Hussain (Hindustani tabla), Lakshminarayan Shankar (Carnatic violin), and a few other

[63] Farrell, Reflecting Surfaces 200-201

Indian musicians. The resultant music, released on three albums from 1975-1977, could swing easily back and forth between Indian and jazz-based musical systems because of each musician's literacy and performance experience both in Indian and jazz styles.

In recent years, Vijay Iyer, a 2014 MacArthur grantee, released the album Tirtha, which consisted of compositions for a trio including himself on the piano, Hindustani tabla player Nittin Mitta, and Carnatic guitarist Prasanna[64]. Continuing in the tradition of McLaughlin's ensemble Shakti, all the musicians have some measure of knowledge about one another's traditions, which allows for a natural flow between Indian and jazz elements. For example, in the song *Falsehood*, a Carnatic-style melody is accompanied by a static harmonic ostinato in the piano (in the place of a drone in the texture) and in a traditional Hindustani *taal* in the tabla[65]. This texture is exchanged, in the middle of the piece, for more active harmonic motion typical of a jazz tune, but still returning at strong cadences to the notes of the *raag*. During this section, the guitar supports with light harmony; its presence is stronger the closer the chord changes are to the initial *raag*. The tabla also alternates between very rigid Hindustani patterning during the more melodic sections and a greater emphasis on texture (the style of which would be atypical during a traditional Hindustani performance) in free sections near the end of the piece. *Falsehood* is firmly rooted in all three traditions, and also departs from each equally.

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[64] Iyer, Vijay. *Tirtha*. Vijay Iyer, piano; Nitin Mitta, tabla; Prasanna, guitar. Act Music and Vision. Compact Disc. 2011.
[65] ibid.

The discussion regarding integration of popular music and jazz with Hindustani music (both in their overlap of musical elements and their inclusion of musicians from both disciplines) is already a large and varied one. I mention it in this thesis largely to highlight the degree to which a similar breath of discourse is absent in the area of Hindustani musical integration with Western art music. Farrell asserts that, "…[t]here is, perhaps, something in Indian music and pop and jazz that make them reflections… of each other."[66] Their various shared elements and the relationship of those elements to one another frame different facets of each genre of music in terms of its relation to the others. When these genres are explored in combination, the attention given to these traits, often due to their correlation with traits in the other genre, contributes significantly to the uniqueness of the music.

Hindustani Music and Western Art Music

The integration between Hindustani music and Western art music has a much steeper learning curve than either American popular music or jazz. The wide variety of Western art music being written by today's composers is not often characterized by the periodic phrase lengths of jazz or popular music, nor does it always have an instantly discernible and unchanging tonal center. Many of the traits that are considered the backbone of Hindustani music are treated very differently, or abandoned entirely in Western art music. Where, then, is the common ground upon which collaborations between these two genres can be reliably built?

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[66] Farrell 190-191

Lavezzoli reaches past the structural building blocks of the music for his answer to this question: "…[A]lthough the two musics are based on different fundamental principles, both [musical cultures] prioritize discipline and virtuosity… A western concert soloist undergoes a similar level of rigorous training as an Indian musician – first to foment proper technique, then to nurture one's artistry."[67] He also points to the particular attitude of reverence, both among Hindustani and Western art musicians for, "one teacher above all others with whom they form a special bond,"[68] – a *guru* (to use the Hindustani terminology), who guides them in the achievement of this artistry. This common musical culture is a great advantage in collaborations between two musical genres that otherwise present a multitude of challenges. While composers of Western art music have certainly found individual points of commonality with particular Hindustani musicians, it often takes exactly this relentless work ethic, and a fervent desire to express the breadth of a thorough training to begin to understand one another's musical systems well enough to bring such collaborations to fruition.

Because there are no points of reliable overlap between Hindustani music and Western art music, each set of collaborators must search for their own common ground based on their individual musical preferences. This has resulted in a small but extremely diverse array of approaches to collaboration: Works can be conceived by Western composers, by Hindustani composers, or by a Hindustani performer and a Western performer without the presence of a composer. Some works are completely improvised, others are completely notated (and the notation often varies

[67] Lavezzoli 12
[68] Lavezzoli 13

greatly from piece to piece), and many make use of a combination of improvisation and notation. Some works for only Hindustani musicians make use of Western compositional techniques, and some works for only Western musicians make use of Hindustani structural principles. In addition, an increasing number of performers and composers who have gained proficiency in both Hindustani and Western performance techniques have opened the door to a whole range of possibilities for new works.[69]

In this thesis, however, I will focus on works that outline methods by which a Western composer can facilitate collaboration between Hindustani and Western art musicians who are not familiar with one another's musical system. To that end, I will be examining a small cross-section of works which conform to two basic criteria: First, each work has been conceived by a composer who has substantial training in Western composition. Second, the Hindustani musicians involved in the performance have no training, or insubstantial training in Western art music.

Each of the works examined in this document is conceived by a Western-trained composer. While many of these composers also have extensive training in Hindustani music, I chose not to include works that had no basis in Western compositional principles. The notion of a 'composer' is very different in Hindustani music, where the role of a performer in the creation of the piece is much more substantial. A Hindustani composer, in the traditional sense of the term, may create

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[69] I would have loved to discuss these performers, such as Payton MacDonald, Shawn Mativetsky et al in my thesis. I believe they are doing work that will truly move Western/Hindustani collaborations forward in a profound way. I truly regret that the focus my thesis ended up taking did not allow for more discussion of their work.

melodies upon which improvisation occurs, but does not typically control the structure of a piece, or changes in orchestration and texture. While Western musicians do work with melody and rhythm (albeit in a somewhat less intricate way), Hindustani music has no equivalent to counterpoint and harmony. Therefore, in music created by Hindustani composers, the parts for Western musicians are often extremely limited.[70] While a part created for a Hindustani musician by a western composer could be said to be equally limited in its melodic and rhythmic scope, a Hindustani musician usually fills out the part through improvisation, a skill that would not be expected of Western musicians. For these reasons, I found that the collaborations that best utilized musicians from both genres were usually spearheaded by a Western-trained composer.[71]

I also opted to include collaborations involving Hindustani performers who were not versed in Western art music. While certainly, musicians who are adept in both genres are writing extremely innovative music, this music is often unplayable by anyone without their particular skill set.[72] In looking at music written for musicians without Western training, I hoped to uncover methods by which the majority of Hindustani-trained musicians would be able to communicate with Western musicians. Hopefully the environments set up by the composers of these

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[70] Prime examples of this type of work are Ravi Shankar's two Sitar Concerti. The writing for the orchestra in these pieces is severely limited.
[71] Of course, I am fully aware that I may have this opinion specifically because I am a Western composer.
[72] This is definitely a growing field, though: there are increasing amounts of performers who can play this music, and these performers are also starting to 'translate' some of these works for musicians without the experience to do so themselves.

works will facilitate a greater number of collaborations among interested Hindustani and Western musicians.

The pieces I will be looking at in detail in this thesis are:

- Vijay Gupta: *Raga Jaunpuri*, for violin and tabla (2011)
- Shirish Korde: *Lalit*, for cello and tabla (2012)
- Evan Ziporyn: *Mumbai*, for tabla and orchestra (2011)
- Michael Harrison: *Bhimpalasi* for cello, piano, marimba, tabla and Hindustani vocalist (2013)
- Reena Esmail: *Aria*, for Hindustani vocalist (2010)[73]

Each of these works uses a unique combination of notation and oral/aural communication to facilitate collaboration between the musicians from each discipline. While notation is considered the backbone of Western art music, and Hindustani music is perceived to be a purely oral tradition, each discipline inherently contains forms of the opposite method of communication. Collaboration between musicians from these two disciplines can build on the practices of notation and oral/aural assimilation in both traditions, using them as a connecting force between musicians.

Bridging the divide between Hindustani and Western art music is, for me, a step towards bridging communication between India and the West. Indians are so fond of using the adage "*Music is the universal language"*. As is the case with any language, finding the right tools for communication can be initially challenging, but

[73] It is no coincidence that these pieces are all very recent. Hindustani collaboration with Western art musicians is a nascent but growing field.

the potential benefit of developing a new modality for communication is tremendous.

CHAPTER 1: Rhythm and Melody

Before embarking on the examination of individual collaborative works, some context is necessary. This chapter outlines some of the basic principles of Hindustani music, which will be subsequently referenced by works discussed later in this thesis, as well as a discussion of the application of those principles in the context of instrumental and vocal music.

Tabla and Taal

It is significant that the majority of works by Western composers that include a Hindustani musician are scored for tabla, the predominant percussion instrument in Hindustani music. In my search for compositions involving both Western and Hindustani musicians, about 80% of the collaborative works I surveyed confined their use of Hindustani instruments to the tabla. The instrument consists of a higher and lower hand drum, to be played by the right and left hand respectively[74]. Though the higher drum is often tuned to the first note of the *raag*[75] when used in a Hindustani context, neither drum contributes any significant melodic material to a composition. The composers I interviewed each had a specific reason for their choice to use the tabla in their work. Sometimes it was used to give a work for Western instrument(s) a more Indian flavor. In other instances, composers had a preference for the tabla simply because they had studied it, and therefore had a practical understanding of its possibilities. In still other cases, the composer knew a tabla player personally, and the desire to collaborate spurred the composition.

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[74] These drums are called the dayan and bayan, which literally translate to 'right hand' and 'left hand' in Hindi.

[75] The note is called Sa, and has a very similar function as a tonic in a western melody.

The rhythmic structure of Hindustani music operates in cycles called *taals*[76]. A *taal*[77] is defined broadly as "the metric cycle characterised by a recurring pattern of subdivisions"[78]. While there are hundreds of *taals* in existence in the Hindustani tradition, current practice makes regular use of about twenty of them, which range from six to sixteen beats. Each *raag* elaboration makes use of one or two of these *taals*[79] which are repeated over the duration of the metered portion of a *raag* elaboration. Depending on the speed of the music and the length of the *taal*, a single cycle of *taal* might encompass a small portion of a phrase, similar to a measure in a Western composition, or might span an entire phrase. Like measures in Western art music, each *taal* has a hierarchy of beats with greater and lesser relative weight, but this weight is more graded and codified at the structural level than in Western music. Instead of counting the beats of the *taal* using numbers, the *taal* is rendered

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[76] It is technically incorrect to use the plural suffix '-s' after terms in Hindustani music. However, like the word 'raga', the '–s' suffix has been adopted in many Western texts on Hindustani music, and separates the singular form from the plural (which would both be the same in Hindi), clearing up potential confusion.)

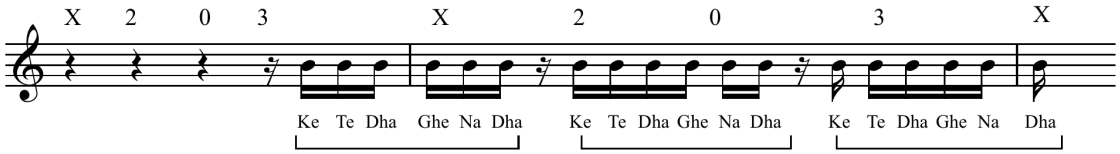
[77] As noted briefly in the introduction, taal and tala are simply two transliterations of the same Hindi word. Tala (implying that the word is two syllables, with an extra "ah" sound at the end of the word) is a pronunciation error that originates from a misreading of faulty transliteration. This error exists in the Western pronunciation of many Hindi words, most notably "yoga", which is authentically pronounced "yog". As in the current usage of the word "yoga", many Indians now say the words "raga" and "tala", especially when speaking in English, though this is technically incorrect. To this end, I have mostly used the words "raag" and "taal" in my own writing, but leave quotes that use the words "raga" or "tala", as they are. In addition, there were a few places where the two-syllable versions felt grammatically accurate in English, so I left those in as well.

[78] Nad 334

[79] When two taals are used, one is used for a slower portion of the raag elaboration, and another will be used for the fast part. They are never interchanged with one another within a single section.

using a specific set of strokes on the tabla, called *bols*[80]. Each *bol* is an onomatopoeic syllable that corresponds to a specific stroke on the tabla. The *bol* is rendered by striking a different area on either one or both drums, which creates a sound with a unique timbre and weight, and the relationship of each of these strokes to one another shapes the individual rhythmic profile of the *taal*. There are roughly 10-15 distinct *bols*, depending on the stylistic traits imparted within a particular gharana[81]. Each *taal* is referred to by a name (*Jhaptaal*, *Teentaal*, *Ektaal* etc.). The name of the *taal* indicates its *theka* (the most basic metric scaffolding) to the performer, which includes the number of beats in the *taal* and the specific order and placement of the main *bols* within those beats. Many *taals* have the same amount of beats, but they have a very different placement of *bols*.

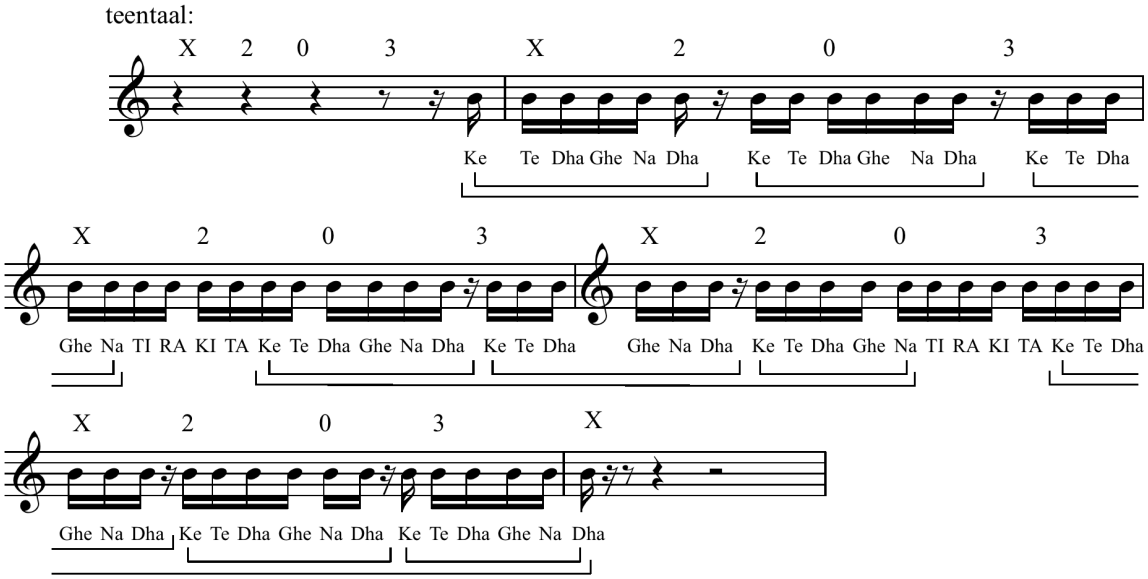
A specific form of rhythmic cadence exists in Hindustani music, called a *tihai*[82]. A *tihai* consists of three identical rhythmic phrases, the third of which



coincides with the first beat of the rhythmic cycle (*sam*). The example above uses *teentaal*, a sixteen beat cycle commonly used in Hindustani music (which can be readily superimposed on the meter 4/4 at various levels of augmentation or

[80] The word bol literally means 'that which is spoken' in Hindi, implying that the drum speaks these syllables. Series of bols are also often recited verbally by the tabla player before being realized on the tabla.
[81] 'School' of performance. See intro for more information about gharanas.
[82] The word tihai derives from the word 'teen' which means 'three' in Hindi.

diminution)[83]. The basic *tihai* pattern is made up of a phrase consisting of the *bols* Ke-Te-Dha-Ge-Na-Dha. The last *bol* of the last phrase must fall on sam (X). Therefore the *tihai* must be calculated backward and started in a specific place. The first two statements of the phrase will therefore fall in odd places in the meter, generating excitement as the listener knows that the *tihai* must cadence on *sam*, but is unable to anticipate how that will happen. *Tihais* can be nested into one another. In the example below, the same *tihai* is repeated three times with the phrase Ti-Ra-Ki-Ta



in the middle of each repetition to signal the beginning of the next leg of the tihai. Of course, because the last beat of the tihai must still end on *sam*, the tihai has to start in a different place in the cycle from the simple version above.

Even though a *taal* differs markedly from a series of measures in the aforementioned ways, the metrical scaffolding and cyclic repetition of both *taals* and

[83] Teentaal is comprised of four main beats with four subdivisions within each beat. Without going into great detail about the theka, and risking confusion with the bols of the tihai, it should simply be noted that the four main beats are referred to as sam (the first beat, commonly notate with an X), 2, Khali (an open, weightless beat, usually notated with a 0) and 3.

measures allow for them to be readily superimposed with little compromise from either the Hindustani or Western perspective. The degree to which the composer knows how to work with the tabla can allow the tabla part to be more or less integrated or engaged with the rest of the ensemble. On one end of the spectrum, music which does not change meter can easily accommodate a tabla player who plays in a specific *taal* throughout, with all inter-*taal* subtleties left up to the improvisatory abilities of the individual performer. On the other end of the spectrum, a high level of specificity can be demanded of the tabla player by a musician who knows the instrument well. Practically speaking, because the tabla is not bound by pitch, there is markedly less chance of an audible mishap, while the variety of timbre in the figures rendered can add a new dimension to the rhythmic profile of the composition.

Hindustani Vocal Music and Raag

While the tabla is the most often used instrument for crossover compositions, and melodic instruments such as the sitar are still prominent but are used markedly less, the Hindustani musicians most neglected by Western composers are undoubtedly vocalists. In my survey of compositions for this thesis, only about 20% included vocalists. This proportion seems incongruous by Hindustani standards: within India, the vocal tradition is the most revered musical genre, while other instruments either strive to imitate or serve as accompaniment for vocalists. When a vocalist is present in an ensemble, it is always as the soloist. Furthermore, as the soloist, the vocalist controls the development of the *raag* through time on behalf of the entire ensemble. Additionally, the presence of words in vocal music allow it to

connect with audiences through narrative. Why, then, are vocalists rarely used in crossover collaborations with Western art musicians? Lavezzoli remarks that, "…[v]ocal music is quintessentially Indian in flavor, whereas instrumental music has a more universal quality."[84] Composer Michael Harrison (whose work will be examined in subsequent chapters) cites this as a reason for the lack of works for Western musicians and Hindustani vocalists: "Vocal music is the hardest to assimilate, as it is an essential element for the definition of language and culture. It is much easier for rhythm to translate: Gamelan, African drumming, tabla… Because vocal music has words, it feels the most foreign to non-native listeners"[85]. While it is true that a vocalist singing in Hindi or Brijbasha might create distance for a Western audience, this has never stifled the popularity of opera in foreign European languages. Though language, or even the distinctly foreign tone quality of the vocal music that is generated from another language, can certainly be an issue, it is not the only one.[86]

A more practical reason for such a disproportionately small number of works including vocalists, as mentioned earlier, is the added difficulty of navigating the melodic component of Hindustani music in a Western context. The Western melodic (and consequently, harmonic) system identifies two main scales, major and minor, upon which tonal harmony is built. Especially in the twentieth and twenty-first centuries, Western music has also incorporated other scales, many of which are

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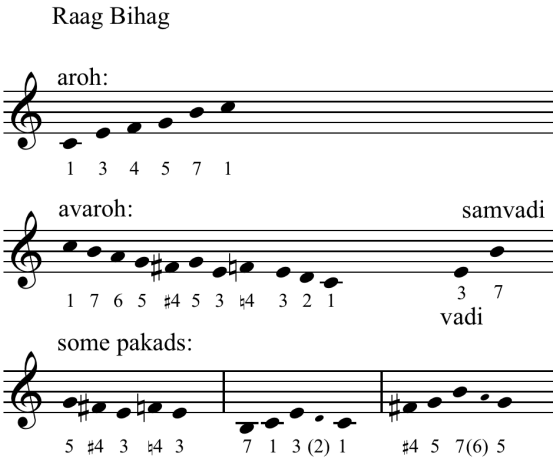
[84] Lavezzoli 28
[85] Harrison Interview (see bibliography)
[86] On the other hand, it is also true that for Americans who enjoy popular styles of music, opera seems the most distant. However, this is the subject of a larger debate which will not be taken up at this time.

appropriated from other musical cultures (such as the octatonic or pentatonic scale). In the last 100 years, a large proportion of new compositions being written are devoid of a tonal center that would be discernible to a Hindustani musician. However, even in music that is clearly within the realm of tonality, Western art music makes frequent use of the principle of modulation: a tonic key is strengthened by moving temporarily to other related key areas. While a piece of Western art music might modulate as frequently as every few measures, a Hindustani singer will often sing on the same tonic note for his or her entire career.



Melodic variety in Hindustani music is created through the use of *raags*. A *raag* is defined as "a melodic form… consisting of particular scale notes, having an identifiable shape and with an associated mood."[87] While there are two principal scales in Western music, there are hundreds of *raags* in common use in Hindustani music. While a *raag* stems from the same basic principles as a scale[88], a *raag* contains more melodic information than a scale does: a scale simply lists the notes in order from lowest to highest (or vice versa)[89], whereas a *raag*'s *aroh* (ascent) and *avaroh* (descent) will often contain

[87] Nad 333

[88] There are seven 'natural' (shudh) notes in Hindustani melody (Sa, Re, Ga, Ma, Pa, Dha, Ni), which correlate to the Western Do, Re, Mi, Fa, Sol, La, Si. For a full desgription of how raags work, consult Nad: Understanding Raga Music pp.38-51

[89] A scale also presupposes certain tendencies between the tones – i.e., the role of the leading tone. Tendencies like this are present in the raag as well, but they vary

different notes, omit notes entirely, or be 'crooked' (*vakhra*), in order to present notes in the way they would appear in the practical rendering of the *raag*. In the illustration of Raag Bihag above, the *aroh* is missing scale degrees 2 and 6, and the *avaroh*, contains all seven scale degrees including both the natural and sharp 4. It must traverse a crooked path to account for the usage of both versions of scale degree 4. In addition to the tonic note, each *raag* has two other pitches upon which the melody often cadences: one in the lower tetrachord (*vadi*) and one in the higher tetrachord (*samvadi*), which vary based on the *raag*. In Bihag, for example, the *vadi* and *samvadi* fall on scale degree 3 and 7 respectively. Also, each *raag* has two or three *pakads* (literally 'catch phrases', or short melodic fragments) that immediately define and identify the *raag* to a listener[90]. So a *raag* can be seen as a collection of melodic fragments, ordered loosely into an ascending and descending pattern, and a *raag* elaboration (the resultant piece of music that is performed by a Hindustani musician) is an improvisation on these fragments.

Students of melodic instruments and voice can spend anywhere from a few weeks to half a year imbibing a single *raag* aurally, gaining an intuitive understanding of its intricacies, and learning to improvise within it. Vocalists will develop their ability to render melody in three specific ways, each of which becomes a section of a *raag* elaboration. An *aalap* is a slow, unmetered section with long, legato phrases. The vocalist exposes each note of the *raag* individually, in a general

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greatly based on the notes in the raag and the prescribed melodic navigation through those notes.

[90] In the example, a few Bihag pakads are listed, though these can change based on the preference of the musician and the specific teachings of their gharana. (there was an odd alignment issue with this example)

ascent from low to high pitch[91]. This section requires the development of an intuitive understanding of melodic pacing (an *aalap* can last from two minutes to over an hour), and the development of the voice to render intricate melodic ornaments, that would barely register to the Western-trained ear. A *bandish*, a short, metered melodic composition, is the only part of a *raag* elaboration that is 'fixed', or notatable[92]. The vocalist can repeat individual lines of the *bandish* many times, each time providing a unique melodic variation. While, at the beginning of the section involving a *bandish*, each line of the *bandish* will be subject to this type of variation in its entirety (often moving back and forth between lines at will), eventually the 'head' of the *bandish* tune (either the first line or a part of the first line, called the *mukhra*) will be broken off from the *bandish* and will serve as a beacon for realignment with the *taal*, amidst the increasing intensity of the improvisation. The *mukhra* will always occur in the same place in the rhythmic cycle as it appears in the original *bandish*, and excitement in the subsequent improvisation is derived from the vocalist's ability to stray further and further from the prescribed rhythmic divisions of the *taal*, seemingly losing all sense of place within the structure, and yet still being able to 'catch' the *mukhra* at the correct place. To this end, the vocalist begins to insert *taans* of increasing length before each statement of the *mukhra*. *Taans* are quick melodic fragments, often sung on a single vowel, usually 'aa', (though sometimes on individual syllables of words from the *bandish*). They use patterns of additive rhythms to move systematically up and down the melodic range

[91] The vocalist starts on the tonic, and usually dips down to the lowest note in his/her range, often the lower 5th or 4th before beginning this ascent)
[92] An extensive discussion of notation of bandish in the work of Bhatkhande will be undertaken in Chapter 2

of the *raag*. As the elaboration proceeds, the *taans* grow longer, cover a greater range, and become more complex and faster[93]. *Taans* are the most overtly virtuosic part of a *raag* elaboration, and a vocalist must develop the robust vocal technique to render them, as well as a metric sense of how these additive rhythms connect back into the rhythmic cycle to align with the *mukhra*. A similar structure exists in instrumental music as *aalap-jod(ghat)-jhala*[94], though this particular form will not be discussed here.

While both melodic instruments and voice work within similar pitch parameters, working the voice into a Western composition presents a variety of additional restraints. Melodic instruments such as the sitar and *bansuri*[95] have the ability to mechanically render pitches with accuracy on their instrument, even when the ear of the musician who plays them does not necessarily conceive of their relation to one another. This allows for some flexibility on the part of the composer to create melody for the instrument that is not strictly within a known *raag*, to surround that melody with pitch material in other instruments that is outside the *raag*, or both. However, in the case of singers, who must generate each pitch based on their own perception of the tonal center, the further a piece of music strays from a familiar tonal system, the more difficult it becomes for the singer to navigate through the pitch space. Even if a singer is singing in a typical Hindustani *raag*, s/he is used to singing with a clearly audible drone. When that drone (or a clear,

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[93] Within a taan, most notes would be the same length – Western musicians would perceive the median length to be a 16th note at Allegro.
[94] A detailed description of these instrumental forms is available in *Nad: Understanding Raga Music*, page 233.
[95] Hindustani wooden flute

repeating reference to it) is not present, staying on the correct pitch becomes difficult. Furthermore, even when the singer is singing in a specific *raag and* a drone is present, other contrapuntal melodies that interact with the vocal part (either by other vocalists or by other instruments in a similar range) are apt to distract the vocalist and cause h/er to fall off pitch. Because counterpoint, as we know it in Western music, does not exist as such in Hindustani music, Hindustani musicians are not trained to work within a contrapuntal setting. In fact, any melodic material in an ensemble that contains a vocalist would typically be generated spontaneously by the vocalist him/herself, and would be subsequently echoed through the other melodic instruments in the ensemble. Even in rare cases where two vocalists are present in an ensemble, the music they sing would never overlap in a Western contrapuntal sense: in a *jugalbandi* (a form in which two vocalists or instrumentalists 'compete' by exchanging rapid phrases of decreasing length, until each phrase is a single beat in length), individual beats are alternately sung by each vocalist.

The many difficulties of including Hindustani vocalists in works of Western art music certainly account for the rarity of collaborations between Hindustani vocalists and Western composers (though it is unclear whether either fact precedes the other). Only one of the composers I spoke to in my research for this thesis had worked with a Hindustani vocalist with previous experience within a Western context. On the other hand, every tabla player involved in the collaborations examined here had extensive experience with musicians in a Western music genre, if not specifically Western art music. It is difficult to understand how to navigate

through the many issues specific to vocalists without some previous practical experience in Hindustani vocal music, so it is unsurprising that all the composers I spoke to who included Hindustani vocals in their works (myself included) had undergone intensive training in Hindustani music, and for most composers, that training was specifically in Hindustani vocal music. The resultant compositions are as startlingly different in methodology and affect as the compositions involving tabla, but in this case, the success of each work depends on the composer's thorough understanding of the needs of the vocalist within the context of the piece.

CHAPTER 2: Uniting Through Notation

The relative role notation plays in Hindustani music versus in Western art music is often cited as the key divisive factor between the two traditions. Since the first accounts of its inception in the thirteenth century, Hindustani music has functioned primarily as an oral tradition, passed down through families for many generations. Even today, it is rare to see a Hindustani musician on stage reading from any sort of notation[96]. To a Hindustani musician, the use of notation is a sign of weakness or incompetence: the music must already exist within the musician as a deep well from which phrases can be spontaneously drawn to create unique and inspired instances of a *raag* in musical performance. In the mind of the Hindustani musician, to read these phrases directly off a page would stifle the spontaneous creativity that defines true artistry. Furthermore, the use of notation impedes the musicians' ability to communicate with their audience as well as with one another. The physical barrier of music on a stand, and the consequent impetus to consult that music with some frequency, lessens the amount and duration of the continued eye contact that is an integral part of Hindustani music making.

This is not to say that Hindustani music is entirely devoid of notation. It has its own unique notation system that contains both basic pitch and rhythmic parameters. Pitch parameters include solfege syllables for the individual notes[97],

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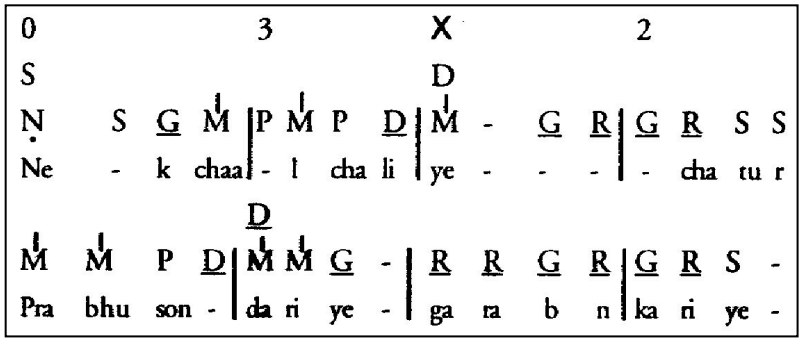
[96] I have sometimes seen students of Hindustani musicians reading the words of a longer, multi-verse composition off a page, but these pages rarely contain musical notation.

[97] Sa, Re, Ga, Ma, Pa Dha, Ni – which are entirely equivalent to our Western solfege system of Do, Re, Mi, Fa, Sol, La, Si. These syllables can be written out in either Devanagari script or in Latin script, using the first letter of each: S, R, G, M, P, D, N.

markers to indicate sharp and flat notes[98], and dots to indicate octave[99]. Rhythmic parameters include Os, Xes and numbers[100] to indicate larger metric groupings, 'barlines' to further articulate these metric groupings, slurs to indicate that the solfege syllables that fall within them fit into one smaller beat, and dashes to indicate the continuation of a note past a single beat within its metrical subdivision.



Commas can also be used to indicate basic phrasing divisions. If the music contains [101] words, they will be notated on a separate line, between the solfege and the larger rhythmic divisions, and will line up with the solfege in a syllabic manner, similar to Western notation of lyrics.

However, the role of this notation in the practice of Hindustani music can be analogized to the use of a fake book in jazz. A fake book contains the simplest form of the melody and rhythm of a tune, and outlines the most basic harmonic

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There seems to be a greater acceptance in recent decades of Latin characters as equal in authenticity to the Devanagari ones.

[98] A sharp (tivra) note is marked by an accent over the syllable (`), where as a flat (komal) note is underlined. A more detailed account of current Hindustani notation can be found in the book *Nad: Understanding Raga Music*, pp.38-51

[99] Dots resemble western staccati in their appearance and placement. A dot above the note indicates that it is an octave above the note in the middle register of the instrument or voice, and one below the note indicates an octave below. Two dots (one next to the other, either above or below the syllable/letter name) would indicate two octaves above or below the middle register note.

[100] Again, these appear regularly in either Devanagari or the Latin numerical characters.

[101] Bhatkhande, *Hindustani Sangeet Paddhati Kramik Pustak Malika* (79) (please ignore location of citation – placement of graphic posed problems in MS Word)

progression associated with it. It is used primarily as a springboard for improvisation – even from the first time the tune is rendered, it can be ornamented beyond what is on the page, and the harmonies can be altered as well. The overall rhythmic structure of the tune remains unchanged, but during periods of improvisation, large blocks of the tune can be repeated or manipulated in a variety of ways. Each of these characteristics is the case for the notatable[102] portions of Hindustani music as well. A notated *bandish*[103] would be about the length of a jazz tune (often even exhibiting a similar four-phrase form[104]), and the resultant *raag* elaboration is usually at least twice as long as a full realization of a jazz tune[105]. Similarly, its local melodic and rhythmic material will be changed and improvised upon, even from the first statement. A defining characteristic of Hindustani melody is its extensive use of melisma and elaborate slides between main, notatable pitches: a musician would never consider rendering a melody without these ornaments, as it is precisely through these figures that h/er creativity and spontaneous inspiration can be displayed to the audience. Additionally, the placement of these melodic phrases within the *taal* serves the same structural purpose as harmonic changes

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[102] I refrain from using the word 'notated' so as not to imply that every bandish is notated, as most of them (though they could be notated with the system described above) are not.

[103] For more information about bandish, see Chapter 1

[104] also somewhat comparable to a jazz tune, this form is further divided into A and B sections called the sthaayi (the purpose of which is to 'ground' the composition and establish the raag) and antaraa (which literally means 'high register', and whose purpose is to make use of the upper register stray from the A material to provide contrast and balance)

[105] The length of a raag elaboration has been getting shorter in recent years for a variety of reasons which will not be discussed in the scope of this thesis. Ten to twenty minutes seems to be the median length, based on the recordings I have heard, but they can vary from two minutes to over one hour, based on the situation and the audience.

under a tune in jazz. The phrases are usually fixed to a certain place in the rhythmic cycle[106], but individual phrases can be repeated with variation multiple times (often with other improvised material in between) before moving on to the next phrase[107]. The notation system, then, serves as little more than a memory aid, and cannot be relied on for precision or comprehensiveness.

Hindustani musicians are certainly aware of the limitations of their notation on the development of their tradition, and have tried both historically and recently to increase the precision in notation of their own music. In 1909, musicologist Pt. Vishnu Narayan Bhatkhande published a seminal treatise on Hindustani music in six volumes called *Hindustani Sangeet Paddhati Kramik Pustak Malika*[108], providing a new framework for classification of *ragas*[109]. In addition to reorganizing *raags* into ten *thaats* based on the main notes contained within each *raag*, he also provided extensive explanations of every *raag* within the Hindustani musical system, with notated examples of *bandishes* in each *raag*. While Bhatkhande's general classification system remains in use, the notated *bandishes* are seen as no more than

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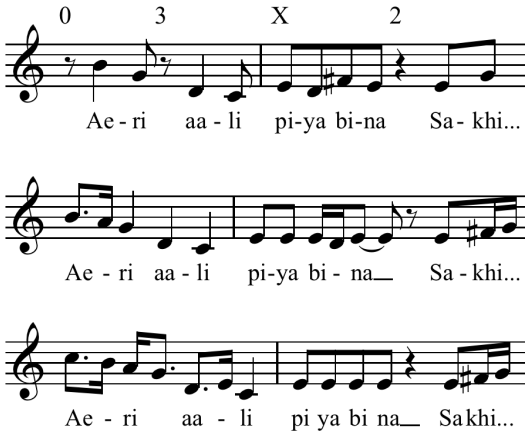
[106] While the length of the rhythmic cycle can vary greatly, it is often substantially longer than a measure in Western music, and especially in the case of teentaal, a common 16-beat cycle, once cycle usually spans the length of an entire phrase.
[107] While the melodies can be greatly varied in pitch and ornamentation, the basic rhythm and placement of the words always fall on the same beats of the rhythmic cycle.
[108] Literal translation: Authoritative Hindustani Graded Music Teaching Book. The treatise was published one volume at a time starting in 1909, and continued publication over the following few years – date of complete publication is unclear from online sources, and is not listed in the book itself, which was reprinted in 1990.
[109] The terms 'raga' and 'raag' can be used interchangeably. For more information on this, see the footnotes for a similar usage of the word 'taal' in Chapter 1.

historical artifacts, and his mission to preserve large swaths of Hindustani music through systematic notation has not been taken up by successive theorists[110].

There are two main issues that prevent a comprehensive understanding of the basic elaboration or ornamentation of a *raag* by looking only at Bhatkhande's notations. The first issue is that the Hindustani tradition has evolved by primarily aural means, and is therefore not designed to support or make practical use of a very specific notation. In contrast, Western art music has evolved precisely *because* of notation over the last thousand years, which both gave rise to and subsequently supported developments in highly complex counterpoint and harmony. These musical devices (counterpoint and harmony) separate Western art music from all other kinds of music, and neither would be possible without an accompanying and highly specific notation, the likes of which is unknown in any other form of music. On the other hand, Hindustani music has never made use of notation as more than a memory aid for music that has been conceptualized and learned aurally. Therefore, the notation cannot possibly address the range of subtlety within the music. The second issue is that a typical elaboration of a Hindustani *raag* generates a constantly changing result based on processes generated by improvisation within large structures. Notating the music as Bhatkhande has done freezes the *raags* into a single form. Bhatkhande has gone as far as Hindustani notation will take him and he makes informed decisions within his treatise, electing, for example to notate only

[110] The current most widely-used comprehensive text in this vein is Joep Bor's *Raga Guide*, which is a more concentrated and encyclopedic listing of popular raags, aimed towards a western audience. Accompanying recordings along with Western notation of the recorded material fill in some of the gaps that Hindustani notation cannot, but the result is still lacking in specificity in comparison to the notation of Western music.

bandishes[111]. While *bandishes* do contain a great amount of melodic variation from one rendering to the next, the melodic pacing of each rendition, the general contour, and the relationship of the words to the rhythmic cycle are still recognizable features that relate the various versions of the *bandish* to one another. For example, *Aeri Aali Piya Bina* is one of the first *bandishes* many students of Hindustani music learn. In my studies with three different teachers, I learned three different versions



of the *bandish* (the figure on the left shows the *mukhra* of each version of the *bandish*). While stylistic choices within each *gharana*[112] as well as the individual preferences of each singer result in slight variations, these three versions of the *bandish* are clearly variations of one another. Bhatkhande also makes another informed decision by notating many different *bandishes* within a single *raag*, thus showcasing the different characteristics of each *raag*, not all of which can be prominently displayed in any single bandish. As one main purpose of the *bandish* is to serve as a mnemonic aid for the specific features of each *raag*, having multiple *bandishes* enhances the conception of the melodic profile of the *raag*. But ultimately, Hindustani notation cannot provide a notational result that even comes close to its Western counterpart in terms of providing a reliable score for performance.

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[111] He omits the notation of more variable parts of the standard raag elaboration such as *aalap* and *taan*.

[112] For a broader discussion of gharana, see Intro section on Minimalism

More recent attempts to create a comprehensive Hindustani notation system have been equally unfruitful for the same reasons. For example, musicologist and tabla player Nikhil Ghosh's 1968 treatise entitled "Fundamentals of Raga and Tala with a New System of Notation", outlines a proposed notation system that is much more specific and comprehensive than the current, predominant Hindustani notation system, which is based on the one pioneered by Bhatkhande. Ghosh writes in his introduction, "[T]he existing systems of writing music had not dealt with the subject of technical expressions adequately as in the West, although subtle technical expressions are as much, if not more, a feature of Indian music as of European music."[113] Ghosh's system does, in fact, add to the already developed Indian markings by making use of many common Western markings, and the treatise far surpasses Bhatkhande's work in its ability to express a broader range of musical parameters and finer levels of gradation within each parameter. However, Ghosh's system has only achieved modest dissemination, perhaps for the same reasons that Bhatkhande's work never took hold.

However, Ghosh's impetus to latch onto the thoroughly established notation system of Western music is one that is being echoed by musicians all over India. In my travels and encounters with dozens of Hindustani musicians throughout the subcontinent, the most often expressed desire among the musicians I met (who were aware that I was a Western musician) was the eagerness to gain proficiency in reading Western notation. While musicians expressed a variety of reasons for this desire, Hindustani musicians who have worked with Western musicians were aware

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[113] Ghosh Introduction (no page number)

of the more efficient rehearsal process, the quick assimilation of material, and the increased range of possibilities that comes from the freedom from memorization or aural assimilation. While Western notation certainly cannot replace the practices currently in place for the study of Hindustani music through a guru, the understanding of notational principles has the possibility move the tradition in directions yet unseen.

The usage and importance of notation in works for combinations of Hindustani and Western musicians varies greatly from composer to composer. In the most conservative cases, notation is reserved for the Western musicians while the Hindustani musicians improvise freely, allowing each type of musician maximum comfort, but minimal interaction. In notation for Hindustani musicians, there is a wide range of specificity: A score can be written out in Western notation and taught to the Hindustani musician by rote, or written out in Hindustani notation (with varying levels of specificity) for the Hindustani musician to follow. An aural score (with the same specificity and rigidity as Western notated scores) can be made by the composer and subsequently memorized by the performer. Some composers have developed entirely new forms of notation for Hindustani musicians[114]. Each strategy for notation depends on the aims of the composer and the desired (or required) specificity of the performance. For Western musicians involved in these collaborations, notation is usually explicit (there is rarely a designated area for untethered improvisation), but the notation can be used as a

[114] However, these notation systems will not be studied here, as they are largely pioneered and utilized by performers who can easily traverse both traditions. While they have the potential to be read and understood by Hindustani musicians, they have not been, as of yet.

vehicle for communication with the Hindustani musician, or can allow for the music to change form to accommodate the Hindustani musicians.

The examples discussed below represent what I believe to be a broad cross section of the notational styles in Hindustani-Western collaborative music being written today.

Strategies for Notation in Involving Tabla

In this section, three representative works for combinations of Western instruments and tabla will be examined: *Raga Jaunpuri*, a duo for violin and tabla by Vijay Gupta; *Lalit*, a duo for tabla and cello by Shirish Korde and *Mumbai*, a concerto for tabla and orchestra by Evan Ziporyn.

Vijay Gupta's *Raga Jaunpuri* typifies a style of hybrid collaboration that is used in many works for tabla and Western instruments. Scored for solo violin and tabla, the work is in three movements, each of which traverses formal boundaries between the Western tripartite sonata form and the *aalap-bandish-taan*[115] format of a typical Hindustani khayal[116] elaboration. Gupta, who is a second-generation Indian American, and is trained entirely in the Western musical tradition, plays from a fully notated score. He created the work by aurally assimilating Raag Jaunpuri through various recordings, improvising on the *raag* on his instrument, notating the particular passages he liked, and then working those passages into a composition

[115] Aalap: slow, unmetered section that exposes the raag, bandish: the middle section, which improvises on the 4-line bandish tune, taan: quick improvisatory phrases, designed to show off the technical capabilities of the musician. (See Chapter 1 for more detailed description)

[116] Khayal is the newer style of Hindustani vocal music, prevalent from the 16th century. The form of dhrupad, the older style, is quite different.

(in the Western sense of the word, i.e. fully written out). While Gupta's part is meticulously notated, there is no tabla part in the score. His collaborator, tabla player Badal Roy simply listened to the violin part and improvised a suitable tabla accompaniment.

The success of the collaboration was based on the fact that Gupta consciously built the rhythmic structure of each movement around a traditional Hindustani *taal*, each of which corresponded to a specific number of bars within a Western time signature. Because of their strict adherence to these *taals*/time signatures, Gupta and Roy were able to coordinate metrically without issue. Because *taals* and measures function similarly within their respective musical traditions and can therefore be superimposed, compositions which make use of this fact allow each musician to work entirely within the comfort of his own musical system. After the base of metric coordination has been established, each musician is free to work within the rhythmic structure as he pleases. Additionally, because the tabla does not have a melodic component, there is minimal limitation on the *bols* he chooses to utilize within the prescribed metric structure.

Collaborations between Western instruments and tabla that do not call for intercultural engagements by all participants are prevalent in the repertoire for combinations of Hindustani and Western performers. They are often performed by musicians who are very well-versed in their own tradition, but do not have a working knowledge of one another's traditions, the time to acquire such knowledge or a third party with the necessary knowledge to aid the collaborative process. In this case, while Gupta as the composer has clearly delved into the Hindustani

tradition for the creation of his piece, his resultant composition does not mandate either musician's proficiency in the other tradition. Another violinist performing the piece would be able to perform the violin part from his notation and coordinate with the tabla player without any study of the principles of Hindustani music. Similarly, the tabla player requires no working knowledge of Western art music to be a successful collaborator. A work like this has a great advantage in its potential for wide dissemination and future performance opportunities: it can be successfully rendered by any Western violinist and any Hindustani tabla player. The success of this work (and others in a similar vein) is based on the fact that the interaction between performers is within the small area of common ground that already exists between the two traditions.

When a composer has experience working in both traditions, s/he is able to guide the performers into a collaboration that addresses more of these avenues of interaction. Such is the case in Shirish Korde's piece for tabla and cello entitled *Lalit*[117]. Korde identifies himself as a Western composer, but has extensive knowledge of Hindustani music and years of practical training on the tabla. He has been working Hindustani musicians into his pieces for Western ensembles for almost three decades in incredibly sophisticated and nuanced ways. Korde's work makes use of the tightness and directionality of Western form while working with the localized patterns and timbres that are characteristically Hindustani.

In Gupta's duo, the violinist is the clear leader and the tabla player is an accompanist. In Korde's piece tabla and cello are equal partners, reminiscent of a

[117] Korde, *Lalit*. I was not able to get the score from the composer despite multiple requests.

Western Romantic-era violin sonata, where each player has substantial and tightly interlocking melodies and rhythms, and where one is not simply accompanying the other. However, like Gupta's duo, because the cellist is the only one who reads notation, the cello part of *Lalit* is the only part that is notated in score form. Korde says, "There were two different approaches I took to the cello part -- one was more sketch-like, but I found that didn't work. Then I notated everything out, and asked him to treat the notation as if it were a sketch, to think of the beats as more elastic."[118] The flutist who initially played the piece (in its first incarnation as a composition for flute and tabla) didn't necessarily have the correct approach. "You have to be almost like a jazz player... it was very difficult for her to let go of the written feel. You have to be secure enough to listen to the tabla player. Most [Western] classical players don't know how to go with the flow."[119] Ultimately he found Jan Muller-Szeraws, a cellist with no Hindustani training (or jazz training), but who was capable of working with the notation in the style he had envisioned. "I didn't want the part to sound [characteristically or timbrally] Hindustani – but I did want it to have an open and improvised feel." Though every note of the cello part is completely notated, Muller-Szeraws has virtually memorized it. "He has performed it over thirty-five times already. He basically has it memorized now, and I keep on trying to get him to play it memorized in performance, but he hasn't yet." Perhaps it is the convention of Western chamber music, where musicians play with music in front of them, that prevents the cellist from abandoning the stand. Or perhaps it is, as Korde says, Muller-Szeraws's worry that the phrases are both so tightly

[118] Korde Interview
[119] ibid.

constructed and so "…asymmetrical and unpredictable that if he gets off, he won't be able to find his way again." But Korde is optimistic that, though the notation is essential for Muller-Szeraws (or another Western cellist) to perform the piece, the ultimate abandonment of the notation in performance which will result in greater communication between the cellist and the tabla player in a manner that is typical of Hindustani music, will lay the groundwork for an even more successful integration.

The tabla part is not notated, but unlike Gupta's duo, the part is completely fixed. Korde uses recordings of the tabla player's own performances of each phrase and makes that into an aural 'score' of sorts. The tabla player then essentially learns exactly the phrases he initially improvised, set into a specific order and into a specific relationship with the cello by the composer, in a method reminiscent of the way a young jazz musician would learn an improvised and transcribed solo. Essentially, he is learning, by Western rehearsal methods, a score that he created through Hindustani ones. The Hindustani mentality for practice is one that aims to constantly iterate: no two renditions should be the same, and each should be more ingenious than the next. The Western practice mentality values refinement through careful memorization and perfection of a single approach. It is this latter methodology that the tabla player must adapt. Korde devised this hybrid approach because he was unable to find any tabla player trained primarily in the Hindustani tradition who was able to read Western notation fluently. But he wishes this wasn't the case: "I would love it if tabla players learned to read notations. I would be able to do so much more – metric modulations, changing meters at will – but it's harder to find people that can read."

Korde has as much control over his music as he would when writing for an exclusively Western ensemble: each gesture is explicitly specified, whether through notation on a page for the cellist, or recorded notation for the tabla player. Therefore, he is able to create a highly nuanced interaction between the tabla and the cello. Every moment of *Lalit* is characterized by dazzling, tightly locked passages between the instruments, with no place for a stray note, let alone any significant improvisation. The result is certainly one of a kind: any tabla player would immediately notice the marked difference and sequence of executed patterns from the improvised ones commonly rendered on the instrument, and also the greatly reduced length of areas of decreased activity, in which an improvising player would have a moment to think about the next phrase. However, the very traits that give the duo its unique character also make it almost impossibly difficult to execute. It is a large step out of traditional performance for a tabla player to attempt to learn a score in a western manner, *bol* by *bol*, and there is a good reason why Korde only trusts a single cellist to do the job[120].

Evan Ziporyn explores a middle ground in his concerto for tabla and orchestra entitled *Mumbai*, featuring tabla player Sandeep Das[121]: While Das is asked to move away from traditional Hindustani performance, there is also room for him to express himself through improvisation. Though Ziporyn has some basic

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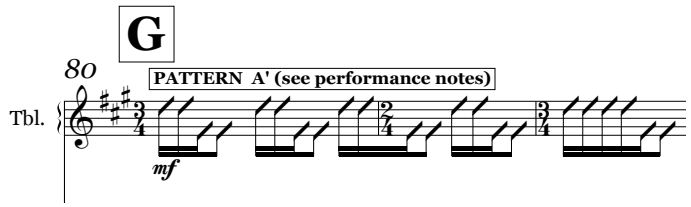
[120] Muller-Szeraws has made an authoritative recording of *Lalit*, which will be released on a new two-CD set of Korde's work on April 3, 2014, the day before this thesis is due.

[121] Das is best known as the only Hindustani musician in Yo Yo Ma's Silk Road Ensemble. He also has his own group based on the same model, called the HUM Ensemble, which contains only Hindustani instruments, but has collaborated with many living composers and performers (both Western and non-Western) from all over the world. Das himself has collaborated with many Western composers.

training in Hindustani music, he has dedicated his career to extensive work with a broad range of non-Western musicians, most specifically through his deep involvement in gamelan music. Ziporyn approached this collaboration with Das as he does most of his work with non-Western musicians: he first identifies the "…frame that [the musician] hangs onto as he works. And in the case of Sandeep, that frame was a certain approach to metric structure."[122] Ziporyn used his understanding of the principles of *taal* to generate two *taals*, using his own invented parameters and [123]structure: each *taal* was 72 beats, and contained particular nested rhythms. Most of Das's improvisation in the first movement of *Mumbai* is based on those *taals*, which are labeled in the score above their entrances (see example), so the conductor can cue Das to move to the alternate *taal* when necessary.



Though, by the time of the performance, Das was able to hear when he needed to move from one *taal* to the next, the presence of the conductor was critical for coordinating Das with the orchestra during the rehearsal process. Additionally, Ziporyn made sure that these *taals* were always audible in the form of their basic *theka* by one of the instruments or instrument groups in the orchestra. The instruments that carry the theka serve as the glue of the ensemble. The Western musicians can listen to the rhythms, and hear the basic metric structure upon which

[122] Ziporyn Interview
[123] From Ziporyn, *Mumbai*. The tabla player did not consult any written score – as this is the tabla's first entrance, the notation in his part simply indicates to the conductor that the tabla player is beginning his improvisation.

Das is improvising, and Das can use those rhythms the basic theka upon which he can freely improvise.

For Ziporyn, the most frustrating part of notating the piece was figuring out how to notate the meter of the orchestra. "Because of the ways that non-Western musicians respond to this kind of metrical thing, and the way they respond to a conductor, I had to find a sweet spot where they'd all be able to know what was going on."[124] Often, the basic thekas, when they appear in Western instruments, look different because they are in different time signatures, or begin in different places in the measure, which were choices Ziporyn made by prioritizing what he wanted the Western musicians to focus on. "Sometimes it makes more sense for the ensemble… to be hyper aware of [what Das is playing], and sometimes it just doesn't."[125]

Like the tabla parts in *Raga Jaunpuri* and *Lalit*, Das's tabla part is not notated on paper because Das, like the other two tabla players, does not read Western notation. However, unlike the other two tabla players, Das has worked with many composers of Western art music[126], and is aware that his inability to read notation hinders his ability to engage fully with Western musicians. While I was not able to interview him for the express purpose of this thesis, I have worked with Das and the HUM Ensemble in Delhi, and he expressed to me multiple times during our collaboration his desire to learn to read Western notation. However, Ziporyn's work succeeds in showcasing Das's areas of strength (improvisation and aural assimilation), and integrating him into a work with multiple metric shifts while

[124] Ziporyn interview
[125] Ziporyn interview
[126] The other two have collaborated extensively with Western musicians as well, but their primary work has been in a jazz context.

eliminating the need to follow any type of score. Though the imagination of both Korde and Gupta's melodic renderings surpass those of Ziporyn's, (which, aside from the presence of the tabla, contain no trace of Hindustani music), Ziporyn's method of structuring his composition allows for the greatest balance (at least on the part of the tabla player) between technical comfort and inter-traditional interaction.

The tabla supports a large spectrum of compositional methodologies, from completely improvised passages to explicitly specified ones. In Jaunpuri, Gupta's choice to notate the violin part meticulously while allowing the tabla to improvise freely allows each player to feel comfortable and rooted within his own tradition. Korde's aural score draws the tabla player into a piece of music that utilizes the meticulous pre-planning of a Western composition, while allowing the tabla player to display his own virtuosity by using materials that he, himself, has created. Ziporyn utilizes notation for the orchestra to help orient the tabla player in time, and provide him aural cues upon which to improvise.

Because of the wide range of possibilities available in collaboration, as well as the absence of the pitch parameter, the tabla may serve, for many composers, as a 'way in' to Hindustani music.

Strategies for Notation in Works Involving Hindustani Voice

In this section, two representative works for combinations of Western instruments and Hindustani voice will be discussed: Michael Harrison's quintet, *Bhimpalasi* and my piece for orchestra and Hindustani singer, *Aria*.

Michael Harrison's work *Bhimpalasi* uses a unique balance of notation and improvisation that allows both the Hindustani and Western musicians to engage with his music in a similar way. *Bhimpalasi*[127] was written specifically for Harrison's ensemble, Samadhi, which consists of five musicians that run the gamut in Hindustani and Western training. The cellist, Ashley Bathgate, has no Hindustani training; Harrison and Western percussionist Payton MacDonald (who both exclusively compose the music for the ensemble) have extensive training in both Hindustani and Western music (including jazz, which has given them experience in improvisatory techniques); the tabla player, Nitin Mitta has no Western classical training but has worked extensively with Western musicians[128]; the vocalist, Sanhita Nandi, is a major proponent of the Kirana Gharana, one of the most famous vocal gharanas[129] in Hindustani music, and has never worked with Western musicians before this point. Harrison, who has studied with teachers from the Kirana Gharana for thirty years and counting[130], explains that, "…the reason it works is because we

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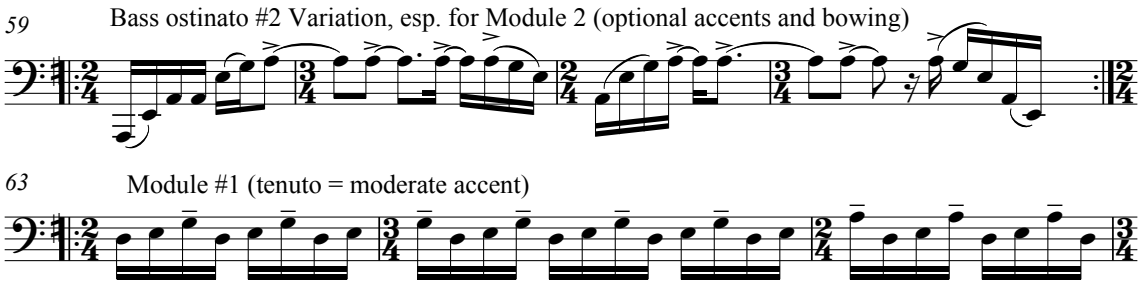
[127] All Hindi titles of the pieces studied throughout this thesis are the names of raags in which the corresponding piece is based.
[128] Primarily in jazz – he works closely with Vijay Iyer, and was the tabla player on the aforementioned piece, Falsehood (see Jazz section in Introduction).
[129] For a full description of the gharana system, see Minimalism section footnotes in Introduction.
[130] He has studied with Pran Nath, has been a disciple of Terry Riley and LaMonte Young for many years, and now studies with Mashkar Ali Khansahib

are not asking the Hindustani musicians to do something they don't know."[131] In this case, the singer, who comes from a very strict tradition, would only agree to collaborate if she was not required to alter any aspect of her finely-honed performance practice. So Harrison wrote the music to allow the Western musicians to be able to adapt to her methods. He created a series of loops that the Western musicians move through in a manner that would be discussed before every run-through, but that was also subject to change mid-performance based on the intuition of the performers. Each loop is



[132]written out in basic Western notation (which provides only marginally more information than its equivalent Hindustani notation would allow), and though the Western players learn their parts by reading from the page, by the time the piece is ready for performance, they use the score only as reference. There are only parts – no score – and the alignment of the parts, and therefore, the pace of unfolding of the piece changes greatly from performance to performance, which is Harrison's express intention.

In *Aria* for Hindustani vocalist and symphony orchestra, I was also searching for methods to accommodate improvisatory passages for a Hindustani vocalist who

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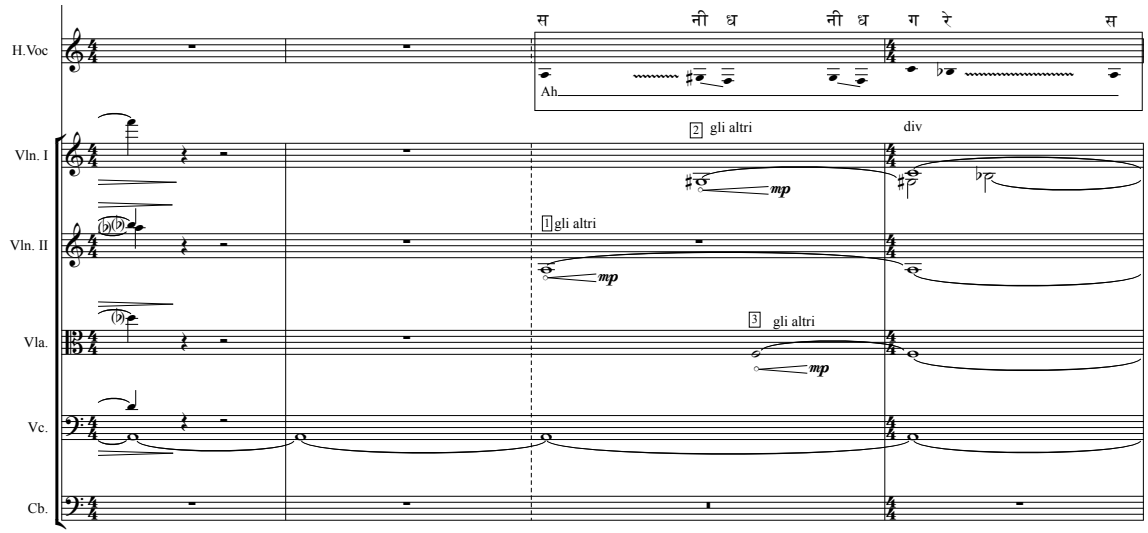
[131] Harrison Interview
[132] Excerpt from cello part of *Bhimpalasi*, by Michael Harrison.

had no previous experience with Western music. While the size of Harrison's ensemble and the design of the particular loops he created allowed each player to make spontaneous choices in responding to the vocalist's part, working in an orchestral setting required a more prescribed structure and alignment. In Ziporyn's concerto, the tabla plays in a particular regular rhythm with which the orchestra can then interlock. However, the vocalist in *Aria* first enters the musical texture singing an *aalap*, made up of phrases that freely elaborate the *raag* without the constraints of meter. Because the organizing principle in *aalap* is a particular order in which the singer will expose the notes of the *raag*[133], being able to anticipate the most comfortable through-line of melodic exposition for the singer allowed me to make a



[134]basic sketch of it in the score. When the singer arrives at certain structural notes in the *aalap*, certain musicians in the orchestra are cued by the conductor, using numbers written into their score, to begin their event. These events are designed to be harmonically malleable enough to either overlap with one another or be

[133] For more information on the specifics of aalap, see Chapter 1
[134] Excerpt from *Aria*, m.31-34 (strings and vocal line only). Hindustani notation is displayed above the staff to help orient the vocalist in the rehearsal process.

separated, depending on how long it takes the vocalist to render the phrase[135]. Because of this flexibility in time, the singer is free to elaborate each phrase at a pace that feels appropriate to her, and the orchestra will be able to adapt to that pace. Additionally, in the spaces between her phrases, the orchestra upholds this feeling of meterlessness. An orchestral instrument (usually one of the double reeds, whose melodic lines are clearly audible in the texture) takes the vocalist's role, and the rest of the ensemble responds to that instrument using the same numbered cues as in the accompaniment to the vocal part. In this case, the solo double-reed's line is always fully notated, but often makes use of boxed figures (indicating the loosening of alignment within the prevailing meter) and feather beams, that allows the soloist's line to feel as unmetered as the vocalist's line. While the singer is not required to read from the score, the basic Hindustani notation is written in the score, allowing her to coordinate during the rehearsal process, as well as visualize her relationship to the other instruments.

In a later section of *Aria* that uses *taans*[136] in the vocal part, the method I used was similar to Korde's process in *Lalit*. I asked the vocalist to improvise *taans*, selected a handful of them from her improvisation, and then notated and ordered them in my chosen melodic arc. While Korde created an aural score, a visual score, written in Hindustani notation was sufficient for the vocalist to learn my order and placement for the *taans*, as she had generated them herself, and they entered in a metric position with which she was comfortable. She only needed to familiarize

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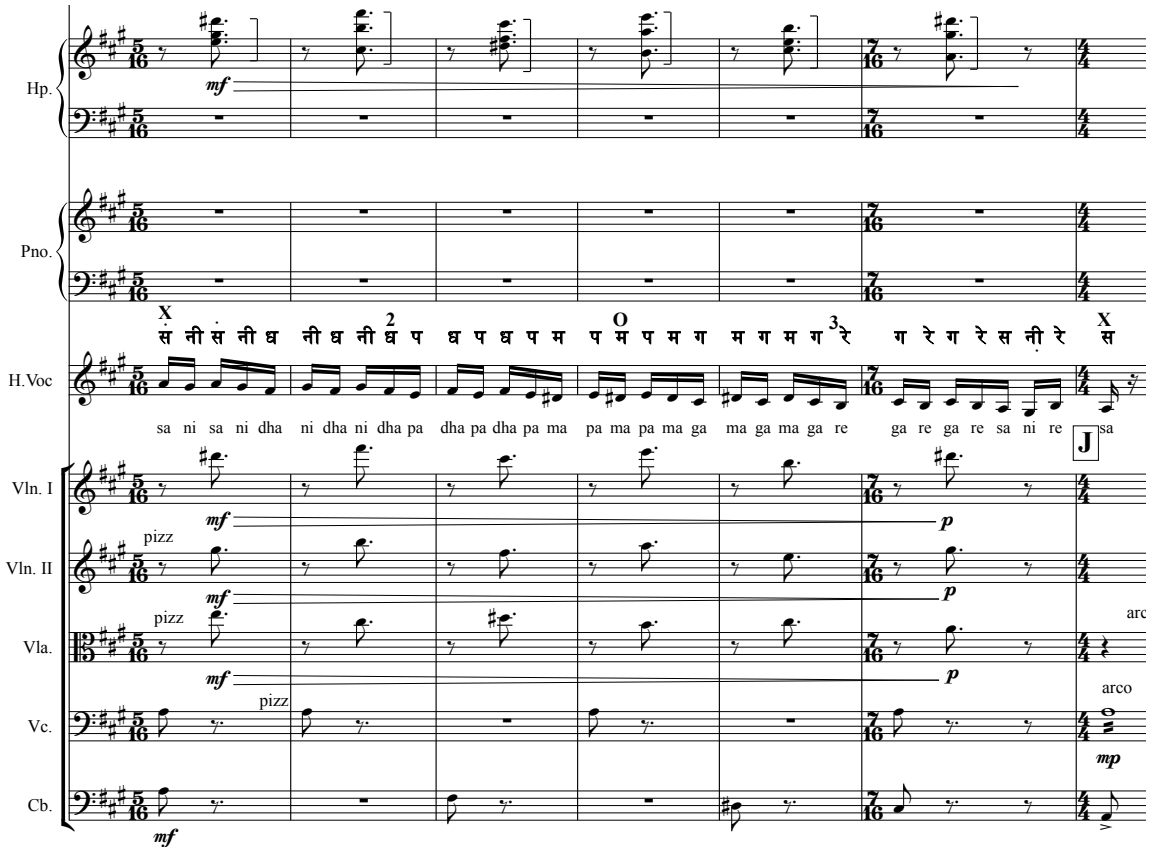
[135] In the case of the example above, the events are single notes, but later in the piece they move into tremolos and repeated boxed figures

[136] For a description of *taan* see chapter 1.

herself with their order. However, Hindustani music works on the principle of additive rhythm[137], whereas Western music makes more common use of divisive rhythm[138]. As the two sets of musicians conceive the music in different rhythmic groupings, it is difficult to navigate the placement of barlines and the division and length of measures in a way that will not skew the interpretation of the phrasing for Hindustani musicians and yet will allow the Western



[139]musicians to lock into the rhythmic structure of the melody. The section was ultimately written for the Western musicians to follow the additive rhythmic

[137] See the discussion on Glass: Satyagraha in Introduction.
[138] The division of the beat into subgroups, like a tree. In Hindustani music, because the meter is always expressly articulated by a percussion instrument, rhythmic interest in the melody is often generated by the creation of rhythmic counterpoint with the meter.
[139] Excerpt from *Aria*, m.86-92

groupings in the Hindustani conception of meter, as the conductor would be better able to cue the vocalist if he could follow the rhythmic profile of her line. However, the Hindustani indication (X-2-0-3) above the vocalist's part shows that she actually conceives of the phrase (and in fact, the entire section) in *teentaal*, one of the most commonly used *taals* in Hindustani, which parallels the western 4/4. Hindustani musicians are not trained to change meter, and thus keeping her in a steady *teentaal* was necessary for her comfort. However, because Western musicians are easily able to accommodate meter changes in every bar, it allowed me to score this music in a way that would complement the vocalist's melodic line. While the vocalist was not able to read the Western notation, she was still able to see where events in the orchestra visually aligned with her notes, as well as to see how her notes fit into a rhythmic cycle with which she was familiar. In addition, the conductor was able to read her part in Western notation and communicate more effectively with her during the rehearsal process. While *taans* are normally improvised spontaneously, I was aware of the restrictions I was placing on her by asking her to memorize them, and tried to counterbalance that restriction by using only *taans* she had sung, and placing each *taan* exactly as it would occur in the Hindustani rhythmic cycle to allow the singer maximum command of her part.

Aria and *Bhimpalasi* explore a large continuum of specificity in notation for Hindustani vocalists. *Bhimpalasi's* notation is designed to give complete structural freedom to the singer, and the *taans* in *Aria* ask the singer to fit into a pre-composed rhythmic and melodic structure, while the *aalap* section in *Aria* explores a middle ground – allowing the singer control of her pacing of each individual phrase but not

of the ultimate trajectory of the work. Notation can be designed to support any point in the spectrum, depending on the aims of the composer and the willingness of the singer to traverse outside of h/er traditional role as the authoritative leader in the ensemble.

CHAPTER 3: Uniting Through Oral/Aural[140] Communication

A few months after returning from a year in India, I participated in a weeklong composition residency at a summer music program in the United States. Five composers were chosen to write works for a particular chamber ensemble. The five pieces were workshopped over the duration of the week, and performed in a final concert. Having immersed myself completely in the world of Hindustani music over the preceding year, many of the melodies in the piece I wrote were styled to sound distinctly Hindustani. When I wrote them into the score, it was with the intention to approximate them as best I could in notation, and fill in the perceptual gap by singing the melodies for the performers during the workshop period. Clearly I had misgauged the situation, because at the first rehearsal, the moment I began singing, I felt an immediate resistance from the performers. This reaction baffled me for many months afterward: why wouldn't the performers want to hear the melodies they were being asked to perform, sung in their original Hindustani style? Wasn't singing the most direct way to communicate my intentions to them? Perhaps they felt I was stepping on their feet by 'interpreting' the score for them, an authority that was in their domain as the performers. Perhaps they felt that I was not doing my job because I failed to accurately notate the melodies as I wanted them performed, and was trying to compensate by singing them. While the answer is still

[140] The term 'oral' is refers to the use of the mouth, whereas 'aural' refers to the use of the ears. The nature of this chapter, which often refers to a sound that is generated by a mouth and perceived by an ear makes the navigation of these two terms somewhat thorny. However, both of these terms refer to means of communication that does not involve notation. These non-notated communication methods are the focus of this chapter.

unclear to me, the incident illuminated in my mind the vastly different role of oral communication in Western art music from Hindustani music.

Just as notation is cited as a key divisive factor between Hindustani and Western art music, oral/aural communication, the other main method of transmission of musical ideas, can often be similarly divisive. In Hindustani music, oral transmission is the primary means of communication between musicians. This emphasis on oral communication comes straight out of the Hindustani teaching tradition. Music is passed from *guru* (teacher) to *shishya* (student) through the format of call and response. The *guru* sings or plays a phrase, and the *shishya* repeats what he has heard. If the *shishya*'s version is lacking, the *guru* repeats the same phrase until the *shishya* eventually performs it up to standard. Lessons with a *guru* do not involve much in the way of theorization. For example, the concepts of *raag* and *taal* that were discussed in Chapter 1 would never been imparted to a student of Hindustani music in the way they were laid out in that chapter. After many years of lessons with a *guru* in the call and response format, the *shishya* would learn the concepts of *raag* and *taal* intuitively. This lack of formal definition, especially in the case of *raag*, accounts for the wide variety of attempts at a comprehensive definition of the term[141].

The emphasis on oral communication in Hindustani music translates from the relationship between *guru* and *shishya* into interactions between musicians in rehearsal and performance. There is no particular music to practice before a

[141] In my research, I encountered at least a dozen definitions, ranging from concise dictionary-style definitions to complete articles attempting to explain the concept of raag. Each one emphasized a markedly different combination of facets of the term.

rehearsal: musicians come only with their instruments and a particular set of skills they have honed in their personal practice. The purpose of rehearsal is simply to assimilate to the particular aural and visual cues of the other musicians so that musicians can be fully open and responsive to one another[142]. At times, even the important decision of the specific *raag* and *taal* to be performed in concert can be left until moments before the concert begins. If communication between the musicians has been solidly established, the spontaneity of the musical and structural decisions made directly before and during the performance will contribute positively to the performance dynamic.

In Hindustani music, notation is often perceived as an impediment to oral communication, an additional step of abstraction that distracts musicians from the act of music making. Alternatively, the notated score in Western art music is usually considered the most accurate representation of a work. Perhaps the current trend among performers towards strict adherence to written notation (often at the expense of innovative interpretation) closes many Western musicians' minds to other communication methods. In his book, *The Compleat Conductor*, Gunther Schuller writes, "if an interpretation, no matter how compelling, how exciting, no matter how sublime at certain moments, is achieved from outside the score's basic information, to the extent that it ignores this core, it is to that extent invalid."[143] While Schuller's remarks refer to the interpretation of a body of music that includes

[142] Hindustani music is most similar to Western chamber music in terms of the size of the typical ensemble. The smallest regular ensemble in a performance is a duo. Though there can often be 7-8 people on a stage, there will still always be one clear leader, and a rhythm player. All other pitched instrument players either respond to the melody rendered by the leading musician or are playing drone instruments.
[143] Schuller 106

a large proportion of works by composers of the past, who did not have the technological advantage to preserve their work in any other form, and are no longer alive to clarify their own intentions, this strict compliance by performers towards the written score often spills out into music by living composers as well.[144] In this context, any oral communication between performers and composers that goes beyond clarification of markings already present in the score can be seen as a shortcoming on the part of the composer, a failure to find a way to visually represent a sonic intention.

But why should a sonic event, in order to achieve validity in Western music, be required to correspond directly to a visual one? The historical reasons for this bias are certainly understandable: for most of the history of Western art music, up until recording technology became reliable, the ephemeral nature of oral communication made it substantially less reliable than written notation as an effective means of communication in the absence of the composer. Especially after the nineteenth century establishment of the idea of a musical canon, where works were designed to have a wider reach than would allow a composer to be present, either in place or time, for every performance, the demand for accuracy in notation was vital to the life of a work. While historians have often alluded to a vibrant oral tradition in the early days of Western art music[145], its ephemeral nature has

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[144] Of which Schuller was certainly one, himself

[145] For example, in the *Oxford History of Western Music*, Taruskin mentions that the very monks who began to notate chants, "were adapting it from oral pratice, very likely connected with secular music making."(42) He further notes that ever since the time of the first notated music in the West, "oral and literate means of transmission have coexisted in the West in a complex, ever evolving symbiosis." (42)

prohibited successive generations of musicians from the same access to that tradition as to written music of the past[146].

Though Western art music notation has evolved over the past millennium to degrees of ever-increasing specificity, it still leaves much room for interpretation. In his 2005 lecture, *Knowing the Score*, Malcolm Bilson states that, "Western music has this so-called precise notation, but it's not precise. It's very suggestive."[147] An unmarked quarter note can be held for anywhere from 50% to 100% of its written value. The proportions in a dotted figure can vary greatly based on context. Dynamic markings can only be measured in relationships: either to the maximum and minimum volume possible on the instrument, or to other instruments in an ensemble. The use of rubato, for example, has never been accounted for in notated rhythm. In addition, many performance markings have changed meaning over time. Bilson notes that while current Western performance practice interprets four quarter notes under a slur as an indication for legato playing, "Leopold Mozart says all notes under a slur are diminuendo [sic]… The first note of the slur is the strongest one. The last note of the slur is the weakest one, and is always short."[148] Composers put a great deal of thought into selecting their markings based on their individual estimation of how those markings might be interpreted by performers. Though the Western notation system is certainly more highly developed than the Hindustani one, and though it indicates a much greater percentage of the musical

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[146] This is not to suggest that the two methodologies were separate – however, what we currently know about the oral tradition is that part of it which has been preserved by, or overlaps with, the written one.
[147] Bilson, (17:31)
[148] Bilson (14:15)

information in the final realization of a work than Hindustani notation does, it is still wrought with imprecision.

In order to successfully navigate this imprecision and arrive at a stylistically sensitive approach to the notated score, Western musicians must, in fact, rely on aural/oral methods of communication. As Lavezzoli pointed out[149], this is an area in which the musical cultures of Hindustani and Western art music are similar: the apprenticeship model of intense study with a master teacher is a similar feature of the traditions of Hindustani and Western art music. Students of Western music might not rely on oral communication with their teachers to the degree that Hindustani musicians do, but some of the most important aspects of interpretation and style cannot be transmitted any other way than by oral/aural means. In addition, Western musicians are currently able to access a wealth of recorded material, which also contributes significantly to the artist's understanding of the boundaries of stylistically sensitive performance. The aural study of many recordings of a single written score illuminates the range of interpretations, ironically, made possible by the imprecision of notation.

However, if these oral/aural methods of communication were built into the 'score' of a piece, they might serve to add new dimensions to its performance. Currently, the composer must translate his or her desires from sound into notation, and then the performer must reverse the process, translating the written score back into sound. Sounds that cannot be translated into notation are either explained in written prose, left up to the discretion of the performer, or omitted entirely. For

[149] See Lavezzoli's quote from last section of Introduction

example, much of the complex ornamentation in Hindustani music is impossible to notate with even moderate accuracy in Western musical notation, so even if similar figures existed in Western music in the past, their inability to be notated has essentially omitted them from current compositional practice. However, in today's technologically advanced and hyper-connected world, where an oral document can be just as easily preserved and disseminated, this style of communication no longer deserves the subservient role it has played in Western art music thus far. Oral communication can be used by composers to add a new dimension to musical gestures that are flattened out by notation – specific techniques of sound production, timbral effects, and complex slides and ornaments that are not supported by current notation. Just as the development of synthetic sounds in electronic music added greatly to the timbral palette, the creation of music that is not limited by its written documentability opens up a whole range of possibilities in technique and timbre on acoustic instruments. Electronic music certainly did not replace acoustic music, and oral/aural communication, similarly, would not replace written scores, but in both cases, the combinations of established and new techniques and methodology can only serve to increase the possible tools and means for communication.

The development of methods of oral communication is especially important in cross-cultural works between Hindustani and Western art musicians. While notation is only interpretable by each musician in relation to their own tradition, cross-cultural communication must be oral. To this end, composers often build aural cues into their works, using Hindustani devices that have certain implications of meter and/or form, and using those to create structure in the work, thus allowing

the Hindustani musicians to respond to the Western musicians using their own improvisatory judgment. These aural cues are not always limited to important structural points, though: sometimes a completely aurally navigable environment is set up for the Hindustani musician by the Western musicians, allowing both sets of musicians the means to conceive of one another's music in terms of their own tradition, and therefore remain constantly aware of one another in performance. The aural collaboration can also occur before the moment of performance, with either the Hindustani or Western musicians, in order to aid in the assimilation of written material, or to offer another dimension to that material that is not possible through notation.

Strategies for Oral/Aural Communication in works involving tabla

While the metric alignment between the violin and tabla in Vijay Gupta's duo *Raga Jaunpuri* is addressed by matching the Western meter with the Hindustani *taal*[150], this simple metrical correspondence does not account for alignment at the phrase level, specifically at points of cadence. Gupta's immersion in the techniques of Hindustani music for the purpose of composing this work allowed him to identify two devices to aurally connect with the tabla player in performance: these were the *tihai*[151] and the *mukhra*[152]. The aural effect of a *tihai* is to alert the performers to an approaching cadence by repeating an identical phrase three times, with the last beat of the third repetition falling on the downbeat (*sam*). As soon as the second repetition of the phrase begins, the Hindustani performer is aware that a *tihai* is in

[150] A complete discussion of this process is in Chapter 2
[151] A complete explanation of principle and usage of tihai is in Chapter 1
[152] A complete explanation of the principle and usage of mukhra is in Chapter 1

progress, and can increase the intensity of his strokes to propel motion towards the cadence. For example, in the third movement of Raag Jaunpuri, around 2:00, Gupta begins a series of short phrases that lead to a *tihai* that starts at 2:16. Immediately after he starts the second repetition, the tabla increases very slightly in intensity towards the cadence. In this case, Gupta also uses the *tihai* as a way to signal a slight but immediate quickening of tempo. The *tihai*, similarly to its function in Hindustani music, elides into a statement of the *mukhra*, the head of the *bandish* which was performed in its entirety during the first few minutes of the piece. The *mukhra* serves as a point of rhythmic stability in Hindustani music, and in Gupta's work, it allows the violinist and tabla player to take a moment to lock into the correct tempo before moving on to the next passage of new material[153].

Gupta also uses the large scale form of the *taan* section at the end of a *raag* elaboration to aurally orient the tabla player[154]. Recognizing the similarity between this form and the Western form of an A-B-A-C-(A-n…)-A Rondo, where a section of identical material is followed each time by a section of new material, Gupta mapped one form onto the other. The A sections here comprise of repetitions of the *mukhra*, the most identifiable material in the movement. In each set of material between the A sections, the violinist begins in a typical Hindustani improvisatory style, and eventually, over the duration of the movement, morphs into increasingly Western-style performance techniques (double stops that outline harmonic and rhythmic patterns, high fingerboard positions, harmonics, et al). However, the fact that this

[153] In this case, Gupta plays the mukhra four times. It is common in Hindustani music to repeat the mukhra multiple times, for the practical purpose of allowing time to mentally prepare for the next improvisatory passage.
[154] For a full discussion of the taan portion of a raag elaboration, see Chapter 1.

alternate non-A material occurs both in the places and for the approximate duration that would be expected by the tabla player, and that they always culminate in the 'catching' of the *mukhra*, gives the tabla player access to an instantly familiar structure upon which to gauge his own improvisatory arc.

Because of Shirish Korde's extensive experience in both Hindustani and Western art music, he is able to move the concepts of *tihai* and *mukhra* past their classic Hindustani function as aural methods of alignment, and use them as symbols to creatively shape *Lalit*, his duo for cello and tabla. The *mukhra* first occurs in the movement *Gat 1* at 0:19. Its first statement aurally cues the entrance of the tabla, just as it would in Hindustani music. The *mukhra* distinguishes itself immediately both because of its first high note (*Sa*, the tonic note), which has the particular timbre of the cello's tenor range, as well as its contour and uniquely syncopated rhythmic profile. If the *mukhra* in *Raga Jaunpuri* was a point of arrival at rhythmic stability, Korde uses the *mukhra* in *Lalit* only structurally as such. Its features make it easily recognizable, but its syncopation creates rhythmic tension with the *taal*. Though the piece is in *teentaal*[155], it is the *mukhra* more than any of the other rhythms in the work that poses the greatest challenge to its metric regularity. As Korde has specifically notated each part (in written form for the cellist and with an 'aural score' for the tabla player[156]), the *mukhra* is not a practical necessity for the communication of phrase structure, as it is in Gupta's duo. However, it is precisely

[155] Which equates in Western terms to four measures of 4/4
[156] A full discussion of Korde's process of rendering an aural score is outlined in Chapter 2.

because it does not bear this responsibility, that Korde is able to give it such a unique rhythmic profile without compromising the alignment in the piece.

Because Korde's use of *tihai* also does not bear the responsibility of aligning the musicians, he is similarly able to explore its connotations in a more innovative way. In Hindustani music, a *tihai* is used to draw attention to an upcoming cadence. While the *tihai* most predictably points to the arrival of the *mukhra*, Korde uses the *tihai* to point instead to important timbral shifts in the piece. For example in *Gat 1* at 1:45, the *tihai* in the tabla cues the entrance of the cello, playing in pizzicato for the first time (a technique that would never be used in traditional Hindustani music). Later, at 6:16, a solo *tihai* in the tabla points to a long, low, drone-like note in the cello which begins the last phrase of the movement. However, even the perception of the occurrence of *tihai* is brought into question in this work. At 3:37, the tabla and cello seem to begin a *tihai* together – they both play a distinct phrase, and then begin its second repetition. However, Korde derails this *tihai* halfway through, and begins a longer one ten seconds later at 3:47, which fulfills the expectation of three phrases, the last of which ends on *sam*. Breaking a *tihai* in the middle may have derailed a piece that is structured like Gupta's, because the tabla player would have been dependent on the aural cue for his cadence, and may not have had enough time to readjust. However, the fact that Korde does not depend on the *tihai* to aurally communicate the cadence point allows him to play with this expectation. On the other hand, both the tabla player and the cellist are aware of the traditional concept, and Korde's innovative take on it allows them to play into its connotations in their

interpretation of the phrase, driving towards the false cadence the first time as if it were a full *tihai*.

The players' tightly locked parts require them to listen closely to one another in order to imitate each other in both the shaping of phrases and in timbral choices. In the evaded *tihai* passage (starting at 3:37), the tabla player must listen to the cellist and imitate the contour and arc of his line through his dynamic and gestural choices on the tabla. While the actual *bols* have been specified in the aural score by Korde, the tabla player must control the way he produces these *bols* to create the effect of a parallel melody. Conversely, at the end of the movement (6:58), the tabla repeatedly plays the *bol* 'tin'[157], and the cellist must imitate the tabla player, producing high, resonant notes that mimic the tabla's timbre. In both cases, notation only takes them to a certain point: the players must then listen carefully to one another to match timbre and gesture.

In *Mumbai*, Evan Ziporyn's tabla concerto, oral/aural communication played a crucial role in both the conception and the performance of the piece. Based on Ziporyn's previous theoretical knowledge of Hindustani rhythm, he created his own '*taals'* as a basis for the tabla improvisation within the first movement of *Mumbai*. He knew that, "as long as [Das] could understand the music in terms of a metric structure that made sense to him, he could do it."[158] Shortly afterward, he set up a meeting with Das "to see how he would respond the newly composed *taals*. "Because… they weren't Indian *taals*, they were artificial *taals*." Ziporyn marvels,

[157] This stroke appears to have different names in different gharanas, but is produced by bouncing the finger at the edge of the drum head, which produces a high, ringing effect.
[158] Ziporyn interview

"He learned them all in five minutes." Because Ziporyn had consciously composed the *taals* to contain the classic markers of Hindustani *taals*[159], and because he taught them to Das aurally, Das was able to assimilate them as naturally as if they were Hindustani *taals*. Ziporyn composed the rest of the work around these 'artificial *taals'*. Their basic *theka*[160] form is always audible in the percussion section of the orchestra. For example, at the tabla's first entrance, at 5:07 (m.80 in the score), a combination of guiro, temple blocks, Tibetan bowls and bells (apitua, which are small and unresonant) create the multi dimensional rhythmic profile of the *taal*[161]. A guiro scrape, and the striking of a bowl and two temple blocks parallels *sam*, the most weighted *bol* in a theka, which, both in traditional Hindustani practice and in this piece, falls on the first beat of the cycle. Ziporyn then uses various combinations of those instruments as the theka progresses to indicate different weights and timbres, the same way the theka of a Hindustani *taal* would use the *bols* on the tabla to indicate weight and timbre, thus creating the basic metric structure for the *taal*. While it is usually the tabla player's job to indicate the theka, here Das was able to depart further from the theka than he would be able to in a traditional Hindustani performance, because of the *theka'*s presence in its simplest form in the percussion section of the orchestra. While having a conductor present certainly helped Das to know when to switch *taals*, it was through the aural assimilation of the distinct

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[159] For a full discussion of taal, see chapter 1
[160] See description of theka in Chapter 1
[161] The score seems to list a tambourine as playing the entire taal, but this does not reflect in the recording: as this was the premier performance, perhaps changes were made in the music that are not reflected in the score.

pattern of each *taal* as it was realized in the orchestra that Das was truly able to respond to and expound upon those *taals* in his improvisations.

Strategies for Oral/Aural Communication in Works Involving Hindustani Voice

Michael Harrison's *Bhimpalasi* aims to explore the Hindustani oral tradition from as close a proximity to its roots as possible, by drawing the Western musicians into that tradition as well. In a sense, it is the opposite of Korde's approach, which attempts to draw the tabla player into Western performance practice. Harrison begins the conception of his compositions with what the Hindustani performers have already learned through their own training. In this case he focused on a *bandish* that Sanhita Nandi, the singer in Samadhi, already knew. Sanhita taught him the *bandish* through the traditional Hindustani method of call and response, and the *bandish* then became the cornerstone of his composition. His aim was for the Western musicians to add slowly changing textures and colors to a centerpiece that was essentially Hindustani. An advantageous feature of this particular *bandish* was that it begins on a particular beat in the *taal* that Westerners would perceive as having three beats worth of upbeat. Therefore, it allows the singer the ability to improvise freely within the rhythmic cycle, and then communicate a point of alignment through the *mukhra*, which is exactly what she would do in a traditional Hindustani performance. Because this particular *mukhra* has an upbeat of a three beats, and each loop begins on the following downbeat, the Western musicians have adequate time to prepare and respond to each return of the *mukhra*. All

communication between the musicians takes place aurally, without the aid of a score[162].

Perhaps because the ensemble's one musician who has no Western training is controlling a large portion of the decisions regarding the unfolding of the music, *Bhimpalasi*, among all the pieces explored in this thesis, has the most quintessentially Indian sense of time. In fact, "…the journey [Hindustani music] takes you on through time…", is a feature that Harrison most loves about it, and it is one of the particular features he aims to explore in his own music. In addition to allowing Nandi (whose sense of time was one of the defining things that drew him to her as a collaborator) the ability to control the use of time, he also made a large effort to assimilate the cellist, Ashley Bathgate, who was the only non-Hindustani trained musician in the ensemble into this paradigm. Harrison worked with Bathgate extensively at the beginning, giving her Hindustani vocal lessons, and exposing her to source material that would allow her to develop a sense of how musicians responded to one another in Hindustani performance practice. I began this chapter by recounting a situation in which the musicians were not prepared for, nor responsive to oral/aural assimilation of the musical material. Harrison was certainly sensitive to the fact that not all musicians would be open to this type of communication, and specifically chose to work with Bathgate because of her openness to oral methodology.

Though the size of the ensemble in *Aria*, prohibited me from working with each musician individually, as Harrison had worked with Bathgate, I did coach some

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[162] The first statement of the bandish melody can be found at the beginning of the *Bhimpalasi* Bandish track at 0:09.

of the soloists within the ensemble in this way. Though orchestra rehearsals are usually heavily regulated, the premier of this work was given by the Yale Philharmonia – an orchestra that was formed entirely of my colleagues at the time. Because the roster was available beforehand, and I personally knew most of the musicians on the concert, I was able to consciously choose to give soli to musicians who I knew would be open to aural communication. Most of the solos went to the first oboe and bassoon in the *aalap* section (3:02) and the concertmaster in the beginning of the *taan* section (6:31), the choices being both orchestrational as well as based on the particular performer[163]. I met with these musicians outside of rehearsal, and worked on their parts with them in the call and response style of a typical Hindustani music lesson. Had the Hindustani vocalist been available for these sessions, her presence and interaction with the Western soloists would likely have bridged the perceptual gap even further, as they would have become attuned to the particular timbre of her voice, which they are clearly imitating in their solos. Still, the combination of completely notated melodies with the added oral communication of the style and flow of the lines yielded a result that imitated the vocalist's voice effectively.

In the first section of *Aria*, the notation is designed to support the aural cues given by the singer. As in *Bhimpalasi*, the singer controls the unfolding of the *aalap* section. A low drone in the timpani is present in the background, allowing the singer to find her notes in relation to that drone, and for even a conductor without perfect

[163] This was my first time writing a piece of this nature, which is why I was very conservative about who I chose to work with. As I now have much more experience, I am able to convey my intentions to a wider group of musicians.

pitch to hear the scale degree she is singing, regardless of the intricacy of her ornaments. It is the job of the conductor to listen closely to the singer, and by his aural perception of what part of the melody she is in, cue the orchestra accordingly.[164]

Thus far, the only examples discussed have been those where the composer felt the result was successful. While more challenging attempts at collaboration rarely receive the same level of attention as those which are perceived to be successful, just as much information about the collaborative process can be gleaned from them.

Kamala Sankaram encountered a variety of issues when working with a Hindustani singer in her opera, *Thumbprint* in the fall of 2013[165]. Thumbprint tells the 2002 story of Mukhtar Mai, a woman who attempts to fight Muslim traditions in her native Pakistan by convicting the man she was forcibly married to as a child, of raping her. Sankaram had envisioned the character of Mukhtar Mai's mother as a Hindustani singer, to represent 'tradition' in the opera. Though Sankaram, who works as a professional Western singer and composer, also had many years of Hindustani training on the sitar, her first attempt to include a Hindustani singer in her music was in this opera. It was only after the opera had been drafted, and was being workshopped that Sankaram realized the degree to which the Hindustani singer needed the reference point of the drone to be able to find her pitches. In Western art music, singers become adept at hearing in a key without the explicit and

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[164] A full discussion of the notation that makes this cueing possible is available in Chapter 2.

[165] The opera premiered January 10, 2014 without a Hindustani singer.

constant statement of the tonic, but because the drone is ever-present in Hindustani music, Hindustani singers do not develop this ability. Additionally, Sankaram realized that while the Hindustani singer was able to sing the part alone, she was not able to function in the context of an ensemble. While Western singers are trained to sing in harmony, Hindustani singers never interlace their melodies with those of other musicians – in fact, if there are other musicians in the ensemble, they will always respond to the melodic lines of the singer. Sankaram realized, after the fact, that she did not build adequate aural cues into the singer's part or surround the singer with a suitable texture that would allow her to express herself without distraction.

In working with a Hindustani vocalist, the composer must be aware of the musical environment the singer requires, and the ways in which that environment differs substantially from the corresponding Western vocal environment. Harrison and I understood this intuitively because we have both been trained in Hindustani vocal music. Perhaps the fact that Sankaram is a professional Western opera singer further skewed her concept of how a Hindustani singer may react. Ultimately, she replaced the Hindustani singer with a Western one, who was easily able to perform the role.

CHAPTER 4: Best Practices

When Western composers write for a Western ensemble, a common early step in the composition process is the consultation of scores and recordings of other works previously written for that ensemble (or similar ensembles). Through this process, the composer begins to develop a sense of the range of possibilities available on each instrument, the types of interactions that are common and/or successful between instruments, and the techniques by which the resultant sonorities and structures are produced. While many of the composers examined in this thesis consulted music that featured Hindustani instruments/voice types within their indigenous context as preparation for their composition of their collaborative work, not a single composer studied other collaborative works between Hindustani and Western art musicians.

While a small but growing repertoire of works exists for combinations of Hindustani and Western art musicians, this repertoire is largely unknown and difficult to access. Many of the composers I spoke to during my research had not heard of more than one of the other composers in this study, and even then, were barely familiar with the music of that composer. Additionally, when asked about other composers that might be included in this study, each composer offered names that rarely overlapped. Libraries, internet searches and other formalized search tools are hardly of use in discovering such composers. The most common method of connection between these composers was through word of mouth. Therefore, it is unsurprising that, when writing their music, composers had very little opportunity to consult previous repertoire.

An unfortunate result of this lack of access to repertoire is that composers who do cross-cultural work between Hindustani and Western art music are unable to learn from one another. Understandably, the process of creating music that combines musicians from two highly but differently evolved traditions is fraught with many basic, practical pitfalls. In Western composition, these pitfalls are readily avoided through consultation of orchestration textbooks and apprenticeship with experienced composers. While a Hindustani orchestration textbook does not yet exist, and there are very few composers on faculty at conservatories who have experience in this particular genre, composers who do this type of work can certainly learn from one another if they are better connected to each other.

Additionally, by making these resources readily available, perhaps many more performers will be inspired to play these works, and consequently, more composers will be inspired to write them. To that end, this chapter attempts to crystallize the practical experience of each of the composers studied in this thesis into a list of best practices that can serve as a springboard for future collaborations.

Determining an approach.

Deciding on an approach to the collaboration should be based on the relationship between the composer Hindustani musicians involved. The better a composer knows the Hindustani musician, and the more s/he is familiar with a) the individual abilities of the Hindustani musician b) the degree to which the Hindustani musician is flexible in experimenting outside his tradition and c) how much time the

Hindustani musician has to spend on this particular collaboration, the more individual and inventive the composition can afford to be.

Quick Collaborations. In the case that the composer does not know the Hindustani musician well, the composer must work within parameters that will be readily familiar to the Hindustani musician. For example, in Gupta's *Raga Jaunpuri*, the tabla player was able to perform the piece successfully with very little rehearsal because it called for only performance practice and alignment techniques used in Hindustani music. An understanding of the basic overlap of rhythmic structures in Hindustani music, or even the agreement on a certain amount of beats within a rhythmic cycle will result in a piece of music that is always metrically coordinated. In Harrison's *Bhimpalasi*, the piece was centered around a standard *bandish* from the vocalist's repertoire so that the vocalist did not have to venture outside of her tradition. A similar effect can be achieved by creating a composition around a pre-existent recording of the vocalist (or melodic instrumentalist), though specific care should be taken to understand which parts of a recording are improvised and which are 'fixed' melodies[166]. A single conversation with the musician can clear this up easily.

More Immersive Collaborations. If the composer is confident that the Hindustani musician is both open to experimentation and has a wealth of time to dedicate to the project, a much greater degree of innovation is possible. The composer can then work with the Hindustani performer alone and with the rest of

[166] In vocal music, this is slightly easier to discern because the bandish melody will generally use syllabically set words as opposed to Hindustani solfege (sargam) or vocalization on vowels.

the ensemble to create a highly individualized approach to the collaboration. The composer might either choose to work on a compositional structure or vision first, and then work with the performers to find was for those ideas to be realized in practice (such as in Ziporyn's concerto). Or the composer may take the opposite approach, first working with the performer, and becoming familiar with the performer's abilities, style and sound, and then tailoring the improvisations of the performer until s/he is satisfied with the result (such as in Korde's *Lalit*). Then the composer must determine how that result combines with the Western instruments. Of course, finding these points of connection in more innovative collaborations is substantially more difficult. However additional rehearsal time allows for the testing of possible methods practically, through trial and error, and for the discovery of new points of connection that may not be as readily apparent in the abstract conception of the work. Additional rehearsal time also allows for the aural assimilation of various features of the composition by both the Western and Hindustani performers, which often plays a large role in the performance of the piece.

Alternatives to Physical Rehearsal Time. While there is no replacement for in-person rehearsal, online communication can be an effective tool. During the composition of *Mumbai*, Ziporyn and Das (who was living in Delhi at the time) sent a plethora of long emails back and forth, working on their ideas for the piece. However, Ziporyn had worked with Das previously, and Das had also worked with Western art musicians for over ten years at that time. Ziporyn felt that these emails, along with a few in-person meetings, were sufficient for the creation of the concerto. However, it cannot be stressed highly enough that, even with this much experience

on both sides, successful communication of ideas is confirmed only musically. Words often have different meanings and connotations from one language and tradition to another, and a concept that appears to be understood in words can play out very differently in music. With less collaborative experience on either side, or with any sort of language barrier, remote communication is much less effective.

During the Composition Process

Hindustani Devices that Aid Alignment Aurally. If a composer is working with a melodic instrument, certain devices can be used in the piece to orient the Hindustani musician in time. One of these is the *mukhra*, the head of a *bandish*. If a piece uses a Hindustani *bandish*, the *mukhra* will be instantly recognizable to a vocalist or instrumentalist, and will align h/er in time. In *Bhimpalasi*, Harrison gave control of the unfolding of the work to the singer by allowing her to dictate the placement of the *mukhra*. In *Aria*, I aligned each of the vocalist's *taans* to the *mukhra* in the orchestra. In each case, the entrance of the *mukhra* was on a specific beat of the rhythmic cycle, which allowed the Hindustani and Western performers to connect with one another aurally at strategic points in each piece. Another valuable aural device is *tihai*[167]. Used primarily in fast music, Hindustani musicians are easily able to detect *tihai* in the music, and plan for the arrival ofthe last beat of the *tihai*, which will fall on the *Sam* (first beat) of the rhythmic cycle. When an explicit rhythm is not constantly playing, Hindustani musicians can often become disoriented, because in Hindustani music, there is no metered music without the express

[167] See Chapter 1 for definition of tihai.

articulation of that meter on a percussion instrument. In this case, the use of *tihai* can realign or reorient the musicians at strategic junctures.

Substitution of Performers. Aside from the fact that a substantial amount of rehearsal time is required to adequately tailor the more innovative collaborations, another important drawback to these collaborations is that Hindustani performers cannot be substituted. Western notation allows for a performer to call in a substitute if he or she is unavailable for a single rehearsal. However, for Hindustani musicians, substitution is, in the worst case, entirely impossible, and in the best case, wrought with extreme difficulty. Even if the part is written in Hindustani notation, the concept of sight reading does not exist in Hindustani training, thus prohibiting the quick visual assimilation of a piece. Of course if the piece is written for a specific performer as a soloist, this issue is avoided, as that performer must always be present. However, if the Hindustani part is written for a Hindustani musician within an ensemble, absence of that performer can prove extremely problematic. Often, if a piece has a long rehearsal or workshopping process (such as an opera), and a Hindustani musician has to drop out midway through that process, it can cause a large setback in the timeline of the project.

Availability of Performers. If a performer needs to be substituted (or found for a performance), certain Hindustani musicians are more readily available than others. Most large cities in America will have accessible and adept tabla players, many of whom will be able to work within a Western ensemble (and will require varying levels of guidance). While most large cities should also have sitar players and Hindustani vocalists, the increased difficulty of collaboration with these

musicians in a Western art music context can substantially limit the pool to those with the ability and commitment to be truly invested in the project. Other Hindustani instruments are substantially harder to come by – professional performers on the sarod, bansuri and santoor are rare, and it is nearly impossible to find a sarangi player in the United States (they are even becoming scarce in India). Possible avenues to establish contact with these musicians are through Hindustani concert presenters, world music organizations and instrument shops that sell non-western instruments.

Before Rehearsal

Hindustani Practice Methods. Hindustani practice methods are very different from Western ones. Practicing Hindustani music is a more meditative experience (in fact, it can be likened in many ways to the practice of yoga). It involves a period of slow assimilation with the individual notes of a *raag*, the opening up of the voice or instrumental facility, and the subsequent rendering of improvised passages of increasing complexity and speed – either improvisations on a *bandish* melody or iterations of *taans* within the *raag*. Hindustani musicians do not have an agenda in a practice session: there are no notes to learn, no passages to memorize. They simply decide on a *raag* and begin to explore.

Western composers often give a Hindustani musician a specific part to learn, expecting the Hindustani musician to come to the rehearsal prepared, by Western standards. However, Hindustani musicians are unlikely to understand the style and specificity of preparation that is required, unless they work with Western musicians often. The Hindustani musician will likely have looked over and/or listened to the

part, and will be expecting to use the rehearsal as a chance to familiarize themselves with the piece.

Recordings vs. Written Notation. This thesis has examined many methods composers have used for communicating their ideas to Hindustani musicians. While different approaches work for different composers, it should be noted that there was no composer who asked a Hindustani musician to learn a piece solely by reading notation. Notation can certainly aid the process of alignment in rehearsal, or can serve as a memory aid. However, the more the musical material can be presented aurally to the Hindustani musician, the quicker it will be assimilated.

Pre-Rehearsals. It is always advisable to call separate rehearsals for a Hindustani musician before the whole ensemble meets. This can be especially beneficial for the morale of the ensemble if the Western musicians are on a rigid schedule, as a Hindustani musician who is not familiar with the Western rehearsal process can slow the progress of a rehearsal considerably. Pre-rehearsals will likely be used to teach the Hindustani musician their part orally/aurally and to help them understand how their part fits into the ensemble. If the other parts can be approximated on a piano, or even using a MIDI file, it will be immensely helpful – Hindustani musicians are able to aurally assimilate material very quickly, and are usually able to remember long passages in a single hearing. If a conductor is required for a piece, it is important that the Hindustani musician know how to interpret the conductor's beat patterns and cues. The concept of a conductor is completely foreign to most Hindustani musicians with no Western musical experience.

Practical Concerns in the Rehearsal Process

Rehearsal Time. There is a very different sense of time in Indian culture. Korde jokes, "If the rehearsal starts at 9, [the Hindustani musicians] want to start at 9:30."[168] While this may seem like a trivial issue to raise, Hindustani musicians who have not worked in the West take a call time much more casually. Make sure that the musicians are aware of the strict Western time code, especially in an orchestra rehearsal or a union gig. If rehearsal are intended to be more relaxed, of course this will not pose a problem.

Placement of Musicians. Hindustani musicians perform sitting cross-legged on the floor. While singers and flute players can technically sit in chairs, the unique placement and handling of most other Hindustani musical instruments requires that they be seated on the floor[169]. This can cause problems when arranging an ensemble of both Hindustani and Western musicians, as most Western musicians will not be comfortable on the floor. If a resonant platform is available on which to situate the Hindustani musician(s), this is the ideal solution. The platform should be high enough to elevate the Hindustani musicians to the same height as the Western musicians seated in chairs, so that sight lines are not compromised.

Visual Contact. Hindustani musicians generally do not use music stands. They may find it disconcerting to rehearse with other musicians who do use stands, because they are not able to maintain visual contact with others in the ensemble to the degree possible in traditional Hindustani music. Encouraging the Western

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[168] Korde Interview

[169] Even Hindustani violinists, though they are playing exactly the same instrument as a Western violinist, hold the scroll of the instrument with their knee, allowing their hand to glide more freely over the instrument

players to make more eye contact with the Hindustani musicians will help the dynamic in the ensemble.

Amplification. Hindustani musicians will almost always need to be amplified. Regardless of the size of the space or the proximity of the musicians to the audience, Hindustani musicians rarely feel comfortable performing without a microphone. However, this can both change the timbre of the music and also create a sonic imbalance in the ensemble, especially if the other musicians are not amplified. It is common for Hindustani musicians to stop the music to adjust the levels on the microphone while a concert is in progress. This level adjustment has almost become a staple part of the beginning of traditional Hindustani performances. As this should be avoided in Western musical settings, it is important that the levels be suitable for the Hindustani musicians beforehand.

Musical Concerns in the Rehearsal Process

Starting and Stopping. As previously mentioned, the Hindustani method of practice rarely involves the repetition of a single passage until it is flawless – instead practicing is one continuous, improvisatory process. Once a particular phrase has been rendered, it is gone, and the mind moves on to the next iteration of the phrase. Therefore, the idea of starting and stopping, or isolating a single passage and replaying it multiple times, can sometimes be disconcerting to a Hindustani musician. While the Western rehearsal process mandates this kind of intense isolation of particular passages, this discrepancy should be considered during the composition of the work. Practically speaking, to whatever degree possible, rehearsal letters should be put in spots that do not fall in the middle of a phrase for

the Hindustani musician, and special efforts should be made in the rehearsal process to allow the Hindustani musician enough context when sections are isolated.

Notation as an Aid in Rehearsal. If the rehearsal of a piece will require a lot of isolation and repetition of sections, and if the Hindustani musician's part is somewhat fixed, it may be helpful to include the Hindustani notation (however basic) in the score. Between the notation and the bar numbers, the Hindustani musician should be able to find h/er place (with some practice).

Shadowing. Especially in a large ensemble, assigning one Western musician in the ensemble to shadow the Hindustani musician can be very helpful. The Western musician can help 'translate' parts of the rehearsal process that are unclear to the Hindustani musician, either verbally or through demonstration on their instrument. To this end, it is particularly advantageous to place the Hindustani musician next to a Western musician who plays a similar instrument. Korde suggests that, for example, a percussionist be placed next to the tabla player in rehearsals. This way, the percussionist, who can read notation, is able to play from the page, and then the tabla player is able to hear it[170]. Ziporyn goes so far as to build this technique into his tabla concerto – the tabla player listens to the other percussionists to hear the basic theka of the *taal* on which he improvises[171]. If he knows the sound of the theka aurally, he will be able to synchronize with the rest of the ensemble easily.

In addition, the 'translator' should aim to know the Hindustani musician's part well enough that he is able to sing or play the first few notes before the

[170] Korde Interview
[171] Ziporyn, *Mumbai*

ensemble picks up at a certain point. If the Hindustani musician is unsure of h/er entrances, this method may be even more effective than notated cues in helping the Hindustani musician drop into the piece at a given location.

While this list does attempt to identify and remedy some of the most basic issues that can arise in collaborations between Hindustani musicians and Western art musicians, it is far from exhaustive. As more composers begin to experiment in this context using a wider variety of compositional techniques and styles, new issues will certainly arise. However, the purpose of this list is precisely to give rise to these new issues – if composers can avoid getting sidetracked or altogether derailed by the initial pitfalls of such collaborations, they will be free to tackle new issues, and in so doing, contribute to and enrich the inter-musical dialogue.

CONCLUSION

At the end of my interview with each composer, I asked the same question: "What would be the traits of your ideal Hindustani/Western collaborative musician?" I had honestly expected that their answers would include enumerations of multiple techniques from both genres. However, every composer had roughly the same response: they each wanted to work with musicians who were, above all else, open and flexible. Though the musicians involved in these collaborations tend to be profoundly talented artists who seek out challenging situations to broaden their musical experience, it is their openness to new ideas and experiences, and their ability to adapt to unexplored and fluctuating musical environments that composers of cross-cultural collaborative works value above all else.

However, it is also the responsibility of the composer to remain open and flexible with the musicians who perform their works. Each individual musician varies greatly in his or her response to experimentation. By sensitively gauging the responsiveness of the musicians to these new methods of communication, the composer can use the context of a composition to create an environment where performers from each discipline can be sufficiently challenged, and yet feel comfortable enough to bring their own individual abilities into the creative process; where their ability to reach further out from their areas of expertise is made possible by their ability to reach more deeply into their well of knowledge. This vibrant performance environment will not only serve to bring out the best in each musician, but will also allow musicians from each discipline to see the best in one another.

Appendix A: List of Works for Hindustani and Western Art Musicians

In the duration of my research, I never came across any compiled list of repertoire for ensembles involving Hindustani and Western art musicians. While I was only able to discuss a few of these works in this thesis, below is the complete listing of works I encountered that fits this profile. While the list is far from exhaustive, I hope to publicize and continue to add to it as I encounter new works, so that they may be more easily accessed by others.

- **Attariwala, Parmela**: The Attar Project. Multiple CDs of commissioned works for violin and tabla.
- **Cuomo, Douglas**: *Arjuna's Dilemma* (opera). vocal quartet, tenor, saxophone, Western chamber ensemble, Hindustani vocalist and tabla.
- **de Haas, Saskia** : multiple collaborations with sitarist Shubhendra Rao. Cello and sitar.
- **Gupta, Vijay**: *Raga Jaunpuri*. violin and tabla
- **Esmail, Reena**: *Aria*. Hindustani vocalist and orchestra
- **Gudmundsen-Holmgreen, Pelle**: *Passacaglia*. Violin, cello, clarinet, piano, tabla.
- **Harrison, Michael**: *Bhimpalasi*. Cello, just intonation piano, just intonation marimba, Hindustani vocalist, tabla
- **Kalhor, Kayhan**: *Blue as the Turquoise Night of Neyshabur* and *Mountains Are Far Away*. Exact instrumentation unknown.
- **Korde, Shirish**: *Lalit*. tabla and cello
- **MacDonald, Payton**: *Four Tabla Concerti*. Tabla and various Western ensembles (percussion quartet, wind ensemble, et al)
- **Majumdar, Gaurav**: Various works for Sitar and Western string ensemble.
- **Mativetsky, Shawn**: tabla player who has commissioned over 60 works for tabla and various combinations of Hindustani and Western instruments.
- **Riley, Terry**: *SwarAmant*. Guitar, violin, tabla.
- **Riley, Terry**: Khayal (Riley's ensemble) has multiple works for Hindustani and Western instruments (instrumentation not known).
- **Sankaram, Kamala**: *Thumbprint* (opera). Western vocalists, string ensemble, piano, tabla.
- **Shankar, Ravi**: Two *Sitar Concerti*. Sitar and orchestra
- **Shankar, Anoushka**: *Sitar Concerto*. Sitar and orchestra
- **Young, LaMonte**: multiple works for Just Aalap Ensemble (exact instrumentation not known)
- **Ziporyn, Evan**: *Mumbai*. Tabla and Orchestra.

Appendix B: Track Listing for Accompanying CD

CD 1

1. Simple Tihai Example (pg. 42)
2. Compound Tihai Example (pg. 43)
3. Raag Bihag (pg. 46)
4. Gupta: *Raga Jaunpuri*, I
5. Gupta: *Raga Jaunpuri*, II
6. Gupta: *Raga Jaunpuri*, III
7. Ziporyn: *Mumbai*
8. Harrison: *Bhimpalasi* (Alap)

CD 2

9. Harrison: *Bhimpalasi* (Bandish)
10. Esmail: *Aria*

Unfortunately, a CD recording of Shirish Korde's *Lalit* only became available on April 3, 2014 (the day before this thesis submission deadline), so I was not able to get a copy in time. However, the movement that is referred to in this thesis is available at http://shirishkorde.com/listen/

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