From Bernstein to Bhatkhande: (Indian and Other) Music as the Universal Language

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In late September 2018, composers, performers, musicologists and theorists, and a variety of other Indian music enthusiasts, assembled at William Paterson University, for the second symposium of *Shastra*—an organization devoted to creating and supporting "artists who create meaningful connections between the great musical traditions of India and the West."[1] Three days of discussions and presentations ensued, which included world premieres of new compositions, conversations about techniques used in creating such works, demonstrations of new performance practices that are being developed to play this music, and scholarly reflections on the wider historical and theoretical contexts for these new musical experiments.

[2] One theme that emerged very persuasively during the symposium was that cross-cultural dialogues about music are not only possible, but needed, in the contemporary world of music performance and scholarship. The learning experiences that the symposium fostered, and the kinds of dialogues that the participants were able to have, is something that everyone seemed to really appreciate—and not only in the way it helped them with their own professional engagements at the cutting edge of Indian and Western music, but also because it allowed the symposium participants to speak openly about their, often deeply personal, experiences with these two venerable traditions, and the challenges they have faced in bridging them. It is wonderful to see, therefore, that many of these experiences will be recorded for posterity, since several of the presentations at the symposium are now being published as articles, in the present volume of the *Analytical Approaches to World Music* journal.[2]

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1. http://www.shastramusic.org/. The first of these *Shastra* symposia took place a couple of years earlier, in 2016. Future symposia are also planned, but have been affected by delays due to the COVID pandemic.
2. These are the essays by John King and Robert Morris in the present issue (i.e., Vol. 11, No. 1), and the essays by Tomáš Reindl and John Robison forthcoming in Vol. 11, No. 2.

[3] What these presentations, and the articles that have emerged from them, also confirm (perhaps inevitably) is the *reality* of cross-idiomatic musical experiences. That is, it confirms the reality of our cross-cultural ability to express ourselves through music, and often in novel and distinctive ways that can cut across various kinds of cultural and geographical boundaries too—just as happens with our cross-cultural capacity for language. As Tomáš Reindl said in this regard in his *Shastra* presentation, which he now repeats in the concluding paragraph of his forthcoming article in this journal (viz., on "Indian Rhythmic Systems as Sources of Inspiration for Western Composers"): "For many music creators, the contact with Indian culture is a rather marginal matter; its resources serve them only as an occasional diversification of the musical language. However, for some composers it represents the primary impetus for reassessment of their rhythmic approach; for these musicians, the encounter stands at the birth of a new, distinctive musical language."[3]

[4] In his *Shastra* presentation titled "John Mayer's *Pawitra Naukari (A Sacred Service)*: In God's Eyes, We Are All Equal"—now also forthcoming as an article in the present volume of the *AAWM* journal—the musicologist John Robison explores exactly such a "distinctive musical language," in the music of the much-neglected Indian-born British composer John Mayer (1929–2004).[4] Mayer had the rare distinction of being as at home with Western music as he was with Indian music, and at a time when such musical "bilingualism" was not particularly common. This led to his developing a musical language from influences as diverse as North Indian classical music and choral music from the European Renaissance, and as realized in the titular composition of Robison's essay, which the author analyzes in detail. But Robison does not, in the process, offer just a close reading of the piece's cross-

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3. In this essay, Reindl goes on further to show how certain cross-cultural ideas from Western and Indian music theory are not just a subject for theoretical discussion and comparison, but also practical application in one's own compositions—an idea that is realized in the essay by Robert Morris (2023) in this very issue of the *AAWM* journal too. Whereas Morris builds on his well-known earlier work with the *vīna* virtuoso Ravikiran (on the harmonic properties of South Indian scales), to develop several two-voice schemata for Western polyphonic composition based on South Indian *rāga*s, Reindl develops several ideas from Indian rhythmic theory instead (such as that of the rhythmic "phrase-building kit"), but which can also be used in contemporary Western composition—and as both Morris and Reindl demonstrate in their own works. What these projects do, therefore, is to not just look to the past for greater musical (or music-theoretic) understanding, but to also inspire music that looks to the future, and in ways that does not merely dabble in a variety of musical idioms, but rather is deeply informed by all of them.

4. Not to be confused, of course, with the American guitarist and songwriter of the same name.

cultural "grammar," so to speak. He makes a point of highlighting its broader vision of cross-cultural understanding too, which he takes as intrinsic to Mayer's music more generally—that is, its "profound message that is still relevant to the peoples of our world more than two decades after its creation."

[5] Thoughts such as these reinforce the belief, therefore, that music, again like language, is one of the best demonstrations of what we have in common, across cultures, as perhaps a universal attribute of what it means to be human. Of course, one has to be careful when countenancing music in this manner not to endorse a kind of blind universality, which "whitewashes" important differences between the world's musics and its peoples, or which fails to address some of their unique characteristics. (And which in the past has sometimes involved applying, in true colonial fashion, frameworks drawn from scholarship about Western music to non-Western idioms, especially to demonstrate the superiority of the former over the latter.) This is significant, moreover, given that the unique characteristics of certain world music idioms can complicate efforts to blend them with Western music, in the effort to create "distinctive musical languages." But on the flip side, it is becoming all-too-common to see arbitrary engagements with non-canonical musics (including non-Western ones) by scholars, often influenced by New Musicological or identitarian rhetoric, to focus on only their differences, especially relative to Western music—or worse still to "prove" why traditional Western music scholarship cannot apply to them, due to such scholarship being allegedly bad or ethically compromised in some respect. Therefore, progress can really be made only when the focus of such cross-idiomatic engagements is genuine dialogue, where *both* sides are learning from each other, and helping situate the human musical experience in its proper global context.[5]

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5. A great example of exactly such a dialogue can be seen in this journal issue's other essay that was initially presented at the *Shastra* symposium, namely, by John King (2023). In this essay, the author explores the *mēlakartā* system of 72 heptatonic scales proposed by early theorists of Indian music such as Rāmamatya and Venkatamakhin, but in a completely novel manner, influenced by contemporary Western theories about musical transformation. Specifically, King demonstrates parsimonious connections between these scales, revealed by changing only one tone between a pair of them (thus keeping the other six tones the same), in a manner reminiscent of scholarship in neo-Riemannian music theory. In the process, the author shows how several subsets of scales within the *mēlakartā* have a group-theoretic structure—and which can be used, therefore, to show the nuanced connections between *rāga*s derived from them, or between *rāga*s in a *rāgamāla* (or *rāgamālika*) performance. Given that the *mēlakartā*s are themselves organized tetrachordally, King's

[6] And this is why statements such as that made by the poet Henry Longfellow, about music being the "universal language" of humankind, still seem worth investigating. Even though some might still dismiss such statements as tired old clichés from a bygone era in musical culture and thought, the reality of *Shastra*, and the kinds of musical dialogues it is fostering, suggests that a belief in the language-like universality of music might still have some relevance today, and which is why it might still be worth exploring further. And there are indeed ways to accomplish this—for example, by examining certain ideas and concepts about musical structure from the perspective of multiple music theories from across the world, or by comparing proposals about such structure from Western music theory with related ones in non-Western sources. Not only can such an approach give us a more "authentic" insight into how indigenous scholars understand their own music, it can also bring into relief (or provide a wider context for) certain established proposals about music in Western musical scholarship—which, in the process, might even help justify or falsify the latter (or even the former). In the end, this might even illustrate how scholars from different parts of the world have found common ground in the world's musical languages—perhaps because there are significant overlaps between them in the first place, or perhaps because music is, in some significant sense, a language. Therefore, in the remainder of this essay, I will switch to exactly such a task, by presenting one perspective through which one might compare the world's music (and its music theories), and therefore address questions and criticisms (or least enable dialogues) about music's cross-cultural provenance—as the ostensibly "universal language" of humankind.

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proposals also show symmetries in the specifically tetrachordal aspects of these scales, which, as the author argues, has further implications for understanding tetrachordal structure in music more generally, including in Western music. All of this makes King's article particularly suggestive because it not only uses contemporary Western music theory to explore certain aspects of Indian music, it also uses this to help put certain aspects of the former (e.g., aspects of neo-Riemannian theory) into context. Such a synergy between non-Western and Western music theory, where one can help us understand the other better *and* vice-versa, is exactly what should be front and center in more music scholarship today.

BERNSTEIN'S "UNANSWERED QUESTION"

[7] The fact that the second *Shastra* symposium took place in late 2018 is significant for another reason—this was also the birth centenary of the celebrated American composer and conductor Leonard Bernstein. In addition to his extraordinary performing career, as the composer of popular works such as *West Side Story*, and his famous tenure with the New York Philharmonic Orchestra, Bernstein was also known as a proselytizer and advocate for music, and also an educator, who tried to help the wider public engage more seriously with all matters relating to music. In particular, he encouraged his audiences to ask deeper questions about human musicality, such as regarding the origins of music as an attribute of human nature, and the relevance of music to human civilization. Much of this side of Bernstein's career is being remembered now, given various problems facing Western musical culture these days, including challenges to teaching music in schools and colleges, budget cuts to local and even national orchestras, and so on. Bernstein's Charles Norton Lectures at Harvard University in 1973, published later as *The Unanswered Question* (Bernstein 1976) have been especially a subject of renewed interest in this regard, given that they contain some of his best-known presentations of what has come to be known as "public musicology."

[8] It is in these lectures that Bernstein made some statements that are worth hearing again, not only for the purposes of this essay, but also for the broader projects of *Shastra* and *Analytical Approaches to World Music*. In his first lecture, on musical "phonology," Bernstein says:

> I suddenly realized that these same four notes, in another order, formed the subject of Bach's C-sharp minor Fugue from the Well-Tempered Clavichord (Book I). Simultaneously I discovered the same four notes, transposed, with the first note repeated, germinating the variations in Stravinsky's Octet. And the same four notes flashed through my mind, in yet another order and key, as the initial motto of Ravel's Spanish Rhapsody. And on top of all that I suddenly recalled some Hindu music I had heard (I was a big Oriental music buff at the time)—and there were those same four notes again. At that moment a notion was born in my brain: that there must be some deep, primal reason why these discrete structures of the same four notes should be at the very heart of such disparate musics as those of Bach, Copland, Stravinsky, Ravel,

and the Uday Shankar Dance Company. … From that time to this, the notion of a worldwide, inborn musical grammar has haunted me; but I would never have dreamed of basing a lecture series on a notion so ill-defined, and apparently nonverifiable, if it were not for the extraordinary materials that have appeared in recent years on the similar idea of a universal grammar underlying human speech. I have been profoundly impressed and encouraged by the burgeoning of thought in this relatively new linguistic area—an area that might be called Chomskian. … In other words, by studying in depth why we talk the way we do—by abstracting the logical principles of language—we may be in a position to discover how we communicate in a larger sense: through music, through the arts in general, and ultimately through all our societal behavior. … this philosophical science called linguistics seems to have become our newest key to self-discovery. (Bernstein 1976, 7–8)

[9] Later he goes on to say:

Now you can see why I became so excited when I began reading the new linguistics, which postulated the notion of innate grammatical competence. Because suddenly my old undergraduate notion of a universal musical grammar was reanimated. It had lain dormant for years, paralyzed, I suppose, by that deadly cliché: Music is the Universal Language of Mankind. After a thousand repetitions of that one, usually with the connotation, "Support your local symphony orchestra," the well-meant phrase becomes not only a cliché, but a misleading one. How many of you can listen to forty minutes of a Hindu raga with intelligent comprehension, to say nothing of merely staying awake? And how about certain kinds of avant-garde music? Not so universal, are they? Well, thought I, so much for the Universal Language of Mankind. But then, when I began reading the new linguistics, I thought: here is a fresh way to pursue my intuitive idea, which had grown stale and had deteriorated into a platitude. In other words, by building analogies between musical and linguistic procedures, couldn't that cliché about the Universal Language be debunked or confirmed, or at least clarified? (Bernstein 1976, 10)

[10] Now it is clear that despite his youthful interest in the music of the Uday Shankar Dance Company, Bernstein's inability to stay awake while listening to "forty minutes of a Hindu raga," suggests that he did not succeed in finding a universal musical grammar—at

least not one that might be of interest to students of Indian music, such as those affiliated with *Shastra* or *AAWM*, who aim to listen to this kind of music "with intelligent comprehension." However, what Bernstein was able to do, was to suggest that "by building analogies between musical and linguistic procedures," we might at least clarify whether music might be a "universal language," in a way that no one had ever done before—and especially when studied from the perspective developed by Noam Chomsky and other language theorists, known as "generative linguistics."

[11] However, Bernstein was later criticized by other scholars, such as Allan Keiler, and Fred Lerdahl and Ray Jackendoff, for not really exploring music from a generative-linguistic perspective, since the "analogies between musical and linguistic procedures" that Bernstein built were quite superficial, and often misunderstood key generative-linguistic terms, such as "deep structure" and "transformation" (Keiler 1978, 198; Lerdahl and Jackendoff 1983, 5). Moreover, his linguistics-inspired attitude towards music ignored work within music scholarship itself that might have been of relevance to his project—which is surprising, given his own professional vocation as a musician.

[12] Therefore, it might be worth exploring a few concepts from within music theory that Bernstein could have used, to explore his interest in a universal grammar of music, and it also might be worth exploring some core ideas from generative linguistics that Bernstein seems to have ignored or misunderstood.[6] Music theorists who were critical of Bernstein's theories, including the names just cited (viz., Keiler, and Lerdahl and Jackendoff), have discussed some of these ideas before, and have used them in their own attempts to answer Bernstein's "unanswered questions." Consequently, my goal here is not just to review this previously-explored terrain, but to show instead how it is also connected to proposals made by the Indian theorist Vishnu Narayan Bhatkhande (1860–1936)—the other name in the present essay's title. By illustrating such connections between traditional Western scholarship and indigenous Indian scholarship, I hope to reveal how a cross-cultural—and perhaps global—framework already exists for "clarifying" how music might be a universal language of humankind. In other words, if music truly is a universal language, in some sense

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6. For a more expansive discussion of these music-theoretic and linguistic ideas, see my essays Mukherji (2019; 2022) and also my forthcoming monograph *The Universal Language: A Minimalist Approach to Musical Grammar*.

of that term, this could be the reason why scholars have arrived at converging theories about it too, in disparate musical cultures.

[13] To proceed in the above venture, I would like to focus first on the concept of "internalism." This is a concept that has been broached from time to time in musical scholarship, but has been of more overt interest in the work of linguists such as Noam Chomsky over the past forty years or so. "Internalism" is the study of language in terms of the *internal* properties of the human mind. (Hence Bernstein's intuition that this might provide a key to *self*-discovery.) The focus on such an internalist approach to language stems from the belief that the mind has certain critical properties, which affects how humans think, and how they express themselves through language in the process, around the world. For example, based on the study of hundreds of languages in the past several decades, generative linguists argue that the mind has certain hardwired principles of *syntax* (i.e., instructions for how words are combined together to create sentences), which seem to be the basis for sentence structure even in languages that appear to be quite distinct (e.g., in terms of how they sound, or in the kinds of thoughts they are used to express). This means that when seen at least in terms of their syntax, all of the world's languages appear to be the same, even when they sound quite different from one another. For example, sentences in one language can sound different from those in another language, when the words used to form these sentences are ordered in different ways (e.g., with the verb in the middle, as happens in English (as in "Vishnu ate apples"), or with the verb at the end, as happens in Hindi, and other verb-final languages (e.g., "Vishnu-ne sēb khāya," which in English would be "Vishnu apples ate")). (Obviously, these sentences also sound different because they use words, syllables, phonemes, and so on that are specific to each language too.) This means that the world's languages do differ, but mainly in the "surface" sound structure of their sentences, as opposed to their internal or "deep" syntactic structure—that is, they do not necessarily differ in the syntactic relationships between the words used to generate the above sentences (such as those between nouns and verbs, and so on).[7]

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7. I am using the term "deep structure" here loosely, since its technical meaning within generative linguistics is something quite different from how music scholars often use the term. In generative linguistics, deep structures have something to do with the meaning of a sentence, and not just its syntax. However, this nuance has typically been ignored in musical discussions, where "deep structures" are typically understood as just syntactic structures, which underlie, and can therefore be shared between, a variety of "surface" structures—a view that is

[14] This syntactic structure is also the basis for linguistic creativity, since it is what allows people to express novel thoughts, by combining words in different ways, to create novel sentences. And furthermore, such creativity is free, since we can typically speak whenever we want, and therefore have the freedom to create language at will. But perhaps the most important part of this free, creative, basis for language with which we are endowed is that it allows us, at least in theory, to create an *infinity* of novel expressions—through the syntactic procedure known as "recursion." By re-defining a sentence, or a part thereof, in terms of itself (i.e., *recursively*), we can create a potential infinity of new sentences. Therefore, we can rewrite the subject of the English sentence above (viz., "Vishnu") as "Vishnu, who is a deity in Hinduism," which results in the new sentence "Vishnu, who is a deity in Hinduism, ate apples." We could potentially rewrite this further as "Vishnu, who is a deity in Hinduism, which is a religion practiced in India, ate apples," and then "Vishnu, who is a deity in Hinduism, which is a religion practiced in India, which is a country in South Asia, ate apples," and so on, *ad infinitum*. The only thing that prevents us from ever uttering such an infinite sentence is of course our own finiteness as mortal beings—among other things, we will die before ever finishing such a sentence.

[15] This is why linguists such as Chomsky have focused so much on the internal, psychological *form* of language—that is, the structure of language in our minds, and how this allows us to generate a potential infinity of sentences in different languages. Consequently, generative linguists are also less interested typically in the *functions* of language—that is, how people use it, for example, to communicate with each other, especially through the various surface sound structures of a given language.

[16] As I mentioned a little while ago, these linguistic ideas have been discussed already by scholars interested in explaining human musicality in generative-linguistic terms. Some of them have also noticed the connection between the above linguistic ideas, and those found in the music theory of the early twentieth-century Austrian theorist Heinrich Schenker (see, for example, Keiler 1977; 1983–84; 1989; and Lerdahl and Jackendoff 1983, 337–38). After

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especially common in discussions of the Schenkerian *Ursatz* and its "surface" manifestations, as I will discuss later in this essay. For this reason, I will continue to use "deep" and "surface" structure in such an informal, musical, manner in the present essay as well, especially given its musical focus. The technical linguistic nuances of "deep" versus "surface" structure, though worth noting, are not relevant to the present discussion.

all, Schenker's theory describes Western tonal music as basically a recursive system, in which a potential infinity of tonal pieces is created from a "deep structure" called the *Ursatz*. This creation is, moreover, free because composers do so by their free will, as is inherent in the very title of Schenker's most famous published work *Der freie Satz* ("Free Composition," Schenker 1935/1979).[8] Lastly, Schenker's theory focuses almost completely on the internal form of music (that is, its structure within the musical mind), instead of the external functions to which music might be put, in cultural communication.

[17] So, Bernstein was right to believe that generative-linguistic ideas might be relevant for understanding music, since they already appear in one of the most influential Western music theories of the twentieth century, namely, that of Heinrich Schenker, and also in later work inspired by his ideas. But Schenker's descriptions of free musical creativity were meant to apply only to Western tonal music, given his biases against the music of other times and peoples.[9] So, what does any of the above have to do with Indian music, or a broader "universal musical grammar"?

[18] The answer to this has to do partly with the fact that even though Schenker wrote almost exclusively about Western tonality, his ideas actually apply to a variety of musical idioms, in a manner of which he did not seem to have been aware himself (partly due to his cultural and political biases)—and has been already pointed out by scholars such as Agawu (1990, and see also references in note 9), Loeb (1976), Powers (1976), and Stock (1993), to name but a few. This is evidenced, furthermore, by the intriguing convergence of his ideas,

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8. More accurately, Schenker thought that composers (at least the ones he admired, such as Beethoven and Mozart) composed according to the "will of the tone"—an idea expressed in the title of another book of his, namely, *Der Tonwille* (Schenker 1921–24). Composition that is governed in this manner, by *der Tonwille*—that is, by various recursive musical principles that Schenker discusses in his writings (such as the well-known concept of "prolongation")—is also what allows composers to cross the bridge, as he says, from strict, rule-based, composition (which is not necessarily based on recursive operations) to *der freie Satz* (i.e., "free composition"). All of this, however, is arguably just another way of saying that musical creativity results from psychological principles that govern how the mind recursively combines tones into musical phrases—in other words, according to principles of syntax, of the very kind being discussed by linguists such as Chomsky in the case of human language.

9. Schenker's reactionary political and cultural beliefs have long been a source of embarrassment for his followers, and a flash point for controversy within certain circles of music scholarship—for example, see Agawu (2021, 15–16; 2023, 115–19), Ewell (2023), Schachter (2001), and Wiener (2022).

and their broader generative-linguistic connections—with those of the Indian music theorist Vishnu Narayan Bhatkhande, to a discussion of which I now turn.

FROM BERNSTEIN TO BHATKHANDE (VIA HEINRICH SCHENKER)

[19] Bhatkhande was born into an upper-middle class Brahmin family in 1860. He showed an early talent for music, and studied for many years with some of the greatest musicians and teachers of North Indian classical music in the late nineteenth century. His most significant studies, in this regard, were with Wazir Khan, the chief court musician in the North Indian kingdom of Rampur. Wazir Khan was a Carl Czerny-like figure in nineteenth-century Indian music, who counted among his students not only Bhatkhande, but also the celebrated *sarod* masters Hafiz Ali Khan (the father and teacher of *sarod* virtuoso Amjad Ali Khan) and Allauddin Khan (the father and teacher of Ali Akbar Khan and Annapurna Devi, and also the primary *guru* of several other musical legends, including Ravi Shankar, Nikhil Banerjee, and Pannalal Ghosh). Despite this pedigree, Bhatkhande's conservative middle-class upbringing forced him to quit his aspirations of becoming a professional musician in his earlier years, which was looked down upon at the time, and he trained professionally as a lawyer instead.[10] This is already an interesting biographical connection to Schenker, who also trained as a lawyer before turning to the musical endeavors in his later life for which he is best known. In fact, like Schenker, this formative experience of Bhatkhande's gave him a rather legalistic outlook towards music too, and towards culture more generally—which also made him a critic of, in his opinion, the moral corruption in modern music. This led him to say things such as the following:

> Among our present musicians, there are some who have soiled the ground of our true music. Here and there one can find high-level, talented individuals, but what can be said without doubt is that the numbers of such people are few and far between. In some respects we are the reason for this scarcity. If we will not teach our students with open hearts and minds, then what will these poor souls sing? Society has lost its ability

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10. It was the occurrence of two proximate tragedies in his life—the passing of his wife and his daughter—that led Bhatkhande to quit professional life, so to speak, and turn to a life of meditation on music instead. See Bakhle (2005) in this regard, for more on the historical and cultural contexts of Bhatkhande's life, especially in connection with the other celebrated "Vishnu" of early twentieth-century Indian music, namely, the vocalist and pedagogue Vishnu Digambar Paluskar.

to distinguish between high-grade and low-grade music. After seeing the poetry, taste, feeling, and craftsmanship in the old songs, the practices of today evoke heartfelt sorrow. ... What is the main reason for all this? Just this, that these musicians have not received training in the highest principles of music. … those *rāga*s whose forms have not strayed too far from their origins, those *rāga*s that can be easily set to principle, and those *rāga*s that have been corrupted by musicians' ignorance and short-sightedness—it is the duty of learned people to fix these kinds of *rāga*s. (Bhatkhande 1909–32 Vol. I, 256–57)

[20] Despite this criticism of "present musicians," however, Bhatkhande was no blind follower of tradition either, nor do the "highest principles of music" he advocates have, consequently, a traditional origin (e.g., in the canonical treatises of Indian classical music—even though he was well acquainted with them, and frequently cites passages from them in his writings too). As the late musicologist Prem Lata Sharma says in this regard, "traditional authors have always tried to bring contemporary practice to conform to fundamental verities accepted in their application to relevant Indian arts or literature. Prof. Bhatkhande in breaking away from this tradition broke to pieces the very ideal and foundation of Indian music" (quoted in Katz 1983, 67).

[21] So, Bhatkhande was quite willing to challenge tradition, when he thought this was appropriate. And strikingly, this led him to assert that the ultimate basis for the highest musical principles—and on what he also based his theories—is actual musical practice, instead of traditional doctrine. This can be seen in his collection of nearly 2000 compositions from several master musicians, in 180-odd *rāga*s, over the course of his life, which he published using a musical notation of his own, in his six-volume *Kramik Pustak Mālikā* (Bhatkhande 1913–37). He proposed a theory of North Indian *rāga* music, based on his study of these compositions, in his four-volume *magnum opus*, *Hindustāni Sangīt Paddhati* (or "Principles of Hindustani Music," Bhatkhande 1909–32). (Neither of these texts have been translated into English, and he wrote little in English otherwise—two rare examples of such being Bhatkhande 1930, and Bhatkhande 1934.)[11]

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11. I should note, in this regard, that all English translations of Bhatkhande's writings in this article are my own.

[22] In other words, Bhatkhande developed his theoretical proposals not from earlier theories of Indian music, but through extensive *analyses* of actual practices of Indian music, by master musicians past and present. The most famous of these theoretical proposals, as discussed in his *Hindustāni Sangīt Paddhati*, is his classification of the 180-odd *rāga*s he studied into one of ten parent scales or modes, which he called *ṭhāṭ*s. These are shown in Example 1.

[23] The above already reveals Bhatkhande's first major departure from tradition. In the older treatises, the most widely accepted *rāga* classification system is one from the late middle ages in South India, called the *melakartā* system, and which was developed by scholar-sages such as Venkatamakhin and Ramamatya. The best-known version of this system proposes not ten, but seventy-two parent scales (i.e., *mela*s or "collections"), derived mathematically from various permutations of the seven scale degrees (see King (2023), in this journal issue, for a further discussion of this 72-*mela* system). Bhatkhande found this system faulty because even though it is mathematically complete in certain respects, it contains

Ṭhāṭ	Scale structure (centered on C)	Western equivalent
Pūrvī	C D♭ E F# G A♭ B C	
Mārvā	C D♭ E F# G A B C	
Kalyān	C D E F# G A B C	Lydian
Bilāval	C D E F G A B C	Major, or Ionian
Khamāj	C D E F G A B♭ C	Mixolydian
Kāfi	C D E♭ F G A B♭ C	Dorian
Āsāvari	C D E♭ F G A♭ B♭ C	Natural minor, or Aeolian
Bhairavī	C D♭ E♭ F G A♭ B♭ C	Phrygian
Bhairav	C D♭ E F G A♭ B C	
Tōdī	C D♭ E♭ F# G A♭ B C	

Example 1. Bhatkhande's list of ten *ṭhāṭ*s, from his *Hindustānī Sangīta Paddhatī*.

several essentially "theoretical" scales, which are not of much musical value, akin to the situation with the Locrian mode in early Western music. So, Bhatkhande thought his ten *ṭhāṭ*s to be sufficient for classifying all genuine *rāga*s. However, he still maintained that:

> even though thousands of *rāga*s might be generated from different combinations and subsets of the *ṭhāṭ* system, all of these do not constitute *rāga*s. Only those specific pitch collections that through sound and form color people's minds, are what scholars call *rāga*. (Bhatkhande 1909–32 Vol. I, 21)

[24] And which pitch collections constitute genuine *rāga*s can be determined, Bhatkhande thought, only by a careful study of actual musical practices, rather than through doctrine handed down from old treatises. A few paragraphs ago, I cited Prem Lata Sharma's consequent criticism of Bhatkhande, for his rejection of traditional doctrine in this manner—and he earned the ire of other more traditionally-oriented scholars for this reason too, such as his main rival as a theorist, the early twentieth-century vocalist and pedagogue (and Prem Lata Sharma's teacher) Omkarnath Thakur (1938–62 Vol. VI, 109–11). Even Harold Powers, who otherwise writes approvingly of Bhatkhande in his authoritative *Grove Dictionary* article on the subject (Powers 1980), occasionally dismisses Bhatkhande's practice-based *ṭhāṭ* theory as the work of a "positivist" (e.g., see Powers 1992, 37).

[25] What emerges, however, from all of this is Bhatkhande's remarkably *internalist* approach to *rāga* music, and one that has much in common with Schenker's ideas about Western tonality as well. Like Bhatkhande, Schenker rejected the theoretical excesses of medieval modal doctrine, reducing these to his theory of major-minor diatonicism, based also on his analysis and critical editions of hundreds of compositions. And as argued earlier, Schenker based his theory on not only actual compositional practices, but on internalist ideas about how human minds create and understand music. The idea that this might be related to the innate workings of the mind, as discussed in linguistic theory, also shows up in the writings of both scholars—see, for example, Schenker (1935/1979, 5), and as Bhatkhande says:

> In these parts [i.e., Western India, where Bhatkhande lived and worked] do not all people speak Marathi? While speaking this language do they not all make complicated uses of grammar? But when did they formally study Marathi grammar in school? In this

> manner, musicians can acquire such knowledge [of musical grammar] too, just
> through exercise and practice. (Bhatkhande 1909–32 Vol. I, 36)

[26] Moreover, despite his belief in a language-like basis for music, this only extended to the mind-internal syntactic aspects of music, and not its external or extra-musical functions and uses (e.g., in communication, akin to similar external uses of language). This can be seen in Bhatkhande's failed attempt to relate his ten *ṭhāṭ*s to certain extramusical properties known as *rasa*s (i.e., "tastes" or affects) in traditional Indian aesthetics. On considering Example 1 again, one observes that the *ṭhāṭ*s shown there can be classified into further groups, based on the pitches they share. For example, the Kalyān, Bilāval, and Khamāj *ṭhāṭ*s, which correspond to the Western Lydian, major, and Mixolydian modes respectively, also share scale degrees $\natural\hat{2}$, $\natural\hat{3}$, and $\natural\hat{6}$, in addition to the fixed tonic and dominant shared by all *ṭhāṭ*s. Now, citing the relevant aesthetic doctrine in this regard, Bhatkhande suggested that the *rāga*s that contain these scale degrees might also be said to evoke the *rasa* of *śriṅgāra*, which means, variously, beauty, love, or romance. This led him to classify the parent *ṭhāṭ*s of these *rāga*s, the aforementioned Kalyān, Bilāval, and Khamāj *ṭhāṭ*s, into a further group of their own, and he did the same with several of the other *ṭhāṭ*s as well, as shown in Example 2.

Ṭhāṭ	**Relevant pitch**	*Rasa*	*Prahar*
Kalyān, Bilāval, Khamāj	$\natural\hat{2}$, $\natural\hat{3}$, and $\natural\hat{6}$	*Śriṅgāra*	*Pratham* ("first") *prahar* of *din* ("day") and *rātri* ("night")
Āsāvari, Kāfi, Bhairavi	$\flat\hat{3}$ and $\flat\hat{7}$	*Vīra*	*Doosrā* ("second") *prahar* of *din* ("day") and *rātri* ("night")
Bhairav, Pūrvī, Mārvā	$\flat\hat{2}$, $\natural\hat{3}$, and $\natural\hat{7}$	*Karuṇā*	*Sandhiprakāsh* ("transitional")

Example 2. Bhatkhande's correlation of *ṭhāṭ*s with *rasa*s.

[27] Now, traditional doctrine asserts that *rāga*s are supposed to be performed during specific spans of time during the day too, known as *prahar*s, due to their association with the mood of a given *prahar*—a day being divided into eight such *prahar*s of three hours each. (So, for example, *rāga*s that evoke the *śringāra rasa* should be performed at certain times during the morning or evening, since these times are supposedly associated with romance.) Bhatkhande tried to reconcile these ideas with his *ṭhāṭ* theory, even though he implicitly suggests in his writings that a day should be divided into six *prahar*s of four hours each, since this works better with his theory. Consequently, he assigns the *rāga*s classified into the parent *ṭhāṭ*s of Kalyān, Bilāval, and Khamāj, and which supposedly evoke the *śringāra rasa*, to the first *prahar*s of day and night, as can be seen in the rightmost column of Example 2. (These correspond roughly to the period from 7 AM to 11 AM, and from 7 PM to 11 PM.) Bhatkhande makes such assignations to the *rāga*s classified into the other *ṭhāṭ*s as well, all of which is visualized more fully in Example 3.
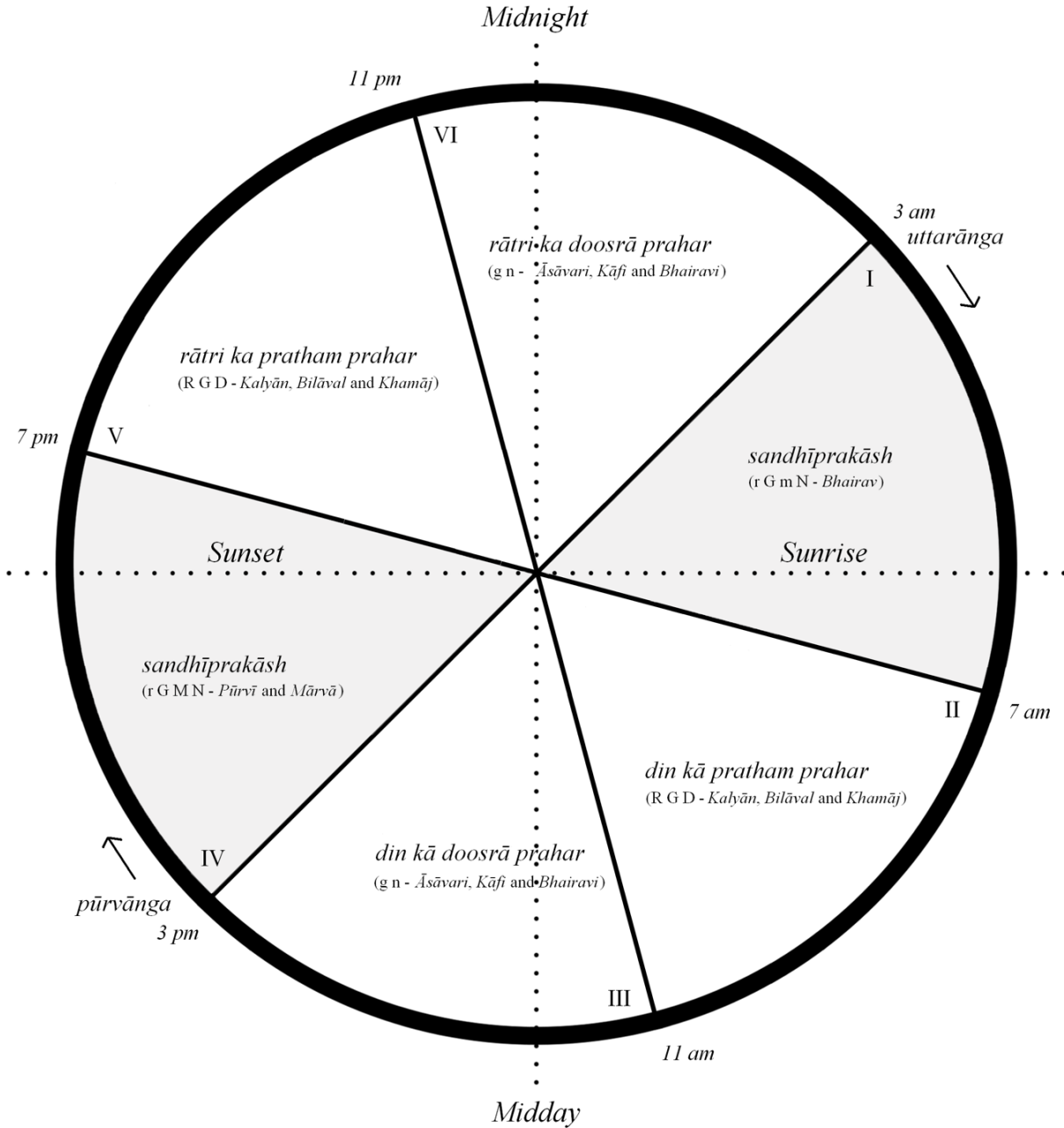
Example 3. Bhatkhande's correlation of *ṭhāṭ*s with *rasa*s in his time theory.

[28] But this attempt of Bhatkhande's, to relate the internal structural properties of *rāga*s with extramusical meanings and functions, of the *rasa* and *prahar* kind, is full of inconsistencies. To take just one quick example of this, notice how the Tōdi *ṭhāṭ* at the bottom of Example 1 is nowhere to be seen in Examples 2 and 3, since it cannot be

accommodated into them—due to this *ṭhāṭ*'s specific scale degrees being irreconcilable with a specific *prahar*.[12] For reasons such as this, Bhatkhande arrives at the strikingly *internalist* conclusion that:

> A *rāga* is like a fragrant flower. A flower's fragrance cannot determine its *rasa* conclusively, but it does bring an indescribable joy to the mind. … Similarly, the pleasant performance of a *rāga* also has an effect on the mind, but it cannot be said that this effect amounts to a specific *rasa*. It is impossible to describe this effect. At most this can be described as *nāda-mōha* ["sound-pleasure"]. According to some, this *nāda-mōha* is different from other states of the mind. Even then, in the absence of clear experiments, nothing decisive can be said for the time being about the relationship between *rāga* and *rasa*. (Bhatkhande 1913–37 Vol. VI, 37)

[29] So, in the grand scheme of things, Bhatkhande's theory is not one about the extramusical meanings and functions of *rāga*s, but rather one that describes the internal form of *rāga*s, as they arise from one of the ten *ṭhāṭ*s, and as can be seen in hundreds of actual *rāga* compositions. Although this aspect of Bhatkhande's theory is relatively well known in music scholarship, its specifically internalist characteristics (in the way this also relates to Schenker's theory) has been generally ignored so far, which is why I have been describing this in the preceding pages. But this is not even the most significant part of Bhatkhande's theory of North Indian classical music, *that* being its *generative* character—and this has been definitely overlooked in appraisals of Bhatkhande's works as well.

[30] That Bhatkhande proposes a generative approach to *rāga* music can be seen first in the way he describes his *ṭhāṭ*s as akin to Schenker-like *Ursätze*, from which the "surface" structures of different *rāga*s are derived:

> We know that people can tell each other apart from their appearance. If someone's appearance is hidden, and we can perceive only what is beneath this, will this not

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12. Moreover, in his description of the first *prahar*s of day and night, to which he assigns the *rāga*s of the Kalyān, Bilāval, and Khamāj *ṭhāṭ*s Bhatkhande often omits ♮$\hat{3}$ in various other places in his writings. This means that a *rāga* that has a Dorian pitch structure, that is, with ♮$\hat{2}$, ♮$\hat{6}$, and *flat* $\hat{3}$ (i.e., one that belongs to the Kāfi *ṭhāṭ*), could be assigned to the first *prahar*s of day and night as well. But this clearly does not accord with tradition, making this yet another inconsistency in Bhatkhande's attempts to reconcile *rāga* structure with extramusical meaning.

usually lead to confusion about their identity? A *ṭhāṭ* may be considered just such an underlying entity, in the case of a *rāga*. (Bhatkhande 1909–32 Vol. I, 81)[13]

[31] The generative character of Bhatkhande's theory can be seen more clearly, however, in his descriptions of the structural details of actual *rāga*s. Take for example his discussion of *rāga* Bhoopali. This *rāga* has the familiar "major" pentatonic pitch structure found in dozens of other world music idioms, with its omission of $\hat{4}$ and $\hat{7}$. This raises a question about from which *ṭhāṭ* this *rāga* should be derived. The very term "major pentatonic" just mentioned suggests that it might be derived from the major-mode Bilāval *ṭhāṭ*—but Bhatkhande considers it a derivative of the Lydian Kalyān *ṭhāṭ* instead. This is partly due to this *rāga* being referred to as Bhoop Kalyān in some traditions. As he elaborates:

> Bhoopali is said to be in the Kalyān *ṭhāṭ*. … One reason is that in convention one can hear Bhoopali being referred to as Bhoop Kalyān as well. … It is of a pentatonic species, and in it *madhyam* [$\hat{4}$] and *nishād* [$\hat{7}$] are not used. … [However] to show the primacy of the *gandhāra* [$\natural\hat{3}$] in Bhoopali, *teevra madhyam* [$\sharp\hat{4}$] or *pancham* [$\hat{5}$] can be used minutely in accompaniment—a use that is very pretty. (Bhatkhande 1909–32 Vol. I, 97–99)

[32] In other words, Bhatkhande argues that Bhoopali should be considered a variety of Kalyān, not Bilāval, because of the subtle use of the $\sharp\hat{4}$ in it, to elaborate the characteristic $\natural\hat{3}$ pitch of this *rāga*.

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13. Notice also the organicist language in Bhatkhande's description here, of the relationship between *rāga*s and *ṭhāṭ*s—that is, in the way a *ṭhāṭ* is seen as akin to the entity that underlies the external appearance of an organism (e.g., a person). Such organicist language is frequently seen elsewhere in Bhatkhande's writings, for example, when he compares his *ṭhāṭ*s to the various "orders" and "other categories" discussed in "the disciplines of botany and biology" (Bhatkhande 1909–32 Vol. I, 27). This is relevant to the present discussion because of the well-known organicism of much of Schenker's writings (e.g., see Pastille 1990; Keiler 1989)—and which is also a central theme in Chomsky's writings on language. (Especially his recent work, which he and many other generative linguists refer to as "biolinguistics"—e.g., Chomsky (2005) and Berwick and Chomsky (2011), and see also Chomsky (1966), for some historical background on the connection between organicism and generative linguistics.)

Example 4. A composition (*gat*) in *rāga* Bhoopali, as performed by Nikhil Banerjee.

Example 4 provides a transcription of an instrumental composition in this *rāga*, performed by the *sitār* maestro Nikhil Banerjee, where one can clearly observe this subtle use of ♯4̂. (The original recording on which this transcription is based is pitched at D, but it is transcribed here in C for ease of reading. The relevant ♯4̂ pitch is therefore F♯.)[14]

[33] It is important to note here that the ♯4̂ pitch is not just a dissonant, or embellishing, tone. For if that were the case, one could reduce this pitch out of Bhoopali's structure, when relating it to a *ṭhāṭ*, and therefore derive it from the major-mode Bilāval *ṭhāṭ* instead. In fact, this is exactly what Bhatkhande does with a different *rāga*, namely, *rāga* Bihāg. Consider Example 5, which shows the scale structures of a number of *rāga*s derived from the Bilāval *ṭhāṭ* according to Bhatkhande, and notice the peculiar presence of *rāga* Bihāg here, which has a ♯4 scale degree in its descent, just like Bhoopali (despite the latter being connected instead to the Kalyān *ṭhāṭ*).

[34] Why then does Bhatkhande not derive *rāga* Bihāg from the Kalyān *ṭhāṭ* too, as he does with Bhoopali? Also notice the second *rāga* in Example 5, *rāga* Deshkar, which has the same "major pentatonic" pitch structure as Bhoopali. Why is *this rāga* also not derived from the Kalyān *ṭhāṭ*? Bhatkhande's response to these issues is very suggestive:

> Bihāg is said to be performed in the second [*sic*] *prahar* of the night.[15] You will see performers using *teevra madhyam* [♯4̂] in this *rāga*. For the nighttime *rāga*s, and in those *rāga*s in which the pitches *ga* and *ni* are *teevra* [i.e., those that have ♮3̂ and ♮7̂], the *teevra madhyam* pitch does not do much damage. It does not have to be used in all *rāga*s, but it seems that it does not damage the *rāga* if used in the appropriate places as a *vivādi* [dissonant] pitch. (Bhatkhande 1909–32 Vol. I, 181–82)

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14. The passage analyzed here can be found from 0:01–1:03 in maestro Banerjee's performance of *rāga* Bhoop Kalyān, on track 2 of the CD *India's Maestro of Melody, Live Concert Volume 5*. Please see discography for further details. Another recording of this performance can be accessed here: https://www.youtube.com/watch?v=OGpQkfZdes4.

15. It is typically performed in the first *prahar*, as even Bhatkhande says regarding "major-mode" *rāga*s (see Examples 2 and 3).

Example 5. Ascending and descending structures of some *rāga*s from the Bilāval *ṭhāṭ*.

[35] Notice Bhatkhande's striking description of ♯$\hat{4}$ in Bihāg as a "dissonant pitch." Such pitches also appear in his description of *rāga* Yaman Kalyān, where this time the dissonance is ♮$\hat{4}$ (since Yaman Kalyān is treated as a Lydian *rāga*, with a structural ♯$\hat{4}$ pitch in it):

> In Yaman Kalyān, this use of *shuddha madhyam* [♮$\hat{4}$] is akin to that of a *vivādi svara* [dissonant pitch]… this pitch is used sparingly in Yaman, and only in conjunction with *gandhara* [$\hat{3}$]. This would not be the case if this pitch were used in a regular manner, as a new pitch, in this *rāga*. Wherever a performer uses this pitch they always sing *gandhara* first, then this pitch, and then they return subsequently back to *gandhara*. (Bhatkhande 1909–32 Vol. I, 43)

[36] If anything this latter statement is a classic description of what Western music theorists refer to as a neighboring dissonance, which elaborates a consonance by moving away from

and then returning to it. This means that Bhatkhande's well-known derivation of *rāga*s from *ṭhāṭ*s contains a specifically generative approach to *rāga* structure, in which elaborating tones—including specifically dissonances—are added to "deeper" structures, at "the appropriate places," to generate the more characteristic phrases of a *rāga*.[16] Consequently, when phrases are generated in a *rāga* such as Bihāg, $\sharp\hat{4}$ is only added later in this generation, as a dissonance, which is why this *rāga* can be considered essentially a major-mode *rāga*, as Bhatkhande indeed does. A similar argument can be made for *rāga* Deshkar in Example 5 too—that is, since $\sharp\hat{4}$ is not introduced into this *rāga* at all, at any level of structure, it too can be assigned to the Bilāval *ṭhāṭ*. But in *rāga* Bhoopali, in contrast, $\sharp\hat{4}$ exists higher up in the syntactic hierarchy of this *rāga*, perhaps in the middleground as a Schenkerian might say, which means that its existence is implied even when it is not heard in overt phrases, as is often the case (Example 4 being one of the rarer examples where it is heard overtly).[17] And *this* is why Bhatkhande assigns Bhoopali to the Kalyān *ṭhāṭ* as well.

[37] A generative procedure of the kind that yields the characteristic phrases of a *rāga* such as Bihāg, where $\sharp\hat{4}$ is treated as an elaborating dissonance lower in the *rāga*'s syntactic hierarchy (and therefore "added" later to a phrase), is illustrated in Example 6.

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16. It is worth adding here that a generative description of a syntactic phenomenon is more accurately a description of the relationships between syntactic objects, especially at different levels of structure. It is not, therefore, a description of a real-time process through which syntactic structures are produced, in the manner of an electrical generator. Therefore, Bhatkhande's description of *rāga* structure is generative because it asserts a relationship between "deeper" pitches in a *rāga*'s syntax, and those that elaborate them by being (figuratively) added at more surface levels of structure.

17. These instances of $\sharp\hat{4}$ being overtly performed in Bhoopali seem to be more typical in performances by members of the Maihar *gharānā* too (of which Nikhil Banerjee was a leading exponent)—who also seem to refer to this *rāga* more consistently as Bhoop Kalyān. Other *gharānā*s of North Indian classical music often interpret Bhoopali with a prominent $\sharp\hat{4}$ as instances of *rāga* Shuddha Kalyān instead, which is another well-known *rāga* of the Kalyān *ṭhāṭ*.

Example 6. Generation of a phrase in *rāga* Bihāg.

[38] Here one can see how $\sharp\hat{4}$ is introduced as a lower-neighboring dissonance to $\hat{5}$ in level E of the example. Notice also how $\hat{3}$ is taken to be a grammatically structural tone here, which is the target of an initial ascent from the tonic, and which then initiates a descent back down to the tonic in level B, via $\hat{2}$. In level C, the initial ascent to $\hat{3}$ is elaborated by a consonant skip to G, and is then elaborated by a dissonant upper-neighboring motion to $\natural\hat{4}$ in level D. The consonant skip to G is then elaborated by the aforementioned $\sharp\hat{4}$ lower neighbor in level E. Then after some further elaborations, by means of passing tones and such, a characteristic Bihāg phrase emerges in level F.

Example 7. Syntactic structure of a Bihāg phrase, from an *ālāp* by Bismillah Khan.

[39] An example of an actual phrase in Bihāg with such a leveled syntactic structure is shown in Example 7. This phrase is transcribed from the beginning of a performance of *rāga* Bihāg by the *shehnāi* maestro Bismillah Khan. Schenkerian annotations have also been added, to illustrate the phrase's hierarchical syntax. In the interests of space, I will not elaborate any further on these annotations, and will just let Example 7 speak for itself.[18]

A VISHNU NARAYAN SCHENKERIAN ANALYSIS OF $\hat{3}$-LINE *RĀGAS*

[40] To my mind, the preceding discussion leads to one unavoidable conclusion, which is that Bhatkhande's description of phrase structure in Bhoopali, Bihāg, Deshkar, and so on, is nearly identical to descriptions familiar from Western music theory, of how Western tonal phrases are generated through the recursive elaboration of structural pitches, by means of dissonances introduced "in the appropriate places." In other words, Bhatkhande's proposals about Indian music seem to be nearly identical to those made by Heinrich Schenker about Western music.

[41] This is worth stating again, since the analyses shown in Examples 6 and 7 are not actually Schenkerian analyses, despite the labels and annotations in them. They are all based on Bhatkhande's *own* statements about North Indian *rāga* structure. The ways in which specific *rāga* phrases arise in these examples, with specific structural sonorities being elaborated by specific dissonances, are all explicitly described in Bhatkhande's writings. Even the seemingly Schenkerian initial ascent from tonic to $\hat{3}$, followed by a "$\hat{3}$-line" *Urlinie*-like structure that descends from the $\hat{3}$ "*Kopfton*" back down to tonic, depicted in Examples 6 and

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18. The passage analyzed here can be found from 0:24-2:41 in maestro Bismillah Khan's performance of *rāga* Bihāg, on track 1 of the CD *Shehnai Maestro, All India Radio Archival Release "Shaan-E-Shehnai" Volume 11*. Please see discography for further details. Another recording of this performance can be accessed here: https://www.youtube.com/watch?v=8K8-uuhkO4o.

7 using Schenkerian orthography—dotted and solid slurs, beams, scale-degree carets, etc.—is explicitly Bhatkhande-ian in origin.

[42] The preceding also owes in some instances to Bhatkhande's, sometimes idiosyncratic, interpretation of certain Indian musical terms. (Which shows, again, his willingness to break with tradition, when this leads to more accurate descriptions, in his opinion, of actual musical practice.) Take for example the concept of "*vādi*" and the related "*samvādi*." In traditional Indian theory, the *vādi* is said to be a pitch that helps identify a *rāga*, in either the lower tetrachord of the octave (i.e., the *pūrvānga*) or the upper tetrachord (the *uttarānga*), with the *samvādi* doing so in the opposite tetrachord. A given *rāga* usually focuses on either the *pūrvānga* or *uttarānga* in actual performances, meaning that the *vādi* will be in the tetrachord of greater focus too. Bhatkhande also buys this definition, when he says, ""I am so-and-so *rāga*"—the pitch that asserts this is the *vādi*" (Bhatkhande 1909–32 Vol. I, 30).

[43] This means that the appearance of the *vādi* pitch in a *rāga* phrase is significant—that is, it indicates that a specific *rāga* is being performed. Such significance results typically from the pitch being marked in some way too (e.g., by its being a conspicuous dissonance or such, not heard in performances of other *rāga*s). In fact, this is exactly how the theorist Omkarnath Thakur conceived of "*vādi*." Strikingly, however, Bhatkhande typically took *consonant* pitches to be the *vādi*s of most North Indian *rāga*s instead—that is, pitches that are typically points of stability and/or arrival, such as the tonic or dominant, or "imperfect" consonances such as $\hat{3}$ or $\hat{6}$.[19] For example, in the case of the popular *rāga* Yaman, Thakur chooses the relatively dissonant $\hat{2}$ as *vādi*, whereas Bhatkhande chooses the consonant, and frequently cadential, $\hat{3}$. Along these lines, the musicologist Nazir Jairazbhoy has shown that $\hat{2}$ appears much more frequently in Bhatkhande's own transcriptions of compositions in *rāga* Yaman, compared to $\hat{3}$, despite his choosing the latter as *vādi* (Jairazbhoy 1995, and especially 1972, 66). Meaning that in Bhatkhande's view, the *vādi* does not necessarily have statistical salience either. This is confirmed by other statements by him, such as the following:[20]

> In practice, these rules are not so hard-and-fast. Anyone who has superior knowledge of
> *rāga* Kedar [which is said to have a *vādi* of $\natural\hat{4}$] can display the shape of this *rāga* without

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19. Moreover, Bhatkhande never takes dissonances such as the leading tone, or $\sharp\hat{4}$, to be the *vādi* for any *rāga*.
20. That the structure of a *raga* does not depend, therefore, on the statistical preponderance of certain pitches is something missed quite frequently, even by current scholars of Indian music (e.g., Prahlad 2023).

giving primacy to the ♮$\hat{4}$. This should be taken to be the case for other *rāga*s as well. The lesser or greater use of a pitch depends on the intentions of the performer. … A clever performer can develop all the pitches without destroying the *rāga*. A musician who is not clever will fail in this endeavor. In short, the rules of using a *vādi* cannot be said to be firm ones. This subject has *much in common with linguistic doctrine* [my emphasis]. In practice, one cannot teach a *rāga* based just on assumptions about *vādi* and *samvādi*. (Bhatkhande 1909–32 Vol. I, 91–92)

[44] All of this suggests that for Bhatkhande, the *vādi* is not quite the distinguishing dissonance it is supposed to be, but is much closer to being a consonant structural pitch, akin to the Schenkerian *Kopfton*— which exists higher up in a *rāga*'s pitch-syntactic hierarchy, perhaps subordinate only to the tonic. This pitch might even be shared between several *rāga*s, as part of the syntactic backbone of those *rāga*s. This is why $\hat{3}$, which Bhatkhande takes to be the *vādi* of *rāga* Bihāg, is indeed shared by several *rāga*s, and appears in the higher levels of phrase structure shown in Example 6—reached by initial ascent from the tonic in level B of the example, in the manner of a *Kopfton* as well—and is therefore elaborated by other, more dissonant, pitches, at lower levels of structure.

[45] All of this, however, also leads to a remarkable implication, with which I shall conclude this essay—which is that one could take whatever pitch Bhatkhande has described as a given *rāga*'s *vādi*, and then use it to describe how the *rāga*'s characteristic phrases are generated, just as one does with the *Kopfton* and its associated *Urlinie* in Schenkerian theory—in both cases through repeated elaboration by means of dissonances in "the appropriate places." Perhaps one could also call such analyses "Vishnu Narayan Schenkerian analyses" of Indian music, some illustrations of which are shown in the last example, Example 8. Here, $\hat{3}$ is taken to be the *Kopfton* of the fundamental line (or *Urlinie*), shown at the top of the example. As is commonplace in Schenkerian descriptions of tonal structure, this *Kopfton* is reached by means of an initial ascent from the tonic (Schenker's *Anstieg*), via a consonant skip through $\hat{5}$, following which the line descends back to tonic via $\hat{2}$. By adding passing tones to this ascent at the next, scale, level, one can see how the major scale (Bhatkhande's Bilāval *ṭhāṭ*) arises as well. But when this structure is then further elaborated, using passing and neighboring sonorities as in Example 6, what can be shown to arise, across the remaining seven staves, are the characteristic phrases of seven different *rāga*s, classified into three

different *ṭhāṭ*s by Bhatkhande, namely, Bilāval itself, the Mixolydian Khamāj, and the Lydian Kalyān. Why this is possible is because what was stated earlier as the $\hat{3}$ *Kopfton*, in the fundamental line from which these phrases are generated, is really the $\hat{3}$ *vādi* that Bhatkhande ascribes to all of these *rāga*s.[21] So, by taking Bhatkhande's words about the $\hat{3}$ *vādi* he assigns to these *rāga*s, and then by elaborating this with "appropriate dissonances" and such, one can not only illustrate how certain *rāga* phrases are generated, in a manner consistent with Bhatkhande's descriptions of *rāga* structure, but one that is simultaneously, and strikingly, Schenkerian as well.

[46] What this implies even further is that Bhatkhande's system of ten *ṭhāṭ*s can be reduced to just two—major and minor, the former in the manner shown in Example 8 (where *rāga*s from three different *ṭhāṭ*s are all generated from the major scale).[22] Meaning that when taken to its logical conclusion, Bhatkhande's theory of North Indian *rāga* music is essentially a diatonic one, as was Schenker's theory of Western tonality—and hence the convergence in the ideas of the two thinkers. This makes sense further when one considers that even Schenker's theory of major-minor tonality emerged from his refutation of earlier Church mode-based theories of musical structure. So, given the related way in which Bhatkhande understood *rāga* structure (i.e., by refuting earlier Indian modal theory), as this essay has tried to illustrate from multiple angles now, it should not be surprising that his theory of ten "modes" should be reducible, therefore, to just major and minor too, and based on his own Schenker-like generative methods and arguments.

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21. Actually, in the case of *rāga*s Alhaiya Bilāval and Hameer the "*Kopfton*" is really the *samvādi*, since these *rāga*s focus typically on the upper tetrachord. But this is unlikely to be of much consequence here, since these *rāga*s, and pretty much all other *rāga*s, have characteristic phrases in the lower tetrachord too.
22. Or more specifically that the major scale is itself an elaboration of some deeper *Kopfton/Vādi*-based fundamental, perhaps universal, musical line (i.e., *Urlinie*).

Example 8. Generation of surface phrases in *rāga*s belonging to three different *ṭhāṭ*s (based on Bhatkhande's account of phrase structure, and 3̂ as *vādi*, in these *rāga*s).

[47] It is understandable if one is initially skeptical of this bold conclusion. But here is why it is significant: first, many theorists over the years have explored Indian music from a broadly generative, and sometimes explicitly Schenkerian, perspective (e.g., Clarke 2017; Cooper 1977; Larson 2010; Morris 2011; Powers 1959; Schachter 2015; Widdess 2016). And they have also questioned, or have been questioned by others about, the legitimacy of this enterprise, given its apparently "etic" origins in early twentieth-century Western music theory. But as the preceding arguments hopefully demonstrate, there is an "emic" justification for this enterprise too, since one of India's most renowned native theorists seems to have taken exactly this approach to *rāga* music.

[48] And the second reason for why the above "Vishnu Narayan Schenkerian" conclusion is significant is because it brings us full circle. I stated at the outset that comparing theoretical proposals by scholars from across the world might help illustrate how they have found common ground in the world's musical "languages," and therefore how music may or may not be a language itself—especially a kind of "universal language," which has led scholars across cultures to arrive at converging theories about it too. Therefore, exploring the ideas of Vishnu Narayan Bhatkhande, and comparing them with those of Heinrich Schenker, not only illustrates the connections between these thinkers, in how they have accounted for their own musical idioms, but how language-like these accounts are as well—and therefore how language-like our cross-cultural experience with music seems to be. That is, by taking the journey from Bernstein to Bhatkhande, via Schenker, one might have taken some of the steps towards answering the former's "unanswered question," about whether there is such a thing as a universal human musicality—especially a language-like one, based on a potentially universal musical grammar (and perhaps one that is even diatonic in nature!). All of which certainly seems to resonate with the kinds of cross-cultural musical experiences people are exploring in institutions such as *Shastra*, and *AAWM* more broadly, these days. Meaning that if nothing else, taking such a journey might at the very least give us yet one more key to self-discovery.

REFERENCES

Agawu, V. Kofi. 1990. "Variation Procedures in Northern Ewe Song." *Ethnomusicology* 34/2, 221–243. https://doi.org/10.2307/851684.

Agawu, V. Kofi. 2021. "Lives in Musicology: My Life in Writings." *Acta Musicologica* 93/1, 1–18.

Agawu, V. Kofi. 2023. *On African Music: Techniques, Influences, Scholarship*. New York: Oxford University Press.

Bakhle, Janaki. 2005. *Two Men and Music: Nationalism in the Making of an Indian Classical Tradition*. New York: Oxford University Press.

Bernstein, Leonard. 1976. *The Unanswered Question: Six Talks at Harvard*. Cambridge: Harvard University Press.

Berwick, Robert C., and A. Noam Chomsky. 2011. "The Biolinguistic Program: The Current State of Its Development." In *The Biolinguistic Enterprise: New Perspectives on the Evolution and Nature of the Human Language Faculty*, edited by Anna Maria Di Sciullo and Cedric Boeckx. New York: Oxford University Press, 19–41.

Bhatkhande, Vishnu N. 1909–32. *Hindustānī Sangīta Paddhatī* (Hindi Translation & Edition. by Vishwambarnath Bhatt, Sudamaprasad Dube and Laxminarayan Garg as *Bhatkhande Sangīta Shastra* (1951–1957)). Hathras: Sangeet Karyalaya.

Bhatkhande, Vishnu N. 1913–37. *Kramik Pustak Mālikā*. Hathras: Sangeet Karyalaya.

Bhatkhande, Vishnu N. 1930. "A Comparative Study of Some of the Leading Music Systems of the 15th, 16th, 17th, and 18th Centuries." *Sangeeta: A Quarterly Journal of Hindustani Music* 1/1, 7–17.

Bhatkhande, Vishnu N. 1934. *A Short Historical Survey of the Music of Upper India*. Bombay: Alavi Book Depot.

Chomsky, A. Noam. 1966. *Cartesian Linguistics: A Chapter in the History of Rationalist Thought*. New York: Harper & Row.

Chomsky, A. Noam. 2005. "Three Factors in Language Design." *Linguistic Inquiry* 36/1, 1–22. https://doi.org/10.1162/oo24389,052993655.

Clarke, David. 2017. "North Indian Classical Music and Lerdahl and Jackendoff's Generative Theory: A Mutual Regard." *Music Theory Online* 23/3. http://www.mtosmt.org/issues/mto.17.23.3/toc.23.3.html.

Cooper, Robin. 1977. "Abstract Structure and the Indian Raga System." *Ethnomusicology* 21/1, 1–32. https://doi.org/10.2307/850849.

Ewell, Philip A. 2023. *On Music Theory, and Making Music More Welcoming for Everyone*. University of Michigan Press.

Jairazbhoy, Nazir A. 1972. "Factors Underlying Important Notes in North Indian Music." *Ethnomusicology* 16/1, 63–81. https://doi.org/10.2307/850443.

Jairazbhoy, Nazir A. 1995. *The Rags of North Indian Music: Their Structure and Evolution*. Bombay: Popular Prakashan.

Katz, Jonathan B. 1983. "Indian Musicological Literature and Its Context." *Purusartha* 7, 57–75.

Keiler, Allan R. 1977. "The Syntax of Prolongation (Part I)." *In Theory Only* 3/5, 3–27.

Keiler, Allan R. 1978. "Bernstein's *"The Unanswered Question"* and the Problem of Musical Competence." *Musical Quarterly* 64/2, 195–222.

Keiler, Allan R. 1983–84. "On Some Properties of Schenker's Pitch Derivations." *Music Perception* 1/2, 200–228. https://doi.org/10.2307/40285256.

Keiler, Allan R. 1989. "The Origins of Schenker's Theory: How Man is Musical." *Journal of Music Theory* 33/2, 273–298. https://doi.org/10.2307/843795.

King, John. 2023. "Neo-Riemannian Theory and the Melakarta." *Analytical Approaches to World Music* 11/1. https://journal.iftawm.org/previous/2023-volume-11-no-1/king/.

Larson, Steve. 2010. "Path and Purpose in a *Raga*." (Paper presented at the First International Conference on Analytical Approaches to World Music, Amherst).

Lerdahl, Fred, and Ray S. Jackendoff. 1983. *A Generative Theory of Tonal Music*. Cambridge: MIT Press.

Loeb, David 1976. "An Analytic Study of Japanese Koto Music." *Music Forum* 4, 335–393.

Morris, Robert D. 2011. "Tana Varnams: An Entry into Rāga Delineation in Carnatic Music." *Analytical Approaches to World Music* 1/1. https://journal.iftawm.org/previous/vol1no1/morris/.

Morris, Robert D. 2023. "Recent Developments Coordinating Melody and Harmony." *Analytical Approaches to World Music* 11/1. https://journal.iftawm.org/previous/2023-volume-11-no-1/morris/.

Mukherji, Somangshu. 2019. "A GLAM Manifesto." In *International Music and Sciences Symposium Proceedings*, edited by Ozan Baysal. Istanbul: Istanbul Technical University Press, 491–519.

Mukherji, Somangshu. 2022. "Language Models and World Music Analysis." In *Trends in World Music Analysis*, edited by Lawrence B. Shuster, Somangshu Mukherji, and Noé Dinnerstein. New York: Routledge, 283–331.

Pastille, William A. 1990. "Music and Morphology: Goethe's Influence on Schenker's Thought." In *Schenker Studies*, edited by Hedi Siegel. Cambridge: Cambridge University Press, 29–44.

Powers, Harold S. 1959. "The Background of the South Indian Rāga-System." (PhD Dissertation, Princeton University).

Powers, Harold S. 1976. "The Structure of Musical Meaning: A View from Banaras (A Metamodal Model for Milton)." *Perspectives of New Music* 14/2, 307–334. https://doi.org/10.2307/832644.

Powers, Harold S. 1980. "India, Subcontinent Of." In *The New Grove Dictionary of Music and Musicians, Vol. 9*, edited by Stanley Sadie. London: MacMillan, 69–91.

Powers, Harold S. 1992. "Reinterpretations of Tradition in Hindustani Music: Omkarnath Thakur Contra Vishnu Narayan Bhatkhande." In *The Traditional Indian Theory and Practice of Music and Dance*, edited by Jonathan B. Katz. Leiden: Brill, 9–52.

Prahlad, Achintya. 2023. "Quantifying Alpatva (Scarcity) and Bahutva (Abundance): A Comparative Study of the Scale-Identical Hindustānī Rāgas Bhūpālī and Deskār." *Analytical Approaches to World Music* 11/1.

https://journal.iftawm.org/previous/2023-volume-11-no-1/prahlad/.

Reindl, Tomáš. forthcoming. "Indian Rhythmic Systems as Sources of Inspiration for Western Composers." *Analytical Approaches to World Music* 11/2. https://journal.iftawm.org/previous/2023-volume-11-no-2/reindl/.

Robison, John O. forthcoming. "John Mayer's *Pawitra Naukari (A Sacred Service)*: In God's Eyes, We Are All Equal." *Analytical Approaches to World Music* 11/2. https://journal.iftawm.org/previous/2023-volume-11-no-2/robison/.

Schachter, Carl. 2001. "Elephants, Crocodiles, and Beethoven: Schenker's Politics and the Pedagogy of Schenkerian Analysis." *Theory and Practice* 26, 1–20.

Schachter, Michael L. 2015. "Structural Levels in South Indian Music." *Music Theory Online* 21/4. http://www.mtosmt.org/issues/mto.15.21.4/mto.15.21.4.schachter.html.

Schenker, Heinrich. 1921–24. *Der Tonwille: Flugblätter zum Zeugnis unwandelbarer Gesetze der Tonkunst*. Vienna: Universal Edition.

Schenker, Heinrich. 1935/1979. *Free Composition* (Ernst Oster, Trans.). New York: Longman

Stock, Jonathan. 1993. "The Application of Schenkerian Analysis to Ethnomusicology: Problems and Possibilities." *Music Analysis* 12/2, 215–240. https://doi.org/10.2307/854273.

Thakur, Omkarnath. 1938–62. *Sangītānjalī*. Hathras: Sangeet Karyalaya.

Widdess, Richard. 2016. "Analysing *Ālāp*: Historical, Cognitive and Linguistic Approaches to Indian Music." (Keynote address to the Fourth International Conference on Analytical Approaches to World Music, New York).

Wiener, Barry. 2022. "Race, Nation, and Jewish Identity in the Thought of Heinrich Schenker." In *New Horizons in Schenkerian Theory*, edited by Allen Cadwallader, Karen Bottge, and Oliver Schwab-Felisch. Hildesheim: Olms, 243–302.

DISCOGRAPHY

Banerjee, Nikhil. 2002. *Pandit Nikhil Banerjee: India's Maestro of Melody, Live Concert Volume 5*. (Label: Chhanda Dhara, Catalog No.: SNCD 70702. Recorded live in San Francisco, USA, September 18, 1976.)

Khan, Bismillah. 1995. *Ustad Bismillah Khan and Party: Shehnai Maestro, All India Radio Archival Release "Shaan-E-Shehnai" Volume 11*. (Label: T-Series, Catalog No.: SICCD 079. Recording date unknown.)