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Unity in Diversity, Antiquity in Contemporary Practice? South Indian Music Reconsidered¹

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“It is not the distinctive quality of man to be a mere repetition of his ancestors. Animals cling to the nests of their effete habits; man expresses himself age after age in new creations.”

– Rabindranath Tagore, *Tagore on Gandhi*²

When Rabindranath Tagore (1861–1941) appealed to his contemporaries to abandon their ‘effete habits’ in 1931, he pursued innovation in the face of opposition from traditionalists and patriotic scholars, teachers and politicians. They revelled in their newly found pride in ‘ancient traditions’, while he embraced creativity as the way forward. Yet Tagore knew that innovation was prized among intellectuals and exponents of the arts and crafts even if rarely acknowledged by their patrons. He sought to reconcile two seemingly contradictory attitudes still prevalent all over In-

¹ The title of this essay refers to ‘unity’ of different traditions as understood by Indian practitioners and musicologists such as T. S. Parthasarathy in ‘The Unity of Indian Music’, *The Journal of the Music Academy Madras: Golden Jubilee Special Number 1977* (1980): 192ff; published online as ‘The Unifying Role of Indian Music’, accessed 29 April 2014. <http://carnatica.net/special/tsp-unify1.htm>.

² Rabindranath Tagore, *Tagore on Gandhi* (New Delhi: Penguin, 2008), 31.

dia: one devoted to India's 'golden past' and the conservative 'values' it stands for, the other hailing the country's cultural 'diversity'.³ As music has often been instrumentalized as an effective antidote to India's centrifugal forces since the twentieth century, the present essay explores how musicians and listeners treat their musical legacy in the modern world. This extends to 'the places of music in the South Asian diaspora' that, according to Philip Bohlman, 'form a landscape that encourages rather than stems change'.⁴ In view of some striking parallels between the performance practice of early European music and South Indian ('Carnatic') art music today, the question arises whether these merely reflect general attitudes and trends or point to a common ground as envisaged by Tagore. Without seeking a definite answer to a question as complex as this, taking it seriously may provide the key to an appreciation of contemporary music practice in and beyond India.

In the speech from which the above quote is taken, the 70-year-old Tagore addressed staff and students of the institutions he had established at Santiniketan⁵ with the words: 'Today all of us who live in the asram [sic] will joyfully celebrate Mahatma Gandhi's birthday.' Although sceptical about nationalism, he praised Gandhi for shaking the 'deepest foundation of their other-rule' as a result of 'fearless self-expression' and asserted that '[in] the world of changing needs, the stream of continuous change flows on.'⁶ Tagore harnessed the power of music to bind people together for a common cause. His own lyrics 'Jana Gana Mana' ('Thou art the ruler of the minds of all people'⁷ set to music in collaboration with the Irish educationist Margaret Cousins in 1919) came to be adopted posthumously as India's national anthem in

³ Music held a privileged position in his life and his poetry influenced many of his European peers; for a detailed account, see Rokus de Groot, 'Rabindranath Tagore and Frederik van Eeden: Reception of a "Poet-King" in the Netherlands', in *Hindustani Music: Thirteenth to Twentieth Centuries*, ed. Joeb Bor, et al., (New Delhi: Codarts & Manohar, 2010), 521ff.

⁴ Philip V. Bohlman, *World Music: A Very Short Introduction* (New York: Oxford University Press 2002), 124.

⁵ Santiniketan (lit. *shanti* 'peace', *niketan* 'abode') was the name his father Debendranath had given to a rural estate he used as a meditation retreat. An experimental school of the same name was founded by Rabindranath in 1901, and the Viswa Bharati University with its pioneering music department (*Sangeet Bhavan*) in 1921. Reba Som, *Rabindranath Tagore: The Singer and His Song* (New Delhi: Penguin, 2009), 7. Since then, an entire town, Santiniketan (also spelt 'Shantiniketan') has grown around this university.

⁶ Tagore, *Tagore on Gandhi*, 30.

⁷ For lyrics, translation and a recording, refer to the Government of India on its 'Know India' website, accessed 29 April 2014, <http://india.gov.in/india-glance/national-symbols>.

1950.⁸ Given its scope for multiple interpretations, it lends itself well to the current topic, namely the ‘unity in diversity’ commonly invoked in India.

Bengali historian and musician Reba Som, herself an exponent of Tagore’s music known as *Rabindrasangeet*,⁹ describes his musical encounters since the late nineteenth century and how he was attracted by the distinctive styles of regional music. Some of these he adopted for his own songs.¹⁰ His interest in South Indian music was deepened during his visits to Madras in 1919 where he heard young Savitri sing Carnatic songs by Tyagaraja (1767–1847), the composer most revered today. These influences manifest themselves in songs like ‘Basanti he Bhubanomohini’ (1931) with Bengali lyrics in praise of spring and new life. It is grafted onto the famous *kriti* by Muttusvami Dikshitar (1775–1835) whose Sanskrit lyrics beginning with ‘Minakshi me mudam’ praise the ‘*vina* lute playing’ goddess Minaksi at Madurai whereby the tune and lyrics convey the tenfold *gamaka* ornamentation of Carnatic music.¹¹

South Indian music made a great impression on Tagore in spite of his well-known aversion to conventional music training. At a time when the practice of music was held in low esteem, he boldly introduced an integrated syllabus at two of the institutions founded by him, a rural school Santiniketan (1901) and Visva-Bharati (1921)¹². His ‘world university for India’ (*visva bharati*) emerged from a quest for a ‘synthesis of the East and the West’ through intellectual and cultural interaction as signatory of the ‘Declaration for the Independence of the Spirit’ in 1919 along with Romain Rolland and Einstein.¹³ Tagore accepted the premise of ‘multiple origins’

⁸ Sachidananda Mohanty, ‘An ‘Indo-Anglian’ legacy’, *The Hindu*, Online Edition, accessed 21 July 2013. <http://www.thehindu.com/todays-paper/tp-features/tp-sundaymagazine/an-indoanglian-legacy/article4936207.ece>.

⁹ Som, *Rabindranath Tagore: The Singer and His Song*, xiii.

¹⁰ *Ibid.*, 146.

¹¹ T. Viswanathan and Matthew Allen emphasize ‘the integral role of ornamentation (*gamaka*, literally, graces or gracefulness) as a part of *svara*. The ornament in Karnatak music is not considered an add-on to the basic note; *gamaka* is an integral structural part of *svara*.’ Viswanathan and Allen, *Music in South India: The Karnatak Concert Tradition and Beyond*, 47.

¹² Before Visva-Bharati was declared to be a central university and an institution of national importance in 1951, Rabindranath Tagore had envisaged a less formal environment to realize his ambition: ‘Visva-Bharati represents India where she has her wealth of mind which is for all. Visva-Bharati acknowledges India’s obligation to offer to others the hospitality of her best culture and India’s right to accept from others their best’. Visva-Bharati Homepage, accessed 4 May 2014, <http://www.visvabharati.ac.in/index.html>.

¹³ Som, *Rabindranath Tagore: The Singer and His Song*, 127.

and reminded his fellow citizens that Indian culture cannot thrive in the absence of external contributions, today as in the remote past.¹⁴

Among the institutions he established in and around Santiniketan (since then a small town in its own right), there are the art school (Kala Bhavana), music school (Sangeet Bhavana), a centre for rural development (Sriniketan) and, as part of Visva-Bharati, several university departments for the study of Asian languages (e.g. Cheena Bhavana). They soon attracted Indian and foreign scholars and artists to research and teach side by side. This policy endowed Visva-Bharati University with an enviable international reputation.¹⁵

Like Tyagaraja, the South Indian composer whose music he knew so well from early youth, he continued to create ‘new’ music while subjecting ‘ancient’ practices to innovation and reflection. David Reck describes the atmosphere of modern India as follows:

A growing and prosperous middle-class exhibits world-class competence and brilliance, particularly in the sciences, technology, and business – and in the arts. In the palimpsest that is South Asia, we find a constant interplay between the ancient and the modern. The old, the traditional, seems able to persist through all the changes of time and history.¹⁶

Where ‘ancient’ authorities are invoked by modern authors, it is useful to briefly consider a conventional distinction often raised, namely that between *marga* and *desi*: according to Lewis Rowell, ‘if *marga* is compared to the Latin of Augustine and Aquinas, the *desi* movement corresponds to the Italian of Dante’; with the result that performers have to deal with textual information recorded by scholars who were neither practical musicians ‘nor interested in attempting to recover details of musical practice other than those set down in the treatises’.¹⁷

Writing on ‘The Unity of Indian Music’, musicologist T. S. Parthasarathy (1913–2006)¹⁸ suggests that mobility itself should be seen as a hallmark of Indian civilization, and this not only merely in the literal sense: ‘Tamil musicologists of

¹⁴ ‘But a river, belonging to a country is not fed by its own waters alone. [...] Contributions have similarly found their way to India’s original culture’. Ranajit Ray (publ.), *Visva-Bharati and its Institutions* (Santiniketan: Visva-Bharati, 1961), 32.

¹⁵ Tagore’s novel ideas on the role of the arts in education guided the founders of several institutions including Kalakshetra (my own alma mater in Chennai) of which he remained Honorary Vice President for life.

¹⁶ David Reck, *Introduction to the Music of the World's Peoples* (Belmont: Schirmer, 2002), 249.

¹⁷ Lewis Rowell, *Music and Musical Thought in Early India* (New Delhi: Munshiram Manoharlal, 1998), 12.

¹⁸ South Indian names are used here as they appear in the publications cited and/or preferred by the musician concerned.

those days [i.e. the early first millennium AD] were fully conversant with Sanskrit works on music and dance written by authors who obviously lived in the Northern part of India.¹⁹ Some of the works referred to are no longer extant but mentioned by later authorities. He goes on to cast doubt on the widespread notion of a clear-cut distinction between the northern *Hindustani* and southern branches of Indian ‘classical’ music (variously anglicized as *Carnatic*, *Karnatak* or *Karnataka* music).²⁰ The familiar Hindustani-Carnatic dichotomy now seems out of tune because neither regional nor linguistic differences stand in the way of mutual appreciation or collaboration. It may be compared with the changing dress code adopted by musicians and dancers on television. Mumbai-based flautist Ronu Majumdar considers the benefits and risks involved:

Hindustani, Carnatic, fusion, folk, jazz, blues, pop ... we need to bring down the walls and make music enjoyable for people. Unless you get them to listen, how can they understand the genres and their specialties? [...] An individual’s experiments cannot tarnish the tradition built over centuries.²¹

Subrahmanya Ayyar (1885–1960), an accomplished violinist interested in subtleties such as intonation and acoustics, and a contributor to the *Journal of the Music Academy Madras* since the early 1930s, characterizes the misconceptions of his times as follows: ‘In recent years, Karnatic music has come in for a lot of criticism by Hindustani musicians: (1) it is highly intellectual in character. (2) it is highly mechanical. (3) as a matter of mathematical computation, it tries to achieve the aesthetically impossible task of obtaining a large number of ragas. (4) it does not base its raga system on the vadi and samvadi arrangement, as understood in Hindustani music’.²²

Reminiscences by Ravi Shankar (1920–2012) and others indicate that the above mentioned issues are being read quite differently today: firstly, inviting intellectual challenges is regarded as a proof of competence (again); secondly technical feats are

¹⁹ T.S. Parthasarathy, ‘The Unity of Indian Music’, *The Journal of the Music Academy Madras Golden Jubilee Special Number* (1977): 192ff.

²⁰ Diacritics have been dispensed with here; a detailed ‘Guide to Pronunciation and Transliteration’ is found in Ludwig Pesch, *The Oxford Illustrated Companion to South Indian Classical Music* (New Delhi: Oxford University Press, 2009), xxif.

²¹ Ronu Majumdar, ‘Melody through the reed’, *The Hindu*, Friday Review, Chennai 8 February 2008, accessed 4 May 2014, [http://hindu.com/thehindu/fr/2008/02/08/stories/2008020850520200 .htm](http://hindu.com/thehindu/fr/2008/02/08/stories/2008020850520200.htm).

²² For details on the enduring influence of Subrahmanya Ayyar’s scientific experiments and publications, see Ch. 1 ‘Gone Native? Travels of the Violin in South India’, in Amanda J. Weidman, *Singing the Classical, Voicing the Modern: The Postcolonial Politics of Music in South India* (Durham: Duke University Press, 2006), 122.

valued by peers and audiences alike;²³ thirdly ‘mathematical computation’ (applying four basic arithmetic operations in a performance) have since become a common feature in concerts all over India, be it in the customary context of a Carnatic drum solo or, more recently, in melodic extemporisation;²⁴ and fourthly, raga conventions such as Bhatkhande’s *vadi* and *samvadi* arrangement, like the ‘time theory’ (*gana kala*), may be overruled by an experienced musician in accordance with practical needs and aesthetic sensibilities.²⁵

The wide appeal of numbers in Indian music, just as the educational value ascribed to it, is rooted in a long history of ‘playing’ with numbers. Mathematician C. Lanczos traces our common decimal arithmetic to India and describes it as ‘the most important discovery of all ages’ (made around A.D. 600) on account of the ‘flexibility and simplicity of the Hindu system’.²⁶ The promise of freedom and creativity perceived by Indian ‘classical’ musicians in general,²⁷ and particularly so by Carnatic musicians, is indeed rooted in a systematic approach comparable to that hailed by Lanczos.²⁸ For centuries, aspiring drummers become conversant with these operations already at an early stage and continue to hone their reckoning skills during each

²³ Some of the number-based rhythmic figures ‘played’ by drummers are explained in Pesch, *The Oxford Illustrated Companion to South Indian Classical Music*, 222ff; and ‘Cosmic Order, Cosmic Play: An Indian Approach to Rhythmic Diversity’, in *Rhythm, a Dance in Time*, ed. Elisabeth den Otter (Amsterdam: KIT Publishers, 2001), 83ff.

²⁴ Ravi Shankar claims to have been the first Hindustani musician to realize the possibilities of such computations when he adapted complex metric and cadential patterns (*tihai*) for the sitar: ‘The Carnatic system’s mathematical approach to rhythm and accurate application of them are also stunning. [...] As far back as 1945, I was absorbing the essence of these from the fixed calculative systems of the Carnatic system [...]’. Ravi Shankar and George Harrison (ed.), *Raga Mala: The Autobiography of Ravi Shankar* (New York: Welcome Rain Publishers, 1999), 294.

²⁵ In view of the difficulties posed by playing some of these ragas ‘in the true Carnatic style’, Ravi Shankar introduced *Hindustani* versions of his own; he refers to them as ‘my own interpretations and embellishments [...] played by most performers nowadays’. Shankar and Harrison (ed.), *Raga Mala: The Autobiography of Ravi Shankar*, 294.

²⁶ C. Lanczos, *Numbers Without End* (Edinburgh: Oliver and Boyd, 1968), 15.

²⁷ South Indian music may be designated as ‘classical’ in the most general sense of the word, i.e. as ‘not being popular’ and ‘having stood the test of time’. The distinguishing features between Indian ‘art music’ and other categories are discussed by Ashok Ranade in ‘On Art Music’, *Sruti Magazine* issue 336, September 2012, 33ff.

²⁸ C. Lanczos, *Numbers Without End*, 34; more details are found in Chapter 29 ‘The Origin of Hindu-Arabic Numerals’ in Georges Ifrah, *From One to Zero: A Universal History of Numbers* (Penguin Books, 1987), 428ff.

lesson.²⁹ Even as concert performers, they literally ‘perform’ all the four fundamental operations of arithmetic, ‘viz. addition, subtraction, multiplication, and division’ on a regular basis. Their time-proven method is based on *jati* syllables and serves to yield an infinite variety of number-based motifs: e.g. the ‘primordial’ Ta Ti Tom Nam = 4, variants like Ta Ki Ta = 3, and Ta Di Ki Na Tom = 5 are then modified, for instance by precisely measured subdivisions, doubling of speed and pauses. Musicians create compositions and improvisations of great complexity by combining motifs in a logical yet (ideally) unpredictable manner. For this neither a written score nor a drum is required because spontaneity is much preferred over preconceived arrangements. Formulaic patterns within any given rhythmic cycle (*tala*) are typically rearranged during a drum solo interlude or special percussion recital. Cadential patterns of musical notes or drum beats are among the strategies constantly being refined by Carnatic musicians in order to demonstrate their knowledge, skill and aesthetic sense. It enables them to collaborate (and compete) with one another even without prior rehearsals.³⁰

The intricacies of the *tala* system exceed the scope of this paper as musicians are free to choose from hundreds of different *talas*. However, two categories should be mentioned here in brief: firstly, the ancient schemes of interest to intellectual composers such as Olivier Messiaen (1908–1992);³¹ and secondly, the multi-layered, performance-oriented rhythmic patterns (*laya*) adopted by Minimal Music and percussionists drawn to the spheres of ‘world’, fusion and jazz music; they value the scope for competitive displays, rapid coordination and surprising conclusions of a Carnatic drum solo (*tani avartanam*). According to David Reck, the South Indian percussionist ‘does not merely “play off the top of his head”’ but is ‘calculating constantly, like a master mathematician [...] he may compose variations, superimpose startling juxtapositions, flow from simple and easy timekeeping to mind-boggling complicated

²⁹ The formulaic patterns in South Indian drumming and their derivation from calculation are explained in an Introduction and in English summaries for each of the 77 verses that constitute *Mattalaviyal* (translated as ‘the art of drumming’), a Tamil manuscript traced to the tenth century; it lists 108 talas (metric cycles), a highly symbolic number (i.e. regarded as auspicious in view of its scope for arithmetic variation). V. Murugan (trans.), *The Art of Drumming: Mattalaviyal* (Madras: Institute of Asian Studies, 1988).

³⁰ For an insider account of the analytical challenges posed by the ‘wizardry’ of Carnatic drummers, the underlying ‘time-flow’ patterns, and a critique on ethno-musicological writing devoid of ‘a performer’s functional understanding’, see David Nelson, ‘Form and Process in the Tani Avartanam: A Non-Indian Insider’s Perspective’, *Journal of the Music Academy Madras*, 82 (2011): 118ff.

³¹ See the reference to Messiaen’s ‘Quatuor pour la fin du Temps’ and ‘Turangalila Symphony’ given by Mirjana Simundza, ‘Messiaen’s Rhythmical Organisation and Classical Indian Theory of Rhythm (I)’, *International Review of the Aesthetics and Sociology of Music*, 18/1 (1987): 117–44, <http://www.jstor.org/stable/836909>.

patterns, stop for meaningful pauses, and start again'.³² Hindustani percussionists have emulated this approach for their solo drumming ever since *jugalbandi* instrumental ensembles became popular in the 1980s.

Carnatic musicians also use number-based strategies for the purpose of organizing scale patterns, thereby enlarging melodic diversity in a deliberate manner. The most intriguing one concerns the classification and retrieval of *ragas* by means of a seventeenth-century innovation.³³ Its author Venkatamakhi postulates 72 'scale types'.³⁴ Its scope was intended to be so universal as to accommodate any conceivable scale based on twelve (approximate) semitones distributed within an octave. Each of these may be associated with numerous 'parental' and 'derived' ragas. Its lasting usefulness for musicians was achieved by means of an equally ingenious alpha-numerical scheme in the eighteenth century. For any given raga, this mnemonic aid visualizes the distribution of the 'seven notes' (*sapta svara*) among twelve semitones.³⁵ Sixteen positions are available in a scheme that recognizes four enharmonic variants.³⁶ Although the *melakarta* 'scale type scheme' was pioneered by South Indian theorists centuries ago, it also began to appeal to those among their northern peers who were keen on expanding their repertoires;³⁷ performers who – in Ravi Shankar's words –

³² Reck, *Introduction to the Music of the World's Peoples*, 265ff. His beautifully worded description is a welcome reminder to express my indebtedness to one such master mathematician-cum-drummer: without the insights provided by T. R. Sundaresan over several years of study and collaboration, it would be quite unthinkable for me to write on this subject with any confidence; for details, see Ludwig Pesch, 'Cosmic Order, Cosmic Play: An Indian Approach to Rhythmic Diversity', 83ff and Pesch, *The Oxford Illustrated Companion to South Indian Classical Music*, 204ff.

³³ S. Seetha emphasizes the novelty, all-inclusiveness and practical use of the invention introduced by Venkatamakhi around 1660; for details, see S. Seetha, *Tanjore as a Seat of Music* (Madras: University of Madras, 1989), 434.

³⁴ Harold Powers defines it as an 'arbitrarily systematic and symmetrical scheme of $2 \times (6 \times 6) = 72$ *melakartas* (scale types, literally [pitch class] collection producers)'. Harold Powers, 'Sargam Notations and Rag-Ragini Theory', in *Hindustani Music: Thirteenth to Twentieth Centuries*, ed. Joeb Bor, et al (New Delhi: Codarts & Manohar, 2010), 591.

³⁵ This significant improvement is ascribed to one Govindacari; for details, see Table 11 (*Katapayadi sutra*) and further explanations in Pesch, *The Oxford Illustrated Companion to South Indian Classical Music*, 176ff.

³⁶ The *melakarta* scheme is based on the assumption that neither the tonic nor the fifth will be subjected to any change; here the application of 'enharmonic notes' differs from that of a western composer introducing foreign notes to a given (minor or major) key as to contradict the actual note names by the new intervals formed in the modulation; see 'Modulation', in *The Oxford Companion to Music*, ed. Alison Latham (New York: Oxford University Press, 2002), 789ff.

³⁷ Its relevance for Hindustani music theory through the pioneering efforts of Vishnu Narayan Bhathkande (1860–1936) is discussed by Dard Neuman, 'Pedagogy, Practice and Embodied Creativi-

‘think it is more reasonable and scientific to follow the old *melakarta* system of the South, because it can sustain almost any *raga*, no matter how unusual its ascending and descending structures’.³⁸ Conversely, Carnatic musicians have adopted many popular northern ragas on account of their emotional appeal.

In his biography *Unfinished Journey*, Yehudi Menuhin (1916–1999) hails the fact that ‘Indian musicians are sensitive to the smallest microtonal deviations, subdivisions of tones which the violin can find but which are outside the crude simplifications of the piano (or harmonium)’.³⁹ His interest in Indian violin music motivated Menuhin to invite Lalgudi Jayaraman (1930–2013) to tour the UK and participate in the 1965 Edinburgh music festival.⁴⁰ As if to return (or rather anticipate) this compliment, P. Sambamoorthy hails the emergence of the violin some two centuries ago, both on account of its ‘utility as a first class accompaniment’, and for its rich tone.⁴¹

In India, musical ideas were never the exclusive domain of specialists but also discussed by learned amateurs (*rasikas*).⁴² As in the distant past, when royal patrons and statesmen were involved in the performing arts on a regular basis, intellectuals of the twentieth century took an active interest in music. Subrahmanya C. Ayyar (1885–1960) stands out for writing his *Grammar of South Indian (Karnatic) Music* as ‘Accountant-General and Member of the Board of Studies, Indian Music, University of Madras’.⁴³ He and his contemporaries (notably musicologist-educationist Sambamoorthy) studied all the available sources (e.g. Helmholtz’s ‘Sensations of Tones’) and compared Western acoustic research with their own findings. This gave rise to doubts whether ‘the human voice in current melodies ever directly reaches the notes of these complex fractions like 256/243.’⁴⁴

ty in Hindustani Music’, *Ethnomusicology* 56/3 (2012): 427ff; and also by Joep Bor and Allyn Miner, ‘The Early-Twentieth Century’, in *Hindustani Music: Thirteenth to Twentieth Centuries*, ed. Joep Bor, et al (New Delhi: Codarts & Manohar, 2010), 207ff.

³⁸ Ravi Shankar, *My Music, My Life* (New Delhi: Vikas Publishing House, 1992), 21.

³⁹ Yehudi Menuhin, *Unfinished Journey* (London: Futura Publications, 1978), 341.

⁴⁰ Gowri Ramnarayan, ‘The Lalgudi Legacy’, *Sruti Magazine*, Issue 314, November 2010, 47.

⁴¹ P. Sambamoorthy, *History of Indian Music* (2nd ed. Madras: The Indian Music Publishing House, 1982), 247.

⁴² With reference to the *Natyasastra*, the earliest treatise on Indian performing arts (c. 200 B.C.–A.D. 200), Ashok Ranade discusses the ‘high status enjoyed by the audience’ then and now. Ashok D. Ranade, ‘Transmission in Nonclassical Traditions’, in *The Garland Encyclopedia of World Music*, vol. 5 (New York: Garland Publishing, 1999), 470.

⁴³ Designations printed on the title page. Subrahmanya C. Ayyar, *The Grammar of South Indian (Karnatic) Music* (Chennai: Vidya Shankar, 1976).

⁴⁴ *Ibid.*, 33.

The spirit of his age is brought out by Suvarnalata Rao (1954–) and Wim van der Meer (1949–). Under the heading ‘Deconstruction of Shruti’, they give an account of the oscillographic recordings made by violinist Subrahmanya C. Ayyar in London. Unlike Sambamoorthy, he called for more, not less differentiation, something the convention of dividing an octave into 22 ‘pitch positions’ (shrutis) would not provide for.⁴⁵ Yet belonging to a family that produced two Nobel Awardees in physics – his own son, Subramaniam Chandrasekar, and his brother Chandrasekhara Venkata Raman (equally known for their interest in music) – Subrahmanya Ayyar did not hesitate to debunk any exaggerated claim as ‘effusion of pseudo-scientific research’; for instance the theories of Abraham Pandithar (1859–1919) who had advocated a system of 48 intervals to the octave in his voluminous work *Karunamruthasagaram* (published in 1946).⁴⁶

In ‘Science and Music vis-a-vis Science in Music’, Hema Ramanathan and N. Ramanathan go one step further by voicing their conviction that ‘music is totally an art, that has no association with science in its practice’.⁴⁷ As for the distribution of the 22 *sruti* among the seven notes (*saptasvara*), commonly ascribed to early and medieval authorities, they assert that ‘there was no “scientific treatment” of the subject in the modern sense of the term’.

South Indian composers who lived before the late nineteenth century used manuscripts in a manner reminiscent of Europe’s Minnesang period as described by James McMahan. This entails that exponents of both ‘traditions’, irrespective of differences such as geographic location, musical forms or themes underlying their lyrics, now share the same dilemma, namely that ‘all the melodies we have today for these songs were handed down in an oral tradition and not written until much later. And when they were finally written down, the manuscripts were not intended to be used by performers’.⁴⁸ If notation can be used as a means of constraining the artistic freedom of musicians, it has tested its limits in the West more than in India. For Albert Seay, the reasons for this are obvious: in the absence of ‘a multitude of individual lines sounding at the same time’, other civilizations rely upon the ‘improvisatory skills of the performer to produce this variety, not the guiding hand of the inventor’.⁴⁹ A simple scheme is supposed to guide performers in their individual elabora-

⁴⁵ Suvarnalata Rao and Wim van der Meer, ‘The Construction, Reconstruction and Deconstruction of Shruti’, *Hindustani Music: Thirteenth to Twentieth Centuries*, ed. Jobe Bor et al (New Delhi: Codarts & Manohar, 2010), 687.

⁴⁶ Ayyar, *The Grammar of South Indian (Karnatic) Music*, 170.

⁴⁷ Hema Ramanathan and N. Ramanathan ‘Science and Music vis-a-vis Science in Music’, accessed 31 March 2008. <http://www.musicresearch.in>.

⁴⁸ James V. McMahan, *The Music of Early Minnesang* (Columbia, South Carolina: Camden House, 1990), 12.

⁴⁹ Albert Seay, *Music in the Medieval World* (Englewood Cliffs: Prentice-Hall, 1965), 76ff.

tions without pre-existing complications, thereby even preventing (rather than encouraging) ‘the repetition of the same work in the same form and shape as in the original creation’.⁵⁰

Yet the performance of South Indian music has always entailed some ‘pre-existing complications’, namely in the form of distinct forms or genres that include elaborate compositions (e.g. études, art and dance music with lyrics); and also in the form of strategies for specific types of extemporisation (e.g. the elaborate ‘ragam-tanam-pallavi suite’). The use of non-lexical syllables (solfège) for both the transmission and performance of melody can be traced back to the first millennium A.D.⁵¹ At the same time, Seay’s characterisation calls for some qualification in view of the capacity of Carnatic musicians to faithfully reproduce every detail of their repertoire if they wish. This accomplishment is routinely demonstrated during unisono renditions of elaborate compositions by any vocal or instrumental ensemble (e.g. the ‘Hyderabad Brothers’, the violin duo of ‘Lalgudi’ G.J.R. Krishnan and his sister J. Vijayalakshmi, and the flute duo known as ‘Sikkil Sisters’). Many South Indian performers of ‘art music’ may have turned to studio and stage technology as a matter of choice rather than compulsion – yet there is no sign of ‘the ever-increasing domination of the creator over the reproducer’ deplored by Albert Seay; nor of anyone assuming ‘absolute control of the interpretation and performance of his musical creations, without intervening interpreters’.⁵² While this may be a welcome option for contemporary composers in the West, such control remains conspicuous by its absence in Indian art music for obvious reasons; its usefulness in sophisticated film music (often involving ‘traditional’ Carnatic performers) is an altogether different matter. On the other hand, the technical advances demonstrated by the film and television industry have also rekindled interest in the traditional aspects of Carnatic music and a lively discussion on ‘authenticity’ in any conceivable context.⁵³

In an era of institution building all over India, musicians and theorists seek to make teaching more effective. Most of them are now prepared to offer a modern variant of apprenticeship by means of communication technology – from mobile phones to online video sessions – thereby creating a highly personalized context for distance

⁵⁰ Seay, *Music in the Medieval World*, 76.

⁵¹ Richard Widdess discusses the use of syllables for the development of the melodic material in early music history based on the Kudumiyamalai rock inscriptions; see Richard Widdess, ‘The Kudumiyamalai inscription: A Source of Early Indian Music in Notation.’ *Musica Asiatica* 2 (1979). A summary is given in Pesch, *The Oxford Illustrated Companion to South Indian Classical Music*, 9ff.

⁵² Seay, *Music in the Medieval World*, 77.

⁵³ Online discussions continue a long-standing debate on this topic in the print and online editions of periodicals such as the review section of *The Hindu* (daily) and *Sruti Magazine* (monthly); scholarly papers are presented and published during an international music conference held annually during the Chennai music festival.

learning. Apprenticeship was traditionally known as *gurukulavasam* (lit. being absorbed in one's teacher's household) or *guru shishya parampara* (lit. 'teacher-pupil-lineage') which implies reciprocity rather than paid lessons. Although rarely viable today, it continues to be eulogized.⁵⁴ As a pragmatic compromise, most teachers follow a standard syllabus in order to prepare their pupils for auditions and degrees, while reaffirming the 'classical values' of their ancestors (*sampradaya*).⁵⁵

Although standardized notation of any type may be seen as a challenge by self-respecting tutors – particularly the senior authoritative teacher referred to as one's *guru* – printed textbooks are now widely used as an aid to memory. This saves time during a brief weekly lesson, especially in the absence of opportunities for 'total immersion' of the kind past learners had as members of a guru's household. In the absence of a tradition for 'prescriptive music in written notation', musicians continue to rely on 'oral notation', referred to as *sargam* solfa-notation (Sa Ri Ga Ma Pa Dha Ni for the seven primary notes or scale degrees).⁵⁶ Howard Boatwright (Associate Professor of the Theory of Music, Yale University, and Fulbright Lecturer 1959–60) compares the dilemma faced by Indian musicians with that of their counterparts in eighteenth-century Europe whom composers supplied with a mere 'skeleton':⁵⁷ the use of solfa-notation presupposes familiarity with the reading or style (*pathantara*) associated with one's own musical or hereditary 'tradition' (referred to as *sampradaya* and *bani* respectively).⁵⁸ This need for familiarity (in a musical as well as personal sense) motivates a few high-level exponents to maintain the one-to-one teacher-

⁵⁴ The *guru shishya parampara* of North Indian (*Hindustani*) music is contextualized in a video documentary by Ronald Kurt, 'Be a Medium. Teaching and Learning Indian Classical Music' accompanying *Indien und Europa: ein kultur- und musiksoziologischer Verstehensversuch* (Bielefeld: Transcript 2009).

⁵⁵ For a discussion of the South Indian 'gurukula system' (*gurukulavasam*) and its perception as being 'pre-modern' (hence incompatible with modernity, the busy life in the city and technology), see 'Gurukulam Is Dead' in Amanda J. Weidman, *Singing the Classical, Voicing the Modern: The Postcolonial Politics of Music in South India*, 275ff.

⁵⁶ A historical overview can be found in Harold Powers, 'Sargam Notations and *Rag-Ragini* Theory', in *Hindustani Music: Thirteenth to Twentieth Centuries*, ed. Jobe Bor, et al (New Delhi: Codarts & Manohar, 2010), 579ff.

⁵⁷ Howard Boatwright, *A Handbook on Staff Notation for Indian* (Bombay: Bharatiya Vidya Bhavan, 1960), 60.

⁵⁸ South Indian music publications based on western staff notation (including one by the author herself) are described in Emmie te Nijenhuis, 'Notation of South Indian Music', *Oideion; Performing arts online* 4 (2004), accessed 4 May 2014. <http://www.iias.nl/oideion/journal/issue04/nijenhuis/index-a.html>.

disciple tradition in the face of modernization.⁵⁹ On the basis of personal experience, David Reck reiterates the ethos of any oral tradition that ‘lives primarily in the hands, voices, memory, and creative imagination of individual human beings’.⁶⁰ It does not lend itself to being written down with the result that the music ‘lives uniquely in each performance [...] in the ephemeral spontaneity and creativity of improvisation’.⁶¹

Mutual understanding, appreciation and a commitment to innovation have become commonplace among ‘classical’ performers. But which are the features that prepare a student to participate in South Indian music today? Several features have contributed to the continuity of Carnatic music for centuries and can be summarized as follows: firstly, its scope for integrated education (i.e. arts, crafts and sciences contextualized by India’s pioneering institutions and their alumni);⁶² secondly, effective transmission in time (i.e. over generations) and space (i.e. reaching out beyond the ‘cradle’ of any art form); thirdly, affinity with ‘universal’ values⁶³ akin to those advocated by Rabindranath Tagore (i.e. reform movements transcending religious doctrines and sectarian practices);⁶⁴ this has long fostered critical thinking and introspection rather than conservatism (e.g. the unorthodox song lyrics widely sung today,

⁵⁹ Joep Bor and Allyn Miner, ‘Hindustani Music: A Historical Overview of the Modern Period’, in *Hindustani Music: Thirteenth to Twentieth Centuries*, ed. Joep Bor, et al (New Delhi: Codarts & Manohar, 2010), 209.

⁶⁰ This has been confirmed by my own experience, as former music student in South India (trained as flautist), and as researcher on modes of transmission used by Indian performers of traditional music, dance and theatre; see *Sam, Reflection, Gathering Together!*. A music education research project initiated at the Bern University for the Arts (HKB, Switzerland) in collaboration with Natanakairali, an institution for the performing arts in Irinjalakuda (Kerala, India). Accessed 4 May 2014. http://sam.mimemo.net/Projekt_description.html.

⁶¹ David B. Reck, ‘India/South India’ in *Worlds of Music: An Introduction to the Music of the World's Peoples* (Belmont: Schirmer, 2002), 256.

⁶² Tagore’s Visva-Bharati inspired several modern institutions including Kalakshetra Foundation – another ‘institution of national importance’ as declared by the Government of India (1994): it was established by Rukmini Devi ‘with the sole purpose of resuscitating in modern India recognition of the priceless artistic traditions of our country’; this includes a college for dance, music and visual arts as well as a craft centre. Kalakshetra website, accessed 3 May 2014. <http://www.kalakshetra.in>.

⁶³ Arnold Bake describes the degree to which Tagore’s songs are indebted to ‘a folk-life with a deep and living mysticism’; particularly to the philosophy of the Bengali *Baul* (‘mad’) mendicant movement which has a ‘Great Self’ (rather than any particular divinity) as its focus. Arnold Bake, ‘Indian Music and Rabindranath Tagore’, in *Rabindranath Tagore: Centenary Number*, ed. Pulinbihari Sen and Khatris Ray (New Delhi: Sangeet Natak Akademi, 1961), 22ff.

⁶⁴ See Ch. 8, ‘Questions about the ‘Rememberers’: Smarta Brahmanas as Renewers of Tradition’, in William Jackson, *Tyagaraja and the Renewal of Tradition: Translations and Reflections* (Delhi: Motilal Banarsidass, 1994), 207ff.

some on social issues); fourthly, the most important trait of any living ‘art music’ is bound to be the scope it affords for creativity: its capacity to accommodate new genres, instruments and theories⁶⁵ just as the degree to which it lends itself to experimentation with unconventional teaching methods.⁶⁶ Lewis Rowell describes how musicians adapted themselves to changing conditions, and – to give a specific example of interest to an international public – made ‘virtuoso attempts to construct a theoretical framework that will accommodate the hundreds of existing ragas’ (as well as new ones) at their disposal.⁶⁷ Their preference for an ‘evolutionary’ approach to innovation has yielded a large body of compositions. This ensures that Carnatic music remains relevant and also finds patronage in a democratic, rapidly modernizing society. Among the compositions preferred today, it is the tripartite ‘art song’ (*kṛiti*) perfected by Tyagaraja – a contemporary of the Vienna school of classical music – that provides the model for scholarly musicians and forms the nucleus of virtually every Carnatic concert. In view of the fact that a spiritual or religious ‘message’ is generally associated with this repertoire, William Jackson argues – in keeping with Tyagaraja’s artistic accomplishment – that ‘a song is more than a verbal text set to notes’ given the rapport it establishes with its listener; quoting *Labyrinths* by Jorge Luis Borges, he emphasizes that this rapport leaves ‘changing and durable images’ on a listener’s memory.⁶⁸

Whenever musicians succeed in establishing this rapport, their music comes alive, even becomes timeless irrespective of its historical connotations. A striking precursor to the concert conventions of ‘modern’ Carnatic music is found in the description of a typical performance in *Tristan* by Minnesinger Gottfried (approx. AD 1200). The following juxtaposition of specific characteristics is a case in point: it reflects the sequence of the original text as translated and explained by James McMahan:⁶⁹

⁶⁵ Post-fourteenth-century theorists brought about several major changes corroborated by the fact that ‘the mela-janya [reference/derived scale] system of raga classification emerged when the gramamurcchana-jati [concept regulating the redistribution of intervals within any scale] fell into disuse. Along with the harp vinas [since then replaced by the present zither type of *vina*, a long-necked lute with *mela*-frets] fell also the grama system’ [outlined in the most ancient source, the much quoted *Natya Sastra*, about one millennium earlier]. S. Seetha: in *Tanjore as a Seat of Music*, 403.

⁶⁶ P. Sambamurthy, *Aids to the Teaching of Music* (Chennai: The Indian Music Publishing House, 1984).

⁶⁷ Rowell, *Music and Musical Thought in Early India*, 178f.

⁶⁸ William Jackson. *Tyagaraja and the Renewal of Tradition: Translations and Reflections* (Delhi: Motilal Banarsidass, 1994), 253.

⁶⁹ McMahan. *The Music of Early Minnesang*, 71ff.

Raga alapana (a *raga* sketched by melismatic phrases or non-lexical syllables)

First the performer had to ‘warm up’ [...] He played some preliminary snatches of melody, not only to get his fingers used to the instrument, but also to check the tuning. [...]

Paddhati (adhering to an established performance convention)

Then he played a few more preliminary pieces and only then did he play the song he intended to perform. [...]

Tanam (a *raga* evolves further through pulsating groups of notes or syllables)

His fingers were very nimble as he played [plucking the strings with] fingers moving quickly and lightly, looking as if they were more numerous than they are (lit. “*walgende in den seiten*”), i.e. ‘rolling, rotating, moving around’ and also ‘swarming, teeming.’ [...]

Pallavi (the main theme of a composition or *ragam-tanam-pallavi* suite)

At the appropriate place the minstrel began to sing. [...]

Prayoga (touching the proper starting and landing notes for any given *raga*)

Beginnings and endings of musical phrases were particularly important and had to be managed well [...]

Raga jnanam (‘raga knowledge’ on intonation and ornamentation; experience)

And in general, a good musician produces the notes correctly

Bhava (appropriate rendition; aesthetic sense)

and is able to understand the song and interpret it with fingers and voice.⁷⁰

Conclusion

Are South Indian performers justified in claiming ‘unity in diversity, antiquity in contemporary practice’? To some degree, such a claim may be justified when considering the larger context of India’s living traditions: ‘the coexistence of oral and written traditions’ whereby ‘reference to the written [material] is not forbidden but placed in a carefully constructed procedural chain’.⁷¹ In this sense, such a claim

⁷⁰ It is this text-based juxtaposition that provided the framework for a lecture recital by Carnatic singer Manickam Yogeswaran and Ludwig Pesch; we presented it on 7 September 2012 on the occasion of the 15th International Conference of the Gesellschaft für Musikforschung ‘Music | Musics. Structures and Processes’ in Göttingen.

⁷¹ See ‘The Coexistence of Oral and Written Traditions’ by Ashok D. Ranade, ‘Transmission in Non-classical Traditions’, in *The Garland Encyclopedia of World Music*, vol. 5, 470.

would reflect the real needs of performers whose prestige largely depends on their memory and extemporization skills.⁷²

This reading of Indian music history from a performer's point of view brings us back to Tagore's maxim as artist, educationalist and social reformer, namely that 'is not the distinctive quality of man to be a mere repetition of his ancestors' even while rediscovering one's cultural roots.⁷³ According to Arnold A. Bake (1899–1963), a Dutch indologist, musician and musicologist who became a close associate of Rabindranath Tagore, continuity is indeed the most outstanding feature of Indian music. He regards India's intercultural relations as self-evident not just as regards music theory but also in view of shared linguistic features and similarities between ancient Indian and Greek mythology.⁷⁴ As for the relations between India and Europe throughout the Hellenistic period, Bake points to marked differences that reflect the lives of the people involved.⁷⁵

It does not surprise that musicians and listeners explore more than one musical idiom while taking pride in tracing their roots. Many of their practices, theories and lyrics may even precede extant written records.⁷⁶ What matters here, however, is the fact that Carnatic music continues to inspire modern listeners in and outside India. The resilience of this idiom is there for all to see and hear, thanks to the internet; and there are no signs of its weakening in the wake of modernization. In short, being partial to an oral tradition is not a sign of ignorance or backwardness; nor would it endanger the continuity of a 'living tradition' such as this.

⁷² During music lessons in Chennai from 1977 onwards, my teacher Ramachandra Shastri (1906–1992) insisted that transcribing anything in excess of the lyrics and a mere outline of a song's melodic and metrical structure would discourage learners from developing their hearing and 'memory power'. The same conviction prevailed among other respondents during interviews.

⁷³ Rabindranath Tagore explained his vision as follows: 'I selected a beautiful place, far away from the contamination of town life' [where] 'the mind could have its fearless freedom to create its own dreams and the seasons could come with all their colours and movements and beauty into the very heart of the human dwelling.' Visva-Bharati Homepage. Accessed 4 May 2014. <http://www.visvabharati.ac.in/Santiniketan.html>.

⁷⁴ In a lecture delivered at the India Society London in 1930 Bake proclaims: 'The similarity between Indian and old European music has struck every investigator, and can be traced theoretically as well—an interesting field for research, and one hardly explored yet.' Arnold Bake, 'Indian Music and Rabindranath Tagore'. In *Rabindranath Tagore: Centenary Number* edited by Pulinbihari Sen and Kiritis Ray, 25.

⁷⁵ Arnold A. Bake, 'Indische Musik' in *Musik in Geschichte und Gegenwart*, Bd. 6 (Kassel: Bärenreiter, 1989), 1150ff. References to Bake's research are also found throughout Joep Bor et al, *Hindustani Music: Thirteenth to Twentieth Centuries*.

⁷⁶ For references to archeological evidence, see Pesch, *The Oxford Illustrated Companion to South Indian Classical Music*, 14ff.

Literature

- Ayyar, Subrahmanya C. *The Grammar of South Indian (Karnatic) Music*. 3rd rev. ed. Chennai: Vidya Shankar, 1976.
- Bake, Arnold A. 'Indische Musik'. In *Die Musik in Geschichte und Gegenwart. Allgemeine Enzyklopädie der Musik*, 2nd rev. ed., edited by Ludwig Finscher, Sachteil vol. 6, 1150–85. Kassel: Bärenreiter, 1989.
- 'Indian Music and Rabindranath Tagore'. In *Rabindranath Tagore: Centenary Number* edited by Pulinbihari Sen and Kritis Ray. 21–33. New Delhi: Sang-eet Natak Akademi, 1961.
- Bakhle, Janaki. *Two Men and Music: Nationalism in the Making of an Indian Classical Tradition*. New Delhi: Permanent Black, 2005.
- Boatwright, Howard. *A Handbook on Staff Notation for Indian Music*. Bombay: Bharatiya Vidya Bhavan, 1960.
- Bohlman, Philip V. *World Music: A Very Short Introduction*. New York: Oxford University Press, 2002.
- Bor, Joep and Allyn Miner, 'Hindustani Music: A Historical Overview of the Modern Period'. In *Hindustani Music: Thirteenth to Twentieth Centuries*, edited by Joep Bor, et al, 197–220. New Delhi: Codarts & Manohar, 2010.
- Ifrah, Georges. *From One to Zero: A Universal History of Numbers*. Penguin Books, 1987.
- Jackson, William. *Tyagaraja and the Renewal of Tradition: Translations and Reflections*. Delhi: Motilal Banarsidass, 1994.
- Kurt, Ronald. *Indien und Europa: ein kultur- und musiksoziologischer Verstehensversuch*. Bielefeld: Transcript, 2009.
- Lanczos, C. *Numbers Without End*. Edinburgh: Oliver and Boyd, 1968.
- Majumdar, Ronu. 'Melody through the reed'. *The Hindu*, Friday Review, Chennai 8 February 2008. Accessed 28 April 2014. <http://hindu.com/thehindu/fr/2008/02/08/stories/2008020850520200.htm>.
- McMahon, James V. *The Music of Early Minnesang*. Columbia, South Carolina: Camden House, 1990.
- Menuhin, Yehudi. *Unfinished Journey*. London: Futura Publications, 1978.
- Mohanty, Sachidananda. 'An "Indo-Anglian" legacy'. *The Hindu*, 21 July 2013. Accessed 25 April 2014. <http://www.thehindu.com/todays-paper/tp-features/tp-sundaymagazine/an-indoanglian-legacy/article4936207.ece>.

- Mudaliyar, A.M.C. *Oriental music in European notation: a monthly periodical*. Madras: A.M. Chinnaswami Mudaliyar, 1892–1893. New Delhi: Cosmo Publications, 1982.
- Murugan, V. (trans.). *The Art of Drumming: Mattalaviyal*. Commentary by V.P.K. Sundaram. Madras: Institute of Asian Studies, 1988.
- Nelson, David. 'Form and Process in the Tani Avartanam: A Non-Indian Insider's Perspective'. *Journal of the Music Academy Madras*, 82 (2011): 118–32.
- Neuman, Dard. 'Pedagogy, Practice and Embodied Creativity in Hindustani Music'. *Ethnomusicology* 56/3 (2012): 426–49.
- Nijenhuis, Emmie te. 'Notation of South Indian Music'. *Oideion; Performing arts online* 4 (2004). Accessed 4 May 2014. <http://www.ias.nl/oideion/journal/issue04/nijenhuis/index-a.html>.
- *Varnam: Selected Concert Studies for the South Indian Lute* (accompanied by two audio-CDs). Naarden: Sarasvati Bhavan, 2002.
- The Oxford Companion to Music* edited by Alison Latham. New York: Oxford University Press, 2002.
- Parthasarathy, T.S. 'The Unity of Indian Music'. *The Journal of the Music Academy Madras: Golden Jubilee Special Number* 1977. Madras (1980): 192–202.
- Pesch, Ludwig. *The Oxford Illustrated Companion to South Indian Classical Music*. 2nd rev. ed. New Delhi: Oxford University Press, 2009.
- 'Cosmic Order, Cosmic Play: An Indian Approach to Rhythmic Diversity'. In *Rhythm, a Dance in Time* edited by Elisabeth den Otter, 83–99. Amsterdam: KIT Publishers, 2001.
- Powers, Harold. 'Sargam Notations and Rag-Ragini Theory'. In *Hindustani Music: Thirteenth to Twentieth Centuries* edited by Joep Bor et al., 579–671. New Delhi: Codarts & Manohar, 2010.
- Ramakrishna, Lalitha. *Varnam: A Special Form in Karnatic Music*. New Delhi: Harman Publishing House, 1991.
- Ramanathan, Hema and N. Ramanathan. 'Science and Music vis-a-vis Science in Music'. Accessed 31 March 2008. <http://www.musicresearch.in>.
- Ramnarayan, Gowri. 'The Lalgudi Legacy'. *Sruti Magazine*. Issue 314 (November 2010): 39–49.

- Ranade, Ashok D. 'Transmission in Nonclassical Traditions'. *The Garland Encyclopedia of World Music*. Volume 5. South Asia: *The Indian Subcontinent*, 468–477. New York: Garland Publishing, 1999.
- 'On Art Music', *Sruti Magazine*. Issue 336 (September 2012): 33–34.
- Rao, Suvarnalata and Wim van der Meer. 'The Construction, Reconstruction and Deconstruction of Shruti'. In *Hindustani Music: Thirteenth to Twentieth Centuries* edited by Joep Bor et al, 673–96. New Delhi: Codarts & Manohar, 2010.
- Ray, Ranajit (publ.). *Visva-Bharati and its Institutions*. Santiniketan: Visva-Bharati, 1961.
- Reck, David B. 'India/South India'. In *Worlds of Music: An Introduction to the Music of the World's Peoples*. 4th ed. Belmont: Schirmer, 2002.
- Rowell, Lewis. *Music and Musical Thought in Early India*. New Delhi: Munshiram Manoharlal, 1998.
- Sambamoorthy [Sambamurthy], P. *Aids to the Teaching of Music*. Chennai: The Indian Music Publishing House, 1984.
- *History of Indian Music*. 2nd ed. Madras: The Indian Music Publishing House, 1982.
- Seay, Albert. *Music in the Medieval World*. Englewood Cliffs: Prentice-Hall, 1965.
- Seetha, S. *Tanjore as a Seat of Music*. Madras: University of Madras, 1989.
- Shankar, Ravi. *My Music, My Life*. Introduction by Yehudi Menuhin. New Delhi: Vikas Publishing House, 1992.
- Shankar, Ravi and George Harrison (ed.). *Raga Mala: The Autobiography of Ravi Shankar*. New York: Welcome Rain Publishers, 1999.
- Simundza, Mirjana. 'Messiaen's Rhythmical Organisation and Classical Indian Theory of Rhythm (I)'. *International Review of the Aesthetics and Sociology of Music*, 18/1 (1987): 117–44.
- Som, Reba: *Rabindranath Tagore: The Singer and His Song*. New Delhi: Penguin 2009.
- Tagore, Rabindranath. *Tagore on Gandhi*. New Delhi: Rupa & Col, 2008.
- *Visva-Bharati*. Rev. ed. Santiniketan: Visva-Bharati, 1961.
- Viswanathan, T. and Matthew Allen. *Music in South India: The Karnatak Concert Tradition and Beyond*. Oxford University Press, 2004.

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

Widdess, Richard. *The Ragas of Early Indian Music: Modes, melodies and musical notations from the Gupta period to c. 1250*. Oxford: Clarendon Press, 1995.

— ‘The Kudumiyamalai inscription: A Source of Early Indian Music in Notation’. *Musica Asiatica* 2 (1979). Accessed 1 May 2014. <http://www.musicresearch.in>