Communication in Indian raga performance
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1. Introduction (A)
Performances of raga music in the North Indian tradition are events rich in communicative potential and practice. Communication takes place in various directions (not only from performer to listener), and through multiple channels (not only auditory), and this variety and multidimensionality is part of what makes these events enjoyable and enriching events for those who participate in them.

The sound of raga music itself is open to multiple interpretations and engagements - its meaning arises as affordances for particular listeners (see Clayton 2001). Many of these affordances seem to relate to patterns of movement, especially movement of the human body -- patterns that have obvious implications for temporality, space and agency (since movement implies something moving somewhere for a reason and at a particular pace). The engagement of listeners with the music depends on an understanding of the movements necessary to produce the sound, particularly the gestures and posture of a singer, as well as imagined analogues of movement (for instance if a melody rising in pitch is associated to an image of a bird rising in the air).

I will explore this theme mainly through a particular ethnographic example. By doing so I hope to make a case for the importance of ethnography in the study of musical communication. It is only through ethnography that we can build up a nuanced picture of the communication that takes place in performance, and of the meanings people ascribe to musical practices. One of the limitations of ethnographic music research is that citable evidence is often limited to what participants are able and willing to express verbally. If what makes musical communication particularly powerful is that it conveys what we are unable (or unwilling) to express verbally, then any research method tied exclusively to verbal testimony is bound to be limited in its effectiveness (see Clayton 2003).

This chapter, therefore, considers how methods of studying nonverbal communication can be applied in this context, especially gestural analysis of individuals involved in musical interactions. The performance of raga music in the north Indian tradition is rich in gestural communication (see Clayton 2000: 1-3). Performers and listeners communicate with each other not only through sound but also with a variety of head, eye and hand movements; gestures produced by performers seem to amplify, or even to explain the meaning of musical patterns; and these in turn evoke gestures of response from appreciative listeners.

This chapter is illustrated with a case study from my own research into North Indian raga performance. It sets preliminary observations of musical practice in the context of theory and investigative methods developed in other fields concerned with nonverbal communication, and reflects on what these methods might contribute to ethnographic studies of music as communication.

My understanding of 'communication' in raga performance is a synthesis of observations of behaviour (especially sound production and physical gesture), of introspection regarding my own experience of such events, and of conversations with both performers and other listeners. I have not imposed a strict definition of 'musical communication'. Rather, I take communication to include any kind of interactive behaviour where the behaviour of one individual has an impact on the behaviour or understanding of another individual; and 'musical' to mean that the behaviour involves the use of humanly organised sound.

Space does not allow me to place this study definitively in the context of previous research, but my approach is influenced by Feld's notion of 'interpretive moves' (1984/1994). Other ethnomusicological precedents include the work of Blacking (e.g. 1977, 1995:38ff), Kubik (e.g. 1979) and Baily (e.g. 1985), who write on the
embodiment of musical process and meaning; and Qureshi, who has applied methods of video-based discourse analysis to South Asian Sufi music (1987, 1986/1995). Although not couched in terms of semiotic theory, it is consonant with certain approaches to the semiotics of music, especially those of Tagg (1999) and Middleton (1993); the latter overlaps with studies in musical aesthetics which highlight gesture and/or motion (Coker 1972, Scruton 1997). I borrow concepts from ecological perception theory such as the idea of ‘affordance’ (Gibson 1966, 1979/1986), which have previously been applied to musical motion and gesture by Clarke (2001) in particular. The importance of metaphorical transfer and image schemata is articulated most clearly by Lakoff and Johnson (1980) and Johnson (1987). Studies of meaning in Indian music are many, but empirical studies are few: those of Deva and Virmani (1968, Deva 1981) and Keil and Keil (1966), and by Balkwell and Thompson (1999) stand out.

This chapter continues with a general discussion of the dimensions of communication in raga performance, considering the issue from a broad ethnographic perspective. The following sections consider a particular ethnographic example, and how it might be explored further by using gestural analysis; finally a summary section draws the various theoretical and empirical strands together.

2. Dimensions of communication in raga performance (A)

In any raga performance, we can identify several ways in which inter-personal communication takes place. I will concentrate for much of this chapter on the communication of character and mood through musical sound, since ethnographic evidence suggests that to be the primary focus of most participants' experience of this music. This is not, however, the only level, or the only direction (performer → listener) of communication taking place: here I discuss the wider context of social interaction too, and consider the different ways in which people can participate in communicative behaviour (cf. chapters by Ansdell and Pavlicevic, Cross, and Welch in this volume).

There are several possible ways in which to express this multidimensionality, and to begin to characterize the different communicative dimensions. One possible scheme is as follows:

i. The participants in a musical performance - principally, the performers and audience - make a statement of identification by their very presence and participation: this is the kind of event I (and by extension, people like me) attend. Extensions or inversions of this proposition are not difficult to read: I belong to the group of people who enjoy this kind of music; people like me listen to this kind of music; and so on. When such statements are not made explicitly but read into others' actions they can nonetheless be very effectively communicated.

ii. Within the performance event, different participants are assigned (or assume) different roles, and those roles may carry with them implications of greater or lesser power: an individual's mode of participation communicates his or her status. (Status in the musical context may not, of course, correlate with social or economic status in everyday life.) Musicians express, and sometimes contest, their status and musical knowledge relative to each other and to other musicians (who may be present or absent). In intimate settings in particular, this kind of exchange extends across the audience, with mutual respect, deference, self-assurance or (rarely) antagonism expressed both verbally and nonverbally.
iii. **Interpersonal communication**, gestural and verbal, continues throughout the event. One function of this is to regulate the event itself and the continuity of the music (the latter mainly between performers, the former involving a wider group). This kind of communication is dependent, in principle, on a shared identification as participants in a musical event (i), and a shared understanding of the role and status of each participant (ii).

iv. **The presence of musical sound** itself communicates to all participants that they are situated within the time and space of the performance. It is important to remember, before discussing the meaning of sound element A (as opposed to element B or C), or the meaning of sound A for listener A (as opposed to listener B or C), that the **generic** qualities of the sound of raga music (e.g. the ubiquitous and quotidian drone) are themselves communicative, and also that they establish the conditions within which sound elements can be mutually distinguished.

v. The most difficult dimension to characterize, perhaps, is what is communicated through the specific sound patterns. One important aspect of this appears to be the communication of **character or mood** through sound (and accompanying gestures). This communication seems to depend on the empathic reception of particular body states and patterns of movement. The musical sound affords the communication of such states, without over-determining their reception. The extent to which this communication is predictable may depend on 'cultural' factors - such as shared language or a repertoire of gestural signs - although the evidence described below suggests that the ranges of affordances for Indian and European listeners overlap considerably. My findings suggest that this process also comes into play where the performer's gestures are not seen – for instance when listening to an audio recording. It seems probable that even here the reception of the music is strongly influenced by each listener's memory of either performing, or watching performances of similar music.

vi. Of interest to a subgroup of those present will be the domain of **intramusical communication**. Individual ragas can be regarded as elements of a global raga system. A raga performance may clarify that raga A has affinities with raga B, but on the other hand is clearly distinct from raga C (with which it may share a scale). Those listeners with insufficient knowledge to understand these dimensions are not, however, hampered in their appreciation of other communicative dimensions. (For an introduction to north Indian raga and basic bibliography, see Ruckert and Widdess 2000.)

The types of communication described in points i and (especially) ii above clearly depend on a degree of shared knowledge - dress, posture, gesture and so on are deployed in ways that would not be fully understood by cultural 'outsiders', who may consequently respond to the superficially 'exotic' features of the event. Point iii (interpersonal communication) depends on understanding which may be partly cultural, or even restricted to fellow musicians; (vi) (intramusical communication) is definitely for this group. What everyone has access to is (iv) - understanding that one is situated in relation to a musical performance, and (v), understanding that the performance conveys something about mood or character. Thus each participant has access to a different set of communicative possibilities.

In the next section I will focus on a particular musical event, as a way of keeping the theoretical and methodological arguments grounded in musical reality. The discussion
concentrates on the use of sound to convey character and mood (my point v. above) - I will return briefly to the other points at the end of the chapter.

3. Raga, meaning and communication: an ethnographic example (A)
A raga performance (B)
In April 2003 I visited Mumbai (formerly Bombay) with the intention of filming music performances, and a variety of follow-up interviews and experiments, in order to explore how people experience musical performance, and how the meaning of a performance is constructed discursively after the event. The first performance recorded for the project was by the khayal singer Veena Sahasrabuddhe, accompanied by Vishwanath Shirodkar (tabla) and Seema Shirodkar (harmonium), and two of Veena's students (tanpura). It was recorded in an auditorium on the campus of the Indian Institute of Technology, Bombay (IITB), where Veena teaches. Veena sang three items: Shree Raga, Raga Des, and a bhajan (devotional song). The performance began at about 6.30pm and was filmed by a locally hired crew using two DVCAM video cameras, in the presence of an audience of about 100 people.

After the performance we retired to the IITB guest house for dinner, and I talked about my research with Veena and some of her students. I suggested that I would like to interview some of them, as well as other listeners, and ask them what kind of mood or image was conveyed by the performance. Veena immediately asked me, "Well, what do you think it conveys?" Posed the question myself, I could barely think beyond the fact that the performance had been superb, and that I had felt a strong sense of engagement with the music. I was aware that the music had had quite a specific effect on me, but I was a long way from being able to put it into words - so I could only reply, "I'll tell you after the interview…"

Reviewing the video footage the next evening, I wondered what the performance was conveying to me. My first thought was again of engagement - I feel like I could be singing this, as if I'm expressing something along with Veena. But what was "I" expressing - what was the music expressing with which I identified so strongly? I listened more, and a few key words presented themselves - it was "strong" and "powerful", but overall "calm". The subject of the performance (was it Veena, the raga, or who?) seemed to be saying, "Here I am: I'm calm and at peace. But don't think that I'm weak, because underneath I have great strength and power ".

How I felt this, of course, is another question - was it all conveyed through the sound alone, or was it also signalled by the singer's physical gestures? Although Veena is a not a particularly demonstrative singer - at times she seems introverted, and there is no hint of the kind of theatrical gestural display one would expect of some other khayal singers - nor is she static (unlike some Western singing traditions, no premium is placed on the restraint of physical gesture in performance). It struck me there was, for instance, something about the way she marked the Pa (5th scale degree) that might have contributed to my response: Veena slowly, precisely, raised her left hand and held it as if to say this is exactly where the Pa sits - right here (see Fig 1c below).

When I had a chance a couple of days later to ask Veena why she had chosen to sing Shree, she made a number of observations:
- She had intended to sing Shree for me - and the Open University - when we had filmed her in Pune in 1996, but had had to change the plan at the last moment (see Clayton 1999).
- She likes the mood of the raga, which is one of her favourites: she also knows that audiences appreciate the ways she sings Shree, and her accompanists often ask her to sing it.
Shree is a Gwalior gharana raga, and she identifies herself as a Gwalior gharana singer. (Although the raga repertory is largely shared across the tradition as a whole, a gharana or stylistic school may have a more restricted repertory of ragas with which singers feel a particular affinity, and which they may develop in particular ways.)

It's not a sampurna ('complete') raga - Shree depends heavily on just a few phrases, and it's very difficult not to repeat oneself while performing (making it difficult to sustain a performance).

The distances between the notes also make it challenging for the singer (The scale, Sa Re Ga Ma Pa Dha Ni, equates to roughly A Bb C# D# E F G# in this case. Six of the seven notes, then, fall within a semitone of either the tonic or fifth.)

What was particularly interesting for me was her description of what she felt Shree Raga was about. She had to approach this question obliquely - a few moments earlier she had put the answer off to another day, but in the context of discussing the character of another group of ragas, she made a comparison with Rag Bhimpalasi:

I was teaching Madhu [Rag] Bhimpalasi. I was just telling her, the gandhar komal, it has some request: "Can you do this? Please do it, I will be obliged…"

But in Shree, no question, there is no request at all. There is not only not [a] request, not even [an] order - "This is it - I can't change. If you like it, take it, if you don't like it, OK, forget about it…" I think Shree rag says that "I have experienced all the worldly things, and I have come to the conclusion that this is my personality, this is my identity, and I have perfectly tested everything and I am very satisfied, whatever I am. I am fully satisfied with myself." (Veena Sahasrabuddhe, interview, 12 April 2003. Gandhar komal is the flat third degree of the scale.)

When I commented that this was very close to what I had felt, citing my keywords - strong, calm, powerful - she replied,

Yes! Shree is a little bit - it's going inside, it's very serious… The day-to-day life, whatever's going on, Shree's not interested in that kind of a conversation <LAUGHS>. It is much more deep philosophy… meditative mood… calm, quiet, you said it yes… (Veena Sahasrabuddhe, interview, 12 April 2003)

I don't believe that in either case – singer or researcher – the 'standard' descriptions or associations of Shree Raga wholly drove our reflections, although the latter are consistent with some of them. Bor writes that "Shri is usually personified as a calm, self-controlled hero, and portrayed as a royal and prosperous person." (1999: 146), and Kaufmann cites the following from the Sangita-Darpana: "Shree raga impressive and majestic like a king, with features like the god of love himself, has his ears adorned with tender leaves and is dressed in red" (1968: 281). Martinez concludes, on the basis of this and other evidence, that Shree is an ideal raga with which to describe a calm, self-controlled hero (1997: 320). (An interesting comparison could be drawn here with Davidson's reference to the idea of a singer "becoming a character", discussed in this volume.)

But Shree's range of associations is rather diverse. One common association, for instance - which others have suggested to me but which did not come up at all in discussion with Veena - is with death and mourning. Shree is performed at, and associated with sunset, the rainy season or the winter months (see Kaufmann 1968: 281). Kaufmann writes that "Its character is mysterious, gentle, and often depicts the...
meditation of love and the nostalgic and prayerful mood of early evening." Another reason to believe that neither my response nor Veena's description were simply a case of recycling "standard" descriptions is that, contrary to my expectation, listeners who responded in terms similar to Veena's description included several with little exposure to raga music, who could not even recognise Shree Rag, let alone recall its usual associations.

I was struck by the extent to which I had perceived Veena's verbally expressed intention in her performance. This apparent evidence of effective communication left me with numerous questions: Did it work the same way for other listeners? How could this apparent communication be accounted for - how was the apparent "strength" and "certainty" conveyed by the music? Whose voice was strong and calm, who was the subject of the performance? In so far as I can answer these questions, I shall do so in the following sections.

Does the music communicate the same thing to all listeners? (B)

I began to investigate this question by conducting short listening experiments in a variety of contexts. I worked with a few individuals at IITB, some of them Veena's students; I also tried the same experiment on a larger scale with an group at IITB - largely comprising Veena's "music appreciation" class, to whom I had been invited to give a guest lecture (16 April 2003), and shortly afterwards with another group in a guest lecture at the University of Cambridge Music Faculty (30 April 2003). In both cases participants were highly selected, and could not be taken as representative samples of the Indian or UK populations. For these experiments I edited a section of Veena's alap, the unmeasured exposition of the raga, comprising roughly the first 7 minutes of this performance. In some cases I also used a second example, part of her performance of Rag Des, which is agreed to have a very different content: the results were indeed rather different, but they are not described in this chapter. I gave all participants an A4 sheet of paper, with an empty box drawn and the simple instruction:

While I play the music extract, please note down any thoughts, feelings, images or associations that come to your mind. Feel free to write or draw anything that comes into your head: there are no "right answers"!

With the individual listeners, I left the room while they listened, then came back in at the end and asked them to summarise, orally, what they had noted down. In each case I also made video recordings, partly in the hope of recording listeners tapping or otherwise gesturing in response to the music. In fact, such responses were minimal, whether because they were listening alone or because of the artificial listening environment and the presence of the camera. One participant in the IITB group wrote, "Felt like responding with my hand movement… Felt like responding by tapping my feet".

Written, spoken, and in some cases drawn responses did however prove to be an extremely rich source of data: a single sound recording is capable of eliciting a vast range of responses. Listeners focus on different levels - some listen analytically and describe the sounds in terms of music theory; others are inspired to think of events in their own past, or other extra-musical associations; while yet others think of quite specific moods, images or characters (cf. Feld's 'interpretive moves', 1994: 92-93). I will quote here some of the comments offered in response to my queries.

Association...

Brings back pleasant memories of days when I had received a particular cassette as a gift, and I was just beginning to listen to Indian classical music. Anon, IITB
A live performance of Indian music, 1999 Stanford CA… Relaxation after yoga… Camden market. Anon, Cambridge

… shades into imagined context…
Sitting cross-legged on the floor… Musty smell of floor mats… Cramps in my legs. Anon, IITB
I was also feeling that I am sitting beside the Powai Lake just after the sunset. Madhuchhanda Sanyal, student of VS

… observations and fantasies involving space, time and movement…
Lotus, morning, water in a canal next to a field waving in the breeze. Anon, IITB
It gives the feeling of Sun rising. Anon, IITB
A quiet evening; peace and repose descend. Anon, IITB
Voice is floating & flying like a bird in the air now - saw bird. Anon, IITB
Sailing slowly down a river in hot, humid weather at dusk. Sailing past various landscapes and images, all the time very slowly as if in a (nightmarish?) dream. Anon, Cambridge

… or involvement in the music…
Wonderful concert by Veenaji. Making you forget everything and get fully involved in it. Anon, IITB

… or on musical processes and theory…
Long rishabh makes us anticipate what's to come next, is it Puriya Dhanashree or which raga. Not clear yet, but elongated rishabh builds suspense…Re-Pa, when she hits pancham, it's clear it's Shree. Bageshree Vaze, student of VS. (Rishabh or Re is the second scale degree; pancham is Pa, the fifth.)
Voice entry completely changed harmony + feel of music… More notes added almost imperceptibly to what appeared to be B<flat>. A resolution at first. Anon, Cambridge

… on mood or emotion…
Sounds "sad" > feeling of loneliness - being alone (of searching for something)… feeling of having lost something that is really close to you. Anon, IITB
After a harsh day, the soul is being relaxed, entering to a meditative mood, contemplating on the things that go by and getting ready for the new to come. The soul experienced along the day happy things as well as less pleasant ones but she expresses strength and power to go beyond earthly things. Keren Porat, Israeli student of VS
Seems somehow to hold back, like having anxiety or other emotions that are not let out, but held in… A mindscape, not a landscape. Internal, not social. Anon, Cambridge

… and finally, on character
I imagine Lord Shiva, or a brave king or queen, one who cannot be challenged, is majestic in nature. Bageshree Vaze, student of VS
A lonely woman standing in the terrace in retrospection. Anon, IITB
Responses engaged in different discursive domains - often consecutively within a single sheet or even sentence. The most common responses, for listeners in both Mumbai and Cambridge, concern particular places (imagined either as contexts for listening, or scenes depicted by the music); images of movement (a bird, a boat, water flowing); and mood (calm and meditative, or sad and lonely). Listeners who imagined the music expressing character saw a figure either strong, calm and dignified (as Veena and I did), or contemplative and sad. Several of the Cambridge group described a feeling of "oppression" which seems to have no equivalent in the Mumbai responses. Apart from the obvious differences in musical terminology among those
who used it, the other distinction I notice is that the amount and range of imagery is richer for the Mumbai group - but where Cambridge listeners did write in imagistic terms the responses were not obviously distinguishable.

On the basis of verbal reports, then, what seems to have been communicated by Veena in this seven-minute clip of alap in Shree raga? She spoke in terms of the raga having a character or personality, and this character being self-confident, at peace with him or herself, introspective and unconcerned with worldly troubles and trivia. Relatively few listeners responded explicitly in terms of a character in this way - for those who did the description was either consistent with Veena's, or couched in terms of sadness and loss. Others talked in terms of mood - again, variously calm and meditative, or expressing the sadness of one experiencing loss. The idea of sadness and loss might appear to contradict Veena's characterisation (and intriguingly, take us closer to the theme of mourning referred to above). Seen in terms of embodied movement, however, it is easy to see how "calm" could be interpreted as "sad", since both would be associated with slow, introverted movements.

There may be a connection here with the findings of studies by Deva and Virmani and by Keil and Keil in the 1960s. These researchers used a set of four alap recordings and asked listeners - Indian and US respectively - to judge them using 7-point adjective rating scales. For the raga Puriya Dhanashree, which is closely related to Shree, they reported that "There are clear indications that its affect is sweet and colourful and it is stable in its formation. Moreover, the moods of sobriety, weariness and darkness are also being communicated with the same piece… A noteworthy point… is that while Westerners "disliked" the music, Indians felt it rather "sweet" and deep." (Deva and Virmani 1968:69-70, Deva 1981:166). This would appear to be an interesting area of cultural difference in affect, which could be investigated further.

The other large group of responses concerned images of place, time and movement. Time was characterised variously as suspended ("timeless"), as distinct from "everyday time", or more concretely as either dawn or dusk. Places were those in which one could imagine relaxing and forgetting worldly troubles - in the sky, by the side of a lake or river, in the desert. Descriptions of movement were either circular, or spiral, or naturally flowing (a body of water, a lotus floating down a stream, a bird, a boat, plants blowing in the wind). The idea of the music taking one out of "everyday" time is consistent with Veena's image of something "inside" rather than social. Images of movement are plentiful in Veena's discourse as well as in these responses, as will be discussed in the next section, although the visual images to which they are attached (the bird, boat, water or grass) did not figure in her description.

In summary then, although listeners' responses are varied and in many cases very personal, and although only a minority explicitly match Veena's description of the raga, I would suggest that the responses are overwhelmingly consistent with that description. There are relatively few exceptions - particularly the images of sadness (for some Mumbai listeners), or of oppression (in Cambridge). But in all the responses there is no mention of anger, jealousy, fear, doubt, disappointment, unrestrained joy, rapid, mechanical or graceless movement, dancing, or any kind of social meeting or relationship (except one brief reference to romantic feelings experienced as transitory). In short, there is plentiful evidence here of communication taking place through the medium of sound, with a degree of consistency between listeners in India and the UK.

How is the meaning communicated? (B)
I suggest that the communication demonstrated above is at least partly mediated by images of movement (and the implications of that movement for space, time and agency). First, let me return to Veena's description of her own expression in singing. She explained to me that she experiences her music as movement, and that this movement can be visualised.

If I want to reach from rishabh to the upper rishabh, in the meanwhile all the swaras [notes] in the middle, re ma pa ni… I don't care [about them]. I know from rishabh to rishabh… I'm just going to… it's just like a curve, OK? I know I am perfectly going there, I have full confidence... I see rishabh there, waiting for me. And I will just go there. Because there has to be a fluency also, a flow, how you reach that. And from there, coming down, I make all kinds of designs, and the designs are in my mind… Instead of swaras, I'm just thinking, imagining about the curves and the lines. (Veena Sahasrabuddhe, interview, 12 April 2003. Rishabh or Re is the second scale degree.)

When pressed specifically on the hand gestures she makes while singing, Veena suggested that "Those gestures, I think [come] very naturally... because I am visualising it, even the flow and the continuation." In summary, Veena reports experiencing the music as the expression of a character - a human being, or at least a consciousness with human-like characteristics. She also experiences the music as movement - directed movement through space, in curves and lines of various kinds. While singing, she also moves her body (especially her left hand, since she plays the tanpura with her right), in patterns which - we may hypothesize - relate closely to the imagined abstract movement, and/or to the movements her imagined character would make. Listeners, it appears, are able to pick up on those movement patterns - even in the absence of the visual clues afforded by her gestures - and seem to experience the music largely in terms of motion and its corollaries, space, time and agency. Thus, Veena might imagine the same phrase as either a calm, self-possessed character in a contemplative mood, or a graceful curve: the listener may perceive in the same phrase either the imagined character ("in a meditative mood"), or another image of motion ("Voice is floating & flying like a bird in the air"). There is no one-to-one mapping between sound and image, but rather a perception of motion, which maps onto images that are diverse but not arbitrary.

Who is the subject of the performance? (B)
I found that the question who is the subject of the performance? is entwined, for Veena, with her identity in relation to both the music and the audience. She was clear that she sees the principal agent as being the raga itself, and that she places the character of the raga before her own personality when she performs.

MC: [When] you sing Shree, is it always the same experience, or do you sometimes feel that the audience is giving more of a response, or that you're communicating more?
VS: Earlier when I started performing on stage, I used to open my eyes and look for the audience: what are their responses? But these days [after 20 years on the stage] whatever I want to sing I will sing, and I am fully involved into that rag. And not only that. When I'm singing any rag, I'm forgetting my identity. I started thinking that I am Rag Shree, or I am Rag Kalyan, or I am Rag Desh… And suppose if audiences gave a good response that's fine, if it doesn't <LAUGHS> I don't get nervous… You must have noticed actually, when I am singing I am singing with my closed eyes sometimes. I am imagining or I am
seeing some other things, maybe those notes. I'm not interested what the
audience [is doing] (Veena Sahasrabuddhe, interview, 12 April 2003)

According to this account Veena is not so much projecting the mood or character of
the raga. Rather, she is identifying with, and giving voice to an imagined, or virtual
character. (This interpretation is consistent with a long tradition of Indian musical
writing, where ragas are described as human or divine characters, and often pictorially
represented in particular settings, performing particular actions: see the descriptions of
Shree quoted above.) Ideally the character does not change, and nor does the mood;
the full performance (of the alap at least) thus takes on the character of contemplation
more than it suggests dramatic narrative. This creates the possibility that listeners may
experience something similar - either observing, or themselves participating in, this
virtual character. A listener may find that the music affords a quite different image,
that is also nonetheless mediated by the same patterns of embodied movement.
The ethnographic evidence, then, points to the importance of embodiment and
movement in the communication process. The performance does offer, of course, both
auditory and visual information which may be analysed directly, and I hinted above
that the performer's movements may be regarded as analogous to the movement
specified by the music. In the next section I develop this theme further, discussing
how gestural analysis can be applied in this context.

4. From ethnography to gestural analysis (A)

Gestural analysis (B)

I have suggested that a particular musical extract can communicate many things, and
that what seems to link many of those things with the performer's intentions are real
and imagined patterns of movement in space and time. I came to this understanding
based on what musician and listeners told me, supported by the evidence of the
singer's gestural communication. In this section, I will offer a preliminary discussion
of the ways in which ethnographic work can be enriched by means of gestural
analysis, such as has been developed in the context of speech communication. In the
case of this extract, since there is no text, gestural analysis implies investigating
Veena's movement in relation to the music's melodic and rhythmic processes, rather
than in relation to the linguistic meaning of a text, but the challenge is otherwise
similar to speech-based studies. I shall briefly describe some important studies of
gestural communication, before locating my own categories in relation to those of
other researchers.

An influential study by Ekman and Friesen offers descriptions of five categories of
nonverbal behaviour - emblems, illustrators, affect displays, regulators and adaptors
(1969: 62ff, cf. Davidson, this volume). By 1977, Ekman had simplified his scheme to
four categories:

i. emblems (movements tied to specific verbal meanings)
ii. body manipulators (head scratching, nose picking etc)
iii. illustrators (gestures tied to the content or flow of speech), and
iv. emotional expressions

This work has been developed further by scholars including Kendon (1981, 1982) and
McNeill. McNeill makes a distinction between gestures and non-gestures, the latter
including "self-touching (e.g., stroking the hair) and object-manipulations" (1992: 78),
before offering five categories of gesture:

i. iconics, "[bearing] a close formal relationship to the semantic content of
speech" (78)
ii. metaphorics, which "present an image of an abstract concept" (80)
There are two types of gestural systems that should be on any student's or researcher's radar. The first is the revised Efron system (1991: 242ff, drawing on Efron's pioneering study of 1941). They distinguish gestures on the basis of the movement's referent. In outline, they identify:

i. Gestures referring to the ideational process: broken down into two subcategories, speech-marking hand movements and ideographs (hand or finger movements "sketching in space the logical track of the speaker's thinking" (244))

ii. Gestures referring to the object of speech (depictive type): broken down into iconic gestures "that parallel the speech by presenting some figural representation of the object evoked simultaneously" (244) and pantomimic gestures (mimetic actions)

iii. Gestures referring to the object of the speech (evocative type): broken down into deictic gestures (pointing) and symbolic gestures (or emblems, see above)

In one of the very few empirical studies of gesture in vocal musical performance to be published to date, Davidson (2001, see also this volume) adapts the framework suggested by Ekman and Friesen, applying their terms to a performance by Annie Lennox. In this case the scheme is adequate, because Davidson can interpret gestures in relation to lyrical content. I nonetheless find Rimé and Schiaratura's scheme more flexible when applied to gestures accompanying textless singing (as in the present example), and it may be useful in extending Davidson's approach to textless performance. Below I will refer to my own set of five headings, which I came to inductively on the basis of observation of this performance. Table 1 sets out how they are related to the "revised Efron" system.

<TABLE 1 NEAR HERE>

**Gesture in khyal performance (B)**

In the present example (Veena Sahasrabuddhe's alap in Shree raga), the performers' movements can be divided into five categories, as described above. I introduce each group with my own shorthand term, and with the equivalent term used by Rimé and Schiaratura in parentheses, where applicable. The first three are illustrated with stills from the performance, marked with arrows to indicate the direction of movement (Fig. 1).

**I. Markers (nondepictive gestures; analogous to speech markers) (C)**

These are markers of musical process or structure, and include marking focal moments such as cadences (mukhra, Fig 1a), or beating out a regular pulse or the tala structure (Fig 1b). This category could also be taken to include listeners' gestures of tapping or nodding in time with the music, counting tal or sympathetically marking the cadence; gestures which may also have an emblematic function ("I got it!", "I'm in time"). (Counting the tala structure could be categorised as both nondepictive and emblematic, since the particular signs used have semantic functions.)

**II. Illustrators (depictive gestures or ideographs) (C)**

In this case illustrators are tied to the content of the singing, rather than (as with Ekman, see above) to speech. Examples here include the gesture of raising and holding the hand, associated with the Pa (Fig. 1c).

**III. Emblems (symbolic gestures) (C)**
These gestures have verbal equivalents: "Well done", "Now you take a solo", and so on. This type of gesture is often used by musicians to instruct subordinate musicians (e.g. telling tanpura players to play louder, or tabla players to play faster), to offer approval, or to invite the audience or fellow musicians to share appreciation of the music (Fig. 1d).

IV. Sound producers: movements necessary to produce the sound (C)
In this example this category would include plucking tanpura strings, striking harmonium keys or tabla drum heads. These gestures can have a multiple function: for instance it may be necessary to adjust posture and head position in order to produce a vocal sound, but this may nonetheless be effected in a more or less "dramatic" manner.

V. Manipulators: movements manipulating the physical environment (C)
This category includes adjusting clothing or microphone placement, taking a drink, or retuning an instrument.

This scheme can be used to analyse the flow and exchange of gestural communication amongst musicians (and listeners) at a gross level, while also providing the context for finer-grained studies of short fragments of the performance. These gestural analyses, in turn, may be correlated with the audio data so that the relationship between sound and gesture can be studied in much greater detail. Even a preliminary analysis of this performance suggests that, for instance, the speed and density of gestures increase with the tempo of the music. It is also apparent that Veena shifts from continuous, flowing ideographic gestures in the slow, unpulsed section of alap to the 'jor alap' section, where she marks a clear pulse with her hand, seeming to superimpose gestures illustrating the movement of the melody over those marking the pulse. It is clear that analogous musical events or processes are illustrated with similar gestures (the gestures in Fig 1 a to c were selected from many similar moments), but detailed investigation of variation in both (is the time she holds the Pa proportional to the time her hand is held steady?) needs to be carried out.

Another area for future investigation is the degree to which gestures, as observed from the listener's perspective, actually communicate anything that is not also accessible through the sound. (Apart from the emblem category, of course, which is clearly not redundant.) It is clear that listeners perceive motion in the absence of visual clues (the responses quoted above are all drawn from occasions on which participants responded to audio recordings only; cf. Clarke 2001). It can also be demonstrated that a mute film of the performance conveys something to viewers: when I tried this experiment at the European Seminar in Ethnomusicology (Gablitz, Austria, 20 September 2003), mutterings audible from the podium changed from "Where's the sound? Turn the volume up!" to "Ah, look, you can see the music!". If the singer's movements are analogous to musical processes, it should follow that they are redundant from the point of view of reception: however, it may be that experienced listeners are able to imagine the singer's likely gestures from the sound information. In any case, redundancy does not imply uselessness, and gestures may be used as clues in the interpretation of the sound, particularly by novice listeners.

5. Summary: communication, gesture and cultural competence (A)
I started this chapter by describing the different dimensions of communication in raga performance, mentioning (i) identification, (ii) status, (iii) interpersonal communication, (iv) sound situating one within the performance space and time, (v) sounds communicating character or mood, and finally (vi) intramusical
communication. I suggested that different individuals could participate in communication in different ways - some of these dimensions are open to all, some depend on a general cultural competence, others rely on detailed music-theoretical knowledge.

The bulk of the chapter has used a particular ethnographic and musical example to investigate the communication of character and mood. The singer Veena Sahasrabuddhe reports her own experience of the piece, Shree Raga, in terms of (1) assuming the identity of a virtual character, Shree Raga itself, who expresses a state of calm and dignified detachment; as well as (2) abstract patterns of motion, visualised in performance as trajectories ("curves and lines") toward locations ("I just go there"). Listeners engage with the sound in a variety of ways: a minority explicitly report the presence of a character, while most listeners (at least, most Indian listeners) report images of place, time and/or motion involving themselves, other people, animals or natural phenomena. Other modes of discourse, including music-theoretical and personal-associative ("reminds me of…") are reported more rarely.

I suggested that these reports confirm the idea that the music affords interpretation on the basis of embodied motion: seen in terms of patterns of bodily movement, even the apparently contradictory responses (sad, oppressive) seem consistent with the performer's intentions, and the performance seems to have been highly effective as a communicative act. In the last section, I suggested that this ethnographic evidence could be followed up using techniques of gestural analysis borrowed from the field of nonverbal communication, and made some initial proposals as to how this might be achieved.

Musical sound, with its associated gestures, is a specialised form of nonverbal behaviour used for communicative means: other musicians and listeners in turn use forms of nonverbal behaviour to express to each other and to the soloist that they understand and appreciate what she is doing, and can participate in the event appropriately. The demonstration that each participant can apply the appropriate codes of nonverbal communication is what facilitates the sense of identification described above; use of these codes also affirms that each understands their relative status and specialised roles, and allows individuals to effectively manage the event and the musical performance. The generic qualities of the sound establish a space and time within which participants can identify and interpret the specific musical sound elements, structures and processes presented: these are interpreted in various ways which seem to be largely dependent on patterns of embodied motion, while certain individuals can engage at another level by interpreting the performance in the light of intramusical associations. Thus, the ethnographic approach described here relates not only to musical communication in the narrow sense but to the whole multidimensional complex of communication in raga performance.

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6. References


Captions
Fig 1. Examples of gestural communication from a performance by Veena Sahasrabuddhe (VS). (a) At the end of an episode of improvisation, VS (left) marks the cadence with a sharp downward movement, followed after the beat by a movement upwards and in towards her body. Madhuchhanda Sanyal is seated behind VS. (b) As she begins her jor alap, VS introduces a periodic beating gesture to illustrate the newly introduced pulse. Harmonium accompanist Seema Shirodkar taps the index finger of her left hand in synchrony. Bageshree Vaze is seated to the left of the picture. (c) As she holds the Pa (5th), VS raises her hand and holds the position. (d) Listening to VS's alap, Vishwanath Shirodkar (left) shows his appreciation with a sweeping head movement from right to left (from his perspective), then looks up to the audience to share the moment.

Table 1. Categorisation of gestures used in *khyal* vocal performance (partly derived from Rimé and Schiaratura 1991: 248).
Table 1

<table>
<thead>
<tr>
<th>A. Gestures classified by Rimé and Schiaratura 1991</th>
<th>Applied to the present example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gestures referring to the ideational process</td>
<td></td>
</tr>
<tr>
<td>1. Nondepictive gestures: speech markers</td>
<td>I. Markers of pulse or tala structure; markers of cadence (mukhra). See Fig 1, a and b.</td>
</tr>
<tr>
<td>2. Depictive gestures: ideographs</td>
<td>II. Gestures which appear analogous to the melodic flow or &quot;motion&quot;. See Fig 1c</td>
</tr>
<tr>
<td>Gestures referring to the object: depictive kinds</td>
<td></td>
</tr>
<tr>
<td>1. Iconographic or iconic gestures</td>
<td>N/a (but can occur in other Indian vocal performances)</td>
</tr>
<tr>
<td>2. Pantomimic gestures</td>
<td>N/a (but can occur in other Indian vocal performances)</td>
</tr>
<tr>
<td>Gestures referring to the object: evocative kinds</td>
<td></td>
</tr>
<tr>
<td>1. Deictic gestures or pointing</td>
<td>N/a (but could be an alternate interpretation of some ideographic gestures)</td>
</tr>
<tr>
<td>2. Symbolic gestures or emblems</td>
<td>III. Instructions to subordinate performers; appreciation. See Fig 1d</td>
</tr>
<tr>
<td>B. Movements not included in speech-based studies, or classified as &quot;non-gesture&quot;</td>
<td></td>
</tr>
<tr>
<td>Physical movements necessary to produce sound</td>
<td>IV. Vocalisation, striking strings, keys or drum heads</td>
</tr>
<tr>
<td>Manipulators of the body and the immediate physical environment</td>
<td>V. Tuning instruments, adjusting microphones, adjusting clothing</td>
</tr>
</tbody>
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