

## **The Ethnography of Embodied Music Interaction**

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“Music is the result of intentional interaction, and processes of decision-making by individuals in society” (Blacking 1981, p. 384).

### **Introduction**

As music psychology research moves away from its earlier focus on the processing of aural information, under the influence of the embodied cognition paradigm, new and productive areas are being opened up. Research in music and gesture is by now well established, focusing on embodied processes in the production of music, most commonly at the level of the individual. Other important strands concentrate on entrainment, interpersonal coordination and musical joint action, exploring the mechanisms by which groups of people coordinate their musical practices as well as the impact of group performance on social bonding and prosocial behaviour. While welcoming all of these developments, this chapter points to a relatively undeveloped area, namely the way these embodied aspects of musical performance relate to broader social and cultural processes. How can previous work in ethnomusicology be extended to overlap and coalesce with cognitive and empirical approaches to embodied music interaction? And how can an ethnomusicological perspective allow us to link local embodied musical interactions to larger-scale social and cultural processes – to provide the top-down complement of the bottom-up understanding of the social bonds that can form in intimate musical interactions? This chapter argues for the importance of such an interdisciplinary endeavour, offering some pointers both to the history of ‘interaction’ as a topic in ethnomusicology, and to selected themes which have the potential to illuminate future researches.

Recent research that has shed light on the dynamics of interaction (including entrainment) in various musical genres has already demonstrated the importance of

the ethnographic dimension (Clayton et al 2005; Clayton, 2013). In a study of rhythmic entrainment between Indian musicians in an unmetred section of a raga performance, it proved vital to know that a particular instrument should not in theory be played in time with other elements of the music (Clayton, 2007). When my colleagues and I studied inter-group entrainment in Afro-Brazilian Congado, it was crucial to explore the way that interpersonal synchrony within and between groups was understood by participants in social and spiritual terms (Lucas, Clayton, & Leante, 2011). Doffman's studies of entrainment in jazz trios similarly connect the variations in strength of coupling meaningfully to musicians' understanding of their interpersonal dynamics (2013).

While it is possible to explore entrainment (as in these examples), ensemble leadership and related topics purely from timing and movement data, such studies are stripped of much of their potential significance if presented without interpretation of the ways in which they address and are shaped by their contexts. The justification for omitting such a perspective is that in familiar Western genres, enough of the cultural context can be assumed of a Western readership that we can concentrate on the quantitative measures. As Doffman's work demonstrates, however, there is much more to the coordination of a 'familiar' musical ensemble such as a small jazz group than would necessarily be guessed by a non-participant from the same society. The need for ethnographic study and contextualisation applies not only to the unfamiliar or 'other', but to any study of embodied musical interactions between individuals. The following section presents a brief historical overview of the study of interaction within ethnomusicology, highlighting some of the most important approaches and theories that have been developed within this discipline. The remainder of the chapter addresses three specific issues that might usefully be considered in any research on embodied music interaction: the relationship between group bonding and individual expression; the nature of hierarchy and leadership in musical ensembles; and finally the distinction between scripted musical encounters in which relationships may be represented and interaction dramatised, and performances in which relationships and status are genuinely at stake in the course of performance.

### **Interpersonal interaction in ethnomusicology**

While interpersonal interaction has been a live issue in ethnomusicology for many years, and has been touched on by some of the discipline's most distinguished scholars, it has rarely if ever been a dominant concern of the field. The importance of interaction for ethnomusicological theory was argued most strongly by Blacking, in the quotation which introduces this chapter: unfortunately Blacking did not follow this interest up with analyses of his own, and nor was his pithy contribution to the topic picked up by later authors, which typifies the piecemeal approach of ethnomusicology to the topic. Interaction has, perhaps, been squeezed between competing foci: the diversity of musical structure and process, and the ways in which music relates to macro-social phenomena such as ethnic or regional identities.

Nonetheless, interaction has been thematised in ethnomusicology in productive ways. Lomax, for instance, took the topic into account in his ambitious and controversial Cantometrics project. Seeking musical parameters that could be reliably rated in his database of recordings and submitted to statistical analyses combining measures of both song style and social structure, Lomax alighted on 'tonal blend' or 'tonal cohesiveness' as an important aspect of song style. As he explained, "In making this judgment the rater must decide whether a group of singers match their vocal qualities so as to sing 'with one voice', or whether many separate voices can be heard, producing a somewhat harsh or strident choral effect" (Lomax, 1968, p. 170). He claimed a very high level of inter-rater consensus for this factor (91%).

Lomax also explicitly linked this 'tonal cohesiveness' observed in sound recordings to synchronous action, as revealed through Condon's pioneering sound-film studies of interpersonal synchrony (174-5). If nothing else, he deserves to be recognised as the first scholar to explicitly link the entrainment of body movements, social cohesiveness or 'groupiness' (his term) and aspects of musical style – an important aspect of embodied music interaction. The current volume demonstrates not only how much more sophisticated and diverse our studies can now be, but also how long we have taken, since Lomax first indicated the possibilities, to reach this point.

The findings of Lomax's statistical analyses have frequently been questioned, but nonetheless remain of interest. (As Feld points out, "Much of the criticism focused on

method and data interpretation, and not upon Lomax's basic hypotheses about music as a universal public communication of social identity", 1984, p. 384.) His main finding in this area was that tonal cohesiveness is generally highest in societies of moderate complexity. The social categories most clearly associated with this feature were 'horticulturalists with specialized fishing and domestic animals' and 'cultivators with domestic animals' (175) – that is, societies in which people need to form stable work teams in order to carry out their subsistence tasks. In this way he suggested a meaningful link between musical style and social organisation, by considering the organisation of joint action in everyday life.

Fascinating as Lomax's proposals are, they are based ultimately on rating judgements (on 6-point scales) of sample recordings. Although he mentions his own attempts at sound-film analyses (178), he did not follow Condon's empirical example in a sustained fashion. His analyses could hardly be expected, therefore, to capture the finer structure of interpersonal interactions in specific contexts: the possibility of exploring his findings in analyses in particular performances remains to be pursued.

A number of ethnomusicological studies from the 1980s, influenced by the 'ethnography of performance' paradigm (Bauman, 1984 [1977]), attempted to correct Lomax's focus on large scale comparison at the expense of detailed description. Following a number of publications addressing spatial layouts and/or sequences of interaction in performance (see Béhague, 1984; McLeod & Herndon, 1980; Stone 1982), Qureshi's *Sufi Music of India and Pakistan* (1995 [1986]) offered a dramatic methodological advance: her video graphs and video charts, distilled from observations of recordings of Sufi ceremonies involving qawwali musical performance, allowed her to analyse in detail the sequences of musical and ritual interactions between participants.

The most systematic attempt to date to theorise interaction within ethnomusicology is found in the second half of Brinner's book *Knowing Music, Making Music. Javanese Gamelan and the Theory of Musical Competence and Interaction* (1995). Brinner elucidates a set of novel terms with which to describe interaction within musical ensembles:

*Interactive network* comprises the roles assumed by performers and the relationships or links between them, *interactive system* refers to the means and meanings of communication and coordination, and *interactive sound structure* is a constellation of concepts associated with the constraints and possibilities inherent in the ways that sounds are put together. These three approaches seek answers to who, how, when, and where... but attention must also be given to the ‘why’ of interaction, the goals, rewards, pitfalls, and sanctions that may be subsumed under the rubric *interactive motivation*. (Brinner, 1995, p.169; italics in original)

Thus, for Brinner, a musical ensemble is described as a network in which individuals perform specific roles, which may be permanent or contingent, and which locate them in a hierarchy in which a certain individual or individuals exercise leadership within specific domains. The flow of a performance is regulated by means of an ongoing exchange of information between individuals, typically in the form of cues. The structure of the interactive network also relates to both musical texture (simultaneous aspects of interactive sound structure) and form (consecutive aspects). Motivations for interactive behaviour may be as diverse as the attainment of particular physical or mental states, the balancing of cohesion and individuality, or the pursuit of interpersonal competition. These issues are illustrated first with reference to a handful of comparative examples (Brinner, 1995, pp. 167-207), and then in more detail with reference to Javanese gamelan – and the whole theory of interaction is embedded in a larger discussion in which it is paired with a theory of *competence*.

Brinner’s approach is essentially descriptive, and his framework is useful primarily because it sets out broad terms within which ensemble interaction may be understood: it is certainly effective in framing his own observations. Where Brinner is less effective is in his attempts to link this work to a cognitivist perspective, or to move beyond a descriptive formalisation of a sensitive musician’s intuitions on how ensemble interaction works.

Another key reference in ethnomusicology is Monson’s *Saying Something: Jazz Improvisation and Interaction* (Monson, 1996). Monson’s book responds to themes in poststructuralism and sociolinguistics in taking up specific discursive issues relating

to interaction, specifically within jazz ensembles – for instance, the relationship between group cohesion, groove and individual expression, the metaphor of improvisation as conversation, or the relationship between the solidarity of the jazz community and interpersonal competition – illustrating these themes with quotations from musicians and with her own analyses.

While we might have hoped for extensive development of these themes following Brinner and Monson, there has been relatively little. Two areas that have been further developed however have been entrainment (as referenced above), and what Brinner calls the interactive network: roles, hierarchies and leadership. In the former, the focus has been on the relationship between temporal dynamics and ethnographic interpretations of interaction. In the latter, scholars have turned to another historic social science research paradigm in Goffman's dramaturgical approach to interaction: studies applying aspects of this model to embodied music interaction include Polak's on wedding celebrations in Mali (2007) and those of Napier (2006, 2007), and latterly Clayton and Leante (2015) on north Indian classical music.

These contrasting studies, then, cover topics as diverse as the relationship between musical blending and social organisation, and the significance (albeit under-investigated) of interpersonal synchrony (Lomax, 1968); roles, relationships, hierarchies and leadership in ensembles (Brinner, 1995; Polak, 2007; Napier, 2006; Clayton & Leante, 2015); processes of interaction evident in cueing behaviour (Brinner, 1995; Monson, 1996; Qureshi, 1995); the relationship between interpersonal interaction, musical texture and structure (Brinner, 1995); and the ethics and aesthetics of musical interaction (Brinner, 1995; Monson, 1996; Doffman, 2013; Clayton & Leante, 2015). Each of these studies – and others, for such a brief review cannot be comprehensive – offers some inspiration for future interdisciplinary studies of embodied music interaction. I will refer back to some of these approaches in subsequent sections, which discuss three possible themes which may usefully inform future research.

### **The individual and the group**

As noted above, ethnomusicology has tended to pay more attention to the relationship between musical traditions and macro-social formations than to the dynamics of intimate interactions. This preference is evident in Lomax, while Brinner's and Monson's books are notable exceptions to this tendency. Although some recent theorising attempts to link these different levels and explain how intimate relationships give rise to an awareness or construction of larger-scale groupings (e.g. Dueck, 2013), too little attention is still given to the relationship between belonging to large social formations such as nations or ethnic groups, and belonging to musical ensembles. Music cognition, in contrast, has begun to address the relationship between intimate musical interactions and groupness or 'entitativity' (e.g. Wiltermuth & Heath, 2009). My argument here is that too little attention has been paid to date to the subtle relationship between the cohesion of the group and the self-expression of the individual. These may be thought of simplistically as a zero-sum game – the more we express ourselves as individuals, the less we express our solidarity as a group – and Lomax's discussion seems to make this assumption (at least, he does not explicitly contradict it). This would indeed be too simplistic, however. Bithell, writing of the Corsican polyphonic singing tradition *paghjella*, quotes singer Ghjiseppu Turchini on the development of personal style, and is worth quoting here at length:

I come from Sermanu; I've learnt because I've listened to him and him and him and him, I sing like them because it's them I've heard. Then one day I take my pilgrim's staff and I do my musical Compostella – my Compostellas, because there are several. ... At 17, 18, you start to do all the [local] festivals [...] Then when you get your car and start to go around with the others you do the Santa di u Niolu, the Fiera di Alisgiani, the Fiera di Francardu, etc. And there you discover other ways of singing . . . . And you take a bit from here and there, and you make out of it your own language, from the languages you've heard, and then the day arrives when you have your own personal color. There's only you who sings like that and yet you are a synthesis – you can't be complete without all the others. That's the wonderful thing. *You become an individual thanks to the others, but at the moment when you are the most individualized, that's when you are the most in the collective mould.* (interview, 2004, cited in Bithell, 2007, pp.64-65; my emphasis).

Individuality and collectivity are clearly not a zero sum game: but has music cognition considered the individual and personal benefits that may accrue through the increased sense of belonging to a collective that musical interactions seem capable of bringing? The strength of laboratory experiments such as Wiltermuth and Heath's is that, remarkably, they can demonstrate how even a group of strangers can feel significantly more group-like, and more inclined to prosocial behaviour, after spending a short time singing together. One of their limitations is that they cannot track the development of deeply-held feelings of both self-realisation and of participating in group identities as a result of long-term participation in embodied musical interactions. Clearly, it is only through sensitive and long-term ethnographic work such as Bithell's that this aspect of embodied interaction can be investigated. Music performance needs to be seen as a rich and ambiguous domain in which group and individual identities can be explored, negotiated, balanced and – as Bithell's study shows – mutually reinforced.

### **Hierarchy and leadership**

In an *Ethnomusicology* article published in 1976 that draws on Lomax, Ridgeway and Roberts make one of the most explicit claims in the literature for a homologous relationship between musical structure and social interaction, when they argue that “music develops its affective meaning for the listener through musical structures which are in some sense homologous to structures of interpersonal behavior, so that music and interaction will be similar in their underlying patterns of emotional dimensionality.” (Ridgeway & Roberts, 1976, p.234).

The field of ethnomusicology has largely moved on from such homology theories, and with good reason, but before dismissing their claim it is worth considering what Ridgeway and Roberts might mean (the phrase “in some sense” leaving us some scope for interpretation). If one agrees with Blacking's later claim about the key role of interpersonal interaction, it is not too much of a stretch to argue that in some cases the dynamics of this interaction can be read in the music (although whether there is a causal link to ‘musical structures’ as conventionally understood is more questionable). One could also read their claim as allowing the possibility for musical structures to be



deliberately created in order to reference patterns of interpersonal interaction, even when those interactions are not directly responsible for the emergence of the musical structure.

We may allow some credibility in both of these possibilities without subscribing to a simplistic homology between social interaction and musical structure. To understand this better, however, we need to look in detail at embodied music interaction and its intersection with social hierarchies. Music is created by groups of individuals, whose musical interactions exist in relation to social hierarchies and formations. Hierarchies performed within the context of musical ensemble influence and constrain the musical structures produced; they relate to wider social hierarchies, whether they appear to reflect them or to stand in a critical relationship to them.

Here, of course, we do have a wealth of information on hierarchies and power relations within particular societies: whether authority is concentrated in the hands of a few or more evenly distributed, to what extent it is concentrated in the hands of males and the domains within which females may exercise authority, and so on, and this is the kind of information on which Lomax built his approach. We can go further than this, however, and explore the ways in which power relations are played out within the specifically musical context. This may resemble, in some respects, the way power operates in the wider society: musical ensembles within strictly hierarchical societies may operate with relatively fixed leadership structures, for example; ensembles in more egalitarian societies may have a flatter leadership structure.

If this were true in a crudely deterministic sense, however, all musical ensembles in a given society would be expected to operate in the same way, and this is clearly not the case. Indeed, one of the common criticisms of Lomax's method is that the selection of as few as ten examples per musical culture removes much of the variability in song style within cultures (e.g. Henry, 1976, Feld, 1984). One reason for this variability is that in modern Western societies and perhaps more widely, musical ensembles offer an opportunity for small groups of individuals to practice a local form of organisation that may be different from, even oppositional to, the wider norms of the society. Another reason is that in musical ensembles interpersonal relationships can be a complex mix of different musical and social factors. For instance, the person with the

greatest command of the musical style may be an individual who in other contexts would not be permitted to assume leadership. This kind of interference between social and musical factors is explored in Clayton and Leante's study of hierarchy in north Indian classical ensembles (2015), which is set within the Goffman's framework. Where Lomax might have seen a relatively simple relationship between a rigidly hierarchical social structure and an equally clear hierarchy within a musical ensemble, in this paper we show how different factors – musical leadership as embodied in the 'soloist' role, seniority (both as a musician and generally as a social being), gender and other factors can at times pull the ensemble in contradictory directions. Musical performance then becomes a forum in which interpersonal relations, while remaining minimally cooperative – cooperative enough to retain the sense that people are 'playing together' – are actually more focussed on subtle or blatant contestations of power within the group.

Again, this is an area in which recent developments in empirical musicology and music cognition that offer means to directly study 'leadership' (e.g. Glowinski, Badino, Ausilio, Camurri, & Fadiga, 2012) can be put into dialogue with ethnographic approaches to musical ensemble. If this can be done effectively, we should be able to develop sophisticated models of hierarchy and leadership within musical ensembles.

### **The real and the scripted**

Both of the previous topics point to another factor which can be overlooked in psychological or otherwise empirical approaches: the extent to which musical performance can have real social consequences for individuals. First we saw how participation in musical ensembles can lead to a sense of belonging to a social collective and, not in contradiction to this, to a sense of enhanced self-realisation. In the following section, I pointed to the fact that a musical ensemble can be the location of struggles for authority. These struggles may be playful battles with no lasting effect, but in some cases they may have significant effects on an individual's self-esteem, standing within a peer group, or even ability to earn a living.

Some recent work on music and evolution highlights the role of music in encouraging bonding within groups, and in allowing for conflict-free interaction between groups (e.g. Cross, 2006). In Western art music conflict may be dramatized within an ensemble, but in line with this view this ‘conflict’ is not generally understood as a real conflict between individual musicians. In a north Indian classical ensemble however we can make no such assumption. When an accompanist in this tradition engages a soloist in a battle to see who can display the greatest technical command, what is at stake is not necessarily only the balance of authority between the *roles* the two individuals are acting out: it may well be understood by the musicians as a statement of the accompanist’s musical authority and an attempt to strike a blow for the dignity of the collective of accompanists.

In general, the idea that musical interaction is scripted and collaborative, and without consequences other than aesthetic and physical pleasure (or disappointment at their absence) is not one that we can assume. In fact, even in the West we do not always make such an assumption. When we listen to a particularly effective piece of music, we may believe that what we listen to is in some sense *authentic*, in the sense that there is little or no perceived gap between an artist’s performing persona and the artist themselves (see e.g. Moore, 2012). Similarly, perhaps, we may read musical interactions as authentic: that is, as real interactions between the individuals rather than as aspects of a scripted drama. Is it possible to disentangle the ways in which musical interactions dramatize or represent human relationships from those in which musical interactions have real consequences for participants? This is certainly easier said than done. In cases of genuine conflict, as Clayton and Leante (2015) demonstrated in Indian classical music, antagonistic performers tend to maintain complicity to the extent that their conflict should not be unambiguously evident to others; on the other hand, even the most cooperative and felicitous musical ensemble can allow an individual to ‘show what he can do’, to establish his individuality, to gently test the authority of the putative leader. Even with the help of a deep ethnographic research engagement, it is not always clear to an observer just how much ‘real’ conflict is present in any given instance. What we can state with confidence, nonetheless, is that the assumption that musical interaction always leads to increasingly harmonious relations within a group is excessively naïve.

## **Conclusion**

In this chapter I have argued for the importance of ethnographic research in helping to shape the emerging paradigm of embodied music interaction. This proposal is aimed as much at ethnomusicologists as it is at those in music cognition, empirical and systematic musicology and related fields, since the published ethnomusicological literature treats the topic in a piecemeal fashion, without a sustained approach to the issue of interaction within musical ensembles. Nonetheless there is sufficient extant literature to allow us to outline the scope of ethnographic research in embodied music interaction and to contribute to debates within the latter on how to address issues of both cultural value and social structure. This approach is essential since embodied music interactions not only take place within social and cultural contexts, they are oriented towards those contexts, articulating values and helping to reproduce or to redefine social formations.

My survey of literature and suggestions for future topics of research point to an interdisciplinary field of huge importance and potential. Ethnomusicology has looked on interpersonal interaction with interest, and some of the discipline's key thinkers have reflected on its importance. However, notwithstanding Lomax's fascination with Condon, the discipline has not developed the systematic and empirical methods necessary to investigate it in depth. Now other disciplines are developing those empirical approaches in increasingly sophisticated ways, that nonetheless often lack a comparable sophistication in theorising sociality and culture. Interdisciplinary engagement has the potential to spur ethnomusicology to take this topic more seriously, while simultaneously offering the considerable advantages of an ethnographic perspective to cognitive and empirical musicologies. Can we forge the collaborations which are necessary to bring about this synthesis? Can a rich understanding of the relationships between musical styles and their social contexts be married to the most sophisticated experimental and quantitative approaches to embodied interaction and joint action? The benefits of such an endeavour would surely be very substantial.

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