

# Music and Meaning

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## **Introduction**

What do we mean by 'meaning'? When we say that something has 'meaning', we are claiming that our original something points to, or is attached to, or can be used to infer the existence of, some other thing beyond itself. Some sort of relationship exists between our original entity or event and something beyond itself. Vernacularly, our original something has *significance*. Another simple way of putting it is that our original something *refers* to something else beyond itself. When we engage with music, we tend to feel that it has significance; it appears to mean something, even if that meaning is entirely personal to us. And when we look at the ways in which music has been theorised and explored, the issue of musical meaning is often central, particularly when music is being explored in its social context (see Feld & Fox, 1994). But while music may have significance, by comparison with language it is very difficult to say what it is that music refers to, or indeed, whether music refers to anything else at all.

Contemporary methods of approaching the question of musical meaning have been shaped by a range of theories of meaning. Some theories hold that music is a species of art, which can only be understood as a phenomenon that is not susceptible to analysis in terms of general and formally expressible principles. Such theories tend to be predicated on the notion that recent and contemporary western conceptions of music - in which music is produced by specialists for aural consumption by the many - are representative of music as a generic human phenomenon. Alternative views are found in literatures that aim to explore music as a social phenomenon (whether in western or non-western contexts), which tend to be pluralistic in the frameworks that they apply to articulate their understandings of meaning in music, drawing on semiotic, sociological and anthropological theories of meaning. Some influential theories that have emerged within analytical philosophy and that are prevalent in the study of linguistics seem to imply that meaning cannot properly be considered a property of music. In these theories meaning is held to be a property only of (formal) systems that are capable of embodying two types of meaning relation, *reference* and *sense* (see below), and that are thus capable of articulating complex propositions that are definable as true or false. The chapter will present an overview of theories of meaning that have been, and that may be, applicable to investigating music, particularly its cognitive dimensions.

## **Theories of meaning**

Philosophers and logicians have devoted much attention to the problem of meaning - to analysing how it is that something means. In general, they have focused on meaning as it appears manifested through language. Their ideas, particularly in the form of theories of semantics, have tended to dominate

conceptions of meaning within philosophy and within most sciences. Semantic theories generally aim to account for the relationships between the phenomena that constitute the objects of meaning and the expressions and sets of expressions that are used to articulate meanings.

One of the strongest influences on the development of recent and contemporary theories of the semantics of language has been the work of Frege, who wrote at the end of the nineteenth century. Frege suggested that there are two necessary aspects of meaning that must be considered in any analysis; these he called *reference* and *sense*. Roughly speaking, the *reference* of a term is that which it denotes - that phenomenon in the world onto which it can be mapped. Its *sense* derives from the ways in which that original term relates to other terms that are interpretable as capable of bearing similar kinds of meanings. To give Frege's classic example, the expressions 'Morning Star' and 'Evening Star' have the same single reference - the planet Venus. But their senses differ in an obvious way, in that the sense of one is 'the star that appears in the morning', and that of the other 'the star that appears in the evening'. The senses of the two expressions arise by virtue of the meanings of the terms that are used to articulate them within the language system.

Hence in this view meaning is a consequence of the capacity of terms within a system to refer and at the same time be bounded by their relationships to other terms within a system of terms such as a formal logic (or a language when it is interpreted as having features that of the same type as those of a formal logic). These features enable terms within the system to be used to articulate propositions that may be evaluated as true or false - that have determinate *truth values*. Only in such systems can complex propositions be expressed and can their meaning be fully accounted for in terms of the elements that make up the complex propositions; only such systems have the capacity for *compositionality*, that of expressing semantically decomposable propositions. It has been suggested that only formal semantic theories founded on Frege's ideas, such as those of Montague or of Tarski, constitute "genuine theories of meaning" (Scruton, 1987). While these types of theories do not seem particularly pertinent to music (particularly in view of the difficulty that the ideas of reference, and of compositionality, pose for music), they are nonetheless highly relevant in that they have underpinned the development of theories of meaning throughout the twentieth century that has shaped much of the intellectual context in which any account of meaning in music has to be understood (for more detailed and technical considerations of Frege's ideas, see Grayling, 2000, Vol. 1, Ch2; Vol. 2, Ch12).

A rather different approach to meaning that has been widely applied to music derives from the work of C. S. Peirce (see Hoopes, 1991), who proposed that meaning could be understood in terms of systems of signs, which can be defined as *natural* or *conventional* and can stand in a variety of relationships to that which the sign represents - its meaning. A sign may point beyond itself by virtue of some formal resemblance between the sign and that which is represented, and thus be *iconic*; it may have meaning because of some necessary connection between itself and what it indicates (as in the case of smoke indicating fire) or by virtue of repeated co-occurrence, the relationship between sign and its meaning thus being *indexical*; and it may mean by virtue of arbitrary convention, its meaning being rooted in the *symbolic* domain.

While Peirce's *semiotic* ideas have largely been neglected or rejected by philosophers and semantic theorists, they have played a role in several influential theories of meaning in music (e.g., Nattiez, 1990). Nevertheless, music does not easily map onto the natural-conventional distinction that lies at the root of Peirce's original theories. Music has tended to be viewed as having an ambiguous status somewhere between the natural and the conventional, limiting the explicitness with which the bases for its meanings can be articulated in semiotic terms.

It may seem that meaning is simply a mapping from a term to its referent (and *vice versa*). But for Peirce, the source of meaning is in the mind; in his theory, "All thought is in signs" (Peirce, quoted in Violi, 1999). The idea that consideration of mind is necessary to theories of meaning lies at the heart of contemporary cognitive science and is central in much contemporary philosophy of meaning and language. Mental states and processes are said to exhibit *intentionality* or aboutness (Dennett, 1987; 1995); they represent, or point to, phenomena beyond themselves. The idea of intentionality can be applied to understand the ways in which language can be interpreted as bearing meaning, by taking into account the ways in which we employ language to articulate the aboutness of our mental states.

A more radical account which explicitly sets out to provide an alternative to the idea that meaning can only be correctly defined in relation to the abstract properties of formal systems is found in *experientialist* approaches, of which the most developed is that of Lakoff and Johnson (see Johnson, 1987; Lakoff, 1987). In this view, meaning is a property of the relationships between mind and world; however, it is best understood as mediated not by the principles of formal logic but by the embodied nature of our experiences of being in the world. Meaning is motivated by kinesthetic-image schemas, which are (Lakoff, 1987, p267) "relatively simple structures that constantly recur in our everyday bodily experience", and which may take forms such as "CONTAINERS, PATHS, LINKS... etc." These body-image-schemas constitute the preconceptual bases for the formation and combination of concepts, grounding meaning in our bodily experience of the world. A somewhat different approach to an experientialist theory of meaning is proposed by Jackendoff (1987, 2002), although directed more explicitly towards making sense of language structure and use. Experientialist theories, in particular those of Lakoff and Johnson, have been applied to understanding the nature of meaning in music, as we shall see.

Ideas such as reference and sense, natural and conventional signs, and intentionality can help account for different aspects of the ways in which something may be interpreted as bearing meaning. But music seems to pose particular problems for these ways of approaching meaning. Usually, we cannot use music to refer to a state of affairs in the world in the ways in which we can use language. In at least this respect, music certainly does not seem capable of bearing the types of meaning borne by language, which would suggest that an analysis of musical meaning in terms of sense and reference is unfeasible. Musical meaning also fits ambiguously with any distinction between natural and conventional signs, and it is also unclear how the notion of intentionality might be applied to clarify the aboutness of the mental states that arise when we engage in music.

In order to elucidate the ways in which meaning in music can be, and has been, explored in ways that are relevant to music (and to the psychology of music), it is necessary to consider what are the kinds of things that can be the objects of meaning. Are they states of affairs in the material world or in possible worlds (for which see Johnson-Laird, 1983, p172)? Are they states of affairs in some abstract yet immanent domain, such as the theorems of formal logic and their validity - their truth values - within some logical system (Tarski, 1956)? Are they states of affairs in some abstract yet immanent domain that *cannot* be described within the theorems of formal logic, such as the domain of the aesthetic (Sibley, 1959). Are they mental phenomena such as the thoughts, beliefs and desires of individuals (Dennett, 1987), or the preconceptual schemas proposed by Lakoff and Johnson? Or are they social phenomena, such as cultural groupings, institutions, contracts or shared understandings (Bourdieu, 1990)? At different times, theories of meaning have postulated all these types of phenomena as being potential or actual objects of meaning, and in one way or another, all have been applied to understanding the question of meaning in music over the history of western thought.

### **Meaning in music in the western intellectual tradition**

For the classical Greek philosophical tradition, music presented two conflicting faces. On the one side, music - and music, for the Greeks, was melodic - moved the passions (for good or ill), and was a fundamentally human activity, affecting our emotions by being stirring and martial, or beautiful and enticing. Its purposes could thus be considered as aligned with those of the science of rhetoric, which aimed to bend human minds and actions to the purposes of the orator. On the other side, music, in the theories erected on the basis of the measurement of aspects of the sounds that comprised it, embodied the natural laws of number and could thus be viewed as reflecting abstract and immanent aspects of the universe such as the principles of natural order, or the workings of the divine (James, 1993).

This dichotomous view of music persisted through the first millennium C.E., gaining in complexity as it was refracted through the multiple prisms of early Christian thought. Hence in the medieval world, music could be thought of as having meaning in at least two domains, the human and the divine. The domains now possessed quite different values; that which was oriented towards the divine had immeasurably higher value than that which was merely secular or bodily. At the extreme, it was not so much music as the *theory* of music (grounded in number and mathematical theory) that had meaning in the sphere of the divine, although vocal and sacred (texted) music that could be interpreted as reflecting the divine order of the cosmos in its proportions and forms could be allowed as having meaning in the appropriate domain. The tension between music as mirror of the heavenly world and music as mover of earthly passion was mediated by church doctrine and by the development of musical notations, through which polyphonic music that might be viewed as simply lascivious because of its sonorous beauty could alternatively be interpreted as reflecting the mathematical complexity of divine order (Sparshott & Goehr, 2001).

By the later fifteenth century theories of music had begun to detach themselves somewhat from the realm of religion with the aim of reflecting the practice and the effects of music more directly. Music came to be seen as a foundationally human activity with its values and its meanings requiring to be expressed and interpreted in human rather than divine terms (Palisca, 1985). Music's meanings were bound to the products and processes of human reason as well as to music's effects on human emotions, allowing for the possibility that music might express or bear types of meanings that were proper only to music as an art.

By the later seventeenth and early eighteenth centuries, music's meanings had come to be largely theorised in terms of human passions or affects. It was felt that a discrete piece of music should express or convey a particular affect or emotion, and should do so in an appropriate manner. Music's alignment with rhetoric was foregrounded (Sparshott, 1998), as was the extent to which its forms mirrored those of linguistic prosody, though the structures that music could articulate also became more important for their own sake. The values accorded to music and its meanings were largely those of rational pleasure, enjoyment founded on the exercise of reason; ostensibly rational principles (based in part on the development of the science of acoustics) were elaborated and adduced that were intended to account for the extent to which a piece of music had fulfilled its brief by expressing its meaning.

Through the eighteenth century the forms and the meanings of music changed radically. From being bound to the devices of rhetoric and hence to its purposes, music's forms became more and more intelligible in terms of theories of harmony, related to either, and sometimes to both, the findings of physical acoustics, and abstract principles of architectonic structure. Musical meaning thus no longer required any sort of justification by reference to the words that it could convey in song, or to the ways in which it conveyed those words (its 'prosody'); instrumental music came to be conceived of as equally capable of bearing meaning in its own right. Music seemed to have attained a level of rationality that appeared to relate directly to the principles that the 'natural philosophers' - physicists - were identifying in the material world (James, 1993).

However, the effects of music on human passions were not completely displaced from consideration; as Thomas (1995, p5) notes, most of the writing on music by the philosophers of the mid to late eighteenth century had as a "governing assumption" the idea "that music was a kind of language". Hence music could be conceived of as capable of bearing meanings of the same type as language though perhaps slightly less developed, as music was held to reflect a sort of pre-linguistic, natural sign of the emotions which had foundationally social functions in communication. These conceptions of music led to the ideas that music's meaning inhered in its power to induce emotions in a listener and also in its capacity to elicit "moments of identification and social bonding" (ibid., p105). Hence by the late eighteenth century, the objects of the meanings of music could be conceived of as private, being in the mind, or as public and social.

### **The aesthetic perspective**

Towards the end of the eighteenth century a new way of understanding meaning in music emerged, one which had its precursors in the notion that music should be valued for its beauty but which sought to detach music's meaning from its social value and to valorise its experience as art as an end in itself. It developed in tandem with the emergence of the notion of music as being autonomous, or as having value in its own right that was independent of the narrative, dramatic, or socially functional contexts in which it occurred. The ideas that underpin this approach have come to constitute the prevalent means of addressing questions of music's value and significance within the western intellectual tradition of the last two centuries or so.

This new approach was first crystallised in ideas that were developed by Hume and by Kant, in proposing that both art and natural beauty can give rise to aesthetic experiences that are exclusive in that they are bound to felt response and are not reducible to any specific set of principles (as they cannot be induced second-hand by verbal description). Hence a largely subjectivist account of music's value and significance emerged, though not rooted in an unqualified subjectivism that would have denied any rational basis for aesthetic judgment. While Hume managed this problem by proposing socially normative bases for aesthetic judgment, Kant proposed that aesthetic contemplation was distinguished by being fundamentally 'disinterested', or free from concern with desire or any other purposive attitude. Both Hume and Kant held that aesthetic judgments are logically dependent on pleasure and liking but are not reducible to them.

Different forms of art have given rise to aesthetic theories that are most applicable to particular forms; hence plastic arts have prompted representational theories, music has elicited expression-based theories, and literary arts have engendered interpretive theories. Of necessity there has been overlap and interplay between theories derived from each form of art, as each is generally held to be a sub-domain of the broader class 'art'. Current approaches tend either to reject the subjectivism at the core of these enlightenment formulations of the aesthetic by claiming that properties of the objects of aesthetic experience engender that experience, or to develop subjectivism by seeking to specify the conditions that determine the nature of aesthetic experience. The notion of the aesthetic is bound up with the notion that there are phenomena that can only be described as 'art', and various attempts have been made either to demarcate the qualities that art must have in order to be art or to situate its bases in the social, historical and institutional contexts from which it emerges (see, e.g., Wollheim, 1980).

The identity of art has been variously proposed as lying in its capacity for representation or mimesis (the principal foundation of aesthetic theories until the eighteenth century), in the internal organisation of works of art (form-based views), in its status as a symbol system, or in its capacities for expression, this last being the most widely held and explored view applied to music at present. In expression-based approaches, works of art are viewed as the loci for aesthetic experience by virtue of encapsulating both emotional and rational qualities that may be more or less apparent to, or recuperable by, engaged audiences (see Davies, 1994). In these theories, music's capacity to engender aesthetic experience does not rely on, and is not expressible in the

same terms as, the capacity that language possesses of bearing meaning by expressing complex propositions that have determinable sense and reference (Dempster, 1998).

Central to many expressivist analyses of musical meaning has been the idea that music's meaning is fundamentally emotional. This idea has been espoused by perhaps the majority of those who have aimed to provide accounts of music as an aesthetic domain, though most of those who have sought to develop this approach have treated the relationship between music and emotion in ways that appear to have little connection with the experimental literature on music and affect. As outlined in chapter 12, there is a large body of theory and experiment concerned with affective responses to music (Juslin & Sloboda, 2001); it has been shown that listening to music can elicit the same types of physiological responses as elicited by emotion-producing situations. It appears likely that engagement with music can in fact lead to responses that are identical to those that occur when we encounter situations in the real world that induce emotional responses.

Two of the leading philosophers of music, Roger Scruton and Stephen Davies, both privilege the expressive dimensions of music in seeking to analyse its aesthetic qualities, though taking somewhat diverging paths. Davies (1994, 2003) proposes that a critical component of the aesthetic aspect of music is its engendering of an 'understanding response' in a listener, which requires the capacity to experience predictive coherence in the ongoing flow of a piece of music as heard. But, in addition to this aspect, music must be recognised as referring beyond itself in being expressive of emotion; music achieves this either by presenting the appearance of emotion (Davies, 2003) or because we (1994, p277) "experience the dynamic character of music as like the actions of a person", though these "natural propensities for expressiveness are structured and refined by musical convention". The experience of music must involve both types of recognition to qualify as an appropriate aesthetic experience; only if both conditions are met will the music be understood, its 'meaning' grasped. Scruton (1987, 1997) suggests that music does not so much express emotion as embody it in a holistic way such that it is not possible to identify just which features of the music are directly responsible for this embodiment of emotion; he suggests (1997, p357) that "In responding to a piece of music we are being led through a series of gestures which gain their significance from the intimation of community.". But in order for this aspect of meaning in music to be experienced, audiences must be capable of hearing the music *as* music. Hence Scruton is suggesting that musical meaning is rooted in the metaphorical experience of movement and is situated in musical culture, or, more specifically, *a* musical culture, which aligns the intuitively interpretive capacities of audiences and the aims and designs of composers and performers.

In theories of musical meaning that are grounded in aesthetic considerations, 'meaning' appears to take quite a different form from that which it holds in the types of semantic theories that can be applied to language. Meaning is immanent as a condition of felt response that depends on the qualities of the music as the object of listening and on the cultural capacities of its audiences. The factors that motivate musical meaning might be expressive, or might have their roots in the structural properties of western music (particularly in

the harmonic domain) that can be analysed in terms of patterns of tension and resolution. Just these types of factors were identified as the proper locus of meaning in music by Hanslick in the nineteenth century (see Cook, 2001), and cognitively oriented theories of music's meaning as rooted in its structural properties have been proposed by theorists such as Lerdahl (see, e.g., Lerdahl 2003). While locating the bases for music's meaning in its structures suggests that musical meaning is thus quite distinct from linguistic meaning, some philosophers have allowed that music might be capable of bearing meaning in largely the same way as language. Raffman (1993) explicitly engages with cognitive theories of music in formulating a sophisticated account of musical meaning. She suggests that music, by virtue of its capacity to be understood in terms of adherence to conditions of well-formedness, and its ability to be experienced as fundamentally informative (embodying goal-directedness in shaping listeners' experiences according to its articulation of patterns of tension and resolution) can be potentially susceptible to semantic analysis.

Hence at least some conceptions of meaning in music that are founded in traditions of analytical philosophy provide foundations for relating musical meaning to concepts of meaning that are applicable in other domains of human experience. Nevertheless, perhaps the majority of philosophical approaches to understanding meaning in music have differentiated musical meanings from 'everyday' meanings by binding music's significances solely to the aesthetic domain. As Cook (2001) points out, such approaches stand in stark opposition to those which aim to locate, and to understand, music and its meanings in the social contexts in which it arises. Theories of this latter type have emerged from sociological and ethnomusicological explorations of music; they are central to approaches that adopt anthropological perspectives on the investigation of relationships between musical sounds, practices and concepts (Merriam, 1964) in non-western and, increasingly, in western cultural contexts, to understand meaning in music.

### **Meaning in music in social and cultural context**

The idea that music's meanings are inseparable from the social and cultural situations and circumstances in which they arise has become widely accepted in musicological (e.g., Kramer, 1995), sociological (e.g., Martin, 1995) and ethnomusicological (e.g., Bohlman, 2000) circles. Here, the ideas that underpin much philosophical writing on music - that music constitutes an autonomous and primarily aesthetic domain - are called into question or outright rejected, whether on the basis that such ideas are grounded in ethnocentric assumptions as to what constitutes music, or on the grounds that such approaches cannot adequately deal with the historical and dynamic aspects of engagement with music

The consensus surrounding the notion that music is explicable only as in its social context evaporates when addressing the question of what *forms* these meanings may take. As Titon & Slobin (1996, p1) note, while "Music is universal... its meaning is not.". Across cultures there is a vast range of ways in which music may be experienced or interpreted as bearing meaning; music's meaning can be understood as foundationally aesthetic, personal or social, or in terms of combinations of any or all of these domains. Within such approaches, as Feld & Fox (1994) point out, it is difficult to disentangle specifically musical meanings from the meanings of the activities of which

music is a part. For example, in writing of Venda children's music, Blacking (1967, p31) notes that "Many songs... add to the meaning of a social event; they crystallize and confirm certain norms of behaviour"; hence the meaning of musical activities may be thought of as complementary to the specific circumstances that incorporate the music.

From such perspectives, meaning in music is multifarious and cannot be understood solely as a consequence of music's aesthetic dimension. As Clayton (Ch 4, this volume) indicates, music may fulfil a multiplicity of functions in different societies; taking this into account, its meanings can be best interpreted as adverting to emic conceptions of social facts and circumstances. Hence Feld (1982) is able to present a compelling account of the music of the Kaluli of Papua New Guinea as displayed in the *gisalo* funerary ceremony, where the musical component of the ceremony possesses a structure, identity, and efficacy in mourning that are inextricably bound both to its sacred connotations (it employs a motif derived from the song of the *muni*, a local bird which is the central numinous entity in the main Kaluli myth of 'the boy who turned into a *muni* bird' and thus joined the departed spirits) and to its place in the ecology of the local environment. Hence the meaning of the music is complex and local, in that it can only be understood by addressing it in the context of the belief systems and cultural practices within which it has a role. In other cultural contexts music's meanings may be interpreted as oriented towards more mundane ends, as when Blacking (1967, p31) notes of Venda children's music that "Knowledge of the children's songs is a social asset and in some cases a social necessity for a child who wishes to be an accepted member of his own age group". Here, music is interpreted as fulfilling an instrumental function in the formation of social groups, its meanings somehow bound up in the emergence, or the maintenance (cf Slobin, 1993), of individual and group identities as social facts.

In parallel with reconceptualisations of the idea of musical meaning emerging from anthropological perspectives are sociologically-motivated theories that have sought to ground musical meanings in the social and historical contexts of music, particularly in western culture. These theories have tended to conceive of music as social construct of which the meanings can only be elucidated by analysis of the processes and conditions that pertain to the contexts within which music is produced and received. Influentially adumbrated by Adorno (e.g., Adorno, 1976), subsequent accounts have frequently aimed to address issues of hegemony and resistance (Born and Hesmondalgh, 2000), and have led to radical accounts of meaning in familiar works of the classical canon such as the work of McClary (1991) on questions of gender in music, as well as to critical and subjectivist accounts of meaning (Kramer, 1995).

Meaning in music has been conceptualised variously by philosophers, musicians, anthropologists and sociologists. While the aesthetic view of music's meaning has been predominant for the last two centuries, other conceptions of the bases for meaning in music have emerged that locate these in the relationship between music and social factors and forces. Many of these theories have been explored in the context of cognitive theories of music

although, as we shall see, certain views of musical meaning present considerable obstacles to scientific theorisation and investigation.

### **Theoretical and empirical approaches to meaning in the psychology of music**

Most attempts to explore meaning empirically by way of music's aesthetic dimension have adopted a severely reduced notion of aesthetic engagement. As noted above, philosophical approaches view aesthetic judgment as dependent on, though not explicable solely in terms of, pleasure and liking; however, experimental approaches have tended to equate aesthetic judgment wholly with evaluative ratings of liking or pleasantness. The most influential theory in the field, that of Berlyne (1971), postulated an inverted U-shape function relating liking to stimulus complexity. Berlyne's theory has been empirically tested and found to account for aspects of the experience of music (North & Hargreaves, 1995); however, other studies (Orr & Olsson, 2005) have found no consistent relation between liking and complexity when factors such as musical style and level of musical expertise were taken into account.

There are fundamental difficulties in empirically exploring aesthetic experiences. In the first place, there is a lack of consensus as to the phenomenal and phenomenological correlates of aesthetic experience; do these inhere in the representative, the formal, or the expressive capacities of the artistic focus of aesthetic experience, or are they consequences of the capacities of the individual who has the experience? This lack of philosophical agreement is supplemented by the difficulties of implementing experimental designs that deal adequately with the issue of 'felt response' that is at the core of ideas of aesthetic experience. Perhaps some answers might be provided by neuroscientific approaches (see, e.g., Blood & Zatorre, 2001, in respect of intensely pleasurable responses to music), but even here what is being identified are not the phenomenological states that are the focus of philosophical aesthetics but neurophysiological states, albeit that these may have determinable correlates in behaviour and cognition.

Nevertheless, many recent accounts of aesthetic meaning in music tend to be rooted in the idea that music is expressive, particularly of the emotions. As is evident in the theories and empirical findings described in Ch 12, most empirical approaches to emotion or affect in music explore the phenomenon within frameworks derived from cognitive and behavioural sciences. Emotions are viewed as dynamic mind-brain-body states that arise in response to the experience of environmental and social events (see, e.g., Panksepp and Bernatzky, 2002). From the perspective of the cognitive sciences, emotional responses to music tend to be viewed as belonging to sub-classes of emotional responses in general rather than as being phenomenally in a category of their own (or even in a category together with responses to the expressivity of other art-forms). Hence the types of meaning that psychological approaches understand as arising from emotional engagement with music do not appear to rest on the same types of premises as those that have been postulated by philosophers such as Davies or Scruton as pertinent to the workings of music's expressive powers.

While it might seem that psychological understandings of music's affective meaning should have precedence over the non-empirical ratiocinations of

philosophers, it might instead be the case that philosophers have in fact identified good grounds for believing that music's expressivity cannot be understood simply by reference to general theories of emotional response. Indeed, the notion of 'disinterested pleasure' that is at the heart of Kant's conception of aesthetic engagement is one that seems almost to stand in opposition to the necessary interest that is implicit in psychological understandings of the experience of emotion. As yet, questions such as whether the affective states that music appears to elicit arise through empathic processes (as Davies, 2001, suggests) or arise directly in response to objective properties of musical structures have not been the sustained focus of experimental investigation.

Affective dimensions of specifically musical meanings have, however, been explored fruitfully by empirical investigation from sociological and social-psychological perspectives. The work of DeNora (2000) suggests that music can be meaningful in being employed by listeners to do 'emotional work' in regulating their emotions and moods in everyday life. DeNora's findings are reinforced by those of Sloboda, O'Neill and Ivaldi (2001), who employed an innovative approach (the Experience Sampling Method) to sample the nature and significance of the experience of music in day to day life. They found that music was particularly significant in social and individual contexts in which personal choice of music was available, and that the efficacy of music in regulating emotion and mood was greatest in such contexts. Intertwined with the empirical study of the individual and social functionality of music's affective dimensions are explorations of the ways in which music is used in the formation and maintenance of senses of self and of group. A wide range of research is reported in MacDonald, Hargreaves and Miell (2002) that indicates that perhaps the primary motivation for engaging with music in the contemporary western world is to facilitate the transactions involved in formulating, presenting and affirming the multiple dimensions of individual and group identities.

A very different account of musical meaning seems to emerge from some recent neuroscientific research. In an intriguing experiment, Koelsch et al (2004) found that similar types of brain responses were elicited when words that were semantically incongruous were presented following either linguistic or musical contexts (for the latter type of context, that words that were used had been rated as either congruous or incongruous in respect of the musical excerpts in a preceding experiment). This would seem to indicate that musical meanings were being experienced as directly relatable to the meanings of individual words; in their words (*ibid*, p302) "music can, as language, determine physiological indices of semantic processing". This finding suggests that musical meanings may indeed be of a similar type to those of language, in stark contrast to most philosophical accounts of musical meaning. However, in a subsequent experiment (Steinbeis & Koelsch, 2008) they suggest that the results of the earlier experiment arose because of imagery or association elicited in response to the music rather than through any intrinsically semantic properties of music. In the latter experiment they find that the semantic unexpectedness of a sentence modulated the neural response to a simultaneously presented musical excerpt that contained an unexpected chord, but that the unexpectedness of the musical event had no effect on the processing of the sentence. They take this finding to indicate that

tension-resolution patterns in harmony motivate cognitive and neural responses that are analogous with the contextual integration aspects of language processing, but do not call on representations of semantic knowledge. Hence they suggest that musical 'meaning' is best conceived of as being borne by the patterns of tension and resolution embodied in music, and is of a fundamentally different order from linguistic meaning.

This notion is somewhat problematised by research that applies the experientialist ideas of meaning developed by Johnson and Lakoff. Brower (2000) and Zbikowski (2002) present complex theories of the ways in which body-image schemas may be applied to understand the ways in which music may mean, illustrating their theories by reference to detailed analyses of structures in western art music. They suggest that while the experience of musical meaning may well be mediated to patterns of tension and resolution, these patterns are themselves motivated by underlying body-image schemas that render the patterns coherent and comprehensible to listeners. Based on the results of a series of experiments and analyses, Larson (1998; 2002; 2004) has explored the extent to which experientialist ideas can account for listeners' experience of aspects of musical structure. Larson & Van Handel (2005) note that 'physical force schemas' appear to account well for listeners' judgments of musical pattern completion, supporting the idea that the types of musical meanings supposed to inhere in tension-relaxation structures in music are in fact grounded in experientialist schemas, a finding supported by subsequent experimental work by Martinez (2007).

### **Conclusions**

One fact that becomes clear on surveying the literature on musical meaning is that there is no consensus as to how questions of musical meaning should best be addressed; indeed, certain philosophical perspectives call into question the idea that music can be claimed to have meaning at all. However, the majority cross-disciplinary view is that music is imbued with meaning, whether music is conceived of as aesthetic object, cultural commodity or social process, yet each discipline tends to propagate ideas of musical meaning that tend to lack the robustness to survive outside its borders. Perhaps it is the case that musical meanings are multifarious and that there is no single approach that can claim precedence for its own conceptions of those meanings. This heterogeneity of solutions to the question of musical meaning poses problems for the psychological sciences; as we have seen, quite different depictions of musical meaning emerge from the theoretical and empirical literature surveyed above. Again, it could be suggested that this is an inevitable outcome of the diffuseness of the concept that it being investigated; nevertheless, the diversity of psychological approaches do exhibit some common themes, although it is evident that there are some conceptions of meaning in music that have not been addressed.

Musical meanings in non-western contexts have remained largely unexplored from psychological perspectives. This is unsurprising, given the relative dearth of studies of music cognition in non-western cultures compared to the number of studies conducted in western contexts (see Ch 2, this volume). Yet the issue of musical meaning can only properly be addressed by the cognitive sciences when the types of meanings highlighted in numerous ethnomusicological studies are made the foci of psychological exploration. In

addition, most empirical approaches to meaning in music take as the object of their investigation the processes that are involved in music listening. While this view is consonant with the ideas of music expressed within most philosophical and many sociological approaches (a notable exception in the latter domain being the work of Finnegan, 1989), ethnomusicological research indicates that music might be better conceived of as a mode of interaction rather than as the object of auditory perception. The psychological sciences need to find means of addressing the study of the meanings that are inherent or emergent in processes of musical interaction, with a few studies beginning to indicate possible methods whereby this might be achieved (see, e.g., Clayton, 2007). Finally, the cognitive sciences of music will need to accommodate new approaches to meaning such as Millikan's (2004) 'teleosemantic' theory, which aims to account for meaning within an evolutionary framework (some theoretical groundwork in this area has been laid in Tolbert, 2001, and in Cross & Woodruff, in press).

The issue of musical meaning is unlikely to be accounted for by one generically applicable theory and is unlikely to be amenable to scientific exploration by any one method. This chapter has laid out some of the principal influences on the study of meaning in music and has suggested that some have had more impact on the scientific exploration of music's significance while others have been unduly neglected. Theoretical and empirical research into musical meaning is still at an early stage within the cognitive sciences; this chapter would suggest that it is important that multiple perspectives on meaning in music, particularly those emerging from the study of music in non-western context, are taken fully into account in future explorations of musical meaning within the cognitive sciences.

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