

## Pragmatics of Music and Emotion

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### ABSTRACT

There is a tradition which considers music as analogous with language. This article explores aspects of that analogy. It agrees with the tradition that music possesses a syntax, and musical semiotic systems which assign 'values' or 'musical identities' to sounds, but that music does not possess a systematic denotative semantics. It cannot 'refer' to the world. However, the article disagrees with the alternative claim that musical 'meaning' is essentially to do with the expression of emotion. The hypothesis advanced is that recent developments in Pragmatics, in particular the Relevance theory account of cognitive processing, communication and poetic effects, can account for many aspects of the comprehension of music. A number of kinds of musical understanding are discussed. It is argued that emotion and other affective responses to music are socio-linguistically constructed in diverse contexts or 'registers' of musical consumption, also according to pragmatic principles.

1. **Language of Music.** This phrase is ubiquitous. How should we understand it? One reason it is used is the resistance of music to theoretical explanation. Music remains "the unanswered question", (Bernstein 1976; Durant 1984). The phrase "the language of music" represents a strategy for thinking about music.

Are we using 'language' to mean 'sign system'; looking for a theory so general that it includes both music and natural language? Such a theory was the aim of the new science of semiology proposed by Saussure (1962: 33). Or should we take 'the language of music' as a metaphor? It would be an analogy posed in the belief that a source domain, language, is isomorphic in relevant ways to the target domain, music, so that linguistic theories or

methods of analysis will apply in the same way to music. Chomsky's generative paradigm has been used this way by Bernstein (1976) and Lerdahl and Jackendoff (1983). But 'scientific' metaphors are complex, especially when they are between disciplines (Black 1962; Gentner 1984; Hesse 1980). We must remember that music is not natural language. Therefore great care must be taken with disanalogies. In fact, disanalogies could be 'learning devices' which both draw attention to the peculiarities of natural language, in contrast to music, and highlight what is semiotically common to at least these two forms of communication. To do this systematically would be an interesting research programme.

My strategy here is agnostic about both the best way to represent the formal nature of music ( 'analysis') and what aspects of it might be innate. My hypothesis is that music is interpreted following the same general principles according to which language is interpreted. Therefore, it follows that Pragmatic theory, as developed in philosophy, linguistics and cognitive psychology, can characterize how people understand music (for Pragmatic Theory, see Levinson 1983; Sperber and Wilson 1986). The formal input, the representational medium of musical cognition, and the social contexts and practices are all very different, and these affect comprehension. But the same interpretative principles are involved. This is also because to the degree that language is comprehended according to general principles of cognition and communication ( the scope of Pragmatics in Relevance Theory ) music will fall under those principles. And alternatively, Pragmatic theory becomes a general approach to mind. In the case of music, the situation is doubly complex, since language itself serves as a meta-language for, and shapes other aspects of, some kinds of musical understanding.

2a.

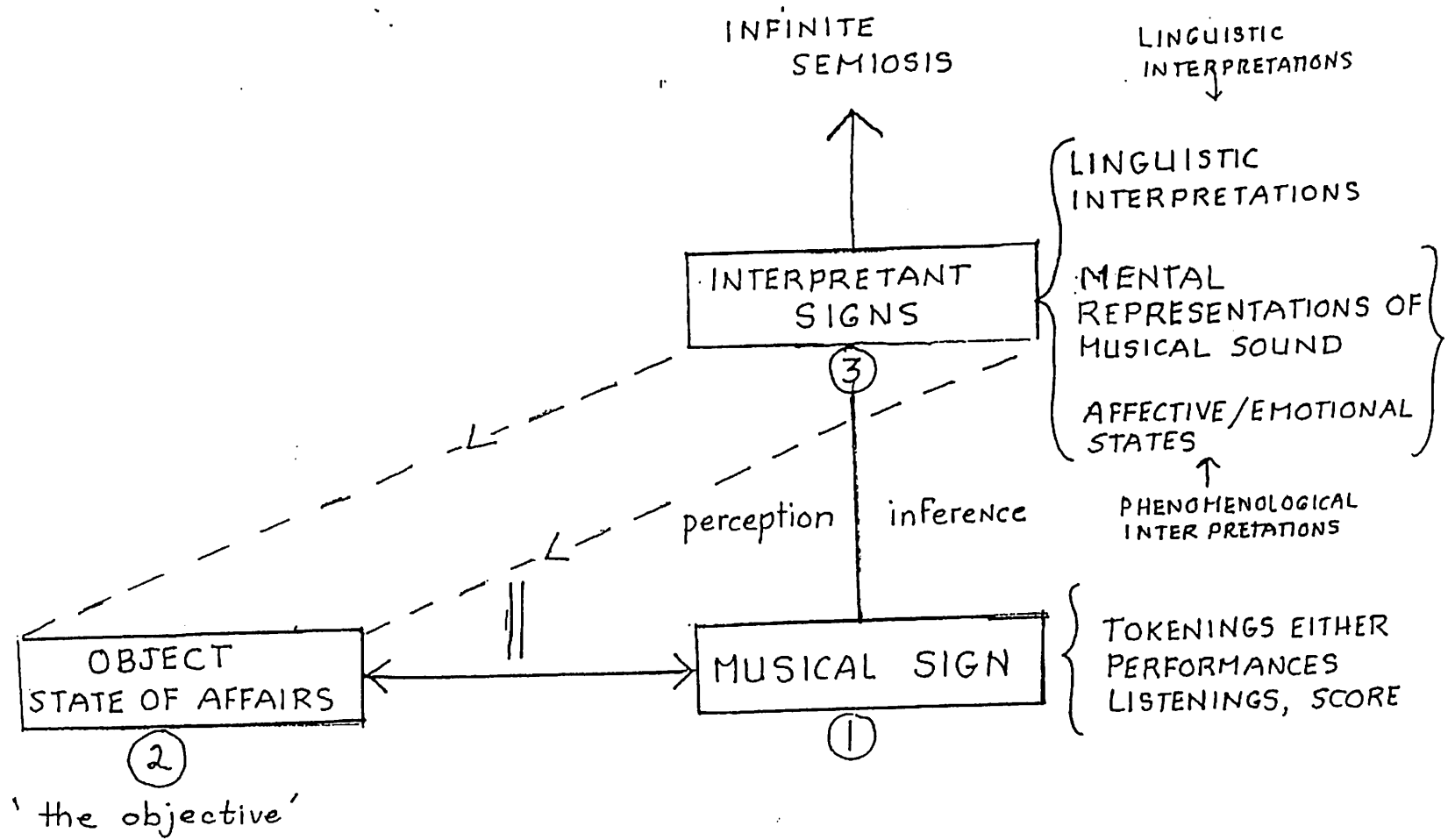
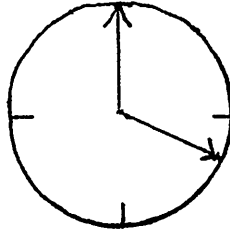


Figure 1.

PEIRCE'S CONCEPT OF SIGN, OBJECT and INTERPRETANT

**2. Inferential Semiotics of Music.** C.S. Peirce's theory of signs can reveal some of the peculiarities of music as a semiotic system (Peirce 1982). Peirce's sign relation, diagrammed in Figure 1., is irreducibly triadic. It involves the three entities: the *sign* (1) ; the *object* (2) ; and *interpretant signs* (3). A sign is a sign if and only if it stands in such a triadic relationship to some object so that this relationship determines another relationship between the sign and its interpretants, such that the interpreting signs stand in the same relation to the object as does the original sign. Sometimes the relation between sign and interpretation seems perceptual. But even in these cases, according to Peirce, inference in context is involved. This position has support among psychologists (see, for example, Gregory 1970 or Johnson-Laird 1988). The relation of sign and interpretant is inferential. In principle, an interpretant is an inference concerning the relation of sign and object, although sometimes what was an hypothetical inference has become stabilized and established as a convention (Lewis 1969). In other cases, interpretants might be 'innate', that is, the inference might be genetically determined, having arisen either directly from or concomitant to natural selection, and be triggered by certain stimuli in certain contexts. (For a summary of nativist arguments for many aspects of cognition, see Pinker 1994). In the first case, the hypothesis is 'formed' by the individual's inferential activity in social context. In the two latter cases, the inferences are made by 'convention' and by 'evolution' respectively. In these cases, we can think of the relation as 'coded', or representable by us as axioms in a deductive system. By contrast, in the first case the correct hypothesis is not entailed by experience, but must be 'formed' by the interpreter on the basis of stimuli treated as evidence. This is not to say that the ability to form good hypotheses on the basis of successful induction might not also be the result of natural selection, as Peirce thought, see also Pinker 1994: 417-418.



Now consider the face of a clock. This complex sign stands in relation to its object, a particular time of day, such that an interpreter assigns the interpretant signs, "It is now four o'clock". This interpretant consists of English signs conveying a proposition which is true of the same object or state of affairs as that represented in a different way by the position of the hands on the clock face. The literal interpretation of the 'time' is 'coded' by convention by the position of the hands on the dial; as is the semantics or 'logical form' of the English sentence. But note how the interpreter has to perform other inferences, and use background information, in actually telling the time: e.g. the clock is running; the 4.00 o'clock referred to is a.m. or p.m.; the clock is 'right', or at least not obviously 'wrong'. Consider both how abstract and general ( recurrent token of a type ) is the Peircean 'object' ( state of affairs ) represented; a 'time of day', an object constructed by and within cultural practices shaping and shaped by both the physics and the psychology of temporal perception.

Since the interpretant is also a sign, then it must also be interpreted, and so on. Each relationship of sign and interpretation implies another. This leads to 'infinite semiosis'. There are in principle an infinite number of things that I could infer from 'It is now four o'clock' in different contexts: e.g. 'School is out'; 'It's time to leave for the dentist'; 'The 27 Bus should have been here by now' etc. etc. In actual interpretative contexts, this is pragmatically controlled by relevance to a context and an individual. If 'It is now four o'clock' is used to communicate an intended message, then the interpretation is governed by

Sperber and Wilson's (1986) Principle of Relevance. In this case, the optimally relevant interpretation of 'It is now four o'clock' might be, for example, the precise intended message 'I have to leave'.

In Figure 1., I have allowed different kinds of interpretants for musical signs. A musical sign can be interpreted in terms of cognitive representations of other musical sounds. For any sound, if it is represented 'as a sound' as having a position and therefore a contrastive identity in relation to other perceived sounds in some scale or composition (either type or token), then it has been 'purely' musically interpreted by the mind in terms of that musical system or structure. In practice, a sound can only be heard this way in context. Alternatively, a musical sound can be interpreted by linguistic signs, or their cognitive equivalent. That is, sounds are understood conceptually, not musically: e.g., "That is in the key of F major"; "That is expressive of grief" etc., etc. This interpretation also requires context. Linguistic interpretants of music are the only way we can publically and consciously communicate about what we have musically enacted or perceived in terms which could be 'true' or 'false', and therefore explicit. Harmonica *maestro* Larry Adler plays some phrases of Gershwin on the piano and says, "That's Black!" (*The South Bank Show*, ITV, Sunday, Nov. 20, 1994). Two other important kinds of interpretants of musical sound may be affective states or physical movements. We shall look at these below.

**3. The Paradox of Music.** In the case of music, the object of the musical sign appears to be missing. It has often been said that music has no obvious semantics, (Jakobson 1971: 705; Eco 1979: 11; Aiello 1994: 54). This is true in the sense that musical signs do not convey a propositional form, and therefore when performed do not make claims of truth or falsity

with respect to possible states of the world. There is no truth conditional semantics possible for music, no truth-values, no referring expressions, no predicates, no operators. However, musical form *can* be used to denote. For example, *Waltzing Matilda* conventionally represents Australia, or some sounds in Messiaen can be interpreted as quoting birdsong. The British used Beethoven against Germany during WW2 for propaganda purposes. Asked about this, the film maker Humphrey Jennings replied that when Germany became civilized again, it could have Beethoven back. But this kind of extraversive semiosis, where the object is outside the system, isn't either necessary or sufficient for a sound to be music. On the other hand, music is both intelligible and potentially communicative, although not necessarily denotative. So we have pragmatics without truth-conditional semantics. But this is the normal situation with non-linguistic signs; that is, with any stimulus that can be interpreted in some perceptual context. So the 'paradox of music', that it is communicative and meaningful but doesn't have a truth conditional semantics, isn't really surprising, nor a paradox. Truth conditional semantics is not a necessary condition for either meaningfulness or communication. More on this below.

**4. The Palpability of the Musical Sign.** However, in the absence of the 'objective', of being able to explicitly say anything true or false about the world, music has often been viewed instead as 'subjective' or aesthetically expressive. Because there are no states of affairs about which truth claims can be made, the way is open to view music as expressing emotions. For example, Aiello (1994: 54) finds the missing meaning;

" But, semantically, where is the musical meaning to be found?  
Is the semantic level of music to be found in the emotions that  
music elicits? To a great extent Yes.... A close link clearly  
exists between musical cognition and the emotion that music elicits,

but an evaluation of this link is yet to be researched thoroughly. Meaning in all its complexity, most likely lies hidden in the emotional content of music...."

A position like this is also recommended by Nattiez (1990: 118 ff.). The working out of a literal extraversive emotional semantics for musical forms was attempted by Deryk Cooke (1959). However, the idea that musical forms literally designate or code feeling states, or the Romantic theory that music exists to 'express emotion' are quite indefensible. For a sound to arouse emotion isn't a necessary or sufficient condition for it to be music. I can hear the highly affecting sound of a piston-engined aircraft outside my East Anglian window. I feel no identifiable emotion as I concentrate on the harmonic structure of such and such a passage. I recognize that *Martin Chuzzlewit* is over as I watch the credits roll and listen to the theme, but feel nothing either specifiable or relevant with respect to the sound. Others might. Such contingent and variable factors cannot be 'the meaning of music'. Even if there is some 'tropism' in music and certain formal structures have a uniform affective salience for human beings, although this could be utilized in a composition, it couldn't exhaust 'the meaning' of that piece of music. If it was, that piece would be synonymous with every piece in which that structure occurs, and this is not the case. All pieces in which ascending 1-3-5 triads in major keys occur do not incorrigibly 'mean' or 'denote' an identical positive, joyous inner state. ( For a full philosophical consideration of these issues, see Wilkinson 1992: 198 ff.).

This absence of semantics also renders the musical sign 'palpable', in Roman Jakobson's sense, (Jakobson 1960: 356). Our attention is drawn to the substance of the sign. Musical signs are opaque. In most language use, we pay little attention to the form or substance of the text itself. It is irrelevant. We 'see through' it to the message. In the case



of music, in the absence of truth claims, the physicality of the sign itself is experienced more fully. The relevance of music is calculated in terms of the significant patterning of the physical substance itself. This physicality is experienced as sensation which has been produced for its own sake, in one sense at least. And any sensations are experienced non-cognitively, as pleasures, distresses, etc.. We locate these 'in' the body. They are bodily sensations in dialectic with the physicality, the 'grain' of the sound, to adapt Roland Barthes' term (Barthes 1977).

This raises Barthes' typology of pleasure between *plaisir* and *jouissance*; the physicality of the above sensations would place them towards the category of the latter, as opposed to the more cognitive, cultural pleasures of interpretation commonly associated with the former. We will turn to issues of interpretation and its pleasures below. But before that, let's consider another possible source of musical affectivity.

It has been suggested that there may be a more primitive level of sub-personal response to music. In a discussion of musical repetition Richard Middleton (1986) distinguishes between two kinds of repetition in musical syntax, *musematic* and *discursive*. As its name suggests, discursive repetition is the higher level repetition of longer musical units. This is the sort of narrative repetition of themes which reaches its extreme in 19th century symphonies, Mahler, for example. On the other hand, musematic repetition is "the repetition of short units"; a kind of immediately recursive music typified by Afro-American music and rock. Middleton (1986: 163) mentions the 'riff' as a prototypical unit of musematic repetition. The interest of this (possibly questionable) division of musical repetition into two types is the association of a certain type of *jouissance* with musematic

repetition. *Jouissance* is not just a matter of physicality. It is produced musematically because this sort of repetition accesses what is biologically primal in sound structures, prior to the emergence of the human subject as a sign user. The response is thus pre-cognitive; and in this sense has an affinity to mystical states. Middleton (1986: 170) writes,

"Its origins lie in the aural relationship of baby and mother....The initial connotations of sound structures (the origins of which may go back beyond the repetitive 'coos' of the mother even into the womb: the (equally repetitive) sound and feel of maternal breathing and heartbeat are prior to any emergence of a subject...; for this reason the basic pleasure of music may be thought of as narcissistic - just as its basic technique was earlier described as infinite repetition, or , in terms of psychological development, as the 'primal metaphor', in which everything is combined in a 'great similarity'."

In adults these sensations are accessed from the unconscious by musical repetition, accounting for its production of ecstatic self loss or *jouissance*. Interesting as Middleton's form of tropism is, it is on a different level of response than the 'emotional' responses which are claimed to constitute differentiated musical meanings, to the 'palpability of the musical sign', (or even to the kind of nativism that proposes that diatonic music may be a 'natural' cognitive capacity). The above theory of the primal nature of short, musematic repetitive structure would suggest a single undifferentiated human response at this deepest of biological and physiological levels. Certainly, it is possible that there may be layers of non-cognitive responses to music, grounded in either the unconscious or physicality (see Figure 2. below Pg.26a). Here we are trying to interpret in language what the listener would experience as *jouissance*. Both of us are assigning interpretants to the sound; the listener's would be a 'tropic' affective interpretant of the sound as a sign i.e. *jouissance*. The object would be the particular primal biological/physiological situation of the human organism which caused the

sound pattern (as an indexical sign) to evoke the interpretant affectivity. It is then culturally open to us to further interpret the *jouissance* in some appropriate way to make it 'truth conditionally' intelligible and socially functional. For this we need language. The pattern is the same as in mysticism.

**5. The Musical Identity of Sound.** At the same time, a musical sound is also extremely abstract. In Pierce's terms, if an auditory-acoustic experience is to be a sign, then it must enter into the triadic relationship. Logically, if it isn't a sign 'of' anything, it isn't a sign. A musical sign as musically comprehended is not understood as an index of its cause, like the whoosh of traffic up Dereham Rd., the hush of the wind in the trees, the sound of the boiling kettle. I can't say, that sound was made by a saxophone, therefore it is music.

The strategy adopted by semioticians has been to say that certain kinds of systematic relations between sounds transforms those sounds into musical signs. This is called 'introversive semiosis'. In Jakobson's words (1970: 12, quoted in Nattiez 1990: 111),

"...instead of aiming at some extrinsic object, music appears to be *un langage qui se signifie soi-même*....Diversely built and ranked parallelisms of structure enable the interpreter of any immediately perceived musical signans to infer and anticipate a further corresponding constituent... and the coherent ensemble of these constituents. Precisely this interconnection of parts as well as their integration into a compositional whole acts as the proper musical signatum."

The peculiarity of musical comprehension is that musical signs have objects - states of affairs that make possible an inferential relation of sign and interpretant - which consist of temporally unfolding networks of relationships of sound, or auditory-acoustic possible

worlds, relativized to types of musical structures available in a culture. A sound (or silence) becomes a musical sign only if an interpretant can be assigned to it within two inseparable contexts. The first context is the temporally unfolding auditory-acoustic patterning which is the tokening of a musical type, the performance of a piece. The second context, both abstracted from and instantiated in the first, is the system of music in the culture in terms in which the sound is intelligible as music; i.e. can have an interpretant assigned to it. Music is a matter of 'hearing as'. A note is thus abstract. It is not a sound, but a sound which is comprehended as having, in a context, a certain musical identity. A position like this lies behind all those views that take musical meaning as lying within music itself, from Hanslick (1854, 1957) to Ruwet (1972).

The very same sound could be comprehended as:

First, in the context of abstract musical systems, e.g.

1. the fifth in the diatonic scale in the key of C major
2. the tonic in the diatonic scale in the key of G major
3. the 8th note in the chromatic scale of C
4. the 3rd note in the root position in the C major triad
5. the 1st note in the chord of the dominant of C major  
and so on without limit.

Second, in the context of instantiations of musical structures drawn from musical types

( the unfolding temporal auditory-acoustic pattern in a performance as a token both of a particular composition, and of a type or genre of music), e.g.

1. the first two notes in the second bar of the initial melodic phrase that begins the Second Movement of Haydn's *Symphony No. 94*, 'Surprise'; the dominant in the key of that Movement.
2. the basis of 'the Surprise' in the 16th bar of the same Movement.
3. the initial note in Berg's *Violin Concerto* series (Pople 1991: 29).

The musical identity of sound is thus inferable within systems and structures of relationship.

However, this does not exhaust the complexity, since music is a system of such systems. There are at least nine dimensions of sound organization which are musically significant and of course each of these are temporally simultaneous and dynamically unfolding.

1. **Rhythmic Structure and Tempo** - monorhythmic, polyrhythmic
2. **Relative Loudness** - analog system of degree
3. **Melodic Structure and Tonality**
4. **Harmonic Structure**
5. **Tone colour** - the quality of the sound - instruments, voices
6. **Orchestration** - the roles of the sound qualities
7. **Musical Structure or Generic Forms - Repetition/Variation**
8. **Musical Texture** - monophonic, homophonic, polyphonic.
9. **Styles of Playing, Singing**

A performance of a piece is thus a substantial instantiation in time of a multi-dimensional texture of musically identifiable sound. And it can be expounded in any appropriate physical medium.

**5. Relevance Interpretation of the Texture of Sound.** As it unfolds temporally on each dimension in any given case, the sound can only be interpreted in the first instance in terms of equivalence, sameness or difference, projected into the temporal sequence. The principles of the musical genres recognize this as they specify normative contexts for 'hearing as'. Musical structures are built on repetition and the variation dependent on it. This is identical to the empirical criterion of the 'poetic function' of language (Jakobson 1960: 358).

Middleton (1986) argues that as a structural type within signifying practices, music tends towards an extreme of non-differentiation, to repetition and therefore 'sameness', as opposed to language (which tends to differentiation because of its denotative dimension). Musical codes are based on predictability and the relevance of variation is relative to that context of predictable repetitiveness. "At the theoretical ultimate, then, music reduces to infinite repetition". Therefore, "the tendency of musical codes is like that of poetry *but more so*" (Middleton 1986: 162). The psychology of musical perception will therefore involve in this respect, expectation and its violation relativized to contexts (Meyer 1956; Bharucha 1994).

We can now consider how this might be handled by Pragmatics. Sperber and Wilson (1986) propose that all cognitive processing is governed by relevance. The relevance of a stimulus is a trade-off between the number of contextual effects it has ( in this case, changes in the state of the processor from the state which it is in when it first receives the new stimulus ) and the processing effort required to calculate those effects. A stimulus may achieve relevance in different ways. There could be relatively few, but still adequate effects, relevant because they were achieved with little processing effort. Or there could be more effects, achieved with more effort. A very relevant stimulus might be one which has a rich plethora of effects, achieved economically. In their analysis of intentional communication, Sperber and Wilson argue that effects which are intended are those which are 'optimally relevant'; that is, those which achieve effects which the hearer considers adequate (in the context) in the most economical way possible, with the least processing effort. But communication need not be intentional. In 'poetic' contexts, relevance can be achieved through a wide variety of effects, for which the hearer rather than the producer takes responsibility. We can use this theory to describe four types of musical comprehension.

5(a). **Formal Musical Comprehension.** How can a musical stimulus achieve relevance? I will assume a purely musical comprehension as the first level. Musical relevance will be achieved in terms of the processing of the sounds as musical signs, or musical cognitive representations. The context for the calculation of relevance will be created by the unfolding temporal structures on all the dimensions; and second, the expectations to do with mobilized generic norms, previous experience of the piece, the composer etc.. The processing effort involves working out the musical identity of the sound, or higher level pattern of sound, in this dynamic context. The new sound will be placed with respect to the pattern that has developed thus far. This unfolding will have created expectations, relative to accessed background musical systems. The musical identity of the sound involves its relation to those expectations. If the sound is problematical, it may require the mobilization of more background, in order to comprehend why it is the way it is, its place in the musical systems, or relative to the stylistic manner of the composer etc. Another input is to consider the interpretative or expressive choices of the performer in each instance. We can ask the relevance of choices made in how the piece is being played, and also attribute intentions on this dimension. The context change provided by each new development of the sound pattern changes the expectations as to how the piece might develop, since each pattern projects different possibilities. The processing involved will be of the kind demanded in order to place the stimulus within these contexts; how it changes them, how it develops them, how it effects the higher level structure that is developing. The contextual effects can be measured by the richness and complexity of the musical identity of the sound, its position within the piece.

However, given the fact that there are at least nine levels of musical patterning and each one of these can simultaneously vary in the context of a performance, there appears to

be no clear limit to the depth and complexity of musical comprehension. Can we draw a line around certain degrees of processing and levels of effect and say that they are adequate, designed specifically by composer or performer to be comprehended? In other words, are there specific musical messages which are intended? There is no doubt that this does occur on one level. The recognition of a tune, a melodic line, a variation on a theme, or a 'designed' effect like Haydn's 'Surprise', seem optimally relevant and therefore intended. There is a 'shallow' intended level of musical comprehension, for example, 'making out a tune', which any member of the 'music community' would comprehend. And there could be other more complex and specific musical intentions aimed at specific audiences.

But musicians also have perhaps a more general intention that music be 'maximally' comprehended; that the listener understand all that they possibly can about it. In principle, there are no limits to the number of effects that could be produced in infinite time or by a mind with unlimited processing power. In practice, there are fluid limits to which the multi-dimensional identity of musical sound can be musically comprehended within the temporal horizon of musical unfolding and the musical training of the listener. Depending on the situation and listening practice, listeners will comprehend music to whatever depth they attend to and are able to calculate within the time horizon. This will clearly include a wide array of unintended effects. Thus we note another aspect of the 'poeticalness' of music (earlier we noted the palpability of the sign and the principle of equivalence). In concert or electronically recorded listening, relevance will be maximized. We ought to note also that the process of musical comprehension is not explicitly conscious. The calculations which constitute relevance occur at the substrate neurological level, not at the level of conscious representation.



Degree of relevance, and changes in the way relevance has been achieved are the source of musical interest: adequate effects with little effort, clearly intended; more complex effects, easily achieved, clearly intended; maximized very complex effects requiring a great deal of effort, and unpredictable in the way they might develop, probably not intended; effects across musical dimensions etc.. One can work out the fairly high degree of relevance, for example, in the 16th bar of the Slow Movement of the 'Surprise Symphony' cited above. Considerable processing is involved, but the pay-off is rich. I'll leave it to the reader to work this example out in detail. But this kind of clearly intended effect is just one kind of musical relevance. The general idea in this section is a re-statement of Meyer's (1956) use of expectations in terms of Sperber and Wilson's (1986) Relevance Theory. We can propose that the affectivity associated with purely introversive musical comprehension would be Barthes' *plaisir*, which would be combined with the sensuous textured palpability of the sound as physical pleasure. Its potentialities could be more foregrounded in different historical periods (e.g. the 'Classical period') and in some uses or functions of music more than in others.

**5(b). Allusive Extraversive Layer of Comprehension.** A second way that the same musical sound can be understood is in terms of wider contexts which are made accessible within the stimuli. We remain within purely musical cognition. A stimulus can achieve some of its relevance because it adds to context some external sound pattern which is recognizable and this will add other contextual effects. We can ask, for example, why the composer did it.

A clear example might be Alban Berg's famous allusions in his Violin Concerto to a

Bach chorale, *Es ist genug!*, Carinthian folk song, and waltz pastiche. The first of these also uses a clarinet ensemble to imitate a small pipe organ. Furthermore, it is a tonal harmonization, placed in a partially atonal context. These musical sounds are identifiable extraversively, and that is clearly part of their relevance. In principle, the whole 'auditory-acoustic space' of the Bach corpus and period is mobilized. To the degree that any pattern of sound is categorizable as musical sound of a generic type, it can achieve relevance partly through this allusiveness. The generic rhythm of the 'waltz pastiche', common in Viennese music and semiotically rich, illustrates this very well. In a sense, any music alludes to and mobilizes the 'type' it is, and all that type means.

Any work in this respect has a layer of such extraversive interpretative possibilities and can deploy these to achieve relevance. For example, in the first track of side A of *The Prodigy's* CD, Music For The Jilted Generation, the iconic signs of heartbeats, and heartbeats heard as if through some medical monitoring device, typewriting, a door opening, breathing, allusion to some of the chord progressions of horror films, the tone colour of an organ, the 'tardus' sound from *Dr. Who*, and speech, "So, I've decided to take my work back underground...to stop it falling into the wrong hands", all occur. A whole layer of socio-musical meanings are accessed in both Berg and *The Prodigy*.

**5(c). Linguistic Interpretants of Musically Comprehended Sound.** The Peirce diagram in Figure 1. permits interpretants of a different type than the sign they interpret. Thus we can interpret musical stimuli linguistically and achieve relevance that way. Conversely, we can interpret linguistic, behavioural or visual signs in musical terms; see any narrative, setting, dance or programme music.

Arguably, it is impossible to share complex musical interpretations without ‘putting them into words’. This suggests that we also conceptually, that is, linguistically, interpret music at the same time as we are musically comprehending it. The two mediums of interpretation are interwoven. For example, the allusion to Bach in the Violin Concerto does not only access a purely musical auditory-acoustic space, but also a social and historical space. And this latter can only be linguistically represented. So musical stimuli can also achieve relevance by contextual effects which are more strictly conceptual or linguistic. In the Berg examples the whole social system of beliefs, attitudes and practices of grief and mourning surrounding the death of the young Manon Gropius are made relevant and anchored by the dedication, ‘To The Memory of an Angel’. This interacts with the allusiveness of the overtly religious chorale. And a linguistic text is also added to context in the setting of words to the chorale by Johann Ahle (1625-73), which are reproduced in the score. Such linguistic information will be used to calculate relevance. The linguistic relevance runs parallel to and interacts with the musical relevance, in calculating the effects of the stimuli. Linguistic interpretation is the only voice in which clear conceptual apprehension of the experience of the music can be available to consciousness in a way communicable to others. The development of ‘registers’ of speech and writing, the discourses of musicians and musicologists, attempts to develop ways of articulating the linguistic relevance of musical stimuli. These forms of text are worth study, for their own sake, as in Nattiez’ (1990) research.

**6. Emotion Again.** Emotional response still remains mysterious. There seems to be a general insistence that emotion of some kind is central to the experience of music. It is considered definitive in some way; not just the affectivity that is part of every experience.

This claim may be an aspect of a 'romantic' conception of art, of the sort familiar in the history of 19th century European, and particularly German, thought, and which is more deeply entrenched in thinking about music than in other art forms. One difficulty with considering the claim that the evocation of emotion is definitive of musical sound is that folk wisdom takes the phenomenology of emotions as given, unproblematical, foundational. But this is far from the case.

It is necessary to subject 'emotion' to theoretical, philosophical and historical examination. A sort of popular, anti-intellectual and mystifying set of attitudes commonly surround 'feelings' or 'emotions' in popular discourse, which are probably a popularization of 19th century romantic ideas. Feelings or emotions are often felt to be central both to what is 'human' and 'natural' and at the same time 'ineffable' or rationally and linguistically inexpressible (except in 'art'). Such ideas serve to present what is problematic and cultural, as what is natural (Barthes 1972). What does it mean to have an appropriate emotion, and 'know' you are having *that* particular emotion? What are you supposed to think or do about that 'emotion', or is it some sort of 'end in itself' or 'end of explanation' in motivation? ( She acted out of 'love', 'ambition', or 'greed', and that is all there is to say about it ). Do all normal humans differentiate, and therefore experience, the same feelings for which we use English vocabulary or do feelings vary according to language, culture and historical period? ( There clearly is a well researched history of 'romantic love' or 'nationalism', but is there a comparable history of 'envy', of 'solidarity', of 'ambition', of 'the sense of the holy or numinous' etc. ). Are these 'emotions' all the same sort of things? Can you be in an emotional state which isn't nameable? Can you be feeling an emotion and not be aware of it; i.e. are there 'unconscious' emotions? ( You must be terribly jealous, but you're not

letting yourself experience it ). Can you truly apply an emotional term to oneself or another when nothing is being felt, if the behaviour seems appropriate? Does language use presuppose the existence of unfeelt emotions, since so often we are told to heal ourselves by 'getting in touch with our emotions'? Does music have to affect emotions, as a necessary condition of sound being music? Can emotions be jumbled or mixed? Do they have clear criteria of identity? Attention should here be drawn to Wittgenstein's famous treatment of the nature of psychological terms, which would include the vocabulary of the emotional life (Wittgenstein 1958). The 'Anti-private language argument' shows that terms like 'grief' could not 'mean' by designating inner states of consciousness. Rather, the criteria for their use rests in a complex of external grief-behaviour, which may or may not be accompanied by feelings.

More recently, 'social-constructivist' analyses of emotions suggests that they may be constituted socio-historically within distinct linguistic practices, and serve social functions (For example, see the articles in R. Harré (ed)(1986). The Social Construction of Emotions. Also, Rosaldo (1984), Jackson (1993)). To be able to participate in these practices and use this vocabulary intelligibly is part of what it is to be a person; part of a theory of persons.

Returning to music, Meyer (1956, in Aiello 1994: 34), moves in this direction with his remarks on how cognition (thought, language) and emotion are not separable. He writes, "Once it is recognized that affective experience is just as dependent upon intelligent cognition as conscious intellection, that both involve perception, taking account, envisaging... then thinking and feeling need not be viewed as polar opposites but as different manifestations of a single psychological process." Meyer goes on to argue that the structure of expectation and

deviation involved in musical perception leads to a general state of affective arousal; a "disembodied feeling of affective experience".

I propose that this general affectivity is given intelligible shape socially and linguistically. This occurs when the processes of Meyer-type arousal caused by the comprehending of purely formal musical relevance become inter-twined with the inferencing of conceptual/linguistic relevance in social contexts. *The affectivity undergoes a socio-linguistic structuration, and thus becomes emotion.*

This may well have a socio-political or ideological function in historical context; especially if music is used to make certain culturally constructed 'emotions'; e.g. national sentiment, romantic love, nihilistic despair or religious joy, seem wholly natural. It follows that the same formal musical structure can be 'intelligibly felt' in diverse ways. And this kind of response only becomes relevant if we approach music with an emotional listening practice. How intelligibly 'moved' we become, could become a measure of the relevance of the piece to us in such practices. And, of course, it can be composed with that in mind. This sort of structuration which turns affectivity into the experienced socio-cultural construct 'an emotion' must be distinguished from the more primitive *jouissance*, the accessing of the pre-personal from the unconscious, distinguished by Middleton (1986) and discussed above. It also must be distinguished from the delight of cognitive construal or *plaisir* (picking up the allusions, mentally reconstructing the score, understanding the intentional communications of the performer), and also from the surface physicality, the grain, of the 'palpable' sign. It would seem that there are different 'layers of sensation and affectivity' produced by music with different possibilities of interpretative intelligibility. One imagines, however, that even these

more primitive affective responses could also be socio-linguistically structured, whatever their unconscious origins, and felt as mystical, or sexual, or as the 'felt identity' of a group, even pride in a football team, etc. in different interpretative contexts where this was relevant.

We need to be cautious in such a speculative area, *but arguably the principle of relevance guides the socio-linguistic structuration of the affective*. Only when affect, or more primitive or sensational responses, have been 'felt' (that is, interpreted) as intelligible emotions would the relevance of the musical sign be adequate; at least within romantic interpretative contexts. The music would feel 'unsatisfactory', 'emotionally unintelligible', unless some sort of identifiable emotion, including a purely aesthetic emotion (Oh, that is beautiful!), is felt. This would be the case in a historical cultural context where 'art' music is constructed particularly in terms of romantic ideas. This need not *necessarily* be the case; music doesn't have to be 'felt' in terms of 'emotion' by definition. That music be intelligibly 'felt' as a means of achieving relevance would only be the reflex of certain cultural contexts. It could just as easily achieve relevance by intellectual analysis, or organizing dance or ritual, appropriateness to architecture or narrative in a *son et lumière*, or in terms of other contexts and practices to be discussed shortly.

The interpretative neutrality of musical form is recognized by Suzanne Langer (1957), Ruwet (1972: 13-14), and Nattiez (1990: 118 ff.) when they point out that the dynamic structuration of musical form provides an unspecified, totally general analogue for other states of consciousness. Music provides abstract patterns which can be homologous to other states. It is a sort of open metaphorical vehicle. The patternings also correlate with similar patternings in other domains, not only of affectivity and emotion, but of both autonomic and

voluntary bodily processes, breathing, walking etc., and other perceptual fields, colour, shape, patterned repetition of physical forms. They can equally be socio-linguistically structured ( and also treated as analogues for emotion at the same time if one wants to do so). This synergy is obvious in dance, ranks of marching men, or figure skating.

**7. Social Semiotics: What are you supposed to do with music?** It is a truism that there is no one music in our culture. But one has to take this diversity seriously. Most profoundly, the production and consumption of musics are social activities which demand a critical socio-musicology (Adorno 1976,1991; Held 1980: 100; Shepherd et.al. 1977; Durant 1984). Consider what is involved in 'watching' *Top of the Pops*. Pragmatic understanding takes place in a bewildering range of socio-economic and ideological varying situations.

I will just list examples of this extraordinary diversity. First, the area of medium relationships - the technologies for musical production, reproduction and publication: (a) the instruments, electronic technology and vocal styles; (b) methods of production and reproduction, e.g. live performance, radio or television broadcast, recordings, CD, cassette etc. consumed on Walkman etc., sound tracks etc. Second, musical genres, art music vs popular genres, e.g. opera, the symphony, other choral and orchestral forms etc., pop, rock, jazz, blues, country, folk, dance, easy listening, musicals etc.. Within art music, the canonized tradition, ancient musics, non-western musics etc. In any generic category, the complex of subcategories continues to whatever delicacy is useful; acid-house, rave, techno-rave etc.. Third, the social activities constituted by the music in its fantastic diversity of institutions and their situations of production and consumption; e.g. amateur vs professional, private vs public, the various commercial music industries, record companies, symphony



orchestras, choirs, string quartets etc., conservatories, examining bodies. And then there are the specific situation types; the music exam, the karaoke session, the rehearsal, the practising at home, the music lesson ( see Diderot's, *Rameau's Nephew* ), the audition, whistling while working, gigs, listening to the sound track of *Betty Blue* on the Walkman on the train, musak in the mall, singing *You'll Never Walk Alone* in the football terraces, or the same song at an evangelical religious meeting. The prototypical public concert for the consumption of art music by a 'listening' audience is quite recent, the first public concert occurring in London in 1672. This vast inventory shows that the number of situation types involving music is infinitely diverse. ( Linguists will see the same social analysis of context of situation familiar from M.A.K. Halliday's (1978) Language As Social Semiotic. This suggests that there are 'registers' of music.) We can then ask, *What is the role, the social functioning, of music in each case?* How is it to be relevantly heard, listened to, used? *These are the contexts for pragmatic interpretation.*

Each of the above practices defines consuming music in a distinct way, by making available distinct listener roles. The classes of interpreters, and the interpretants they employ will vary. A ballroom dancer at *Come Dancing* assigns stylized dance gestures which interpret musical form which can be perceived as relevantly related to that form and judged accordingly in a contest.

These practices allow for the socio-linguistic structuration of affectivity into the musical analogues, so that the music can become saturated with what can be linguistically distinguished more or less clearly as emotions, if that is appropriate to the context. Once the situation structures what can be intelligibly felt, then it can be mapped onto the music in

whatever detail is situationally appropriate. Each sudden change in the sound pattern, changes in key or sound colour, tempo, rhythms etc. can be experienced as, arouse, structure, be interpreted in terms of, the contextually appropriate emotions. The contextual effects are interpreted as emotionally relevant. The relation of text and instrument in music is historically complex. But the effect of 'lyrics' in song, opera and other genres, and other extraversive allusions, are to *anchor* the interpretation of the open musical analogue. Conversely, the open musical analogue can be understood (in the more traditional way) as *interpreting* the words. These are two perspectives on the same process; without any prejudice about how the music might have been composed. In this context, it is worth remembering that the equality of purely instrumental music with vocal music is quite a recent innovation, really developing in the latter half of the 16th and first half of the 17th centuries. Other socio-linguistic functions that may have nothing to do with emotion can guide the interpretation of music in many situations. As noted above, the emphasis on emotional interpretation is arguably historical and contingent.

Lets consider the socio-linguistic structuration of affectivity, very likely the more primitive *jouissance*, in a particular case: the synergistic gestural, musical and social situation of 'raving' at 'a rave' within the context of 'rave culture'. Can we phenomenologically characterize the emotional experience of the crowds, the heat, the strobes, the 100,000 watt polyrhythmic intensely repetitive 'musematic' electronic music of *The Prodigy* at Munich's old airport with 25,000 other participants?

Let us try to linguistically interpret the complex of emotions manifested. There is ideological violation, danger, intense aggression experienced as thrill, cognitive empty-

mindedness, being 'cognitively blown', collective dionysiac self-loss, ecstatic happiness. Linguistic texts which articulate the sub-culture in interviews, reviews, reporting, point to the emotional interpretants, for example, the following from *New Musical Express*, ( Oct.15, 1994: 36 );

"F\_\_ the dolphins, what's the buzz?... the rave utopia of babes, booze and brain scrambling volume.... they're a ruthlessly designed raw excitement generator, tuned, polished, revved up, and ready to deliver... the dark rush of techno - that speed blur sensory gushing that you get when you've got your foot flat down and you come into a bend and the g-force threatens to pull you off the road and your whole life flashes before you.... Keith's bike is a CBR 900 Fireblade with flat sided carbs at a grand set and a nose cone made of the same shit they make the space shuttle from. Keith has had 13 accidents. "The buzz of crashing is unreal," he says. "Everything goes in slow motion. One of my best buzzes ever was going under a car." Hardcore, eh!"

These linguistic interpretants, themselves metaphors, are integral to the social activity and the functioning of the music within it. The music is relevant if felt *this* way, as expressing *this*, while raving. It is experienced as structuring conscious affectivity such as it is *that* complex of emotions, heard in *this* context and constituted in *this* practice, accompanied by the right behavioural manifestations. Music, language, context, work to-gether to create the emotional culture, or sensibility, of a period. And the emotion clearly has a political, ideological dimension, and hence so does the music.

We are now in a position to get an overview of all the ways that music can be interpreted and I have diagrammed this in Figure 2.. We can end by asking if any of these forms of comprehension are favoured as the 'correct' or 'best' way of responding to music.

**8. Music and Anxiety.** There is anxiety connected with 'Art Music' in our culture. This

### Interpretants and Comprehension

(A)-(C) includes the comprehension of **both** intentional 'communicative' and unintended 'poetic' effects.

**(A) Introversive Semiosis:** Identification of musical identity or value of sound within a system of music,

1. In terms of musical comprehension
2. In terms of linguistic understanding.

**(B) Extraversive Semiosis:** Interpretation of a musical sound or pattern as denoting or alluding to some other 'object' or 'text', in terms of either (A) 1. musical comprehension, or (A) 2. linguistic understanding.

1. Conventional denotation of a musical sign e.g. an anthem etc.
2. Allusion, iconicity, inter-textuality to some other musical or non-musical sign or 'object'. e.g. programme music, bird song, musical quote etc.

**(C) Interpretants of musical signs by signs of some other non-linguistic semiotic.** e.g. dance, gesture, lyrics, costume etc.

### Interpretants and Affectivity

**(D) *Plaisir*.** The pleasure of calculation of musical identity in terms of Introversive and Extraversive semiosis. Musical pleasure oriented to the cognitive comprehension of pattern and allusion.

**(E) *Palpability*.** The pleasurable physical sensation of the texture and quality of sound, grain of the sound patterning.

**(F) *Emotion*.** The socio-linguistic construction of intelligible 'emotions' in social situations of musical consumption, including the purely 'aesthetic' emotional response to A-E.

**(G) *Jouissance*.** (a) Ecstatic self-loss in response to ( musematic ) patterning in appropriate contexts of musical consumption. And (b) a quasi-mystical response to any self-transcending and non-cognitive aspects of musical experience.

Figure 2.  
Types of Musical Comprehension and Response.

is also true in the other domains of culture. In each area, there is a stratification between an art and a popular variety, and the high variety induces anxiety. Many feel that the art variety is complex, hard to understand in the correct way, and the repository of values which a listener, reader, or observer has to be trained to properly appreciate. This is particularly true of the modern, the contemporary, the *avant garde*. These are major 'fault lines' in the culture. One issue is whether there are criteria in form which distinguish Art Music from Popular Music, or whether it is a matter of listening practices, ideology and social situations. What is it that distinguishes what a person 'likes', from what they 'loathe'? Is there a correct way that normatively defines how music should be comprehended, interpreted or felt in order that it be properly consumed as art?

As we have seen, an emphasis on the emotional structuring of musical affectivity is one recommended listening practice in the culture. It makes the same popular prescription as regards poetry and art in general, perhaps as part of an agenda of using art to construct mass sensibilities. Outside of socio-linguistic contexts, it's hard to know how to construe the claim that music expresses emotion. ( At one extreme, listeners might freely associate imagery evoked by the music, and construct emotions appropriate to that imagery.) This could only be a favoured way of consuming music if its function was to be the self conscious cultivation of publically acceptable 'ways of feeling'; the production and reproduction of collective emotional life. Music could indeed have this ideological role in some contexts within contemporary culture, that is, the management of affectivity.

In fact, listening self consciously in terms of musical systems in the detailed way described above, is really only available to those with musical training and is only appropriate

in academic and concert contexts. These are social and historical phenomenon, a particular way of consuming and understanding music. Surely, they are not necessary or sufficient conditions for a sound to be 'properly' or 'satisfactorily' comprehended as music. The musical expert's way of listening surely cannot be the only correct, or even the best way of calculating musical relevance in all contexts. The "disembodied feeling of affective experience" might be felt as 'aesthetic' emotion, like the complex of pleasures and ecstasies which are part of the expert interpretative play of construing and reconstruing described by Barthes as 'the pleasure of the text' (Barthes 1976). These can be combined with the emotions socio-linguistically made relevant by the level of allusion, and linguistic 'anchorage', as in the Berg example above. But surely these are not normative, proprietorial emotions, required for a correct response to the music. We would not expect everyone to hear the music in the same way. It will vary with context. It certainly won't be the same as a music theorist's analysis of the structure. Therefore, we wouldn't expect experiments to reveal that non-musicians perceive or comprehend music in the same way as music experts, or according to the structures proposed by musical analysis (Cook 1994: 87ff.).

Whatever aspects of the perceptual input of music might be genetic, the relevance of the sound as music will differ from listener to listener, and from situation type to situation type. The detail of purely musical comprehension, the depth of analytical understanding of musical identity in achieving relevance, will clearly depend on both listener training and listening practice, the way the genre is normally listened to. This means that some listeners will only shallowly calculate musical identity, in a gross or obvious way, but adequately to achieve relevance through linguistic allusiveness, feeling the music as analogue for emotion, dancing or toe-tapping, sensing the bodily pleasures of the musical signs, and different

balances of all these responses depending on the kind of music. Different people, differently placed in society, will be experts in construing and consuming different types of music.

For example, in a country and western song such as those performed by Dolly Parton, the socio-linguistic comprehension of the ideology implicit in the lyrics, the unique 'grain' of the voice with its stylized nasality, whispers, spoken segments, hints of sobbing, the social meaning of the 'Appalachian' accent, will carry more relative weight in overall relevance, the effect of the musical identity of the sound on context, than the complexity of instrumental pattern. Above straightforward melody and rhythms, the breathy historicity of the harmonica, the expressively bent notes of the steel guitar, or the sliding between notes of the Hawaiian instrument, can be heard as homologues of stylized expressive human intonations and the heart-wrenching heaves of feeling which are part of the 'love complex'. Affectively, the song yields something to be intelligibly felt; the listener 'feels like crying', feels that their life is being directly spoken to.

Each kind of listener, in each genre, perceives the sound as relevant in some way, to some degree. In fact, the way in which relevance is achieved, the overall complexity of the response, may be cognitively equivalent despite the contrasting 'ways of listening'. But the balance between the different intertwined aspects may simply be different. ( It also depends on how deeply the listener is attending to the music, as opposed to treating it casually as background.) For example, the lyrics or the emotionally intelligible sound or the linguistic understanding may play a relatively larger role, at the expense of the formal texture or the orchestration of tone colours, which would be foregrounded in a symphony. The listening practices appropriate to the symphony and the country and western song may be equally

socio-musically rich and involving to their listeners in their situations. Academic listening practices wouldn't be appropriate to most musical situations. One could listen academically but that wouldn't be the appropriate listening mode for the music's social function in that register. But this is an uncomfortable conclusion, which has implications for the consumption of any art. One could argue that critical contexts, which analytically 'see through' the music and achieve relevance in that way, have important cultural roles in enriching, making conscious, and demystifying the social, aesthetic, emotional and political use of music, without however being the 'correct' way to experience it.

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