

2. 'The most important thing'...

Music as a 'universal language', the 'language of love' or at least of body and feelings rather than of the mind, as an art which transcends the sordid social realities of everyday life – these are some of the most commonly heard notions about the nature of music in the culture I belong to.¹² Glancing through the estimates of music's everyday importance (pp. 5-10), you do not need to be a musicology professor to work out that those notions of music will not be much use in explaining how and why, in the everyday reality of most people living in our media-saturated society, music communicates what to whom and with what effect. We obviously need a more prosaic working definition of 'music'.

Definition and axioms

In this book, 'music' will be understood as *that form of interhuman communication in which humanly organised non-verbal sound can, following culturally specific conventions, vehiculate combinations of emotional, gestural, tactile, kinetic, spatial and prosodic patterns of cognition.*

That dense and rather academic working definition can be made a little clearer with the help of the following eight axioms.

1. Music cannot exist unless it is heard by someone, whether out loud or inside someone's head.
2. Although the original source of musical sound does not have to be human, music is always the result of some kind of human mediation, intention or organisation, typically through production practices like composition, arrangement or performance. In other words, to become music, one or more humans has/have to organise sounds (that may or may not be considered musical in themselves), into sequentially and synchronically ordered patterns. For example, the sound of a smoke alarm is unlikely to be regarded in itself as

12. "If music be the food of love, play on; / Give me excess of it, that, surfeiting, / The appetite may sicken, and so die." Words spoken by Orsino, Duke of the romantic kingdom of Illyria, from Shakespeare's *Twelfth Night* (Act I, scene i, lines 1-3). 'Music, the universal language' reads the inscription on one of the stained glass windows in Liverpool's Philharmonic pub (*The Phil*), diagonally across from the city's Philharmonic Hall. Notions of music's 'transcendence' are discussed in Chapter 3.

music, but sampled and repeated over a drum track, or combined with sounds of screams and conflagration edited in at certain points, it can become music.¹³

3. If points 1 and 2 are valid, then music is a matter of interhuman communication.
4. Like the spoken word, music is mediated as sound but, unlike speech, music's sounds do not need to include words, even though one of the most common forms of music making entails the singing, chanting or reciting of words. Another way of understanding the distinction is to remember that while the prosodic, or 'musical' aspects of speech – tonal, timbral, durational and metric elements such as inflexion, intonation, accentuation, vocal timbre, speed of delivery, timing, periodicity, etc., – are all important to the communication of the spoken word, a wordless utterance consisting only of prosodic elements ceases by definition to be speech because it has no words: it is more likely to be understood as music.¹⁴
5. Although closely related to human touch, gesture and movement – for example, dancing, marching, strolling, jumping, hitting, tapping, shaking, breathing, blowing, stroking, scraping, wiping –, human touch, gesture and movement can exist without music even if music cannot be produced without some sort of human touch, gesture or movement.
6. If points 4 and 5 are valid, music is no more equivalent to touch, gesture or movement than it is to speech, even though it is intimately associated with all four.
7. If music involves the human organisation and perception of non-verbal sound (points 1-6, above), and if it is closely associated with touch, gesture, movement and prosodic aspects of speech, it is close to preverbal modes of sensory perception and, consequently, to the mediation of somatic (corporeal) and affective (emotional) aspects of human cognition.¹⁵

13. Even John Cage's famous 4'33 can be qualified as music because its performed 'silence' is organised as a sound event in relation to other, contrasting sound events.

14. Tonal languages, i.e. languages in which denotation is conveyed by means of pitch (as tonemes) as well as by consonants and vowels (phonemes), are discussed below (p.xx).

8. Although music is a universal human phenomenon, and even though there may be a few general bio-acoustic universals of musical expression (see p.15, ff.), the same sounds or combinations of sounds are not necessarily intended, heard, understood or used in the same way in different musical cultures (see tenet 3, below).

In addition to these eight axioms it is important to posit three more tenets about the concept of *music*.

Tenet 1. Concerted simultaneity and collective identity

Musical communication can take place between:

- an individual and himself/herself;
- two individuals;
- an individual and a group;
- a group and an individual;
- individuals within the same group;
- members of one group and those of another.

Particularly musical (and choreographic) types of communication are those involving a *concerted simultaneity* of sound events or movements, that is, between a group and its members, between a group and an individual or between two groups. While you can sing, play, dance, talk, paint, sculpt and write to or for yourself and for others, it is very rare for several people to simultaneously talk, write, paint or sculpt in time with each other. In fact, as soon as *speech is subordinated to temporal organisation of its prosodic elements* it becomes intrinsically musical, as is evident from the choral character of rhythmically chanted slogans in street demonstrations or in the role of the choir in Ancient Greek drama. Thanks to this factor of concerted simultaneity, music and dance are particularly suited to expressing *collective messages of affective and corporeal identity* of individuals in relation to themselves, to each other, and to their social, as well as physical, surroundings.¹⁶

15. See 'Music and socialisation' (p.27, ff.).

16. Even multitracking, overdubs, etc., although frequently performed by the same individual on different occasions, constitute an intrinsic collectivity of parts or voices.

Tenet 2. Intra- and extrageneric

Direct imitations of, or reference to, sound outside the framework of musical discourse are relatively uncommon elements in most European and North American music.¹⁷ In fact, musical structures often seem to be objectively related to either: [a] their occurrence in similar guise in other music; or [b] their own context within the piece of music in which they (already) occur. At the same time, it would be silly to treat music as a self-contained system of sound combinations because changes in musical style are found in conjunction with (accompanying, preceding, following) change in the society and culture of which the music is part.

The contradiction between MUSIC ONLY REFERS TO MUSIC (the intrageneric notion) and MUSIC IS RELATED TO SOCIETY (extrageneric) is non-antagonistic. A recurrent symptom observed when studying how musics vary inside society and from one society to another in time or place is the way in which new means of musical expression are incorporated into the main body of any given musical tradition from outside the framework of its own discourse. These 'intonation crises'¹⁸ work in a number of different ways. They can:

- refer to other musical codes, by acting as social connotors of what sort of people use those 'other' sounds in which situations, for example an 'ethnic' flute in the middle of a piece of mainstream pop or a 'pastoral' drone inserted into a Baroque oratorio;¹⁹
- reflect changes in sound technology, acoustic conditions, or the soundscape, as well as changes in collective self-perception accompanying these developments, for example, from clavichord to grand piano, from bagpipe to accordion, from rural to urban blues, from rock music to technopop;
- reflect fluctuations in class structure or other notable demographic change, such as reggae influences on British rock; or the shift in dominance of US popular music (1930s - 1960s) from Broadway

17. See section about 'sonic anaphores' in *Introductory Notes to the Semiotics of Music*, www.tagg.org/teaching/analys/semiotug.pdf.

18. See Assaf'yev (1976: 100-101).

19. See section about 'genre synecdoches' in *Introductory Notes to the Semiotics of Music*, www.tagg.org/teaching/analys/semiotug.pdf.

shows to the more rock-, blues- and country-based styles from the US South and West;

- act as a combination of any of the three processes just mentioned.

Tenet 3. Musical universals

Cross-cultural universals of musical code are bioacoustic. While such relationships between musical sound and the human body are at the physical basis of all music, the majority of musical communication is nevertheless culturally specific. The basic *bioacoustic universals* of music can be summarised in the following four relationships:

- between [a] musical tempo (pulse) and [b] heartbeat (pulse) or the speed of breathing, walking, running and other bodily movement. This means that no-one can musically sleep in a hurry, stand still while running and so on;²⁰
- between [a] musical loudness and timbre (attack, envelope, decay, transients) and [b] certain types of physical activity. This means no-one can make gentle or 'caressing' kinds of musical statement by striking hard objects sharply and that it is counterproductive to yell jerky lullabies at breakneck speed. Conversely, no-one is likely to use smooth phrasing or soft timbres for hunting or war situations because those involved will be too relaxed to do their job;²¹
- between [a] speed and loudness of tone beats and [b] the acoustic setting. This means that quick, quiet tone beats are indiscernible if there is a lot of reverberation and that slow, long, loud ones are difficult to sustain if there is little or no reverberation. This is one reason why a dance or pub rock band brings its own adjustable acoustic space, in the form of echo and reverb units, to venues where carpets and clothes absorb the sounds the band produces.

20. For relation between smaller bodily movements (fingers, eyes, etc.) and musical surface rate, see Tagg 1997. *Bra Böckers Läklexikon, vol 5* (Höganäs 1982: 145-146) states that a well-trained athlete's pulse rate can, if measured during sleep, be as low as 40 b.p.m. And that the pulse of a baby in a state of stress exceeds 200 b.p.m. This coincides with the limits of a metronome, from 40 (*lento*) to 212 (*prestissimo*).

21. Musical volume must be considered as a culturally relative phenomenon, in that variations between societies in the loudness of the soundscape (Schafer 1977: 71 ff, 151 ff, 181 ff) will require 'loud' and 'soft' to adapt to what is audible above the noise of the soundscape (Tagg 1987: 145 ff). For more about links between vocal timbre and types of human activity, see Lomax (1968).

- between [a] musical phrase lengths and [b] the capacity of the human lung. This means that few people can sing or blow and breathe in at the same time. It also implies that musical phrases tend to last between two and ten seconds.²²

The general areas of connotation just mentioned (acoustic situation, movement, speed, energy and non-musical sound) are all in a bioacoustic relationship to the various musical parameters with which they are associated (pulse, volume, phrase duration and timbre). These relationships may well be cross-cultural, but that does not mean that *evaluation* of such phenomena as large spaces (cold and lonely versus free and open), hunting (exhilarating versus cruel), hurrying (pleasant versus unpleasant) will also be the same even inside one and the same culture, let alone between cultures. One reason for such discrepancy is that the musical parameters mentioned in the list of 'universals' (pulse, volume, general phrase duration and certain aspects of timbre and pitch) *do not include* the way in which rhythmic, metric, timbral, tonal, melodic, instrumental or harmonic parameters are organised in relation to each other inside the musical discourse. Such *musical organisation* presupposes some sort of *social organisation* and *cultural context* before it can be created, understood or otherwise invested with meaning. In other words, only very general bioacoustic types of connotation can be considered as cross-cultural universals of music. Therefore, even if musical and linguistic boundaries do not necessarily coincide, it is fallacious to regard music as a universal language.

22. This practice is known as circular breathing. Of course, some musicians (e.g. jazz saxophonist Roland Kirk and every didgeridoo player) can inhale through the nose and blow out through a wind instrument. At the same time, there are all sorts of belated (e.g. bagpipes, organs), mechanical, electromechanical and electronic instruments that can make melodies without being hampered by the restrictions of the human lung. Some people even sing while breathing in. More importantly, neither percussion instruments (including mbiras, pianos, xylophones as well as drums) nor plucked / bowed instruments depend on inhalation / exhalation to measure phrases. Nevertheless, studies of rhythmic or melodic recurrence (reiterative, sequential, varied, etc.) in any music will almost certainly show that most rhythmic / melodic statements can be perceived as units (motifs or phrases) seldom occupying less than two or more than ten seconds. Even the didgeridoo player, who inhales while chanting into a hollow eucalyptus trunk, measures his constant flow of sound with rhythmic and timbral motifs that also fit in with phrase durations.

To make this essential point about music's cultural specificity completely clear, it is worth mentioning a little experiment I conducted at a symposium on cross-cultural communication.²³ I informed thirteen participants, all working in the sphere of immigrant cultures, that they would hear eight short examples of music which were 'all connected to one and the same thing: an important event in any culture and something which happens to every human being'. The participants were asked to guess what the common denominator might be and, if they could not think of anything, to jot down on a piece of paper whatever mood, type of action, behaviour, images or thoughts they felt the music communicated to them. All eight examples, each taken from a different 'non-Western' music tradition, were connected with DEATH, a universal phenomenon if ever there was because, with the exception of mass casualties in wars, natural disasters etc., the death of virtually every human is marked by some form of ritual in all cultures. Did the thirteen cross-cultural experts manage to spot death in the music they heard?

Despite the pretty obvious initial hint ('an important event in any culture and something that happens to every human being'), not a single respondent associated death or anything death-related (wake, funeral, mourning etc.) with any of the eight death-related music examples. True, connotations like COMPLAINT, WAILING, SADNESS, SERIOUS and SUFFERING occurred in response to two of eight extracts, but the most common descriptions of all the examples had to do with either [1] energetic action or excitement, for example WORK, WAR, FIGHTING, HUNTING, AGITATION, DANCING, ADVENTURE, GYMNASTICS; or [2] HAPPINESS and CELEBRATION, including JOY, CONFIDENCE, FEASTING, ABANDON, CONTENTMENT etc. There was even some LOVE and TENDERNESS as well as one WEDDING. More significant is perhaps that eleven of the thirteen respondents tried to identify the cultural origin of the music: there were two AFRICAS (plus one JUNGLE), two ARABS (plus one each for BAZAAR, DESERT, CAMELS and YEMEN), as well as one each for CHINA, GREECE, INDIA and TURKEY. Clearly, the examples presenting music for funerals,

23. The symposium was organised by Jens Allwood of Göteborg University's Linguistics Department in 1983.

burials, etc. were considered foreign and associated with a variety of moods and events, the vast majority of which have no discernible link with anything 'death-like' in contemporary urban Western culture.²⁴

Conceptual comparisons

Another way of understanding the Western concept of music is to compare it to different but related concepts in other cultures. Although no human society of which we have any knowledge has ever been without music as defined above, the *concept* of music is by no means universal. For example, the Tiv nation of West Africa (Keil 1977) and the Ewe of Togo and Eastern Ghana do not appear to have found it necessary to single out music as a phenomenon requiring a special word any more than the British have been in need of different words for the three basic types of snow, each of which the Inuktitut language conceptually refines into several subcategories.²⁵ To be fair, the Ewe do actually use the English word 'music', but only as an untranslated loan word to denote foreign phenomena like singing church hymns or listening to a CD. The music they make themselves in traditional village life has no equivalent label in the Ewe language. According to Ghanaian musicologist, Klevor Abo:

'Vù really means 'drum' and há is the word for club or association. A vù há is the club you belong to in the village... Voice is called bá, so singing is vù bá. Vù is used to signify the whole performance or occasion: the music, singing, drums, drama and so on.'²⁶

Having no exact verbal equivalent to our 'music' clearly does not mean that the culture in question is without music any more than the English language's lack of verbal equivalent to the Hindi notion of *rasa* or to the German notion of *Weltanschauung* means that anglophones cannot conceive of different types of feeling/mood/state-of-mind (*rasa*) or of different ways of looking at the world (*Weltanschauung*). Nor is a lack of

24. For more details on this small experiment and on this topic in general, please see '*Universal' Music and the Case of Death* (Tagg 1993).

25. Inuktitut is an Inuit language. For more on Inuit words for various types of snow, see | www.linguistlist.org/issues/5/5-1401.html | and | www.industryweek.com/Columns/ASP/columns.asp?ColumnId=258 | (both 2002-02-23).

26. Conversation with Klevor Abo, Göteborg, 2 November 1983.

equivalent to our word *music* connected to village communities in West Africa because the Japanese, with their long-standing traditions of music and theatre in official religion and at feudal courts, did not feel obliged to invent a word equivalent to the European concept of 'music' until the nineteenth century. The Japanese translated 'music' as *ongaku* (音楽), *on* (音) meaning sound and *gaku* (楽) enjoyment, i.e. sounds performed for listening enjoyment or entertainment.²⁷

In other words, neither the Japanese nor the Ewe needed a word for what we mean by music until confronted by us Europeans and our culture. It must have been strange to come across people like us who treated what we call music as if it could exist independently of a larger whole (drama, poetry, singing, dancing, ritual, etc.), and the Japanese went straight to the heart of the matter with the word *ongaku*, identifying the European notion of music as referring to the non-verbal sounding bits of what they themselves considered as part of a larger set of symbolic practices. The Ewe reacted similarly, using the untranslated English colonial word *music* to label European music which was not an integral part of their own traditional culture and which we Europeans conceptualise as distinct from other related cultural practices.²⁸

Both the Ewe (*vù*) and Japanese (*gaku*) concepts resemble to some extent that of the ancient Greeks whose term *technê mousikê* (τεχνη μουσική. or *mousikê* for short) originally referred to the skills of *all* the muses: drama, poetry, dancing, etc., not just to playing instruments or singing. The *musica* of ancient Rome seems to have covered a similar semantic field. However, during the Hellenic merchant period, there seems to

27. Lecture by Prof. Toru Mitsui (Kanazawa University) at the Institute of Popular Music, University of Liverpool, February 1993, cf. *nogaku* (music and movement in *No* theatre), *hogaku* (stylised indigenous music, song and dance), *gagaku* (courtly music and dance).

The Welsh word for 'music', *cerddoraeth*, contains three morphemes: (i) *cerdd*, meaning song or poem; (ii) *-or*, being similar to the 'or' at the end of 'inventor' or 'councillor', hence *cerddor* = bard/singer/musician; (iii) *-aeth*, roughly equivalent to the *-ship*, ending of 'musicianship'. *Cerddoraeth*, translated as 'music', therefore literally means the art of those who make songs or music. Cf. also Icelandic's *tónlist* (footnote 33, p.21) and the *troubadour* concept (p.21).

28. There is, of course, more to the history of meanings for the word 'music' in Europe. A few of those developments are mentioned later (p.20, ff.).

have been a shift in the meaning of Greek *mousikê* and Latin *musica* in learned circles, so that Saint Augustine (d. 430), worrying about the seductive dangers of music, seems to use 'music' (*musica*) in our contemporary sense of the word.²⁹

It seems likely that this more restricted use of the word *musica* prevailed amongst scholars and clerics in Europe from the fifth century onwards.³⁰ Moreover, Arab scholars between the eighth and thirteenth centuries appropriated the Greek word *mousikê* (*al musiqi*) to refer to what we mean by 'instrumental music' today, not to the gamut of artistic expressions denoted by the *mousikê* of Plato or Aristotle.³¹ It should also be noted that Mohammed is said to have shown interest in music and that the Koran itself contains no directly negative pronouncements against music. However, orthodox clerics of Islam were later to warn, like St. Augustine, against the evils of music, the main controversy being whether or not the Prophet's judgement of 'poets', including musicians, in the Koran's 26th *sura* referred to music connected to infidel rites or to music in general.³² In short, it seems that some ascetic patriarchs of Mediterranean and Middle-Eastern monotheism were worried about the sensual power of the non-verbal aspect of sonic expression and that they needed a concept to isolate and identify it.

What happens to 'music' in the vernacular languages of Western and

29. 'Through an indiscreet weariness of being inveigled do I err out of too precise a severity: yea, very fierce am I sometimes in the desire of having the melody of all pleasant music, to which David's Psalter is so often sung, banished from mine own ears and out of the whole church too.' Source: Strunk (1952: 73-74), quoting *Saint Augustine's Confessions II* (London, W Heinemann, 1912): 165-169. Translated by William Watts (1631).
30. e.g. Boëthius (d. 524), Cassiodorus (d. 562), Isidoro de Sevilla (d. 636), Odo de Cluny (d. 942), Guido d'Arezzo (d. 1050), all quoted in Strunk (1952: 79-125).
31. e.g. Al-Kindi (9th century), Al-Farabi (870-950), Safi Al-Din (13th). Abu Nasr Al-Farabi's most important theoretical work, *Kitab al-musiqi al-akbir* (= 'A Greater Book On Music'), refers to Aristotle. It is important to bear in mind here that Arabic music theory sorted under the mathematical sciences (including al-gebra and al-chemi) and that these theories (both musical and mathematical) were spread all over Europe from the Arab cities of Córdoba and Seville (see Ling 1983: 64, referring to Sigrid Hunke (1971) and Henry George Farmer (1965)).
32. They cited traditional sources outside the Koran according to which Mohammed was to have considered musical instruments the 'muezzins of the devil' (Skog 1975).

Central Europe before the twelfth century is anybody's guess. Perhaps, like old Norse or modern Icelandic, there was a blanket term covering what bards, narrators of epic poetry and minstrels all did.³³ Certainly, the Northern French *trouvères* and the Provençal *troubadours* of the eleventh to thirteenth centuries were not only known as singers, players and tunesmiths (*trouver / trobar* = find, invent, compose) but also as jugglers and poets.

Music enters the English language in the thirteenth century via old French, whose *musique* first appears about a century earlier.³⁴ The arrival of the word in the vernacular of both nations denotes more or less what we mean by *music* today. It also coincides with the granting of charters to merchant boroughs and with the establishment of the first universities. Unfortunately, there is hardly enough evidence to support the idea that the crystallisation of the term *music* connects ideologically with the ascendancy of a merchant class, even though the Hellenic period, Arab mercantile hegemony in the Mediterranean, and ascendancy of the bourgeoisie in their chartered boroughs,³⁵ all seem to feature the new concept. Whatever the case, the European ruling classes were certainly able to use the word *music* in its current meaning well before the eighteenth century: the semiotic field had been prepared by clerics and ecclesiastical theorists who had, by the eleventh century, established a metaphysical pecking order of musics. This type of hierarchy is, as we shall see the later (p. 39, ff.), important to the development of the romantic notions, cited at the start of this chapter, of music's supposedly transcendental qualities.

These brief cross-cultural and historical observations about the word *music* indicate that the concept denotes particular sets of non-verbal sound produced by humans and associated with certain other forms of symbolic representation, sounds which relate enough to physical and emotional aspects of human experience to be considered disconcerting

33. In Icelandic, music is *tónlist* (= the skill or art of tones) and composer *tónskald* (= the bard or poet of tones).

34. *Concise Oxford Dictionary* (1995); *Le Petit Robert* (1993).

35. *Borough* is of course related to the German *Burg* and French *bourg* which in its turn give rise to the word *bourgeois*.

by ascetic clerics. The question is: which 'sets of humanly produced sounds' relate to which other forms of symbolic representation? One answer to that question is provided by theories of human evolution.

Music and evolution

Animal music?

The oldest musical instrument discovered to date is a flute made from the femur of the now extinct European bear and found in a Neanderthal burial site in today's Slovenia. The flute, unearthed in 1995, is between 45,000 and 84,000 years old.³⁶ Although (to split the difference) 64,000 years may sound like a long time ago, it is the mere twinkling of an eye in terms of the evolution of our species: the earliest hominid forms evolved from the higher primates at least 3½ million years ago.³⁷

Evolutionist theories of music explain its origins in terms of evolutionary adaptation, by which is meant the ability of a species to find effective strategies for survival by means of adapting to their environment. One rather unlikely theory is that music derives from the synchronous chorusing of higher primates, while another argues more plausibly that 'it is in the evolution of affiliative interactions between mothers and infants that we can discover the origins of the competencies and sensitivities that gave rise to human music.'³⁸

Several other theories stress the importance of what Brown (2000) calls 'musilanguage', i.e. that language and music, both sonic and both neurologically intertwined, stem from a common origin, 'evolving together as brain size increased during the last two million years in the genus *homo*' (Falk 2000). Like the mother-and-infant theory, this explanation also seems quite plausible because both *Homo sapiens* and *neanderthalensis* had, if our knowledge of the Slovenian bone flute and other early

36. See Huron (1999). Most music archaeologists now agree that the object is a flute and that it was made by Neanderthal man (for ongoing argument, visit | www.webster.sk.ca/greenwich/fl-compl.htm | 02-04-30). *Homo erectus*, evolving from earlier hominid forms which evolved from the higher primates, develops into two genus: *Homo neanderthalensis* (c.400,000-50,000 BP) and *Homo sapiens sapiens* (humans, from c.150,000 BP). Humans wipe out Neanderthals around 50,000 BP. Although humans have yet (2006 CE) to eradicate themselves and entirely destroy the rest of the planet.

37. 3,500,000 years ago means 55 times older than the merely 64,000-year-old flute.

human instruments of music are anything to go by,³⁹ clearly started to treat oral language and music as *distinct modes of sonic communication*. Although neurologically interrelated, these two sonic systems were used for different functions. This aspect of evolution is important because the separation of music from language can be seen as a trait distinguishing humans from other animals.

One common objection to the theory of distinction between music and language as a basis for understanding the origins of music as trait of *human* behaviour seems to argue that if we, as humans, say that birds and whales sing, then we are talking about music, simply because that is how we hear it. The sonic habits of humpback whales provide fuel for this argument. As those great mammals migrate or swim around their breeding grounds, they piece together repeated phrases, singing song after song for up to twenty-four hours at a stretch. Humpback whales have a seven-octave range similar to that covered by the piano keyboard, i.e. a range of fundamental frequencies well within the limits of

38. The more plausible theory is presented by Dissanayake (2000), the less plausible one by Merker (2000), whose account runs more or less as follows.

Chimpanzees in equatorial Africa live in territorial extended family groups. To produce healthy offspring, they can't breed within their own group. This is why females from one extended family go off individually to mate with males from another.

Invisible because of jungle foliage, a gang of males in the other group draw the approaching female's attention by producing a concerted chorus of vocal sounds.

She pays no attention to individual males outside the gang but to those who make the most striking sonic display within the chorus, such behaviour being identified with social acceptance and cohesion, as well as with strength and dominance.

These observations of behaviour among one type of primates may be important, but it is doubtful that they can explain the origins of the *human* phenomenon of music.

The problem lies partly in the assumption that all primates from which we descend, or to which humans are similar, regulated mating in a similar way for long enough for that behaviour to become genetically hardwired, a process taking millions rather than thousands of years. Failing that interpretation of the theory, the assumption has to be that the primate mating behaviour was somehow passed on by learning from generation to generation, then from species (primates) to genus (*homo erectus*) to genus (*homo sapiens*) without entering the human genome. This is also an unlikely explanation because the physical and social changes humans have had to confront over the last 50,000 years have produced a wide variety of mating habits.

39. The oldest *human* (rather than Neanderthal) instrument found so far that is still playable dates from 9,000 BC and was found in Jiahu (China). See | www.webster.sk.ca/greenwich/FL3DEBAT.HTM#From | [2002-03-07].

what humans can hear, and much larger than the restricted range of pitches the human voice can produce. As the months go by, the whales modify their song patterns and most males end up by singing the same new song after a while. Moreover, humpback whale songs contain rhythms and phrases which, strung together, build forms of a length comparable to ballads or symphonic movements. It also seems that their songs contain recurrent formulae which end off different phrases in much the same way as we use rhyme in poetry. One theory about rhymes in whale song is that they help in the breeding season when the males have to remember 'what comes next': the more elaborate the whale's song pattern, the more likely it is to rhyme.⁴⁰

All these traits of whale song come across as typically musical to the human ear. But the 'music' of the animal kingdom does not stop there: certain insects produce rhythmic patterns, some even metronomically regulated, which, like those of human music, vary and repeat in longer patterns. Moreover, eleven percent of primate species can produce short strings of notes that, though less musical to our ears than the songs of humpback whales, form a recognisable pattern in time. This behavioural trait, characteristic for most of our own music, is thought to have evolved independently four times within primates.⁴¹ This evidence suggests that music is *not* exclusive to the human species.

The problem with the objections just raised is that they are anthropomorphic, i.e. that they interpret *non-human* behaviour on the basis of *human* experience, perception and behaviour. The ANIMALS MAKE MUSIC standpoint assumes, in other words, that the whales, insects and primates just mentioned hear and react to the sounds they make themselves in the same way that *we* hear and react to them; it also assumes that animals produce those patterns of sound for the same reasons as we make what we hear as comparable patterns of sound in our music.⁴²

40. All information given here about whale song derives from Milius (2000).

41. Milius (2000), referring to Thomas Geissmann, at the Hanover Institute of Zoology.

42. Thomas Eisner, Professor of Entomology at Cornell University and accomplished classical musician, holds that we must 'draw a distinction between enjoying animal sounds [as music] and saying that animals make music', although, after hearing recordings of humpback whales, he admitted: 'if a whale calls me up tomorrow and wants to do an evening of sonatas, I would be the first to volunteer' (Milius 2000).

For example, although we hear birds as the greatest songsters of the animal kingdom, it is, once again, highly improbable that they make, hear and use their melodies as we make, hear and use our music. As one leading ornithologist put it:

'Any analogy to human music is not interesting to me. It doesn't explain anything about how the world is, except how humans want to perceive it. Good on 'em, but I want to understand animals... Birdsong constitutes an avian broadcasting network, letting birds minimise the arduous work of flying about during interactions'.⁴³

If singing can replace the amount of flying around birds would otherwise have to do in order to interact, it is certainly part of a symbolic system. Instead of physically repelling every potential invader of its own space, a bird can claim its territory by making sounds we would call birdsong. Instead of flying round to see if local members of the family are all there before they shut down for the night and that they are all there again in the morning, an individual bird can join in the evening and dawn choruses. Birdsong is in other words a strategy for the survival of individuals within the group, because they all have to have a place to nest, and for the group as a whole, because they may all need to collect for foraging or migration. Singing is just an energy-efficient way for birds to establish these relations essential to their survival.

It would in a similar way be absurd to expect whales, who have to cover huge distances in search of food but reconvene for breeding, to keep visual or tactile underwater checks on the whereabouts of each other, as individuals and as family groups, across vast stretches of ocean. In this sense, whale song, by replacing physical and visual contact with sonic communication, also acts symbolically to facilitate the social cohesion necessary for the survival of their species. It is also highly probable that the various functions of sonic communication in the animal kingdom are linked with what we humans might qualify as pleasure and pain, tension and relaxation, etc., i.e. with what *we* think of as emotions and which are essential ingredients in the evolutionary process of most sentient beings.⁴⁴ If such 'emotions' are linked to situa-

43. US ornithologist Eugene Morton, quoted in Milius (2000).

tions in the animal kingdom where what we hear as their 'music' is used to signal messages *we* might understand verbally in terms like GET OFF MY PROPERTY! or IT'S OK, WE'RE ALL HERE, then it is also probable that the sounds in question are accompanied by patterns of hormone production comparable to those found in humans when stimulated in certain ways by certain sounds in certain situations.⁴⁵

If there is any truth in the line of reasoning just presented, it would seem that there may be grounds for calling that animal 'music' music. After all, such an argument would go, what we have described tallies quite well with the seventh of our eight axioms about music (p.12), with our observations about 'concerted simultaneity and collective identity' (p.13), and with several other points mentioned under our working definition of music. However, there is at least one human trait that animal 'music' does not exhibit: unlike humans, animals do not appear to have two distinct symbolic systems mediated as sound, one system – language – more suited, though not wholly dedicated, to the denotation of objects and ideas, the other – music – more closely, though not entirely, related to the expression of movement, gesture, touch and emotion (see axiom 4, p.12).

As stated earlier, language and music, both neurologically intertwined and both using the sense of hearing, seem to stem from a common origin, evolving together as brain size increased during the last two million years of evolution in the genus *homo*. However, even though the oldest musical instrument found so far may be from a Neanderthal burial site, it is after we humans managed, some 50,000 years ago, to wipe out our Neanderthal cousins that we start to leave significant numbers of technologically complex sonic objects behind us.⁴⁶

44. For example, the human tendency to like the taste of sweet, heavy food is probably grounded in the need of our ancestors to ensure they consumed enough carbohydrate fuel to provide the energy necessary for survival. With more abundant food sources and a more sedentary lifestyle, humans have to consciously correct that genetic trait.

45. There is no room here to enter this realm of biomusicology. For more information, see section 'Biochemical Evidence', especially about naloxone, testosterone and oxytocin, in Huron (1999).

46. See footnote 39, p. 23.

To summarise: the separation of sonic representation into two distinct but related spheres of activity – language and music – may have started to evolve in our hominid precursors but seems to have developed dramatically after their demise. Moreover, there is no evidence to suggest that any other species extant in the animal kingdom uses two distinct sonic systems of representation. For example, a blackbird joining in the dawn chorus does not seem to distinguish sonically between, on the one hand, what we would think of as a verbal statement like I'M HERE AND I HEAR YOU'RE ALL THERE and, on the other hand, whatever sensations she might have on waking up and on registering that she is chirping away in her own place, that her neighbours are in theirs, that there are males and fellow females in the vicinity, and that she's not the only one of her kind around. We humans seem to be the only species to make such a distinction between those modes of sonic representation. Cross (1999) argues that this distinction between language and music may be the most important thing humans ever did. We will return to this point after the next section which deals with music's importance for another fundamental aspect of human development.

Music and socialisation

At the age of minus four months most humans start to hear. By the time we enter this world and long before we can focus our eyes on objects at different distances from ourselves, our aural faculties are well developed. Most small humans soon learn to distinguish pleasant from unpleasant sounds and most parents will witness that any tiny human in their household acts like a hyperactive radar of feelings and moods in their environment. You know it's no use telling baby in an irritated voice 'Daddy's not angry' because the little human sees straight through such emotional bullshitting and starts to howl.

But baby's hearing is not what most parents notice first about sound and their own addition to the human race. They are more likely to register the little sonic terrorist's capacity to scream, yell, cry and generally dominate the domestic soundscape. Babies are endowed with non-verbal vocal talents seemingly out of proportion to other aspects of their size, weight and volume: they appear to have inordinate lung power

and unfailing vocal chords capable of producing high decibel and transient values, cutting timbres and irregular phrase lengths, all communicating messages that parents interpret as I'M UNCOMFORTABLE or I'M IRRITATED or I'M IN PAIN, or I'M HUNGRY, messages demanding action such as CHANGE MY NAPPIES! or COMFORT ME! or PROVIDE IMMEDIATE NUTRITION!. Maybe these tiny humans have to yell not so much because they can't speak as because they need to dispel whatever state of adult torpor we happen to be in while watching TV, chatting, reading or, worst of all, sleeping. Babies seem to know in advance that sharp timbres at high pitch and volume carry well, cutting through whatever ambient hum and mumble there may be in the adult world, be it idle conversation, TV in the background, fridges, ventilation, etc. Also, irregular rhythms and intonation by definition avoid the sort of repetition that can gradually transform into ambient (background) sound: a baby's yell is always up front, foreground, urgent, of varying periodicity and quite clearly designed to shatter whatever else mother, father, big sister or big brother is doing. That sonic shattering is designed to provoke immediate response. Desires and needs must be fulfilled *now*.

Now is the operative word here. Sonic statements formed as short repetitions of irregularly varying length are also statements of urgency, as well we know from news and documentary jingles – IMPORTANT, FLASH, NEW, THE LATEST UPDATE.⁴⁷ Babies seem to have no conscious past or notion of future: all is present. The baby's lack of adult temporal perspective in relation to self is of course related to its lack of adult senses of social space, which, in its turn, relates to baby's egocentricity, essential for survival in the initial stages of its life.

Non-verbal sound is essential to humans. We monitor it constantly from inside the womb until death or deafness do us part from its influence. We use our non-verbal voices to communicate all sorts of messages from the time we are born until we die or turn dumb. Together with the sense of touch, non-verbal sound is one of the most important sources of information and contact with social and natural environments at the most formative stages of any human's development. It is

47. For more on urgency cues, see the *Sportsnight* section of Chapter 00.

vital to senso-motoric and symbolic learning processes at the preverbal stage of development and central to the formation of any individual's personality. Moreover, we have all had to experience the process by which we gradually learn that we are not the centre of others' constant and immediate attention: we have to get used to being just one human subject and social object among many other fellow human subjects. We have to have some sort of working relationship with whatever society and culture we belong to and we cannot live in the vain hope of returning to a state where we are the sonically dominant or foreground figures: we can never regain any imagined or real lost paradise, whatever advertisers may have us believe.

Different cultures and subcultures develop different norms for what course the process from baby via child to adult should run. The ultimate goal –becoming a fully functioning male or female adult– depends on whatever the society in question at any given time sees as desirable on account of its material basis and cultural heritage. Assuming we have all been babies and if baby's power over the domestic soundscape in the early development of every human is a biological necessity that must be relinquished for that individual to survive among fellow humans in adulthood, then we ought to gain important insights into how any culture works by studying patterns of socialisation that relate directly to non-verbal sound.

Humans can emit an enormous variety of non-verbal sounds. We breathe, talk, cry, shout, yell, call, sob, sigh, laugh, giggle, burp, fart, crunch, slurp, gulp, swallow, yawn, groan, moan, growl, cough, splutter, slobber, wheeze, sniffle, sneeze, kiss, hiss, snort, spit, scratch our heads, smack our lips, blow our noses, clear our throats, cough up phlegm, etc. Our hearts beat, tummies rumble and intestines gurgle. We make noise, however weak or strong, whenever we move our bodies: we cannot sit down or stand up, walk, run, stroll, tiptoe, limp, jump, hop, skip, drag our feet, stumble, fall, etc. We also shudder with fear, tremble with delight, or shiver with cold so that their our chatter. We also make sounds when we hit, kick, drag, push, cut, tap, pat, clap, caress, chop, saw, hammer, grind, scrape, slap, splash, smash, etc. Some of these sounds are loud, others soft; some are heavy, others light;

some are fast, others slow; some are high-pitched, others less so; some are long or ongoing and repetitive, others short and discrete and so on. All these humanly produced sounds are made within a context that is itself full of sound. In urban industrialised societies we have fridges, freezers, computer drives, traffic, aeroplanes, mains hum, air conditioning and all sorts of other machines; elsewhere we may be able to hear wind in the trees, rain, sea swell, animals, birds, insects, running water, thunder, earthquakes, ice breaking, crisp or slushy snow under our feet, waves breaking on the shore, etc.

Some of these sounds we make ourselves, others we just hear in a wide variety of acoustic settings, including those inside our own heads and bodies. Which (combinations of) sounds are evaluated as pleasant and unpleasant, which ones are deemed to be part of music and which ones not, will largely depend on the culture we belong to and on what sort of motoric and sonic behaviour prove to be generally compatible with the needs of that community, be it a youth subculture in late capitalism or a nomadic people using stone age technology.

All of us have been babies and all of us have had to learn that we cannot for ever remain at the centre of the world around us, acoustically or otherwise. We have to learn to cooperate, to negotiate social space and uses for ourselves in relation to the community we belong to. Music and dance provide socially constructed sonic and kinetic frameworks for that learning process: most of us learn to sing, hum and whistle in accordance with the norms of what our culture regards as music, rather than just yelling, laughing, mumbling, or bashing objects at will in an uncoordinated or unpatterned manner. As we acquire the gift of language we learn to distinguish between humanly organised verbal and non-verbal sound. More importantly, by repeated exposure, within the music culture to which we belong, to the simultaneous occurrence of certain types of musical sound with certain types of action, attitude, behaviour, emotional state, environment, gesture, movement, personality, people, pictures, words, social functions, etc., we construct a vast array of categories combining several of the constituent elements just mentioned into overriding and integral musicogenic 'concepts'.⁴⁸

Many of us also go on to learn how to play an instrument as a way of making sound whose functions are clearly different not only to those of spoken language but also to those we make when chopping wood, hammering nails, ironing clothes, doing the washing up, flushing the toilet, taking a shower, walking upstairs, driving a car, eating food, operating machinery, folding a newspaper, closing the door, etc., etc. It would, from the perspectives just presented, be absurd to regard music as some sort pleasant but parasitic appendage to human life – 'auditory cheesecake' as one writer put it.⁴⁹

Cross-domain representation and synaesthesia

There are other reasons for understanding music as an essential part of the survival kit for any human society, not as just cultural icing on the socio-economic cake. These reasons are presented by Cross (1999) and can be summarised in the following simplified terms.

As we saw earlier, the distinction between two modes of sonic representation (language and music) appears to be a specifically human trait. In fact, the human capacity to process signals from the world around them via different *domains of representation* (verbal, visual, motoric, emotional, etc.) seems to have been one of our species' great advantages in the evolutionary struggle, in that we can sort out abstractions of cause and effect by distinguishing between visual, verbal, sonic and motoric impulses. Those domains of representation are even located in different parts of the brain so that what we hear at a particular time (a sonic event) does not have to represent the same phenomenon as a movement or emotion we may experience at that same time. Put crudely, having to rush up in a panic as the alarm clock goes off does not make us think the alarm clock is stressed out.

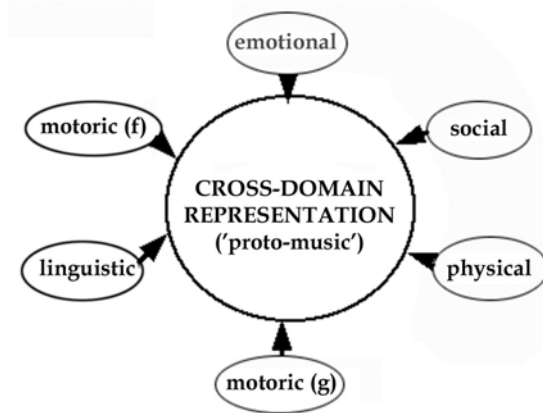
Of course, such domain-specific signal processing in no way prevents humans from making connections between several simultaneous domain-specific signals if they co-occur on a regular basis. For example,

48. See p.00, ff. for section on 'functional embodiment' (Lakoff, 1987).

49. The 'parasitic' notion comes from D Sperber's *Explaining Culture* (Oxford, 1996), that of 'auditory cheesecake' from S Pinker's *How the Mind Works* (London, 1997). For critique of these notions, see Cross (1999).

when a loving parent talks in a sing-song voice to a baby while holding and rocking it, the little one receives signals that are at the same time specific to the sonic, motoric and emotional domains of representation. As these *combinations* of domain-specific signals are repeated, the infant learns to make connections between them so that another, overriding or 'embodying' type of representation comes into play. Such combinations of sonic, motoric and emotional signals are sometimes called *proto-musical*.⁵⁰ They also relate to synaesthetic patterns of cognition.

Fig. 1. Domains of representation and the 'embodying' cross-domain level⁵¹



The specific domains relating to (proto-) musical representation, shown in figure 1:1, partially overlap and need some explanation.

[1] The *physical* domain covers the ballistics, trajectory and kinetic relationship of a body (or bodies, including one's own) to the type of space through which it travels or in which it is motionless. Fast or slow, jerky or smooth, regular or irregular movement, or no movement at all, in an open or closed space; movement which arrives or leaves within that space, towards or away from a point inside or outside it, movement which waits or passes over or under, up or down, to the left or right, to the back or front, to and fro or in one direction, suddenly or gradually:

50. Cross (1999), drawing on Karmiloff-Smith (1992).

51. *Motoric (f)* means fine motoric, *motoric (g)* gross motoric (see text below figure for further explanations, pp.32-34).

these aspects of movement and space, when enacted by a human, are all part of the *physical* domain of representation. It also includes the enactment of some aspects of heaviness or darkness and lightness, of density and sparsity, as well as of multitude and singularity.

[2] The *gross motoric* domain of representation involves the movement of arms, legs, head, etc., e.g. walking, running, jumping, dancing, pushing, pulling, thrusting, dragging, waving, rolling, hitting.

[3] The *fine motoric* domain of representation involves the movement of fingers, eyes, lips, mouth, throat, etc. Blinking, glittering, shimmering, rustling, babbling, clicking, tapping, fiddling, dripping, spitting, swallowing, gurgling, etc. all exemplify movement requiring fine motoric representation.

[4] The *linguistic* domain is mainly concerned with prosodic patterning, with the 'musical' elements of speech, i.e. with intonation, timbre, accentuation, rhythm, dynamics, etc., including the sonic characteristics of vowels and consonants.

[5] The *social* domain involves the representation of patterns of human interaction, for example of individuals to a group or vice versa. As we shall see later, particular strategies for structuring musical parts or voices can correspond to particular socialisation patterns.

[6] The *emotional* domain is self-evident. It involves *evaluating* a situation in response to different body states such as posture, muscular tension or relaxation, hormonal stimulation, adrenalin count, etc. It includes evaluation of experience whose *verbal* conceptualisation is often formulated in polarities like pleasing/painful, happy/sad, beautiful/ugly, love/hate, security/threat, etc.

It should be clear that these six domains of representation are in no way mutually exclusive. For instance, it is impossible to imagine a *gross motoric* activity like dragging (domain 2) without considering bodily movement in space and aspects of heaviness (*physical* domain 1). Moreover, any aspect of the *emotional* domain needs to be qualified by aspects from other domains. For example, is the expression of pain sharp and sudden? Is it relentless, throbbing and ongoing, or is it stifled in the background? Does the pain come in gradual waves or as violent

shocks? Does it make you quiver, shudder, jump, fall over, fall apart, yell, scream, groan or grumble? Or does it hit, stab, pierce or poison you? Or does it make you depressed and apathetic? Is the pain repressed and under control, or is it up front and violent? Perhaps it paralyzes or silences you altogether? Is it the pain of a solitary individual or does it more closely resemble a community of suffering?

Proto-music's six domains of representation also overlap in terms of *synaesthesia*.⁵² For example, some onomatopoeic pairs, like *babble* and *bubble* or *rumble* and *tumble*, are normally, though not exclusively, associated with the sonic and visual/kinetic aspects respectively of the same basic type of movement, as, indeed, are *rustle* and *glisten*. Other sonically similar words like *bustle*, *hustle* and *hassle* not only lend themselves to expression in visual or sonic terms: they also include aspects of social interaction and emotional evaluation. It is the combination of all these aspects that makes such concepts particularly musicogenic.

Before going any further in this explanation of cross-domain representation, it is necessary to clarify that we are using the noun *synaesthesia*, not *synaesthesia*, to denote any use of two or more modes of perception at the same time. While *synaesthesia* is generally used as a clinical term designating a particular neurological condition involving the disturbance of normal perception by the involuntary intrusion of impulses from more than one sensory mode, *synaesthesia* is no more than a transliteration of *synaisthêsis* (συναίσθησις), *aisthêsis* meaning 'perception' and *syn* = '[along] with', 'accompanying', i.e. simultaneous perception in more than one sensory mode.⁵³ *Synaesthesia* is therefore not a debilitating clinical condition but an normal and essential part of human cognition. The only terminological trouble here is that *synaesthesia* and *synaesthesia* both give rise to the adjective *synaesthetic*. To avoid further confusion, then, *synaesthetic* will in this book qualify *any* type of perception using more than one sensory mode at the same time. In more concrete terms, we shall qualify, for example, the combined tactile, kinetic,

52. *Synaesthesia* and *synaesthesia* are explained in the next paragraph.

53. For example: '[W]hile cross-sensory metaphors are sometimes described as "synaesthetic", true [sic] neurological synaesthesia is involuntary and occurs in slightly more than four percent of the population (1 in 23 persons) across its range of variants.' (<http://en.wikipedia.org/wiki/Synesthesia>; 2006-12-02).

visual and sonic aspects of *babble, bubble, bumble, rumble, crumble, tumble, rustle, bustle, hustle* or *hassle* as SYNAESTHETIC because they constitute instances of normally functioning SYNAESTHESIS.⁵⁴

To summarise: music can, as we have defined it (p. 11), be understood as a specifically human type of activity which lets us mix elements from any of the six domains of representation (p.32) into an integral whole. It is an activity allowing us to represent combinations of signals from its constituent domains in one *symbolic package* rather than in merely linguistic, social or corporeal terms. As a meaningful system of non-verbal sound, music lets us engage in interpersonal activity on many levels simultaneously, either by making music or by responding to it individually or together with others. To express ourselves on all these levels at the same time, humans do not always need to confront each other with verbal outbursts, bodily display or physical interaction: we can use music instead. In other words, music enables relatively *risk-free* action to members of the culture producing and using it because it provides socio-culturally regulated forms of potentially *risky* interaction between humans. But music does more than that: it also helps avoid confusion. Now, this last statement may sound strange given the fact that music is often considered to be polysemic (an assumption challenged in Chapter 00), so we had better explain.

Imagine, for example, the not uncommon state of mind characterised by a mixture of, say, irritation or resentment and the feeling that is nevertheless a nice day and good to be alive. Using the *linguistic* domain, you could express this single dynamic state of mind directly to a friend,

54. Interference from colour perception is an often cited symptom of *synaesthesia* (the disorder). Given the connotatively polysemic and culturally relative character of colour, it is, however, doubtful that colours are operative in normal musicogenic *synaesthesia*. For example, red can 'mean' danger or full-blooded life, *stop* at the traffic lights or *charge* like a bull at a red rag; green 'means' *go* for un-green vehicles at traffic lights and it can 'mean' Ireland or Saudi Arabia, sick with envy or fresh and alive, as of luxuriant vegetation; death can be black or white, depending on your cultural membership; blue can be the blues or royal blue or a bright summer sky; yellow can be cowardly or as bright as the sun, etc., etc. In short a colour itself is not normally associable with elements of musical expression but its often contradictory connotations are (danger, stop, full-blooded, charge, go, Ireland, Saudi-Arabia, sick, fresh, lively, luxuriant, the blues, bright, etc.).

partner, child, parent, or to the authorities, telling them first how strongly you disapprove of their behaviour: you could start by speaking with sharp timbre and choppy delivery, then switch to a smooth, mellifluous voice. Using the *fine motoric* domain, you could frown then smile, tap your fingers nervously then flutter your eyelids encouragingly, grit your teeth then relax your mouth. *Socially*, you might want to avoid the people causing the irritation then make efforts to welcome them into your company. Using the *physical* and *gross motoric* domains of representation to communicate your state of mind, you'd almost have to first beat up the person or people concerned, then caress or hug them. *Emotionally*, you'd probably want to first yell and stamp your feet then sit down and relax; or perhaps you'd first tense your shoulders and clench your fists then lean back, open your arms and show the palms of your hands.

Although feeling irritation on a basically good day is hardly a symptom of emotional instability, expressing that dynamic using just one of music's contributing domains of representation, as described in the previous paragraph, would at best come across as contradictory and confused. It would more likely cause offence, perhaps even provoke a diagnosis of manic depression. However, thanks to its character of cross-domain representation, music is able to mediate that same sort of dynamic as a unified single experience in a socially negotiated and culturally specific sonic form. After all, we seem to readily accept that the single *linguistic* concept of LOVE involves feelings of vulnerable anxiety and the fear of loss in addition to the occasional, indescribably powerful bout of euphoria. Similarly, it is totally impossible for us mortals to entertain the notion of human LIFE without considering death.⁵⁵

These platitudes about love and life serve merely to illustrate the fact that while language only occasionally lets us conceptualise dynamic states of being as integral experiences, music almost always does so. FEELING ANGRY ON A GOOD DAY, or DESPERATELY TROUBLED IN THE MIDST OF CALM AND BEAUTY, or TOTALLY SICK OF THE WORLD AND FEEL-

55. According to Swedish poet Kristina Lugn, '[L]ivet är den enda möjlighet vi har att inte vara döda', i.e. life is the only possibility we have not to be dead. Thanks to Margit Kronberg (Mölnådal) for this reference (phone call 2006-12-25).

ING ALIVE BECAUSE OF THAT DISGUST – these are no more than pale verbal hints of just part of three of the innumerable kinds of dynamic mood categories that music can create.⁵⁶ We should therefore not be surprised that respected critics can describe the same piece of music – in this case the first movement of Mozart's 40th symphony – in terms of both 'deepest sadness' and 'highest elation'.⁵⁷ Was Mozart confused when he wrote the music? Probably no more so than usual. Does the music make a confused or contradictory impression? Certainly not to modern European ears: it's one of the most well-known, highly valued and widely covered pieces in the Viennese classical repertoire. Were the critics confused when they wrote about sadness and elation in the same breath about the same music? No again: they, too, were just giving palid verbal hints of what they felt the music to be expressing.

By combining input from its constituent domains of representation, music forms integral categories of cognition that, from a logocentric viewpoint, would be qualified as contradictory, confused or polysemic, even though those categories seem to correspond more accurately with what we actually feel or imagine on a daily basis: angry on a good day, troubled in beautiful surroundings, sad *and* elated, vulnerable *and* euphoric, etc. This holistic aspect of musical cognition may well be one reason for music's ability to move us so deeply, sometimes even to occupy our whole sensory being. It may also be one reason for music's therapeutic usefulness. Furthermore, music helps cognitive flexibility, i.e. the ability to mix, switch and correlate across different domains of representation. Viewed from these perspectives, music may indeed be, as Cross (1999) concludes, 'the most important thing that we humans ever did'.

56. For 'desperately troubled in the midst of calm and beauty', try the third movement of Bartók's fourth string quartet (1929). For 'totally sick of the world and feeling alive because of that disgust', try Nirvana's 'Smells Like Teen Spirit' or 'Lithium' from the album *Never Mind* (1991). Check out also the mood categories explained on p. 00, ff.

57. 'Von Wehmüthigsten bis zum Erhabenesten': Saint-Foix quoting an anonymous review of the symphony movement (G minor, K550) in an 1804 number of the prestigious Viennese periodical *Allgemeine Musikzeitung*. Among other review descriptions of the same piece are 'impassioned', 'worried' and 'moving'. For more on this subject, see Stockfelt (1988: 21-22)

Summary of seven main points

[1] Humans are the only animals to have developed two separate systems of sonic communication: language and music (p. 22, ff).

[2] Music is a form of communication involving the emission and perception of non-verbal sounds structured or arranged by humans for humans. As such, music is a universal *phenomenon* in the sense that no human society has ever been without it, even though the *word* 'music' may have no exact equivalent in many languages (p. 11, ff.).

[3] Music is no more a universal 'language' than (verbal) language itself. Being a universal *phenomenon* does not mean that the same sounds, musical or verbal, have the same meaning in all cultures. The fact that language and music do not trace the same cultural boundaries in no way means that any music or language can be understood by everyone on the planet (p. 15, ff.).

[4] More often than not music involves a *concerted simultaneity* of sound events or movements. Unlike speech, writing, painting, etc., music is particularly suited to expressing collective messages of affective and corporeal identity, since individual participating voices or instruments must relate to the underlying temporal, timbral or tonal basis of the particular music being performed (p. 13).

[5] By combining input from several domains of representation, music forms integral categories of cognition that, from a logocentric viewpoint, may seem contradictory or polysemic but which correspond more accurately and holistically with states of mind as they are actually felt (verbal hints: 'angry on a good day', 'sad *and* elated', 'vulnerable *and* euphoric', etc.). Music also helps synaesthesia and cognitive flexibility (p. 31, ff.).

[6] Music is, in different ways and to varying degrees, essential to any human in any culture in the socialisation process leading from egocentric baby to collaborative adult (p. 27, ff).

[7] Music is important in contemporary everyday life in terms of the amounts of time and money spent on it: about 3½ hours and the price of a loaf of bread or of a litre of milk per person per day (p.5, ff).