social issues
concerning musical processing

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> When one gets an inkling of the laws, then one's bound to find one's relationship to such minds entirely changed! One stops to imagine that a work can exist or alternatively needn't – it *had* to exist. Where something special has been expressed, centuries had to pass until people caught up with it. That's the "moral gain" (…)
>
> What a perspective this opens! It's a process entirely free from arbitrariness. I recall a saying of Schoenberg's when he was called up; one of his superiors asked him in surprise, "Would you perhaps be the composer, by any chance ?" to which Schoenberg replied, "Yes – nobody wanted to be, so I had to volunteer for it."

Anton Webern (lecture at a private house in Vienna, 27th February, 1933)

introduction

The following paragraphs will enquire into some social and cultural aspects determining the perceptive, cognitive and parsing mechanisms involved in the invention and activity we call 'music' and 'music making' – and its consequences on that Western, post-Renaissance specialisation known as 'musical composition'. In the discussion which follows, any objectivity, to be considered a warrant of *validity*, will probably be in the line of what Kant describes as *exemplary* validity.[1] Without immediate examination of the mere possibility of 'pure' objectivity when arguing and articulating these (or any other) type of ideas, it is nevertheless worth stating that I do not intend to conceal my subjectivity during the discussion pursued: on the contrary, it will rather be explicitly present throughout and, furthermore, by having it 'in sight' (and hence 'under control'), will hopefully facilitate the realisation of any merit in the development of it. Should some theoretical value be achieved in what follows, this will reside, not only in what could be regarded as the conclusion or end of the analytical journey, but more in the issues uncovered during the route in quest of it.

This idealised 'end' could be expressed thus: the action of music making, in particular music composition, is an action involving as much social, cultural and political judgements as the obvious aesthetical ones implied; considering this, and taking into account the current circumstances of musical activity within the globalised, westernised cultural framework of contemporary human society, *which directly determine the cognitive processing of the musical object*, there is no way (any more) for a composer of music to judge in purely formal, syntactic and structural terms her compositional decisions; hence, she will need, as a guide, to account for the social, cultural, political, economic (and so on) implications of the sounds contained in her

[1] What Kant (trans. 1952) states on his third Critique is, 'Here I put forward my judgement of taste as an example of the judgement of common sense, and attribute to it on that account *exemplary* validity. Hence common sense is a mere ideal norm. With this as a presupposition, a judgement that accords with it, as well as the delight in an Object expressed in that judgement, is rightly converted into a rule for everyone.' (p. 84)

work. Should this argument be correct, then one most relevant consequence (and one which I will not directly address), is that the decisions and judgements leading to the actions that produce the creative (probably sonic) output that make someone 'a composer of music', are to be ethically as much as aesthetically determined.

Some clarification of several terms used in this sketch is necessary here: firstly, I am not considering as a premise that socio-political judgements have always been consciously involved in aesthetic action: this is something that gradually claimed its place within the music practice loop.[2] I am hence implying a process in which music has, along our Europeanised historical perspective, changed its function, meaning, significance, etc. within society: if composers could guide themselves mainly by (what they would regard as purely) aesthetic judgement in 18th Century Europe, that is not the case any more in 21st Century global society. This process is what will be described as cognitive evolution.

The emergence of this outcome can be seen as divided into two poles of phenomenological levels of occurrence of the musical event: (i) at the perceptive, cognitive and parsing levels of the individual mind and (ii) at the socio-political and economic macro-levels of human relations. Regarding the latter, and following the tradition of classic formulations by Adorno and Benjamin, the work of, among other authors, Richard Leppert, Susan McClary, John Shepherd and Trevor Wishart, have deeply and extensively analysed aspects at the macro levels referred. These approaches have challenged a prevailing academic positivism, raising questions, criticizing and eventually rejecting, as Leppert and McClary (1987) put it, 'the notion that music shapes itself in accordance with self-contained, abstract principles that are un-related to the outside world' (p. xii). Regarding the historical 'process' mentioned earlier, I would also underline the relevance that a gradual separation and eventual divorce of *cultural power* from *economic* and *political power*, occurring with the rise of a bourgeoisie dominated cultural policy in post-Enlightenment and post-Revolution Europe (as well as in the newly born, ex-colonial states of the Americas) has had. This divorce resulted in an ever-increasing redundancy (and hence banalisation) in the musical content of those languages credited with the exceedingly largest amounts of patronised economic support.[3] Consequently, this situation highlights the old ethical dilemma of 'artistic integrity', but now within the highly professionalised, sponsorship-based environment of 21st century music-making: the (almighty) 'market' expects an easy-decodifying language, which the composer feels as banal; she either follows her artistic intuition (at the risk of not being able to survive economically), or she bends to the demands of the market (with the consequently monetary gain). That this happened during every artistic epoch in the history of professional Western art is true; the point here is that the levels of redundancy contained in the musical languages with the bulkiest amounts of patronage has been ever-increasing since the Industrial Revolution - in direct

[2] The fact that Greek classicism, through Plato and Aristotle, have indeed addressed socio-political aspects of music practice does not affect this idea: what was considered then was the power that abstract, musical pitch-rhythm relationships had on human behaviour – not the judgement of the composer/performer use of those pitch-rhythm relationships (see n. 18).

[3] The gradual banalisation of certain styles of music, coinciding with the gradual bourgeois take over of the means of production of those styles, has been noticed almost from the start by some authors. Already in 1927 Adorno (1992), commenting on the meaning of foreign words in operettas, writes that 'originally, no doubt, they were meant to distinguish the banal, bourgeois world, which defines the imaginative horizon of the operetta, from the pathos of romantic opera' (p. 10).

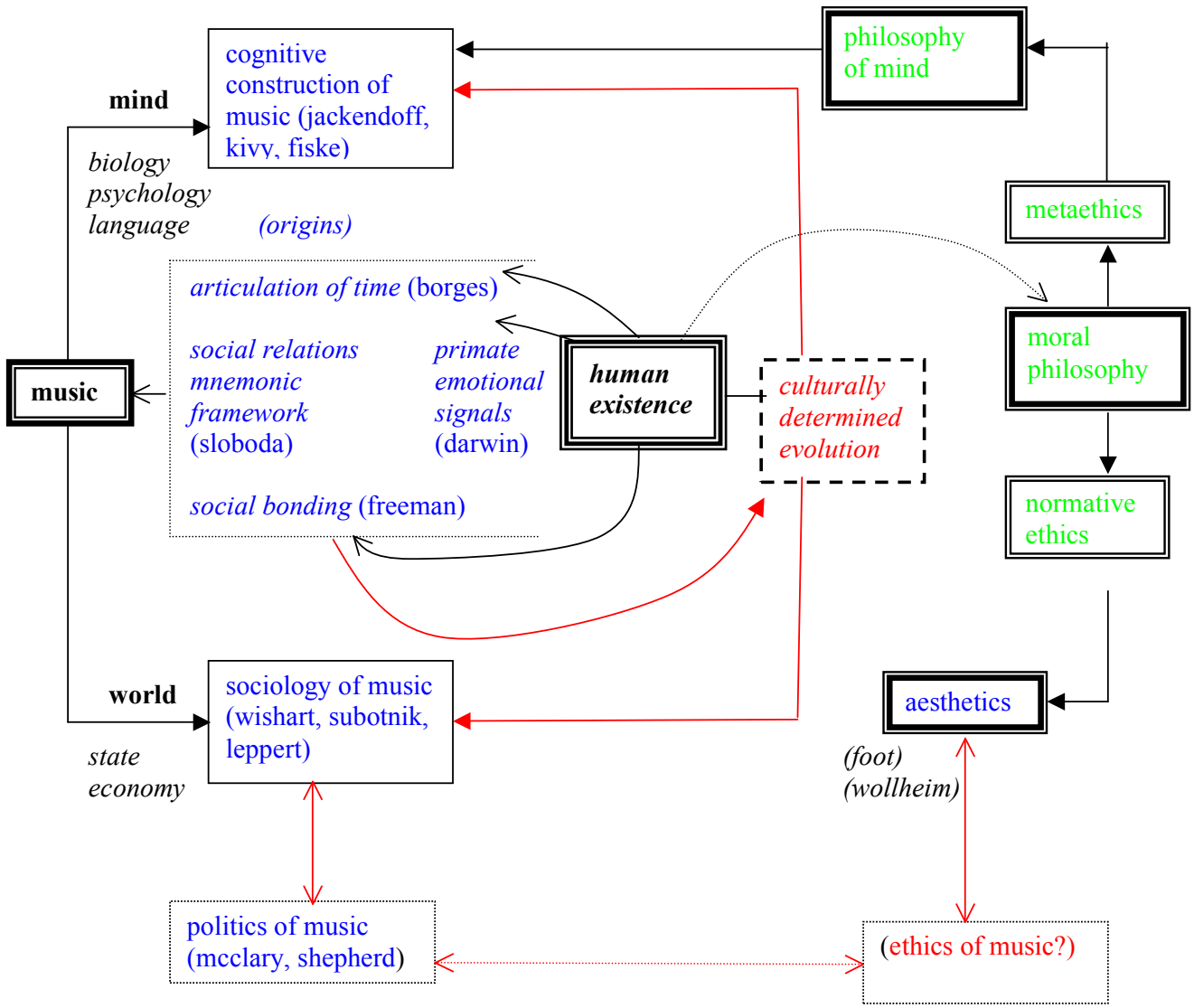
relationship to the ever-increasing dominance of capital as the agent affecting every aspect of human relations.

However, the field of enquiry of this essay is situated at the opposite pole of the phenomenological occurrence of music mentioned above: it will discuss the mind-level, cognitive aspects of this evolution in musical perception. The principle idea behind the argument is that different Western musical materials have not been totally substituting themselves along the musicological history line; these syntactic artifices have been gradually adding themselves up in our parsing mechanisms, fusing into supra-syntactic levels of articulation (and hence cognition), allowing (finally) the possibility for certain sonic constructions (and probably within certain individuals only) to convey semantic content. In other words, I will make a case for what can be described as a process of 'mutation' in musical processing. This evolutionary process is what eventually allows for the possibility of communicating meaning purely with sound, bringing with it the likelihood of articulating figures of speech (generally associated exclusively with language) such as irony, humour, metaphor and the like. Therefore, this carries forward, by the mere option of expressing it, the question of moral judgement into the musical practice agenda.

road-map

The rather ambitious sketch shown below intends to graphically illustrate the context in which 'music' plays its roles within human society. It does not aim to account for every aspect related to 'music in human existence', but only those that, for the sake of this argument, will have to be directly or indirectly discussed. This theoretical 'road-map' which I intend to follow, shows the starting point of the analysis (the origins and roles of music), different related subjects I will discuss on the way and some other related subjects I will not. Linking the different aspects of musical occurrence is the fact that 'culture' is the factor determining its nature: as a consequence, accepting that human evolution is culturally determined, musical phenomena, being culturally shaped, must necessarily mutate and evolve.

phenomenology of music
a tentative map



Thus, starting with the 'beginnings' of music within our species, I will discuss, among other issues, the role that music has had in articulating the problem of 'time': since this notion has always been a central one within human existence, music – by somehow addressing it – reserves its central place as a consequence. Articulation of time, through the sense of hearing that (unlike that of sight) stresses the relational by 'bringing the world to us' (Shepherd, 1987). Linked with this integrational aspect of music, is Walter Freeman's (7/07/03) seminal work on the biology of music and dance: its function as social bonding tools, (mainly through 'altered states' inducing rituals) which not only prepare the appropriate synaptic structure within our forebrains necessary for the acquisition of new knowledge, but with it allow for the build up of trust among isolated individuals, that hence become able to bridge the solipsistic gap separating them – and without which complex social organisation and evolution would have been be impossible. Freeman's findings provide for a powerful and convincing 'culturally–determined' link between the two opposite poles of occurrence of music phenomena: the lowest mind level of music cognition, and the macro, socio-political level of its global incidence find in this theory a biological connection.

I will then argue aspects within one of the opposite phenomenological domains of musical occurrence: that related to the perception, cognition and parsing of music, within the individual mind. By showing how this aspect is wholly or partially determined by cultural, social, educational upbringing, I aim to point out, together with the non-existence of independent pure aesthetical judgement, the fact that 'society' (and hence education, economy, politics and the like) is at the essence of every possible aspect of musical phenomena, both at its micro and at its macro levels.

The 'ethics of music' box, then, in spite of not having been directly addressed in this particular discussion, is somehow 'pointed at' as a consequence of the relationships shown – whilst not a conclusion or an ending point, it remains as a final (negative) question, which could be stated thus: if music is such a powerful and ubiquitous human manifestation, and one whose whole occurrence is socially and culturally determined, both at the local, mind domain of perception and cognition and at the global, cultural domain of social relations, how, then, could there *not* be ethical issues at the core of its judgement and activity?

the origins and role of music

To see into issues about the 'role' of music in human society, the first question to ask would be 'why *music*?' What is it with it that makes it such a prevalent human activity? - as John Sloboda (1985) puts it:

> Does man *need* music? If he does, then deprivation should be harmful in some way. We know, for instance, that sleep is necessary for humans, since continued deprivation of sleep causes physical and psychological ill effects. On this count music is very unlike sleep. People can go without music for very long periods without suffering noticeable ill effects. (p. 266)

But that music is a pervasive activity, present in every known cultural community is something noted by various authors. Sloboda remarks that 'cultures without music do

not, in fact, exist" (ibid p. 267); commenting on Mary Louise Serafine's theory of *Music-as-Thought*, Harold Fiske (1996) points out that, among Serafine's four 'facts' about music, there is its "universality: all cultures enjoy a music system of some kind, and all persons have music knowledge of some 'considerable' degree' (p. 40); Freeman (7/07/03) when comparing the evolution in the human brain of networks of neural activity associated to music, writes that:

> Birds, whales and cicadas "sing" and "signal", but they do not manifest the richness of compassion and understanding that we experience in speaking and singing with one another. *Humans in all societies have these capabilities in varying individual degree*, but we cannot make a tree of evolution to describe their origin from neuro-humoral mechanisms of mammalian behavioural controls. (p. 2, my italics)[4]

That music has a universal presence seems to be without discussion. But this fact does not answer the question *why* does it have such a ubiquitous occurrence.

In 1859 Charles Darwin published *The Origin of Species*, described by Peter Kivy (1993) as 'probably the most important book of the nineteenth century.' (p. 214) In this and other works, Darwin does give an account of the origins and primitive functions of music. Kivy highlights the role of music given by Darwin within one of the two principles operating in his theory of evolution: its function within *sexual selection*.[5] As he explains:

> It was the consideration of the evolution of man and his mental faculties that led Darwin to extrapolate from the music of birds to the music of men. According to the principle of sexual selection the strongest, most active, or *most attractive* male will be the one most likely to gain a mate and reproduce. With respect to birds, the production of pleasing sounds, that is, singing, is a primary means of attraction. (ibid, p. 216)

Kivy then goes on to explain how Darwin places himself within the 'arousal' model of music theory, a tradition that according to Kivy can be traced back to Plato.[6] Sloboda (ibid) also mentions Darwin's account on the origin and roles of music in the evolution of our species, but in a slightly more critical manner. For Sloboda:

> The vocalizations of apes seem to be involuntary patterns, having more in common with human behaviours like laughing, crying, and screaming, which survive very distinctively in humans as something quite different from music. (p. 265)

Sloboda seems to align himself more with theories of 'group cohesion', in which sounds are thought to have functioned in proto-human groups as a means of localisation and communication of motivational state. But his main claim is that music provided (and provides) for a mnemonic structure in which the cultural traditions of a community can be stored and recalled:

> Music, perhaps, provides a unique mnemonic framework within which humans can express, by the temporal organisation of sound and gesture, the structure of their knowledge and their social relations. (ibid, p. 267)

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[4] Page numbers of Freeman's paper refer to those in the internet publication of it.
[5] The other principle, of course, being *natural selection.*
[6] In Darwin's theory, the arousal of emotions by music is associated with a primeval memory of its link with primitive courtship behaviour. (Kivy, ibid, p. 218)

Sloboda's mention of 'temporal organisation' is worth pointing out. It would seem that what is implied here, is not the mere 'documenting' by music of rules and traditions, necessary for the community to survive as such: this could easily be achieved with written language alone and the existence (and importance) of music within literate cultures shows that this role has not been substituted by the written word. What I believe is implied by Sloboda is, rather, the *articulation* and *sharing* of the temporal flux which music and dance (and ritual in general) provide.

That music directly (probably in the *most* direct possible way) manages to touch into the idea, sensation, perception, etc. of the flow of 'time' is something, I think, that is indisputable. Trevor Wishart (1985), following Susanne Langer's ideas, describes music as an 'articulation of the time-continuum' (p. 12). Adorno (1992) has similar, if not essentially identical, views:

> As a temporal art, music is bound to the fact of succession and is hence irreversible as time itself. By starting, it commits itself to carrying on, to becoming something new, to developing. What we may conceive as musical transcendence, namely the fact that at any given moment it has become something and something other than what it was, that it points beyond itself – all that is no mere metaphysical imperative dictated by some external authority. It lies in the nature of music and will not be denied. (p. 150)

So succession, transcendence, development are undeniably lying in the nature of music, all qualities which make it a 'temporal art', an articulation of the invisible, ever-present temporal flow – or of our perception (some will say 'illusion') of it.

Ever since human evolution became culturally-determined - rather than genetically so - the need for, on the one hand, storing and transmitting basic survival knowledge to coming generations; and on the other hand, for de-codifying, articulating, re-presenting, conceptualising (and so on) the signs from the outside 'world', in order to somehow apprehend it and thus 'control' it, human beings were in need to relate self-consciously to immaterial, abstract, ontological, metaphysical (and so on) aspects of existence. And the mystery of 'time', (together with that of its sister concept, 'eternity') has always been lying at the heart of those enquiries. During a conference at the University of Belgrano, Buenos Aires, in 1979, Jorge Luis Borges (1998) explained that:

> (…) time is an essential problem. What I mean is that we can't do without time. Our consciousness is continuously passing from one state to another, and this is what time is: succession. I think that Henri Bergson once said that time was the capital problem of metaphysics. Should that problem be solved, everything would be solved. (p. 84)

The problem of time was one of Borges' long-life obsessions; but, if his (and Bergson's) conviction about its sway on the development of human thought is correct, it has been, then, an everlasting obsession for the whole of human civilisation – regarding Western philosophy, one stretching back to Parmenides, his disciple Zeno of Elea (of which his memorable paradoxes give a direct account),[7] Heraclitus and Aristotle.[8] It is worth mentioning also that 'dissolving the illusion' of time passing has a

[7] For a detailed analysis of the 'Achilles and the Tortoise' paradox, see Borges (1989), pp. 244-8

[8] Parmenides' and Zeno's represent what's regarded as the 'static' view of time; Heraclitus' and Aristotle's, the 'dynamic' one. See Lowe (1995), pp. 875-6.

central role the Zen Buddhism practitioners' seeking of 'satori' – a word denoting 'wisdom', 'happiness', 'illumination' and the like.

Music, therefore, by being the 'temporal art' it is, and by concretely articulating its continuum, corresponds 'directly with the continuum of our experience, the continuous flux of our response-state' (Wishart, ibid, p.12), becomes probably the nearest human beings get to somehow solving, if not logically, the 'capital problem of metaphysics'.

It is significant that Borges (ibid) chooses to start the afore mentioned conference (specifically entitled 'time') with the following supposition: that instead of five, we are left with just one sense – and that one is hearing; the visual world disappears, and so does touch, together with smell and taste, and consequently:

> We would have a possible world which could do without space. A world made up of individuals. Of individuals able to communicate between themselves (…) a world made up of consciousness and music. (…) In that world, however, we would always have time. (p. 83)

So the sense of hearing is intimately linked with the perception of time, and not with that of space, which as Borges (1989) declares, 'is an incident of time and not a universal form of intuition, as Kant imposed. There are whole provinces of Being which do not require it; such as those of smell and hearing.' (p. 200)

It is worth mentioning that Borges is speaking here of 'space' in its metaphysical dimension, and not in the acoustic sense of *spatial localisation of sound*, within which the sense of hearing does indeed have obvious direct bearings.[9] It is this latter meaning of space, and the different ways in which we link with it through our visual, aural or touching channels, which John Shepherd (1987) addresses when discussing male hegemony in noetic, scribal dominated societies such as the Western:

> Male hegemony is essentially a *visual* hegemony. Touch reminds us constantly of our relatedness to the world, and sound brings the world to us both circumambiently and circumjacently. Vision by contrast is the silent and inert sensory channel which allows us not only to distance ourselves from the phenomena of the world but also to interject ourselves into the world from a distance. (p. 155)

Shepherd's views on the capacity of control and power-over of a male, visually oriented domination of culture (realised through the social structures of capitalism) are explicitly addressing the socio-political aspects of musical phenomena. What I would like to point out now is his description of the sense of hearing which, unlike vision (that corresponds to distance and separation) and touch (that activates our distinction between us and not-us) 'is a medium that, in bringing the world to us, stresses the integrative and relational.' (ibid, p. 157).

It is this integrative and relational what, I think, Walter Freeman (7/07/03) refers to when discussing the 'social bonding' aspects of human relations. According to Freeman, knowledge is produced inside the brain of each individual – with the realisation of the existence of other minds. This type of solipsism is what he defines, in a slightly different use of the word, as epistemological solipsism: a gap which

[9] For a detailed description of psycho-acoustic mechanisms for sound localisation, see Jure (27/07/03)

individual minds need to bridge in order to form integrated, functional societies. And this is the role that music has had in human evolution:

> A case is made that music together with dance have co-evolved biologically and culturally to serve as a technology of social bonding. Findings of anthropologists and psychiatrists are reviewed to show how the rhythmic behavioral activities that are induced by drum beats and music can lead to altered states of consciousness, through which mutual trust among members of societies is engendered. (ibid, p. 1)

Trust, implying a predictability in the behaviour of those sharing our spatial environment, built through the temporal, non-verbal experience of bonding that the practice of dance and music provide, is the main vehicle of transcending the inevitable solipsistic gap between each individual mind. And this must have preceded the invention (and sharing) of language and technological discoveries such as the taming of fire and the use of tools.

Freeman's research on neural activity has further implications. By tracing stimulus-dependant activity in the sensory receptors of the brain of rabbits, Freeman discovered that this activity vanishes at the cerebral cortex level, replaced by cortical activity created in the rabbit's brain. These patterns were not derived, but created in the chaotic dynamics of the cortices, and lacked invariance with respect to the triggering stimuli. Freeman thus concluded that, not only the meaning of a stimulus, but all knowledge of the outside world that animals and humans have, is constructed in the brain. Furthermore, every perception is influenced by the previous one, such that 'each exposure to a stimulus changes the brain's synaptic structure, so that it cannot respond identically over time, though it may appear subjectively to do so' (ibid, p. 4); thus, the acquisition of knowledge is achieved by dissolving the synaptic connections in which prior knowledge is held; this is achieved by the release of a neuropeptide (oxytocin), which happens to be the same one released during copulation, lactation and 'altered states' type of rituals induced by music making and dance. Freeman comments on these discoveries that:

> What is at issue is the extent to which feelings of bonding and the formation of a neural basis for social cooperation might have been gendered by the same neurochemical mechanisms that evolved to support sexual reproduction in altricial species like ourselves, and that might mediate religious, political, and social conversions, involving commitment of the self to a person as in transference, fraternity, military group, sports team, corporation, nation, or new deity. (ibid, p. 7)

It seems, then, that the neurochemical mechanisms necessary for the genesis and development of human civilisation as a whole, are those built in our brains during, not only the activities of male/female sexual reproduction and mother/child caring (which would come as no surprise), but also during the shared, inside-time communication of music and dance.

The implications of Freeman's research are of capital importance for the sake of the argument pursued in this article: it seems that what we have here is a connection, which being neurochemical is still culturally-determined, between the mind level of music cognition and the social macro-level of music practice.[10] If, as I shall argue, the

[10] My use of the word *practice* intends to encompass the composition, performance and reception of music.

syntactic units of music languages have morphed gradually into further, more complex constructions essentially different from the original ones (and with them, our parsing mechanisms), I do not think it plausible to believe that the neurochemical mechanisms present within our forebrains have done so. So if a cognitive, higher focal aspect of music conceptualisation might have evolved since the genesis of primal musical grammar to the present, this is not the case regarding the essential, biological functions lying at the base of our low-level cortical perception and cognition. And, if Freeman's conclusions are correct, that low-level functioning is essentially linked with all aspects relational, communal, social and hence, political.

I will now turn to the discussion of some theories of music perception and cognition.

music and mind: an overview of some theories

Any musician, theorist or critic interested in (or in need of) analysing, studying and/or comparing theories of music perception and who, at the same time, happens to be a devoted practitioner[11] of non-tonal, non-mainstream languages of music, will feel, at a certain point during the research, some sort of theoretical discomfort. And this happens when realising that the bulk of those theories do account (some in extreme detail indeed) for the perception, cognition and parsing of tonal or discrete pitch/rhythm based music languages. In lieu, discounting a few scrupulous exceptions, not enough is said about the cognitive construction of any musical material which does not function within the combinatorial syntax of grammatical units such as *note*, *scale, chord, motif*, *rhythmic phrase*, *theme* and the like. This exclusion is unacceptable, even if there existed in the whole world just one composer, a single performer and one lonely auditor of a time/space gestural event which happens to be sonically situated outside that pitch-based grammatical realm of sound organisation. If that single event is actually de-codified at the emissary and receptor areas of its occurrence and does function as a shared gesture within a lapse of time/space articulation, then that event *is* music, and the participants of that event are sharing the cognitive, aesthetic and social interaction implied in music practice. Music theories of perception should account for those cases, as much as for the cognitive construction mechanisms involved in the perception of a Beethoven string quartet. The fact is that those practitioners do exist – even if, in comparison, that practice is not as extended as, say, that of Anglo-American pop music, or of the tradition of European art music.

What can be read from this, I think, is two-fold: on the one hand, the majority of these theories do include a 'cultural context' and/or 'educational background' element within their explanations of how the mind conceptualises music - something which, in many cases, is explained in similar fashion to the cognition of language (Jackendoff, 1992). At the same time, the fact that these authors and researchers use for their subjects, examples, explanations, etc., tonally oriented material, is something that points indirectly to *their* own cultural and educational background.

[11] See n. 7 above.

Much correct effort is made to include non-western music in those theories. In this sense, Harold Fiske (1996) indicates that a music theory 'must account for the world's most multifarious languages, many of which do not see ear to ear with Western tonality, texture and structures' (p. 59) - but these efforts are usually single-directional in their approach: non-western languages are put through the theoretical sieve of European music's syntax rules, and never otherwise. I have never come across an analytic syntactic tree in which a Bach fugue is de-constructed with the structural artefacts at work in a Javanese gamelan.[12] As for non-tonal music, there are possibilities for post-tonal (yet traditional) idioms to be perceived through many models (Fiske, 1996; Cook, 1990): the same cannot be said about languages involving noise, landscape sounds, silence, industrial drones and so on. For a start, these musical languages are totally devoid of (what I understand as) 'pattern' associated material, which would convey what Fiske (1996) regards as one of the primal stages in the process of music cognition: this involves a 'cognitive decision-making activity characterized by pitch-durational pattern formation and pattern intercomparison' (Fiske, ibid, p. 60). It is the use of this term which I find problematic: is there any sort of ' pitch-rhythm pattern' perception and cognition involved in, say, a 20 minute, non-developing, single, inharmonic drone played by Nikos Veliotis on his prepared cello,[13] or for that matter, a piece of non-manipulated *musique concrete*? If so, then Fiske's principles of music cognition can be regarded to be universally inclusive – and the above objections unjustified. I still hold my doubts, even aware of the fact that Fiske does clarify that these pitch-durational patterns involved in perception and cognition are 'any type of sonic pattern, not merely melody or rhythm' (ibid, p. 153). My experience with such music (Veliotis, or noise-based) and my personal communication with practitioners of it is that an active 'pattern comparison' attitude *by itself* would lead to strong aesthetic frustration; hence a different, non-comparative, non-expectant type of audition is required as well if some satisfying aesthetic response is to happen. The fact is that it does happen – and theories of music only accounting for pattern-based perception, cognition and parsing fail to explain how.

What these theories do point out, is that music perception and cognition is, not only a construction process within the modular structure of our brains (seemingly responsible for the realisation and comparison of those 'tonal-rhythmic patterns'), but also the result of a set of social and cultural relations. Fiske (ibid), after giving a detailed examination of seven seminal theories of music perception,[14] 'each representing a different ontological context' (p. 138), summarises in the final chapter '21 principles of music perception and cognition which together portray a rich theory of musical thinking' (p. vii).

1. The brain seeks perceptual economy.
2. Perception is a search for element interrelationships.
3. Music perception is a search for tonal-rhythmic patterns (or pitch-durational patterns: the search is for any type of sonic pattern, not merely melody or rhythm).

[12] Something which, of course, will be quite difficult to find: these theoretical speculations are fundamentally Western enquiries.
[13] Reference: Antifrost afro 2018
[14] The selected theories, representing ' the most interesting thinking we have had about the nature of the musical mind' (ibid, p. 138) are: Carl Seashore's 'copy' theory, Abraham Moles 'information' theory, Mary Louise Serafine's theory of 'musical thinking, Fiske's own work on 'connectionist models', and finally, an account of three theories of 'musical meaning': Susanne Langer's (signs and symbols) Leonard Meyer 's (expectancy) and Peter Kivy's (resemblence).

4. Perception requires time and effort.
5. Perception is a construction process, not a copy process.
6. Music cognition is unique to human brains.
7. The function of music cognition is the realisation of tonal rhythmic (pitch-durational) patterns.
8. Music cognition is limited exclusively to the realisation of tonal-rhythmic (pitch-durational) pattern structure and interrelationships.
9. Music cognition requires time and effort.
10. Music patterns comparison procedures represent a semantically closed, self-reference, modular system.
11. Musical communication is the result of a shared social-cultural contract.
12. Music listening requires active, rather than passive, participation on the part of the listener.
13. Music listening is an hypothesis-testing process.
14. Perception is dependent upon a cognitive context created by the listener (i.e. from long term memory of previous experience and information).
15. A musical language is defined by the set of syntactic rules describing the permissible tonal and durational relationships which represent that language.
16. Different sets of syntactic rules define style differences and, at an extreme, define separate musical languages.
17. Music cognition involves a succession of tonal-rhythmic tasks arranged hierarchically (or by a processing loop); the number of different cognitive tonal rhythmic tasks is probably finite.
18. Tonal-rhythmic tasks are solved successively, each requiring a solution to all previous tasks which together, account for accumulated processing time and effort.
19. Musical comprehension is proportional to the extent of successful negotiation of tonal rhythmic pattern-comparison decision making.
20. Musical meaning is defined by, and the result of, the realisation of tonal-rhythmic relationships; depth of meaning is proportional to the depth of task hierarchy cognitive penetration and is, therefore, equivalent to musical comprehension; the outcome of this is aesthetic attitude.
21. An aesthetic response to a piece of music is the consequence of realised tonal-rhythmic relationships; this is distinguished from an emotional response to music which is attached to a musical experience following cognition; an emotional response takes on appearance-value, the quality and type of which is solely by the listener, probably as an outcome of previous life experiences found by the listener to relate in some way to one or more dimension of the music heard. (ibid, p. 153)

I shall return to some of the perceptive-cognitive aspects of this summary later. What I do want to point out now is the fact that, according to Fiske (which means, in turn, according to Serafine, Langer, Meyer, Kivy, et al) the musical event, once constructed in the individual brain, is dependant for its communication on a set of social and cultural contracts (point 11), and that perception is dependant on long term memory and previous experience (point 14).

For some reason, among the selected theories in Fiske's compendium, Fred Lerdahl's and Ray Jackendoff's Generative Theory of Tonal Music (*GTTM*) does not feature (apart, that is, from brief mentions). Lerdahl and Jackendoff's work on the processing of tonal music could be described as an extrapolation of Noam Chomsky's theories of generative grammar into the music cognition realm – a parallel which might have an antecedent in Schenker's structural approach to musical material. As Sloboda (1985) points out, in both Schenker's and Chomsky's models, a distinction between deep and surface structures within grammatical trees is fundamental. In Chomsky's theory, the node carrying semantic function (the *deep structure*, term replaced by *D-structure* in his later work) generates various sentences (the *surface structure*, later *S-structure*), decomposable to lower structural units, and all of them conveying the same

semantic content (Schenker, in place of deep structure refers to *Ursatz*). Likewise, *GTTM*'s model of musical perception[15] show principles of real time, internalised grammar used by a listener in order to build internal musical representations, something which 'parallels familiar arguments from linguistic theory concerning the relation of linguistic universals to the problem of language acquisition (…) - or practically anything on language by Chomsky.' (Jackendoff 1992, p. 127) Another principle at work in Chomsky's linguistic model is what he calls 'performance', a concept related to the 'competence' a speaker has of the language within which she is able to generate those *S-structure* sentences from the *D-structure* semantic node. Within the musical realm, it is this 'performance' aspect what Jackendoff's later work, subsequent to *GTTM*, intends to address: the parsing mechanisms at work in musical perception and cognition and its influence on musical affect. According to Jackendoff (1992), a theory of music perception should contain

> at least:
>
> 1. an account of the abstract structures available to the listener,
> 2. an account of the principles available to the listener to assign abstract structure to pieces of music
> 3. an account of how the listener applies these principles in real time to derive abstract structures for a piece as it is being heard, and
> 4. an account of the facilities in the mind for applying such principles. (ibid, p.126)

As Jackendoff explains, *GTTM* intends to 'serve as part 1 and 2 of a theory of musical processing.' (ibid, p. 126); this later work on musical parsing, then, covers points 3 and 4. In this sense, real time processing of music, then 'amounts essentially to deriving the abstract structure of a piece in real time' (p. 137). The fact that this is a real time processor, faces one fundamental obstacle: some moments of grammatical indeterminacy will inevitably arise, which cannot be resolved until later in the development of the music (a D – A chord progression is heard: is it to be considered as a I – V sequence, or is it a IV – I one? This cannot be solved until a larger context of the piece is heard). Jackendoff presents three possible models of parsing: first, a *serial single-choice* parser, a processor which, when confronted with indeterminacy, chooses the most likely option at the moment, and judges the structure from there. Next he presents a *serial indeterministic* model, a parser that when facing indeterminacy will not come to a decision until a unique possibility can settle. And finally, the model which Jackendoff himself thinks most plausible: a *parallel multiple-analysis* processor, a parser that when encountering a choice point, processing then splits into various competing analyses, which are abandoned should they drop below a certain plausibility threshold – those branches remaining at the end of the piece will represent the viable structure(s) of it. If this is correct, why then is that multiplicity of simultaneous analyses not perceived as such? When listening to a Bach chorale, we are experiencing a single piece, even when moments of indeterminacy are constantly arising. Jackendoff solves this by explaining that 'as in other cognitive domains, it is generally the case that we perceive only one interpretation at a time' (ibid, p. 141). This position means that we are conscious of one analysis at a time, the others while present, are 'inaccessible to attention' (ibid, p. 141). It is worth noticing the extremely elaborate model that Jackendoff builds in order to explain and justify an issue which has been central to the

[15] I shall stress the fact that Lerdahl and Jackendoff's (as its title claims) is a theory of *tonal* music processing; it does not carry the pretence of being an all-inclusive cognitive theory for every possible musical language.

discussion followed here: the fact that music needs to be processed *in real time*. Again, the sharing of a time flux articulation is at the core of the musical event.

Jackendoff's processors of musical perception, cognition, and parsing, have a strong element of 'expectancy theory', an approach first brought forward by Leonard Meyer in 1956. According to this intuition, as Jackendoff puts it, 'each fragment of music, as it is heard, builds in the listener expectations of what's to come' (ibid, p. 148), a position which in general terms, 'can be applied to the more complex and abstract musical structures posited in *GTTM*' (ibid, p. 149). Fiske (1996) claims to 'have always been fond of Meyer's theory' (p. 110) and points 13, and 18 to 21 of his music cognition summary, have all an expectancy ingredient.[16] Furthermore, Fiske points out Meyer's theory links with musical meaning. He explains how Meyer ascribes to musical tones, not only embodied meaning (tones that point to other musical tones), but also designative meaning (music can trigger connotations and emotional states dependant upon the musical *understanding* of the listener). The relevant aspect of this is that 'Meyer claims that designative musical meanings are primarily shaped by cultural experience.' (p. 108)

the mutation of cognitive processing

Perception, cognition, parsing and affect are extensively described and experientially verified by these theories; the musical objects that are seemingly constructed within our minds do have certain plausibility as described by these models. In all of them, there is an element of cultural or social background which define the shaping of that musical object, together with attributing to real-time processing a central role in it. Nonetheless, what these theories fail to account for is our inevitable (even if unconscious) *awareness of the human gesture implied in each of those pieces of music we are listening to*. Models of musical processing treat the music constructed inside our minds as an object independent of the human input that produced the stimulus in the first place. In other words, music is treated purely as a textural object ('pitch-rhythm relationships') devoid of gestural input – and that is equal to reifying the object outside the gestural, real-time context that the loop 'music practice' implies. When listening to a Mozart piano sonata, we are certainly processing, comparing, expecting, patterns; and we do let those patterns satisfy, shock, surprise us, and so on. My point is that while doing so, we are at the same time constantly aware of the human will and intention which produced those patterns in the first place: in other words, we let ourselves be bewildered by the texture of those sounds *as much as by the human gesture behind them*. We are listening to a sonata, its relationships, its structure; but, above all, we are listening to *Mozart* – a fellow being who is in charge (has the power) at that moment, by mastering the appropriate skills, of articulating the space-time sharing experience we are so much in need of as a species. Consequently, we feel not only an aesthetic response (Jackendoff's 'affect') purely through the 'patterns' we are perceiving and processing (something I will call *textural* affect), but also emotive responses I would associate with gratitude, admiration, respect and the like, towards the

[16] Some other aspects he finds problematic, mainly the objective status given to the relationship between stimuli and mental construction, something he describes as 'based on a copy paradigm' (ibid, p. 110). This would be in contradiction with point 5 of his summary.

human will and skill able to arouse that aesthetic response (*gestural* affect). We do not admire the beauty of Mozart's sonata, as we admire the beauty of a fantastic summer sunset in the ocean's horizon: regarding the sound event (in the tradition of post-Renaissance Europe), there has always been the need to associate some human rhetoric to it, even if it be a purely sonic, non-representational rhetoric. And this is exactly what, I think, Cage's post-1952 compositional ideas intend to address: Cage is calling our attention to the possibility of finding beauty in every existing sound, including those found in nature, devoid of any human gesture and rhetoric whatsoever. In a sense he is, by pointing at it, showing us that beautiful sunset, to which we were not paying enough attention on account of being too busy looking at a Tintoretto, Goya, Kandinsky or Rothko painting. So once we find that beauty in the sunset, we feel the aesthetic (textural) satisfaction which comes with it and still, as hard as Cage tries to keep his gestural input away from it, we also feel gratification, admiration and respect towards his 'pointing' at it: hence, we still have that gestural satisfaction – which is not associated with any rhetorical manipulation of the textures involved, but rather with the context created by the original idea of showing us the 'found object': there has been a conceptualisation of the musical context, which, when shared, is capable per se of producing aesthetic response. Whoever feels aesthetic affect while listening to a performance of *4' 33"*, is certainly expectant to 'what's going to happen next', and somehow comparing the pitch-rhythm relationships of the random sounds occurring during that time/space lapse: the textural affect might be exactly as that constructed during the Mozart sonata audition. The gestural affect, however, is of a different nature altogether: we are not so much admiring the will and skill behind the textures, as the 'idea' of making us focus our aural attention towards them: the beginnings of conceptual listening (and, therefore, of conceptual processing).

What this type of listening involves, is a re-shuffling of the cognitive processing models described earlier: being necessary, they are not sufficient for explaining the ocurrence nowadays of post-industrial, post-deconstruction, conceptual-related musical activity. As said earlier, these activities do happen and therefore, in spite of being a minority in comparison with traditional ones, social and cognitive mechanisms are in place there – they *exist*, therefore they are *possible*. I will attempt an explanation of how this might have happened. As explained earlier when discussing its origins and functions, music is an activity that by internally articulating the time continuum within a ritualised, communal sharing of a space-time lapse in which synaptic connections of the forebrains are destroyed and rebuilt by the release through 'altered states' induction of certain neuropeptides and thus properly setting up the synaptic structure in the brain necessary both for the acquisition of new knowledge and for the building of trust which enables individuals to bridge their solipsistic gap and bond in order to share that new knowledge, makes possible cultural evolution and the construction of complex societies. With the construction of complex society comes specialisation; what originally had probably been a spontaneous communal practice, gradually became specialised and certain (gifted? powerful?) individuals would take up the role of 'musicians', 'dancers', 'priests' and the like. An obvious consequence of this is that the specialisation of roles has its counterpart with individuals who delegate those roles i.e. the specialisation of consumption, resulting in the emergence of the music practice loop I was referring to earlier: composer > performer[17] > listener. Whichever ways this loop

[17] It is usually the case, of course, that composer and performer are the same person in mostly all musical traditions.

is described at its surface,[18] still does not affect the fact that, wherever someone is located in it, the musical object is constructed within the perceptual, cognitive and parsing mechanisms at mind level, with the resulting affect and aesthetic satisfaction – the emotive result of that original synaptic network construction and neuropeptide release (which, as shown by Walter Freeman, is the same one discharged during sexual intercourse).

The important issue here is that, while our neurological mechanisms remain exactly the same as those present in the *genetic* origin of our species, this is not plausible regarding the *cognitive* processes, which, as every important theory of cognition accepts, has a cultural variable to account for – and it is cultural (not genetic) the format in which the human species has stored its basic survival information. It is an accepted anthropological fact that, since the appearance of the first groups of Homo sapiens in the face of the earth, human evolution has been culturally, rather than genetically, determined.[19] This 'cultural window' appearing in the models of musical processing, is what allows for the possibility of 'cognitive evolution'. Therefore, while the biological affect remains (and will remain) a constant, the perceptive, cognitive, parsing and, I will add, conceptual musical constructions have been (and always will be) evolving. Models of musical processing which do not take into account the possibility of their own mutation, are very probably reifying a particular type of listening, only true for some cultural, historical, economic (and so on) contexts - but not for all of them. Richard Wollheim (1979), when discussing theories of art and their relationship with the 'understanding' of it, addresses how this fallacy might develop:

> 'What appears to happen in most cases is this: Something is found in our characteristic reactions to art that corresponds to *a* use of a particular word: this word is then adopted as *the* word for spectator's attitude: but when this happens, it is the whole use of the word, or its use in all contexts, that is collected: and the spectator's attitude is then pronounced to be all those things which are covered by this word. A theory is established, and an insight obscured.' (p. 146)

By ignoring an integral parameter of cognition (ie. its evolution and change), these models of musical processing cannot become the universals which, and this is the problem, they claim to be.

Apropos of the music practice loop, the cognitive construction of music must, in addition to what has just been said, allow for the entry of that specialist 'the composer' (or 'the performer', or both) in its parsing and affect processing: not doing so is to deny the communication which is taking place, the 'dialogue' making possible the articulation of the time continuum – if not by hands-on practice (as it was probably in its origins), by becoming 'listeners', and being 'audience', prior delegating to the specialists their version of a time-flux articulation for us to share. Thus, we let Mozart do it, we respond to his version of the flux, which we then make our own and respond

[18] As an example of a contradicting view of the existence of a full communication loop from composer to listener, Serafine 'argues that communication is not a part of the music process (…), instead, the process consists of only two levels: composer and music (imagined, notated, or performed), performer and music (notated or performed), or listener and music (notated, imagined, or performed). (In Fiske, ibid, p. 43). Wollheim (1979) argues otherwise: 'for it to be in any way in order to talk of understanding apropos of art, there must be some kind of correspondence between the artist's activity and the spectator's reaction' (p. 147).

[19] For an extensive bibliography on cultural evolution, see Lea (09/07/03)

aesthetically to – and also inevitably admire, respect and feel gratitude towards him, or rather, his *power*. This entry of the composer/performer into the music practice loop is probably one crucial evolutionary step in the history of music cognition – I will not attempt now to guess the historical period in which this might have first happened,[20] but it is probable that by post-Revolution nineteenth century Europe, it already had. Rose Rosengard Subotnik (1987), in a contextualised analysis of Chopin's Etude in E Major (Op. 10, No. 3), comments that:

> In composing music that seems to require of the listener prior knowledge of Chopin's authorship, Chopin seems to me, like the very different Mahler decades later, to affirm that we draw meaning from another's expression not only from its inner structure but also from its sensuous qualities and from our knowledge of (and reaction to) the particular context in which it originated. (p. 116)

In some sense, Subotnik is describing the particular evolutionary step in musical processing I was referring to – one that maybe marks the transition of a Baroque rhetoric of 'pure music'[21] (textural, 'inner structure') to a Romantic one of 'self-expression' (the 'sensuous' qualities, involving the affect of texture in combination with the gestural input) – but, most important of all: Chopin (according to Subotnik) is pointing already towards a conceptual way of processing, typical of post-Industrial, Western(ised), 21st Century global culture: a cognition including the awareness of the *context* in which the music is created (composed, performed, listened) and, crucially, the possibility for that context (our 'knowledge of and reaction to' it) to be a carrier of *meaning*. It is not only the 'composer' who enters the musical dialogue, but also the awareness-of-the-awareness by the composers/performers of their 'entering the dialogue' that is taking place. Furthermore, once the conceptual 'self-awareness' gate is opened, whole conceptual constructions such as tradition, history, style (and so on) claim their place in the loop as well. And when these concepts become carriers of meaning, music then has the potential of pointing outside itself, and by doing so, of articulating semantic content within its symbolic syntax.

context and meaning

The established notion of semantic articulation within music theory is summarised by Peter Kivy (1999) thus: 'Music is a self-sufficient pattern of sound with "syntactic" but not "semantic" properties' (p. 57). Considering that, when making such claim, Kivy is discussing musical languages related to Haendelian opera *seria* and Mozartian opera *buffa* this could be considered, in some sense, to be true. In a similar ideological line Fiske (1996) writes that 'Clearly then, musical patterns are about other musical patterns (…) the musical module can be described as a semantically closed, self-reference cognitive system' (p. 146); Jackendoff (1992) asserts that:

[20] It is unlikely, though, that by classical times it had: both Plato's (trans 1941, pp. 90-4) and Aristotle's (trans 1962, pp. 301-15) remarkable accounts of music and its role in (and danger for) society seem to describe a state of affairs in which 'music' was already somehow reified, though not whoever produced it (the *Ionian mode* or the *Lydian mode* where the items to be discarded, not a particular player, composer, or listener).

[21] For a deep insight of Baroque musical rhetoric, see Harnoncourt (1989), pp. 37 – 42.

> it hardly makes sense to say that the representations one constructs in response to hearing a performance of the *Eroica* are true or false. Nor does it make sense to claim one has propositional attitudes toward musical representations, which aren't, as far as I can tell, propositions. (p. 165)

Even when accepting this purist notion of music as true for some particular historical-cultural contexts, it is by no means inclusive of, say, the slit-drum practice of the Tangu people from the Madang district of Papua-New Guinea, where a 'complex signalling system, in which every Tangu person, pig, and place has a distinctive call-sign, enables these people to transmit a full repertoire of precise announcements - a ritual feat is in the offering, someone's wife has died and so on' (in Ryan, 07/08/03). This example of musical practice which seems not to abide in the non-semantic, purist view of music as a non-referential symbolic system, is just one of many outside the Western musical world – nevertheless, scholastic theory can easily dismiss these as 'exceptions'. It is the fact that the purist approach does not account for some Western supra-syntactic practices which clearly subverts it.

If Subotnik's example of Chopin's contextual self-awareness would still not make a case for a completely semantically driven musical practice, it does, together with other late 19th and early 20th century examples, unlock the doors for allowing its entry. The main question to ask would be: is there a possibility of articulating, purely within the sonic realm, semantic figures such as irony, metaphor, sarcasm and the like? An affirmative answer would make the case for the musical semantics approach. The purist view would possibly answer negatively: those forms would involve propositional assertions and attitudes impossible in a purely grammatical realm. Irony, for example, as classically defined by Aristotle denotes 'saying something but meaning the opposite', a definition which has similar resonances with Myers Roy's contemporary designation of it as 'saying something other than what one means.' (both in Barbe, 9/08/03): these descriptions imply some 'meaning' in the sentence – something conveying a belief in the utterer and invoking a propositional attitude in the listener. Nonetheless, I do not think it would be incorrect to describe, say, Jimi Hendrix's 1969 Woodstock performance of 'Star Spangled Banner'[22] as an articulation of 'irony', or John Zorn's late 'muzak' in *The Gift*[23] as musical 'metaphor'. Hendrix's sounds do stand as 'pitch-rhythm' relations, we do parse the syntax in the traditional way, together with the novelty of the timbral, spectrally driven electric guitar textures (still musically 'pure': what I called textural affect), we are overwhelmed by Hendrix's technique and virtuosity (gestural affect) but also, we are incorporating our knowledge of the context, the outside-music meaning that a performance of the American national anthem, at that particular time and place, by that particular composer/performer, has and, once processed, *we respond aesthetically to that knowledge* (a reaction I would call 'conceptual' affect). The musical object constructed has thus incorporated all syntactic meanings, all of them pointing to each other, and eventually morphing into a musical object capable of pointing beyond itself towards non-musical, social, cultural, political (and so on) implications - which we can soundly describe as, regarding the context in which the gesture is happening, 'saying the opposite of what it means'.[24]

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[22] ref: Mca B000002OSN

[23] ref: Tzadik 7332

[24] Should we include to this definition of 'irony', its *echoing* properties, the Hendrix example becomes even a clearer case of 'musical irony' - see Sperber and Wilson (10/08/03). It is this 'echoing' that inclines me to describe the Hendrix performance as 'irony', and not (say) 'metaphor' – of which John Zorn's *The Gift* can better stand for: instead of quoting discrete passages within single works, hence

The possibility of creating a musical object which points beyond itself, brings whatever that musical object is capable of pointing at, into the composer/performer's working agenda. Either by inclusion or omission, the mere possibility of its articulation is unavoidable.

objective v subjective moral judgements: from sincerity to principles

I will insist on the fact that, in spite of *believing* these matters to be true, I am also aware that it is a type of belief filtered with particular opinions determined by ideology, taste, cultural background and so on, and therefore I have no proper way of objectively *proving* it as a universal to anyone not sharing those particular opinions - always bearing in mind that the purpose of this study is not to *convince* the reader on the appropriateness of an arbitrary creed: this is still an essay intending to develop a certain argument, and to show it as clear as possible, and definitely not a proselytization of subjective views of the world. But, following Kant's conclusion on the question whether 'taste' could be regarded as a 'natural and original faculty' or an artificial idea acquired by us, these

> are questions which as yet we are neither willing nor in a position to investigate. For the present we have only to resolve the faculty of taste into its elements, and to unite these ultimately in the idea of common sense. (ibid, p. 85)

As said earlier, it is in the *process* of discussing these issues that valid arguments could be found, regardless of particular points of view.

Of course all of these problems lead to, as Philippa Foot (1979) describes it "the old question as to whether moral judgements are subjective or objective." (p. 13). The general strategy of not masking my subjectivity from the argumentation and at the same time not to make the validity of the conclusion depend on objective assertions can, I think, be aligned with Foot's account of the falsehood implied in describing moral judgements as subjective, whereas

> we have the verbal form of an exclamation, as when someone says 'alas!' or 'ow!' or 'how nice!' we cannot tell him that what he said was false, though we can suggest that he is pretending or being insincere. Where he uses a declarative sentence, as in saying 'I am dismayed' or 'that hurts' or 'I like that', we may say 'that is not true', but only if we think he is lying or at least being insincere. (ibid, p. 13)

In Foot's view, then, the problems and discussions touching issues concerning moral judgements, due to the special way in which matters of truth or falsity arise within that area, simply do not raise questions about subjectivity. As for the issue of 'insincerity', she goes on explaining in the same page:

> That moral judgements are subjective in this sense is ruled out, rather trivially, by the fact that some, at least, are not asserted directly but rather derived; this at once

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allowing access to a general referential frame in which to place those quotations, in *The G ift*, Zorn quotes *whole genres*: there is no frame of reference other than our knowledge of those genres and of his own earlier work: there's a *substitution* in place, what we are listening to is actually standing in for something else. For a thorough discussion of 'metaphor', see De Azevedo (1997).

> breaks the analogy with subjective utterances by introducing a possibility of error not due to insincerity.

I think that, considering the derivative nature of the methodology pursued in this essay, the conclusions drawn *may* have errors independently of the sincerity implied in them. But then, what about art? Even if agreeing with the impossibility of error within a non-logical realm such as music, the question to ask would be: is there a possibility of judging a sonic event as 'insincere' - and therefore 'not true'? It is probably insincerity that Hume (17/05/03) refers to when claiming that:

> there is a species of beauty, which, as it is florid and superficial, pleases at first; but being found incompatible with a just expression either of reason or passion, soon palls upon the taste, and is then rejected with disdain, at least rated at a much lower value.

But would de-codifying mechanisms involved in musical processing, which allow for the construction of über-syntactic sonic objects, be able to convey the feeling of error independent of sincerity? The answers to these issues all involve careful assessment of the consequences that accepting an evolution in musical processing could bring.

In accepting that social and cultural issues are determining every aspect of musical (and for that matter, artistic) practice, how is it, then, that Foot's following statement should be read?

> In matters of moral judgement it is hard to accept subjectivity where it genuinely exists. It seems far easier in aesthetics, and this may be because it is not our own conduct that is in question (ibid, p. 17).

If *society*, as whole, claims its place in the artist's working desk, I can't see how every issue functioning and dis-functioning *within* society would not do likewise. Aesthetic action together with aesthetic omission, will necessarily define the social persona of the artist: through her choices, her principles will inevitably surface, someway or another, in the aesthetic/social object produced. Once principles are on the table, there is no way out of confronting moral choices.

In this sense, Susan Sontag (26/04/03), during her speech at the presentation of the Rothko Chapel Oscar Romero Award to Ishai Menuchin, on the 30th March, 2003, made a most powerful case for the inevitability of action, once 'principles' are admitted:

> That a society should actually embody its own professed principles is a utopian standard, in the sense that moral principles contradict the way things really are – and always will be. How things really are – and always will be – is neither all-evil nor all-good, but deficient, inconsistent, inferior. Principles invite us to do something about the morass of contradictions in which we function morally. Principles invite us to clean up our act (…)

Music purists will argue that there is no act to 'clean up' at all – the place of the artist is within the realm of 'beauty' and 'form'. The problem seems to be that every possible place, even it being in the tower of the purest ivory, is still placed *in* the world, and within its web of social relations.

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