the musical score
in times of conceptualisation

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> (…) we arrive at something as incredible as what has just been said. Something that clashes with our western minds (that clashes with mine), but that it is my duty to mention: when thinking about words, we think, historically, that words were first sound and then subsequently became letters; on the contrary, within the *cabbala* (which means *reception, tradition*) it is believed that letters precede the diction of words. Consequently, nothing is casual in the Writings: everything has to be determined. For example, the number of letters in each versicle.
>
> Jorge Luis Borges, *Siete Noches*.

preamble

On Monday 16th June 2003, I had the opportunity to attend a musical performance by 'The Bohman Extended Family', a London based experimental group led by brothers Adam and Jonathan Bohman. The instrumentation used by the ensemble comprised (as announced in the programme) prepared violins, home-made strings, balalaika, objects, rubber bands, tape, percussion, strings, rods, cones, feedback piano, oscillators, hose pipes and sundries, the greater part of which was laid out on a huge wooden table from which the performers picked out in real time their sonic options. At a certain moment in the routine, Jonathan Bohman walked up to a microphone and announced that the group shall perform an 'action piece' in which he himself will *be* the 'graphic score' to be realised by the ensemble; he then proceeded to swallow up eager spoonfuls of jelly, while the rest of the players 'read' him, or his actions, and hence performed their sounds.

The importance of this performance was not its radical conceptualist aspect, nor the particular sound world created, but the possible implications of the definitions encompassing what we, within Western Contemporary Culture, call 'music', and hence, call the 'musical score'.[1] Furthermore, it would seem that, with such (among other already classic) examples in mind as Tom Johnson's notation of his *'Celestial Music for Imaginary Trumpets'* (1974), involving a chord ascending 103 ledger lines above treble clef, or Nam June Paik's requirement in the score of his *'Danger Musik for Dick Higgins'*[2] to 'creep into the vagina of a living whale', a clear reciprocal relationship between the conceptualisation of (Western art) music practice and that of musical notation can now be addressed: it is no longer true that while there can be musical practice without musical notation, the contrary cannot be possible – we now do need to accept the *possibility* of musical notation devoid of 'practical' performance intentions. The term sometimes used for describing pieces such as Johnson's or Paik's was

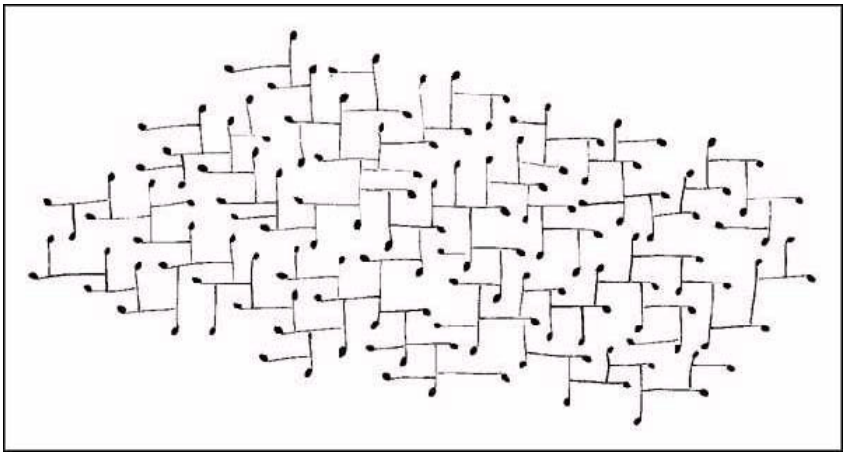
[1] I shall stress this 'Western Contemporary Culture' point again: these definitions and nomenclatures are worked out and put forward within a particular, limited, cultural context. A Hindustani sitar guru referring his ragam from a Paluskar text, would probably be in no need of such theoretical speculations - which might include within its subject matter, the Paluskar notation system.

[2] In John Cage, *Notations* (New York: Something Else Press, 1969)

conceptual music; I would say it is rather a case of *conceptual notation*, the consequence of which is the coming about of written musical ideas which cannot (and do not expect to) be realised within the realm of perceptive physical sound.[3]

definitions

The second half of the 20th Century (and especially after post-1952 Cage), some extreme re-definitions within the Western Art Music community of what a musical composition actually is had to be carefully assessed – that is, if such definitions were to be universally inclusive. Following Popper's concept of *falsifiability* (unrestricted generalisations cannot be verified, but can be *falsified*), I would suggest that any definition should be all-encompassing.[4] So with the denotation of musical score: a true taxonomy ought to account for a traditionally notated Haydn string quartet, a page of Cornelius Cardew's Treatise, a notated Vedic hymn, Nam June Paik's awkward requisite, a pair of '.orc' and '.sco' text files for computer-generating sounds in C-sound, Jonathan Bohman's self feeding on jelly and whatever a 'composer of music', as such, wishes to call a 'score' (just as it is intrinsically her artistic right to describe whatever lapse of perceptual time-space articulation she chooses, as 'music'). It seems we have arrived at a state of affairs in which, in spite of the risk of over-generalization, and hence not defining anything at all, the only appropriate answer when confronted with the question of what a musical score *is*, would be *anything that has been denoted as such*.



Tom Johnson: Syncopated Texture (in Imaginary Music; Paris: Editions 75, 1974)

This non-definition seems to indirectly align itself to non-classical, causal approaches to cognitive phenomena, which state that meanings of terms don't involve definitions known to users of them but causal relations within a particular social context

[3] Whether there exists a possibility of realisation within a purely cognitive realm is a different matter.
[4] By the end of his life, Popper revised this idea, making it possible for the existence of *exceptions* within *scientific* laws. The point of my argument is that in the case of *artistic* definitions, we lack the necessary critical perspective to judge whether a contemporaneous aesthetic move is a rule or an exception – and therefore it is our duty to accept it (should the rules of its contemporaries been followed, Beethoven's violin concerto, or 'Pierrot Lunaire' would probably have been wiped out as 'exceptions' from music History).

in which these terms are used.[5] This would carry the problem of finding substitute properties for the implied competence deficiency, in other words: if competence does not consist of grasping a definition, how does someone discriminate something from another? (How does someone discriminate a score from a non-score?) With no intention of touching issues concerning the existence or inexistence of truth-values in the non-semantic, non-representational, realm of music, I will nevertheless suggest the possibility of truth properties contained in the musical score; superficially put: provided with the appropriate de-codifying tools, a listener can (and inevitably will) judge if a rendition of a *notated* musical passage, she is acquainted with, is valid. This could only be accepted considering the context in which the proposition (the rendition of the score) is being made, so an *intensional context*[6] would be necessary here. If this is correct, a proper substitute for the lack of definition of the term 'score', and hence the possibility of its existence in spite of that lack of definition, is prepared. This can only happen if a process of 'conceptualisation' has taken place, something I'll come back to later.

I have written above 'we have arrived', as if, from the origins of musical literacy in the West to this day, a determined process has lead to the actual 'state of affairs'. Whilst this historic determinism might not be an entirely unsuitable perspective, it is also true that the psychological, socio-political and philosophical 'seeds' for this outcome (and for those yet to come) have probably been embedded in Western civilization from the outset. Realism, conceptualism, idealism, rationalism, formalism and so forth have always been pervading currents underlying and permeating every aspect of European thought. Borges (1980) suggests that

> chronology (and) history do exist; but they are, above all, western enquiries. There are no histories of Persian literature or Hindustani philosophy; nor are there Chinese histories of Chinese literature, just because peoples over there are not interested in the succession of events (p. 66).

From that perspective, Tom Johnson's notated 'Celestial Music', vibrating at around 945 billion cycles per second, can be thought of as a mere arrangement for trumpets of the Pythagorean 'Music of the Spheres', probably the oldest precursor of music conceptualisation in Western history.

the musical score as concept[ualisation]

Without becoming mired in a deep discussion of the notion of 'concept', which, as Georges Rey (1994) warns, 'lies at the heart of some of the most difficult and unresolved issues in philosophy and psychology' (p. 185), I will avail myself only of some of the phenomena to which the word is applied, and subsequently see its relevance within the notion of 'musical score'. One element threading through different descriptions of the term 'concept' is its intimate link with language: a concept, in this view, is referred to as something (generally a constituent of thought) a person has when she is able to use parts of her language; in this sense, it is an idea (though not in the

[5] See Rey (1994), p. 190.

[6] 'Intensional' as the converse of 'extensional' in the logic-semantic sense: a context is intensional if truth is dependant on the meanings of the functions (or predicates), and not just on the reference (or objects) defined within that context. See Guttenplan (1994), p. 374. (I should also note that this meaning of 'extensional' is a different one from that denoted when discussing 'symbolic extensions').

classical, Platonic sense), bound more to the use of language, rather than associated with the construction of an image. To this link with language I'll refer later when discussing extension processes and musical literacy. Coming back to the issue of the definition (or rather the lack of it) of 'musical score', and making a handle of Rey's 'tentative conclusion' in his analysis of concepts (ibid, p. 192), the following assumption may be constructed: that the concept [musical score], effectively exists (i) as a token representation in the mind of an agent, which (ii) is then shared by different agents as types, (iii) representations of which need an intensional context to function as carriers of meaning, which (iv) is in fact situated in a particular causal and covariant relation within a determined semantic-linguistic community. If this is correct, then the process of conceptualisation, which I have been referring to, has indeed taken place: the musical score has effectively 'travelled' from being originally a practical mnemonic device - an object still not separated from its function (not separated from music practice) - through an externalisation process - consequently turning it into a symbolic extension (still a tool, an enabler), and 'arriving' - probably due to post-industrial aesthetic subversions - to its actual state of conceptualised mental representation.

I will append to this description that these successive functional and cognitive transformations are by no means to be seen either as an exhaustive record of properties, or as temporarily substituting each other along the western 'history line'; these properties (among others) add themselves up gradually to a certain contemporary, socially shared notion of 'musical score': it being a concept, is also an extension, also a mnemonic device, and so on.

And if this can be assumed to be an on-going cultural process, a question inevitably comes to mind: next what? My view is that a (most dramatic) further addition to the mnemonic-object / symbolic-extension / conceptual-representation attributes of the 'musical score' is coming about - arguably due to the extreme revolution generated in human collective psychology by the use (and idea) of digital generation, editing, storing and reproduction of sound and, consequently, of the graphic symbols representing it.[7]

I will now turn to the other aspects I mentioned as embedded in the notion of musical score: its origins as a mnemonic object and its transformation to a symbolic extension, a course leading to aesthetic (and probably ethical) consequences not devoid of strong criticism. This development is intimately link with the ever-increasing significance of literacy within Western civilization: hence linked with the *use of language* mentioned earlier when discussing the process of conceptualisation.

the musical score as mnemonic tool-turned-symbol

There is a noticeable consensus when discussing the genesis of musical notation in human history: the writing of sounds first appears as a mnemonic device supplementing and aiding an already established practise based on oral tradition.

[7] Jure (27/07/03), highlighting the need of developing appropriate scores for electroacustic music, extensively explains (and applies) sonographic notations, based on graphic representations of spectral analyses of the sounds involved; Ingram (17/06/03) has devised a notation software aiming to edit and store music symbols separately from their spatial hierarchy as well as from their temporal meaning. These are only two of many examples of how the use of computer technology is re-shuffling the contemporaneous concept of music notation.

Together with pointing out understandable parallels between the development of written language and that of written music, authors agree in describing a differentiation in the manners of conveying meaning (standing in direct relation to the value attributed to literacy within a cultural community) between neumatic notations, tablature-action notations and alphabetic ones. Hugo Cole (1974) lists four main prototypes of most notational methods found and still used today:

> 1) Alphabetic notations, using words, syllables, or letters to stand for single sounds of fixed pitch.
> 2) Directional signs, to indicate rising or falling pitch.
> 3) Group signs, to indicate melodicles – recurring groups of notes that always appear in a set form.
> 4) Tablatures: action notations which lead the player's fingers to the required place in the instrument. (p. 6)

Regarding parallels with written language: neumatic musical notation is associated with ideogramatic writing, whilst alphabetic/syllabic musical notation obviously has its homonymous category within the written word; the strong graphic element of tablature notation tempts me to associate it with hieroglyphic writing systems.

Syllabic notation: basic notational elements of North Indian Bhatkhande system (in Courtney, 28/06/03)

A further categorization of the mentioned notational categories starts taking shape when analysing the ideological socio-linguistic implications in the systems used. Trevor Wishart (1985) comments that

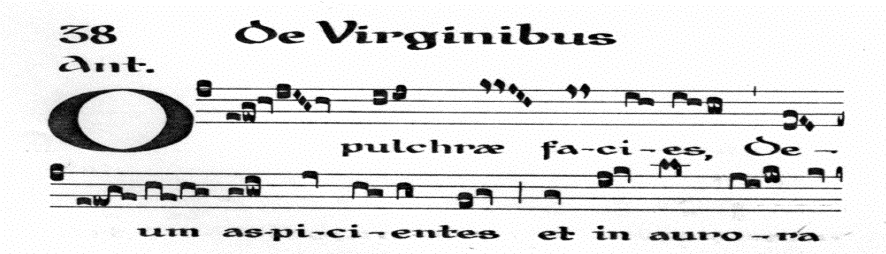
> just as the original form of writing, the ideogram, did not attempt to convey the sound of words (as with alphabetic writing) but the ideas which were expressed through the word-sounds and hence demanded a familiarity with and adherence to, the sphere of those ideas, so the neume did not attempt to mark out what we now come to regard as individual pitches and units of rhythm but only shapes and contours of melodic line customary in current practice, and hence also requiring a complete familiarity with current melodic practice, and an adherence to it, before becoming usable (p 13).

In the same way that the ideogram carries its meaning within a social context, whilst still being open to a variety of non hierarchical interpretations of that meaning and thus, as Barton Mc Lean (1981) notes, 'preserving richness and nuance of an event on the one hand while scribing or documenting it on the other' – so does the neume within an oral based musical practice. Alphabetic writing, on the other hand, by breaking up the original meaningful symbols into its meaningless phonetic constituents, gives rise to analytic attitudes towards language, music and probably every other aspect of human interaction and communication. In the same paragraph quoted above, Wishart goes on explaining that in the historical development of analytic literacy

> a more significant breakthrough occurs with the emergence of analytical notation (…) the earliest examples (of which) were afforded by the syllabary , as in Hebrew (…). However,

> the most significant form of analytic notation for language was the alphabet, probably invented in the Middle East but taken up by the Greeks as the foundation of the first literate, critical culture. The alphabet takes the principle of the syllabary one stage further, notating the (idealised) sound-constituents of the syllables themselves (…)

The consequences of this step into the use of analytic alphabets are enormous. Together with its potential to universally widespread literacy, Wishart notes that the writing of *sounds*, and thus the documentation of what has been *said*, (rather than what has been *meant*) allows for the possibility of recording conflicting statements and consequently giving birth to a critical tradition. Sloboda (1985) adds that notation allows 'lengthy verbatim recall of complex meaningful material' (p. 242) which can migrate, proliferate and, while keeping the content of an utterance, separate itself from its context. This separation is what McLean (1981) describes as an extension process, one that travels from 'internalisation' to 'externalisation' and in doing so creates 'some distance between the creator and the symbol being extended'.



Analytic notation: Square Note or Gregorian Notational style, excerpted from "Lieder", published by Otto Muller Verlag, Salzburg

This extension process described through written language has an analogous development within the field of musical notation. The ideogramatic/neumatic notations[8] gradually became, in some cultures, syllabic or action-based[9] and eventually in (and *only* in) the European musical culture, alphabetic/analytic notation systems.

And it is the consequences that this process of reification of the written symbol has had on music *practice*, which becomes a problematic issue. As McLean (1981) explains,

> Western music beyond the common practice period has so successfully set up an elaborately extended pitch-rhythmic-notational system (one which has ultimately become far removed from our own basic human body gestures, rhythms, and melodies in its extreme development as exemplified in, say, post-Webern serialism) as to effectively amputate from humankind its sound art.
> **(…)** it is in truth a censoring device, an artificial creation of the Western cultural inclination to model all of its institutions after, as McLuhan would put it, the modularized phonetic alphabet.

So what started out as a necessary mnemonic device for musical practice, gradually started determining what that practise should consist of, how instruments

[8] For an documentation of the development of neumatic musical notations to analytic, discrete rhythm/pitch-based in medieval Europe, see Bell (2001)
[9] As in the Arab world. Some description of the evolution of the systems in use can be found at the *The Oman Centre for Traditional Music (15/07/03)*.

should be built, what is worth registering as 'music history', what not and so on. There seems to have been within post-Renaissance Western culture, as Mclean puts it, a 'failure to distinguish between symbol and content'. Likewise, Trevor Wishart (1985) and John Shepherd (1987) see in this hegemony of the discrete, lattice-based, objective formalism of Western Art Music musical notation a symptom of the need for social control of a scribe-dominated society in the former, of male hegemony in the latter. The situation, somehow depicted by Webern's (1960) assertion in 1933 'What is the material of music?…The note, isn't it?' (p. 12)[10] can be summarised thus: the only truth (reality) is that which can be written; ergo: only that which can be written, is true (real).

close

It is this dissociation between the abstracted, symbolic extension and the original internal, gestural flux which originated it, which becomes the unavoidable obstacle; as it is apparent here, the symbol has turned back on itself and dictates its own meaning. When speaking about the 'musical score' the issue still is: how to translate the real-time perceptual experience of a particular sonic gesture into the outside-time, two dimensional, static frame of a written set of instructions and/or descriptions (some would add *analysis*) of that sonic event or its triggering mechanisms - that is, without letting the rules limiting the notation, dictate the parameters of the sonic gesture that supposedly generated the need for a notation in the first place.

My argument is that it is exactly this conflict that allows and calls for, among other post-industrial cultural and aesthetic subversions, the conceptualisation of the musical score I have discussed earlier. Not only is this conceptualisation of musical writing a natural outcome of a process of externalisation within a Laplacian/Newtonian view of the world dominating post-Renaissance Europe, it might well be that these are all desperate attempts, once the lattice trap has been identified (and thus conceptualised), to somehow evade it - even within its own discrete, Cartesian domain.

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[10] Doing justice to Webern's enormous insight and open mindness, I must also mention that, following the above quote, he admits the 'attempt at quarter tone music and the like' when the time is 'ripe for them'.

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