

The Semiotic System of Peirce and the Musical 'Notation'

Profile of the musical performer

Introduction

The Peircean triad - configured by the elements: sign, object, interpretant - constitutes, as is well known, a dialectical crossing of three semiotic unities. The main purpose of this paper is to examine from this perspective the semiotic relation in the musical domain between the composer's musical ideas (starting from the musical formulation in the musical score), the musical notation (as a channel in the concretion of the score), and the musical performer (as a decoder of musical scores). The aim is to compare this musical triad with the one of Peirce (and its principal variants) and to reflect about the eventual coincidences and divergencies.

Moreover, the general gnoseological finality, the present reflection has a more specific purpose: to endeavour to understand how the interpretative lecture of musical texts works from the semiotical point of view, and which is its repercussion in the aesthetic realization of music. Moreover, I esteem it is useful on account of its projections in the field of the critique of musical interpretation. Maybe the musical critic could realize his work more consciously, starting from this field of reflection, and be aware of the possibilities and restrictions with which a musical performer is confronted.

1. *The musical performer facing a system of signs*

In this particular case of the relation with Peircean ideas, it is important to state clearly the differences between **interpretant** and interpreter. This is a crucial term in the articulation of musical variables. The „interpretant“, in the conception of Peirce, is a mediator, is another sign (simple or complex) which can translate and explain the basic sign. The interpretant is a semantical field of this basic sign. The end of this process of translation and explanation is not mechanical, it is decided and defined by the individual who interprets signs.

In her work *Allgemeine Zeichenlehre* (1979) Elisabeth Walther (1), following Peirce, characterizes the concept of 'interpretant' in this way: „The interpretant is, generally

speaking, a ,sign which interprets' or a ,conscience which interprets' where the ,conscience' must not be restricted to thinking but, according to Peirce, includes also sensation and experience. The conjoint of interpretants constitutes a ,field of interpretants' or a ,field of meaning', i. e. a type of interpretation based on interpretations already existent, which provide the basis of special interpretations."

The interpreter is, on the other hand, the individual who interprets signs, for instance, the driver of a car who finds on his route a road signal. An interpreter is, also, the musician in his rôle of „reader“. The performer is also a mediator and the mainly empiric realizer of a musical work, based on the mediation of a score, with all the creative connotations which this implies.

The **object** of the triad is, according to Peirce, „a representation“ (not a material object) of a ,first' representation, i. e. the idea. Such a process presupposes a chain of ,representamens', where each one is more sharp and precise than the foregoing one.

If we keep in mind the Peircean characterization of the **sign**, we find, as a first mark, that the sign ,stands in the place of some other thing or of someone in certain aspects or capacities'. As Max Bense expressed it, a sign is, moreover, „an artificial metaobject related to factic objects“. We speak of signs of the musical notation: its „factic objects“ are the musical works in their sonorous presence, alluded to by the score. The signs function, too, engaged in systems and repertoires but not isolated. Is it correct to say that the musical score ,stands in the place of some other thing'? In which way? I will endeavour to answer these questions in the following.

In the case of ,traditional' music, the score is a signal system for the wide universe of discourse of the musical performers. This is true for the soloist, and also for the musicians of a chamber group, or for the conductor of a symphonic orchestra and its components. The score presents itself as a conjoint of co-ordinated signals according to specific logics. Every performer can read it and comprehend it as a conjoint of expressed indications; nevertheless, the imperfections of the notation system are always indicated. It is a system, however, which still continues being employed. It is clear that the performer knows which are the references to this constellation of signs (2) (present in the score in front of his eyes). Thus, he can realize the basic corpus of the piece of music.

The link composer - performer, special variant of the connection transmitter - receiver, builds a basic level in music. I will call it 'denotative'. On this denotative level, the working of the musical code is similar to the working of other well-known codes, such as the 'natural' languages (Spanish, French, German . . .), artificial languages, as the morse system, or the transit code.

If one compares the linguistic system with the musical system, it is easy to see that in both cases there is a denotative level. In both cases a **transmitter** can communicate something definite (bound to the thetic character of the sign), **conventionalized**, to a **receiver** through a **channel** or systematized conjoint of signs. The signs of the musical notation constitute a class of expressive signs with aesthetical projections. Max Bense (Kleine Abstrakte Ästhetik, 1969) (3) has exposed an explicit scheme of linguistic communication (following W. Meyer-Eppler). In this scheme, a transmitter codifies a message, using a communication channel. The receiver decodifies the message. Each one has its repertory of signs, but there is a 'semiotical zone' of common signs. This scheme guarantees the following relation:

composer ----- score ----- performer

and represents a primary system similar to other primary or denotative systems. However, this denotative level is only one point of procedure in the behaviour of musical interpretation to achieve the **connotative** level on which the aesthetic finality is realized. That means, I take for granted that aesthetics, being a „co-reality“ (as Max Bense denominated it in his work *Aesthetica* (1965) (4)), cannot be entirely subsumed under precise codes. There, the interpretant is widely open.

1.1 *Joining in a semiotic situation*

For a better understanding of the nature of the general semiotic situation, it is useful to observe the links between Tone (the quality, qualisign), Token (the particular version, sinsign) and Type (the class, the abstract concept, legisign). These relations are exposed by Charles Peirce (5) in his reference to the medium. There are remarkable coincidences between the Type notion and the Class notion exposed by Luis Prieto in different words, in his Theory of Classes. I would like to say that the Peircean notion of Type corresponds in its functioning with the notion of class, proposed by Prieto.

The translation of that trichotomy into the art field **cannot be made** in a ‚mechanical‘ way. Even under the supposition that it is possible to specify the aesthetic limits of the sensitive qualities (for instance, colour in visual arts, sound in music), it will be necessary to differentiate on the other hand (the Type), between visual arts, (sculpture, design, painting, engraving) and musical art. Prior to other considerations, the different versions of a musical work are Tokens of a Type; something similar is to be said of the „issues“ (versions) of an engraving. But: What about a picture or a sculpture? Which are their Types? Sometimes, visual artists pursue an idea through several pictures or sculptures. Is that ‚idea‘ a Type?

In fact, every empirical situation of sign-interpretation (related to any of the 1., 2., 3. levels in the numeric description of Max Bense), involves a network of generic abstractions. These are fundamental to the signification process, although if it were the case of signs, those are in the place of individual phenomena (as the statement: „The Sun King“, which alludes to Louis XIV). The perception of the individual is only a „cross“ of generic abstractions. This idea is, therefore, acceptable even in a situation much closer to the perception, I mean, the Qualisign. Why? Because the very perception of a quality is connected with the knowledge of Types, and depends on conventions. Otherwise, the significant link always becomes completed in „thirdness“. This „thirdness“ (Type) is privileged also in this case, that is, the type, the class.

How is the relation Medium (M), Object (O), Interpretant (I), ($S = R(M, O, I)$) presented in the field of musical notation and its semiotic interpretation?

It is clear that the musical notation fulfils the function of the **Medium (M)** within the Peircean conception. The notation system points at its object, such as every other sign-system. There is, however, an important difference: the musical sign (or its more or less complex combinations in the score) **cannot** replace its object, the music, as, for instance, does the Morse alphabet. It cannot replace it, if we see it from the point of view of a **complete** musical experience which involves sonority. It is true that the musical sign can **allude** to its object, but it cannot substitute it.

Dealing with the reference to the Object (O), it states another trichotomy. This one reappears in the musical notation system. The interpreter-reader of musical signs is faced with a very complicated task, because the feature of those signs extends itself, both beyond the analogical/representative and conventional/presentative sense:

- a) The performer must interpret signs of a very different nature with respect to the Object (O) reference. In a musically developed score, the musical instrumentalist finds, for instance:

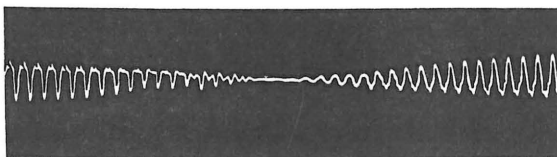
(O) = 1 = Icon:

1) Intensity regulators:

Example 1a



Example 1b



- a) Notational regulator
b) Acoustic graphic of ‚phonodeik‘ of a „diminuendo-crescendo“

2) Signs referring to musical ‚ornaments‘, such as the so-called, „appoggiatura“, „mordente“, „grupetto“. These signs show, in their own design, a relative analogy to the sonorous phenomena to which they allude.

Example 2



It is useful, consequently, to consider the icon classification developed by Max Bense. He differentiated topological, structural, material and functional icons. From my own point of view, the icons of the musical notation belong mainly to the **topological** class. They function in the way of ‚reproducing a topological image‘ of the sounds they allude to. We can perceive this. Between the ‚regulator‘ (Example 1) and the increase of intensity („crescendo“) there is a topological analogy.

(O) = 2 = Index:

- 1) It is the case of the voice „Da capo al segno“ which indicates a precise position

Example 3

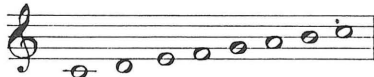


on the very space of the present score. It is evident, moreover, that the indication employs symbols, too.

(O) = 3 = Symbols:

- 1) The ‚height‘ of the sounds ‚symbolized‘ on the staff.

Example 4



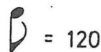
- 2) The traces describing rhythmical variants, defined as 'variables', because their rhythmical value (timing) is relative to the indications of the bar and the metronome.

Example 5



- 3) The letters symbolizing intensity: P, MP, F, FF, etc.
- 4) The bar-lines, „calderone“ (the suspensive symbol), metronomic indications.

Example 6



Metronomic Indications

- 5) Words and voices describing expressive traces: „Adagio“, „Allegro“, „Presto, ma non troppo“, among others.

It is important to remember, here, that the triadic relation, proposed by Peirce, unfolds the semiotic process from the 'firstness' to the 'thirdness'. It grows from the most immediate to the most abstract and mediate. Consequently, with regard to musical notation, it is easier to reach intuitively the interpretation of icon than the interpretation of index and symbol. Even taking into account that there are some codifications in every iconic sign, the same is valid for the access to other sign-systems. Finally, it is necessary to comprehend widely the entire musical code in order to attain the interpretation of the notational symbols. The expressiveness (of a musical piece, as in this case, or of a picture) comprises 'thirdness' as an organic conjoint and communicates its meaning in a symbolic manner.

- b) The performer must ascribe to those signs an interpretation which varies according to the epoch, the style, the composer, the piece. In this way, the Peircean idea that the sign is rather a relation than an object is confirmed in the same way in

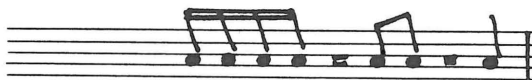
which one can test variations among diverse performers, and variations in time (the performances of Beethoven's work, for instance, are not the same in the 'fifties' as they are in the 'eighties'). The sign-relation presupposes not only the individual variant but a time variant. This constitution of a heterogeneous domain (at the same time, musical, linguistical, historical, aesthetical) has a reason: that the signs of the musical notation participate in the „general indetermination“ of the sign. They cannot comprise all the aspects dealing with its mediation. Later, I will refer to the interpretant field.

c) The performer must react in the face of the musical signs with technical operations of musical performance (i.e. instrumental or vocal performance), or of musical conducting (direction of orchestras or chamber groups).

With regard to complexity as described in sections a) and b), and **reality** described in section c), I will state the following: In the musical **reading** process (which engages the simultaneous playing) the „interpretant field“ (Peirce) covers three different effect-relations caused by the employment of signs. I am of the opinion that musical performance has to do with three effects. They are the following: 1) the **emotional** effect, bound to aesthetic-affective situations; 2) the **energetic** (reactive) effect, because, as it is well known, musical ‚reading‘ implies neuromuscular work; 3) the **logical** effect, as there is always a conceptual interpretation/comprehension of the signs. It must be said that the interrelation of these effects becomes particularly clear in such an aesthetic employment of the signs of musical notation.

Finally, what can be named **Interpretant** (I) in the system of musical signs? An interpretant, according to Peirce, presupposes that signs must be explained by means of other signs. To my mind, in the musical field the interpretant cannot be constructed by intranotational signs as in the case of the linguistic system. Only certain facts of numeric/quantitative nature could be assumed as an intra-notational explanation. For instance, a ‚half-note‘, as a rhythmic element, can be ‚explained‘ by two crotchets or four semiquavers:

Example 7



However, the musical effect of such ‚explanation‘ is so different that it could hardly be qualified as an authentic explanation. This radical **difference** involves other aspects of the musical system. Why cannot a musical explanation in music exist? The reason, I believe, is that there are no equivalences in music (I have developed this subject in „Divergencies between linguistic meaning and musical meaning“) (6). Normally, a logical equivalence presupposes the possibility of an interchange between the „explicandum“ and the „explicans“. However, in the musical field, every change implies aesthetical differences and, consequently a remarkable difference of meaning. Even in the musical structure named „variations on a theme“, a real equivalence among its sections, is not to be admitted. Every section is a **sui generis** part.

Therefore, if the musical sign participates of the general trace of **repeatability**, pointed out by Peirce, this kind of sign cannot participate, in fact, in the trace of **replaceability**. It is not possible to replace musical experience by signs, nor to replace a sign by other signs. It must be noted that the musical notation system can be described as a sign-system even if it does not have the property of replaceability in interpretant relation. It would be interesting to find out which sign-systems participate in the same mark.

With other words, the semantic field of the interpretant (taking into account the musical system) cannot be homogeneous to the musical sign. Why? Because in music, one cannot speak of the definition of a sign by means of another sign. Neither can we speak of explanation, nor in this case of synonymy (see the cited essay in note 6). Consequently, the semantic field must extend to complementary conceptual aspects (in its condition of language) peculiar to each sign, besides the stylistic traces. Those aspects and these traces can be specified only by means of **another system**, i.e. the linguistic system. This comprises, but, at the same time, transcends the musical notation. This is mixed with the linguistic system (as it occurs, for instance, with the system of road signals).

As we can see, musical notation needs a mixed interpretant. It should be recalled that a sign is only complete in its semiotic structure when it attains ‚thirdness‘. This level (the relation to the interpretant) can be achieved within in the framework of musical notation by means of the complementation of the linguistic system, on account of the fact that, as I proposed above, there is no possible explanation within the musical notation system. It occurs, however, that the whole system is also mixed.

The articulations of the Peircean triad (,firstness', ,secondness', ,thirdness'), on the one hand, are supported by two different systems (musical and linguistic). The very system of musical notation involves different elements of trichotomy: icon, index, symbol (taking into account the relation to the object (O)).

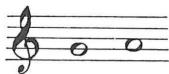
The musical meaning of a score is a coded formulation of the musical train of thought of the composer. In this sense it is a **semiotical object**, and the process of this formulation of the musical ideas of a composer is, consequently, a semiotical process. In the musical field, as we see it, this specific reversibility working in verbal communication does not exist. I mean, the concatenation of the dialogue (oral or written) is a double-directed communication by using the same Medium (M).

In the traditional musical structure, the performer does not communicate by employing the same channel as the composer. He communicates by commencing from the sonorous interpretation of the signs and their organization. Both, signs and organization, come from the direction of the composer. The message, however, is sent to another 'colloquist': the public, the listener. I would like to say that there is an „arrow of time“ in the relation: composer→performer→listener. That means, the composer is an emitter, the performer is a receiver/emitter (a translator), the listener is a receiver.

However, the performer is not a ,passive' receiver. There are several circumstances in which the performer can participate with his own creativity. For instance, the situation named „cadenza“ demands from the performer such a creative participation. (7) There are, also, other situations in which the musical notation gives freedom to the performer: they are named „rubato“ (that is, robbed of the regularity of the rhythm), or „ad libitum“ (following the own will). But, generally speaking, the performer can communicate his personal blends of expressiveness by playing, incorporating them into the general interpretation (8,9).

It should be pointed out that not all the signs of traditional musical notation communicate their messages with the same precision. For example, the relationship between two signs fixed on the staff in "G clef"

Example 8



is quite different in its relation to precision to the relationship between two signs such as.

Example 9 'mf-----ff' (10).

The statement fixed by the indication of ,height' in Example 8 is much more definite if we take into account the ,universal' tuning adopted by convention (despite the variants of tuning of the diverse instruments according to their constructive characteristics). On the contrary, the statement between the signs indicating intensity in Example 9 is less contracted, looser. The reason is that there is no established starting point in the intensity, I mean, an intensity pattern analogue to the stipulated tuning pattern. Further, it is not possible to value precisely the ,scale' of intensity expressed by ,dynamic' signs, such as: ppp - pp - p - mp - mf - f - ff - fff.

The definition of relative intensity, suggested by these signs, is normally made in an empirical way. It depends partially on the composer's expressiveness and partially on the performer's expressiveness. Consequently, the value of these relative intensities is definite for the performer who is supported by the existing circumstances (composer's musical personality, piece, style, epoch). Circumstances complete the sense of signs and make easier the transmission of messages in every sign-system (as Luis Prieto said). Also in the musical domain, the circumstances are of help. It is a variant of the notion of context, employed by the semiotics of texts in literature.

Despite these and other inexactitudes, the musical notation constitutes a **repertory** and ,works' as a sign-system.

Another interesting aspect, related to musical notation, has to do with the nexus enunciated by Meyer-Eppler with the terms „fon“ (for the sonorous linguistic element), and „graf“ (for the written linguistic element). We reencounter these elements in the circumstances of the musical notation. However, the ,distance' between „fon“ and „graf“, in the musical field, presents much more variations. There is a greater ,flexibility' between musical „fons“ and „grafs“, compared with the language relationship. This ,flexibility“(a kind of inexactitude) provokes new effects (creativity of the sign) in the musical domain, aroused by the aesthetic component, because specially in this case the distance deals with the meaning.

The fact of the relative precision of the signs is to be noted in other codes. For instance, in the linguistic code the difference communicated by two words,

poplar' and ,ashtree' is greater than the difference communicated by the words ,dawn' and ,twilight'. These are almost synonymous, which makes the semantic demarcation difficult.

The kind of musical performance characteristic for traditional instruments of music makes the determination of the limits difficult, and the reach in the very sense of several musical signs. For instance, in the case of the subclass of signs describing intensity (see above), we could imagine a series of exactly determined corresponding elements.

It could be established that:

ppp	=	10	decibels (dB)
pp	=	20	"
p	=	30	"
mp	=	40	"
mf	=	50	"

and so on. This would be an objective scale.

The musical expressiveness, however, so near to those signs, cannot be reduced without any decline to a calculation of this kind. How could we level to the same sign (mp = 40 dB) the expressiveness of Beethoven, Debussy, Stravinsky, taking into account their stylistic, temperamental, epochal differences?

This hypothetical gradation of intensities would require, for its realization, an instrument of precise measurement (similar to the metronome which measures the speed of the musical ,pulse'). But, in that case, we would only be solving a mechanical problem. It would rest open, nevertheless, the aesthetic quality of alive musical performance. It is not an effect of such a kind of precision. Vitality of musical performance surges, precisely, from ,inexactitudes', displacements in comparison with the mechanical exactitude of the reports among diverse musical elements.

As we see it, the reference to Interpretant in the field of musical notation/interpretation appears to be a very complex one. With semiotics, a specific way to accede to and interpretate this complexity must be found.

1.2 *The musical sign as a class of signs*

Despite this problem of the diversity in communicative precision, all the stabilized signs of traditional musical notation fulfil the **allusive** function. Musical notation alludes to but cannot replace its object. The function, „to be in the place of something which it remits“, defines one of the main characteristics of sign-structures. Fortunately, it is a point of coincidence among those who treated the subject. (See 1 above).

The signs of the musical script, to which I have referred, belong to the general class of signs, on account of these traces and its functioning. For the musician (composer or performer) this remittent character is a non-questioned platform. As we know, the musical practice, accomplished by composers and performers, leads to the automation of that allusion. Consequently, the graphisms of a traditional score are not perceived as visual designs, but as „signs“ of a possible sonorous reality. When a musician is faced with unknown musical score (not only with a wellknown one), simultaneously with the course of musical lecture, he experiences the internal **audition** of what is written in the score. He has an auditive image, and ‚lives‘ the written signs as auditive images.

It is easy to understand, that, for the musician, the written signs of the score have no value of their own (I mean a plastic-visual value as, for instance, the line drawn by a designer). They possess the value of that which they announce, i.e. the sonority to which they allude (11). Hence, when a score has accomplished its ‚mission‘ it loses its significance. Several performers and directors of orchestras consider that they get to be ‚expressive‘ when they become independent of the score. We can test this in the concert halls. On the contrary, it is ‚absurd‘ to prescind from the line of a designer, although it remits also to a sense that transcends the line.

The value of sonority, with regard to the script, is differs between the languages and the music. So different, in fact, that we can compare a **mean** in the first place with a **goal** or a **purpose** in the second place. The French aesthetician and philosopher Mikel Dufrenne (12) marked out that the report between scripture and sonority, in music and in the languages, is not homogeneous. We experience in the quotidian communication that the meaning can normally be attained, although the sign is present in a written or an oral form (the distance between ‚grafs‘ and ‚fons‘ is less relevant).

In that 'instrumental' speech there is a strong reduction of the importance of sonority as a factor which contributes to signification. The meaning of a proposition **maintains** itself, generally speaking, although this proposition should be submitted to changes: of speed, graphics, timbre of the voice of the speaker, material of the support (where the proposition is written) (13). The quotidian language-communication raises meaning over sonority. There are cases, however, where the sonority level helps the speaker in approaching the very intentional meaning of a proposition.

1.3 *The "non - written" music and the "non-conventional" scripts*

The denotative level already referred to, on which the semic functioning of the signs appear clear enough, is circumscribed to a determined period of occidental music. It is necessary, however, to point out two situations in the whole historic process of music in which the semic mechanism seems to fail. Why? Because there is no channel of sign-transmission. A third situation is conceived with a wanted vagueness, a deliberate inexactitude of the interpretant, concerned by the emitter in the sign-relation. This semic vagueness represents musical aesthetics.

1. The first situation has to do with the oral transmission of music. Folk music of different cultures, or the ecclesiastical singing in the „Gregorian“ period, the realization of ‚chorals‘ in the first „Lutheran“ period, are some examples of such oral transmission. Sometimes, in the last cases, a cantor („chantre“) conducted the singing of the mass of believers with signs performed by the hand in the air. This was called ‚keironomics‘ (from greek, kheir, hand). Apart from these keironomic signs in these examples, musical practice did not take place by fixation of sounds (by means of sign-intermediation). We can almost speak of a **direct** emission and reception of musical facts. We must remember that it is possible to learn music by oral transmission. In this way, the mother language is learned by infants before the script. In the examples mentioned musical sound-structure was not reedificated by a medium, i.e. the script-channel. The keironomic signs, more unprecise than the musical notation, of course, could be totally absent. Besides, they were only a general aid.

When he lacks the mediation of script, the musical apprentice must perceive and understand musical organization, directly, empirically in an imitative way. Even if a

physical medium should exist when the sound is transmitted, this medium is not experienced as a semic Medium.

2. The second case is concerned with certain realizations of contemporary music. I am referring to those works where there is no performer implied. The reason? The composer creates **directly** his musical work, recording it on the musical magnetophonic band. We face a direct 'manipulation' of sound which is **constructed** simultaneously with the registering, both in the case of concrete and electronic music. Here, also, the intermediate condition of musical notation is absent as well as a 'direct' relation between composer-emitter and listener-receiver. Here, there is no place for 'inexactitude'.

I would not say that in this scheme the magnetophonic band represents the emitter, and the recorder represents the receiver, the interpreter of the signs which communicates with the band. That would extend fruitlessly the terminology and consequently deprive it of all sense. My subject is human communication in the aesthetical field between composer and performer. I think that this point of view does not contradict any Peircean statements. I mean, a sign does not necessarily require the presence of an interpreter, but it must be, above all, 'interpretable' because the interpretant process is, after all, lead by the individual.

3. The third example I proposed is constituted by the „non-conventional“ scripts, these sign-systems in scores of contemporary music which contain signs of musical facts, the semiosis of which is different from traditional ones. I hope to be able to show by means of examples that this deals with signs created by composers of particular musical situations in new aesthetics. Consequently, the composer must clarify in words the meaning of these signs at the beginning of the score, because these are not signs of a well-known meaning, conventionally accepted and historically sanctioned. It must be imagined that the meaning of these signs will become part of the general musical notation.

Regarding this subject, it is important to pay attention to the following: The so-called „non-conventional“ scripts require from the interpreter a performance during which he effects a particularly creative intervention within a certain range. In that non-conventional notation, the signs designed to allude to sonorous effects are partially different from composer to composer.

What is the matter, in this system, with the functioning of the semiosis process? The semic process subsists, I think, because of those ‚correspondence-tables‘ at the beginning of the scores. The main signs are intrinsically vague; I mean that they were conceived to provoke a singular freedom in the interpretation by the performer.

The Chilean musician Gustavo Becerra speaks of „controlled freedom“. Juan Carlos Paz, an Argentinian composer, introduced the sign ‚//.‘ to indicate: „repetition ad libitum“. That is an adaptation from the traditional sign of (only one-time) repetition ‚./‘. Note that vagueness leaves open the material interpretation, the empirical fact, in a different way than the traditional notation. The musical work is, there, much more a Token than a Type.

The following examples correspond to such classes of signs, deliberately created as ‚vague‘:

Example 10

a)



signifies: „several changes of the ‚arc‘, consecutive and irregular“.

b)



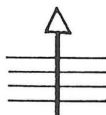
is defined as: „very quickly ‚tremolo‘ without a precise rhythm“. (The examples a) and b) were employed by Krzysztof Penderecki in his work „Ofiarum Hiroszimy-Tren“ (Lamentation for Hiroshima), composed in 1960.)

c)



must be understand as: „The conductor gives a sole sign of departure to the performers who continue, then, ad libitum until the next sign.“ (Used by Witold Lutoslawsky in his work „Three poems by Henri Michaux“, 1963.)

d)



sign indicating „the major height possible“ (employed by León Schidlowsky in „Visions“, for string orchestra, 1967).

These examples have a common note: a deliberate vagueness in demarcation. They represent a proposition-suggestion which grants the performer a considerable space for his imaginative largeness in respect to musical interpretation.

On the level I called **denotative**, I would say that these manifestations of musical realization which prescind notation do not work (it is of no consequence why they are not present). What does really happen with these **non-conventional** scripts? Is it possible to speak of a **semic process** in which the correspondence between Medium, Object and Interpretant is less firm?

Motivated by a deliberately inexact poetry, for instance, the sign c) (Example 10) is not bound to a determined sonorous conjoint. Or, at least, it is not so determined as the main signs of the traditional musical notation, as I explained before. The composer wished to relate that sign, the vertical arrow, with sonorous facts, each time differently. A difference, here, added to the normal differences aroused by musical interpretation of signs (siehe S. 135). A musical work of this kind, besides, can be performed by different musicians, in different concerts, or by a same performer in diverse presentations and be, then, diverse. Its aesthetic value can also be diverse.

However, even if the concretion of the sign be aleatory, the performer interprets it in the **direction** wished by the composer when the sign appears in the score. The **semic process** is accomplished, therefore, with a singular variant: the meaning alluded to by the sign is required as 'indefinite' and the interpreter of the sign does consciously assume this indefiniteness.

Despite its diverse origins and motivations, folk music - the music made directly in magnetophonic bands, and the music containing non-conventional scripts are related by means of what they discard. But the prescindence, with respect to the normal **semic system**, works in each case in a different way. The first two situations discard the sign-system. Organization accomplishes the function of the channel of communication of sonorous contents, relatively determined, between an emitter (the composer) and a receiver (the performer). Musical communication is **direct** in folk music and other classes of non written music. I think it is acceptable both in folk music (where creator and performer can be different individuals or coincide in a same individual), and acceptable, too, in music created on a magnetophonic band (where creator and 'performer' are one sole individual).

With respect to these non-conventional scripts, they represent another intermediate system. Apparently, they constitute themselves as a system of signs, the functioning of which is similar to other sign-systems. It happens, nevertheless, that they do not accomplish the following condition: that the receiver could identify, with a definite clearness (on the Interpretant level) the meaning which these signs communicate. Because he, the receiver, is called up on to produce the aleatory musical facts aroused by his **circumstantial freedom**.

In that case, we face another relation M,O,I, where the Interpretant varies, to a great extent by pre-determination. But, as we can understand, there is no obstacle of any semic process. I strive to make clear that my reflection has, by no means, the goal of an evaluation of two diverse aesthetical propositions; it endeavours to describe two diverse semiotic processes.

1.4 *Relative value of musical notation*

I obtain from what I have said hitherto the following propositions:

- a) that the score **is not** a duplication of music by other means;
- b) that musical performance - as sign-interpretation - **is not** a mechanical process of the deciphering of signs and later the emission of sound.

The first proposition, a), is evident. The addition of a score plus the circumstances attained in the Interpretant field (I mean, diverse theoretic-technical informations), are **diverse** from the very musical work. There is something which is impossible to 'substitute': sound as such. Consequently, auditive experience cannot be replaced without losing something very important by the experience of reading the notation. I mean, an 'ordinary reading', not a 'musically performed reading'. There is, in music, a considerable gap between graphemes and phonemes, as I have said before, even if the interpreter could produce a melody by imagination, and 'experiment' the sounds in the so-called **inner audition**.

It can be useful to compare this notion of the musical sonority with a presumable similarity corresponding to theatre, and, even, with the architectonic fact. I believe that there is an analogue distance between the 'mental reading' of a musical score and its performance, as well as between the reading of a theatre play and theatre experience. In this experience, the following converge: human voice, corporal

movement, real space, scenography, music, illumination, besides their symbolic correlations.

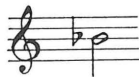
On the other hand, it is the same between an architectural design and the building. The built architectonic work rises from the **presence** of real materials, tridimensional and penetrable space, colours, light, besides the suggested meanings.

The second proposition, b), is caused by a basic esteem of the performer's personality. It happens, really, that his 'mark', his performance style, can be clearly perceived. It is possible, therefore, to speak of the diverse 'talkings' of the style-type of a composer by diverse interpreters (14). From what does that individual **resonance** of the sign-message relation originate? It originates partially from imperfect registration in musical notation of the qualitative details of the sonorous fact.

According to the already referred-to differences of precision of the signs, we can speak of two **denotative poles**:

1) One extreme is defined by those musical signs which show a better precision by themselves. For instance, the connection between the written pitch in the staff, the realization of any pertinent gesture by the performer in a precise point of the musical instrument, and the height of sound resulting from that gesture is not submitted to personal variations. For example, a 'b flat' written on the third line of the staff, in 'G clef':

Example 11



means 'the same' for every violinist with regard to the height of the sound. Therefore, when all the violinists of an orchestra read the mentioned pitch-sign in a given point of their scores, the result of the performance must be „unison“. That can be expected because the signs are considered to bring a message belonging to a **class** (or type) of messages. That is, the pitch-sign of Example 11 is not only valid for a determined violinist in a determined point of a particular score, but, generally, for every instrument where it could be realized as sound, independent of its specific timbre and of the personality of the performer.

2) The other pole comprises musical symbols which depend more than the former pole on the circumstances. The appreciation of an expressive-moving indication, such as „Andantino“ (and the limits individualized by such indication, compared with the indication „Allegretto“), cannot be communicated with sufficient brightness in empirical realization. Even defined by the metronome, they could confuse a non-specialized listener. The signs of contemporary notation (see 1.3) depend strongly on personal circumstances, too.

1.5 Possibility of meaning on the musical connotative level

Briefly, a normal communicative process functions in music. There is a level where signs can be classified and grouped in **repertories**. Musical notation is a Medium (M). It also reaches the dialectic process of the Peircean triad in more than one sense. On the other hand, the universe of discourse of musical messages admitted by those signs do exist. That is, the musical Object, and the (mixed) musical Interpretant do exist. That which is to be reflected and analyzed regarding the connotative dimension of the aesthetic musical phenomenon should previously take into consideration the limitations and possibilities on the denotative level of musical notation.

I think it would be an indispensable ‚training‘ for the musical ‚critic‘ whose task is also a semiotic process, and a delicate one, because it develops itself in the **connotation** domain (the same domain which the performer **hopes to reach**) and presupposes the denotation level. The musical critic considers the musical sonorous presence of a musical work as a sign system. There, the Interpretant reference, the „dicent“ produced by the performer, appears as prime material to elaborate its critical discourse. Could that discourse take place on the „legisign“ level? Could it have, perhaps, the force of a syllogistical „argument“?

Notes and References

- 1) Walther, E.: 1979, *Allgemeine Zeichenlehre. Einführung in die Grundlagen der Semiotik*, Agis Verlag, Baden-Baden.
- 2) With respect to the general functioning, the musical signs, integrated in the score, do not function as spontaneous signals (that is, they transmit relatively conventionalized meanings through a Medium, by means of a code, shared by transmitters and receivers, in an intersection of repertoires). I will use these terms (sign, signal) in this sense.
- 3) Bense, M.: 1969, *Kleine abstrakte Ästhetik*, edition rot, stuttgart, text 38.
- 4) Bense, M.: 1974, *Eстетica*. Ed. Bompiani (Idee Nuove), Milano, trad. G. Anceschi. See also: Bense, M. & Walther, E.: 1975, *La semiotica. Guía alfabética*, Editorial Anagrama, Barcelona, trad. L. Pla.
- 5) Peirce, C.S.: 1965, *Über Zeichen*, edition rot, stuttgart, text 20. See also Peirce, C.S.: 1991, *Vorlesungen über Pragmatismus*, ed. by E. Walther, Felix Meiner Verlag Hamburg. See also Prieto, L.: 1972, *Messages et signaux*, Presses Universitaires de France.
- 6) Schultz, M.: 1992, „Divergencies between linguistic meaning and musical meaning, *Semiosis*, 65-68, Jg. 16, H.1-4, Festschrift für Elisabeth Walther, Agis Verlag, Baden-Baden.
- 7) Until the Mozart period, the „Cadencas“ were the sections assigned to the creative improvisation of the performer.
- 8) This characteristic feature collaborates so that a musical work can be an „open work“ (U. Eco).
- 9) The main fact is to explain the admission, in music, of a second system, a „connotative“ one, based on the first system, the „denotative“ one. That is, what is considered as **meaning** in this denotative system, could be a **sign** to further connotated meanings. I would be interesting to analyze if the meaning on the connotative level can build such a triadic relation as a meta-language.
- 10) That means, technically, „mezzo-forte“, „fortissimo“, respectively. Recent investigations regarding the influence of the noise on the human ear show that „ a noise of a sonorous level higher than 90 decibels (dB) provokes a temporal reduction of the audition levels“. A symphonic orchestra produces normally between 80 and 100 decibels (dB). See: Rabinowitz, J.: 1991, ‚Mundo Científico‘, Recherche, 112, vol.11.

- 11) Contemporary musicians did realize experiences of construction of sonority starting on a graphic design. Aaron Copland tells that once he has written a musical idea, he can modify a little the melodic design, looking for a more attractive melodic line, such as a designer modifies the trace of his design. See: Copland, A.: 1939, *What to listen for in music*, Mc Graw-Hill Book Company, New York.
- 12) Dufrenne, M.: 1978, *L'art est - il langage? - El arte. es lenguaje?*, Edición Faculty of Arts, Universidad de Chile, Trad. Margarita Schultz.
- 13) A linguistic phrase can be pronounced slowly or quickly, be written in diverse typographic characters, emitted by feminine or masculine voices, designed with a pencil, a piece of chalk, on paper or on a blackboard, and so on. In customary communication, the transcendence of these factors is minimized. In the artistic domain, however, it deploys its aesthetic relevance. There are, nevertheless, intermediate situations of an expressive intention in current speech, starting from sonority. The Tone has, perhaps, something to do with „suprasegmental traces“?
- 14) Maybe, we find a confirmation of that idea in the fact that on several occasions the realization of a score (its performance) does not attain the musical fact. The mechanisms are accomplished, the indications of the score are considered, but the music is absent.

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