Sound and Music in the Domain of Rhematic Iconic Qualisigns

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The context of Peirce’s theory of signs is extensively the semiotic context in general. The latter presents several trends that are not limited to a mere opposition between linguistic semiotics, on the one hand, and Peirce’s semiotics on the other. Semiotics of music, as well as any other field to which semiotic theories are applied, is representative of the existing variety of semiotic theories, models and methods. In its extensive presentation of “Basic concepts for studies in musical signification: a report on a new international research project in semiotics of music”, Tarasti (1987) provide us with a broad overview of trends in musical semiotics (see also Osmond-Smith 1971, 1974; Lidov 1980, 1981; Keiler 1981; Boîles 1982; Nattiez, 1987; Tarasti, 2002; Worten 2010; Monelle 2010, 2014; Tarasti and Marino, 2014).

As for the specific applications of Peirce’s semiotics to music, in the 1970s, alongside the structuralist semiotic studies of music also began to emerge some Peircean lines of analysis (see, for example, Coker 1972; Osmond-Smith, 1972, 1976; Escal 1978). Since then, studies along these lines are numerous (cf., among others, Hatten 1980, 1990; Dougherty 1993; Benedict 1994; Baest, 1995; Fisette 1999, Turino, 1999; Leon, 2012). It is not the aim of this paper to discuss the state of the art of musical semiotics. Hence, I will limit myself just to entertain the dialogue with those who, in the Peircean tradition, also follow the proposal I wish to defend here: the dominance in music of the phenomenological category of Firstness and the types of signs that belong to it, especially Martinez (1991, 1996), Coelho de Souza (1994), and Fisette (1999).

This proposal is a complement of a broader and more ambitious work (Santaella, 2001), in which I argued that there are three semiotic matrices of thought and signs from which all hybrid sign systems are derived: the verbal/textual, the visual, and
the acoustic/musical signs. Based on Charles Sanders Peirce’s phenomenology and semiotics, I developed the argument that verbal signs are predominantly symbols, visual signs predominantly indices, and musical signs predominantly icons, which does not mean that verbal signs are only symbolic, visual signs only indexical, or musical signs only iconic signs. Peirce’s categories are omnipresent, so that all three aspects of signs, symbolicity, indexicality, and iconicity, are always somehow present in any sign process. However, in any semiotic process one of these aspects always predominates. As sound and music are types of signs with no power of reference to anything that is external to them, they appear as exemplary cases of the rhematic iconic qualisigns, that is, the triad that refers to the three inseparable characters of signs in the level of Firstness: the qualisign or the attribute of the sign in itself which in relation to its object can only be an icon, and in relation to its interpretant can only be a rheme. Although Peirce’s categories are relatively well known, an overview is here necessary for the understanding of this paper’s proposal.

1. An overview of Peirce’s phenomenology

Before studying any science, according to Peirce, philosophical thought must begin with a logic system, and the primary task that logic has to face is to establish a formal and universal table of categories from the most radical analysis of all possible experiences. After many comings and goings, it was only in 1904 that he recognized that the difference between mathematics, philosophy and the special sciences depended on the observation mode employed by each of them. From this he deduced that the categories were not subject to psychology, since to come to them nothing else is required except careful attention to the phaneron (anything that appears in any way to the mind), by the way, something that can be observed by all persons in normal physical and mental conditions (Peirce 1931-1958, § 8.297).

Philosophy has the task of finding out what is true, limited, however, to the truth that can be inferred from the common experience that is open to every human being at any time and place. The first and most difficult task that philosophy has to face is to find the universal categories of experience. This assignment falls to phenomenology, a quasi science whose task is to provide the observational basis for the rest of the philosophical disciplines. In the context of his classification of the sciences, the latest version that Peirce reached at the beginning of last century of his doctrine of categories, developed since 1867, was attached to the science of phenomenology, the first and most basic discipline of his philosophical edifice.

These categories are the most universally present in any phenomenon, whether physical or mental. They are, therefore, simple concepts, applicable to anything; in short, they are so broad ideas that should be considered as tones or thin skeletons of thought rather than as static or terminal notions. They are dynamic and interdependent, or better, omnipresent. Since they are universal and formal, they
do not replace, exclude, or rub against the infinite variety of many other material and particular categories that can be found in all things. To get an idea of the breadth and maximum aperture of these categories, in its most general level, Firstness or Monad is the beginning, corresponding to the notions of chance, indeterminacy, vagueness, uncertainty, possibility, irresponsible and free originality, spontaneity, freshness, potentiality, presentness, immediacy, quality, and feeling. The second or dyad refers to what is determined, terminated, final, correlative, needed, reactive, being linked to the notions of object, relation, polarity, denial, matter, reality, crude and blind force, compulsion, action-reaction, effort-resistance, here and now, opposition, effect, occurrence, fact, vividness, conflict, surprise, doubt, result. The third or triad is the medium, becoming, development, process, generality, continuity, growth, mediation, infinite intelligence, law, regularity, learning, habit, sign (Peirce 1992, p. 280). Thus, for example, the thread of life is a third, becoming without beginning or end; fate that cuts life and determines it is gross and blind force, Secondness; its indefinite, indeterminate beginning, freshness of the free and spontaneous potential of all that is just beginning, is Firstness (on the categories, see also Rosensohn 1974 and Esposito 1980).

The entire work of Peirce is based on these categories. His doctrine of signs or semiotics is entirely based on the three categories and there is no way to understand the subtleties of his many definitions and classifications of signs without a careful understanding of his phenomenology. Most importantly, however, is how semiotics is extracted directly from within phenomenology. The simplest form of Thirdness is the notion of the sign. If the universe of signs is the legitimate territory of semiotics, this already starts inside phenomenology, or more precisely, the third phenomenological category is already a semiotic category. In addition, when it comes to the territory of semiotics, Peirce reinserts phenomenology within it. Therefore, Peirce takes the sign notion so far to the point of considering relations of Secondness as quasi signs and, at its peak, he includes the possibility of monads to function as quasi-quasi signs. This is the source of his classification of the signs under the dominance of Thirdness, Secondness and Firstness.

2. The main substrate of the icon

Sustained in the logic of the three categories, for Peirce, there are three major classes of signs: (a) the rhematic iconic qualisign, (b) the dicent indexical sinsign, and (c) the argumental symbolic legisign. Although it is very widespread, it is a great mistake to consider the semiotic triad icon, index and symbol, without considering the other aspects of the signs accompanying each of the elements of this triad. I mean, the concept of icon, which concerns only the sign in its relationship with its object, has to take into account that this sign in itself has the nature of a qualisign that can only be interpreted as a rheme, i.e., a hypothesis. The same goes for the index corresponding to a sinsign and interpreted as a dicisign. Equally
the symbol corresponds to a *legisign* that is interpreted as an argument. To avoid simplifications that lead, as a rule, to sterile analyses, this paper takes the full triad of *Firstness* for discussion, taking also into account the variations of the icon which have until now rarely been studied in detail.

When they are actualized in existing sign processes, the main three classes of signs are mixed through various combinations. The classes are abstract constructs that help us to understand the possible mixtures. This is no less true for music. When I suggest the dominance of the *rhematic iconic qualisign* for music, that does not mean that music does not display mixtures of signs. Certainly it does. This, however, does not imply the absence of a radiating center that performs its function precisely in defining by predominance a class of signs over the others.

In Peirce’s and his commentators’s writings, icons are always exemplified through images, both mental and visual ones. Therefore, my proposal that sound is under the dominance of the icon and visuality under the dominance of the index should cause at least some surprise. However, as already warned by Ransdell (1983, p. 65), our understanding of this trichotomy (icon, index and symbol) is usually weakened by the tendency to take as paradigmatic certain types of cases that, in fact, do not so perfectly exemplify a class of signs as one may think. This is the case of paintings, drawings, maps, and even photography, which are often mentioned as examples of icons, even though the only reason for this lies in the fact that visual images present, as a rule, a similarity with the objects to which they refer. This makes it easier and consequently reducing the explanation of what the iconic sign really is.

Without ceasing to be a sign that functions by similarity, the icon is much more than that. To rescue its complexities on what matters to characterize sound and music as signs, we should begin by their insertion into the category of *Firstness*. In one of his best references to *Firstness*, Peirce says:

> The first must therefore be present and immediate, so as not to be second to a representation. It must be fresh and new, for if old it is second to its former state. It must be initiative, original, spontaneous, and free; otherwise it is second to a determining cause. It is also something vivid and conscious; so only it avoids being the object of some sensation. It precedes all synthesis and all differentiation; it has no unity and no parts. It cannot be articulately thought: assert it, and it has already lost its characteristic innocence; for assertion always implies a denial of something else. Stop to think of it, and it has flown! What the world was to Adam on the day he opened his eyes to it, before he had drawn any distinctions, or had become conscious of his own existence — that is first, present, immediate, fresh, new, initiative, original, spontaneous, free, vivid, conscious, and evanescent. Only, remember that every description of it must be false to it. (Peirce 1931-1958, § 1.357-358)

In this description, we can find the main substrate of the icon, a sort of bed where the primordial characters of this type of sign rest, namely the characters of chance, indeterminacy, uncertainty, vagueness, spontaneity, presentness,
immediacy, potentiality, quality, feeling, conjecture, hypothesis. To understand how these characters operate within the icon one cannot overlook that the icon concerns the relationship between sign and object, that is, between the sign and that to which it refers or applies. This relationship is only possible because the sign has, in itself, some kind of property, a quality or a composite of qualities, that allows its relationship to something outside it, its object.

The three major classes of properties that allow the sign to relate to its object are: (a) the sheer quality that the sign has in itself, its Firstness, (b) the fact that it exists and reacts against other existents, its Secondness, and (c) its character as a law, his Thirdness. In the case of the iconic sign, the ground or internal property of the sign that holds up its relationship to the object is a mere quality. This means that, in relation to the object, the sign is iconic because, in itself, the sign is a simple quality, i.e. a qualisign, a quality that is a sign.

There is no doubt that sound displays aspects of Secondness, manifested in its actualization in time and space. Sound also presents elements of Thirdness due to the fact that it is subjected to physical laws. Thirdness is accentuated when sound is musically structured. However, in this article, I intend to highlight the dominance of the qualitative aspects of sound and music, especially when music is compared to the other matrices of signs such as visual and verbal signs. The prominence of the qualitative character of sound and extensively of music imposes itself by itself, never having ceased to be brought into relief by musicians and musicologists.

Sound is airy, light, fleeting. Emanating from a source, sound travels in the air through pressures and depressions, running paths, subject to deformation, whose contours and shapes never set. This explains the primordial sound quality, its evanescence, made of ebbs and flows continuously growing, pure evolution that never settles into a space object. Sound is omnidirectional, borderless, transparent and capable of high latitudes. We do not stumble upon sounds. Instead, they come through us.

Therefore, music is the only kind of semiotic manifestation that may present itself predominantly as a mere monadic quality, a simple qualitative immediacy, pure presence, moving and elusive. It is so pure that it may get rid of any comparison with something to which it may be similar, of any discrimination concerning its embodiment, and of any reflection about the laws or rules that it actualizes. It is true that other types of signs may also achieve a similar level of detachment, poetry, for example, or even many paintings, especially abstract paintings, some videos, etc. When this occurs, however, these arts come close to a condition that is proper to music. This condition is explained by the preponderance of the qualitative attributes, rather than referentiality, qualities that appear in such a positive way, quality as it is, suchness, that the aspects of the legisign, essential to the internal organization of any system of signs, also ceases to be immediately noticeable, which does not mean that they cease to exist.
Qualisigns function as signs by means of qualities that present themselves as mere possibilities abstracted from any space-time empirical relationship with anything other than possible similar qualities. Therefore, qualisigns are available signs which are open to multiple possibilities. Within Peirce’s logic, this field of possibilities converges to three broad categories, so that the qualisign may be presented in three levels: (a) qualisigns in the level of Firstness, (b) in the level of Secondness and (c) in the level of Thirdness. In the first case, there is a disembodied quality, a quality in its purest state, a mere positive and simple presence, without any power of reference, brushing the impossible threshold of immediacy without mediation. In the second case, a quality is embodied and may be perceived. In the third case, a quality is cognitively compared to other qualities, and by means of this comparison it properly acts as a sign. The potential of sound for these three quality levels is abundant. This explains why there is no contradiction in defending limiting cases of pure qualitative iconicity, in one extreme, and the cognitive function of iconicity in perception, in the other extreme, as we shall see. From this derives the varying levels of iconicity, the different levels of relationship with their objects that qualities, in this case sound and musical qualities, can exhibit, as will be discussed below.

3. Pure icon in sound and music

For a long time I have been calling attention to the variegated richness of Peirce’s concept of the icon (Santaella 1995, pp. 143-157; 1996; Santaella and Nöth 1998, pp. 59-73; Santaella 2012). This richness is far from being reduced to the repeated explanations that the icon is a sign that represents its object by similarity. This, in fact, is only one facet of the icon, its hypoiconic facet. A more systematic reading of Peirce’s writings reveal, however, that there are several levels of iconicity ranging from pure icon to metaphor. As I will discuss, there is no other kind of sign that is more favorable to illustrate the varying levels of iconicity than sound.

The first class of signs, the rhematic iconic qualisign, that I propose as dominant in sound, should be considered as a limiting case, since, at this level, we are dealing only with non-actualized possibilities. When they are considered in themselves, qualities, as pure possibilities, are independent of the sinsign in which they inhere, independent of what gives them embodiment. Nevertheless, in their obsistential aspect, that is, as an occurrence in time and space, than qualities jump from the level of mere possibility to the level of existence, and they turn into sinsigns. Of course, qualities are still present in what exists, but no longer as pure chance or possibility. That is why a still non-actualized sound possibility is different from a possibility when it is already manifested in a current sound. Moreover, in any current sound there are elements of law (Thirdness), because sound is subjected to physical laws. Moreover, not only to physical laws but also to the laws of sound organization.
There appears, therefore, the ubiquity of the three categories, as was postulated by Peirce. Despite this ubiquity, there are situations when Firstness, pure qualitative possibility, not yet actualized, seems to reign supreme. In this case, icons emerge in their most tender state, as pure icons, because they are neither existing sinsigns nor a law or general principle, a pattern, for instance, working as an icon. It is in this regard that one of the most enigmatic of Peirce’s statements about the icon becomes understandable, “an Icon is strictly a possibility involving a possibility, and thus the possibility of it being represented as a possibility is the possibility of the possibility involved” (Peirce 1931-1958, § 2.311). In this realm of possibilities the ultimate threshold of the rhematic iconic qualisign is located. When considered in itself, a quality can only be an icon in relation to its object and nothing more than a mere conjecture in relation to its interpretant.

Well, non-actualized possibilities are disembodied abstractions. This would then mean that there are no phenomena or situations that could perform the role of rhematic iconic qualisigns? The answer is no and yes. Indeed, there can be no such situations because possibilities prescind from existence in time and space. The positive response is more complicated than the negative one. In a revealing passage, Peirce says that

A sign by Firstness is an image of its object and, more strictly speaking, can only be an idea. For it must produce an Interpretant idea; and an external object excites an idea by a reaction upon the brain. But most strictly speaking, even an idea, except in the sense of a possibility, or Firstness, cannot be an Icon. A possibility alone is an Icon purely by virtue of its quality; and its object can only be a Firstness. (Peirce 1931-1958, § 2.276)

Therefore, a pure icon is something mental in a state of emergency, still not entirely factual. It can only be an idea before it is materialized as such. It is a state of mental effervescence preceding and leading to discovery. These are moving, swaying configurations, still wandering in search of fixation in a form. This mental state results from the plasticity of the human mind to produce configurations that are not copied from something prior and that spring under the unstoppable force of the associations. Between being and not being an idea, between being and not being a form, pure icon is a quasi sign, responsible for all creations in science, art, and in everyday experience. Therefore, “No pure Icons represent anything but Forms; no pure Forms are represented by anything but Icons” (Peirce 1931-1958, § 4.544). If this statement is already valid for any creative process, in the creation of music it reaches its peak.

Pure icon is an icon in its nascent state. Emerging forms are moving forms, volatile, fleeting. These hatchers of signs, dawn of creation in all forms of art, feature characters that the process of musical creation displays in such a privileged way to the point where we can say that sound in pregnancy is the one that is closest to pure icon. What is a musical idea before it materializes in a certain sound sequence when it wanders still vague and undefined in the mind of the composer? Is there
a more subtly perfect example of the rhematic iconic qualisign? This is certainly the purest grade that the icon can achieve, but there are other degrees as will be discussed below.

4. Perceptive icons in sound and music

The passage from pure icon to the second level of iconicity, which I call factual icons, was indicated by Peirce in details:

An icon is a representamen of what it represents and for the mind that interprets it as such, by virtue of its being an immediate image, that is to say by virtue of characters which belong to it in itself as a sensible object, and which it would possess just the same were there no object in nature that it resembled, and though it never were interpreted as a sign. It is of the nature of an appearance, and as such, strictly speaking, exists only in consciousness, although for convenience in ordinary parlance and when extreme precision is not called for, we extend the term icon to the outward objects which excite in consciousness the image itself (Peirce 1931-1958, § 4.447).

Images that external objects raise in consciousness are related to perceptual images. At this level, we consider the role that the icon plays in perception. Peirce’s theory of perception is quite complex (see Santaella 2012). From it I will retain only the information needed to understand the role of perceptual icons in music.

All known theories of perception are dyadic, because they basically consider the relationships between a perceiver and the perceived object. Unlike this tradition, Peirce’s theory of perception is triadic. In any perceptual process, three elements are involved: (a) the percept, (b) the percipuum, and (c) the perceptual judgment. The percept corresponds to what is commonly called stimulus. Something outside of us presents itself to our perception. It knocks insistently at the door of our senses. We cannot avoid paying attention to what is there to be perceived, because our senses work as open windows for all that appears to them. What is out there, appearing to the senses, is the percept.

As soon as the percept reaches our senses, it is immediately converted into the percipuum. All species are genetically equipped with specific sensory systems that filter outside stimulus or percept in a certain way, imposing a certain type of perceptive translation to what is present to the senses. When translated in accordance with the potential and limits that a given sensory system imposes to the mind, the percept becomes the percipuum. This conversion or translation can take place at three levels. In the case of human perceptual processes, they are identified as: (a) a mere quality of feeling; (b) a surprise; (c) an interpretative habit.

At the first level, the perceiver’s consciousness is immersed in a wave of vague and undefined feeling. Surely, this corresponds to Firstness in perception. A kind of fusion between the perceiver and the perceived is produced in the perceptual field. Perception is quasi immediate in its immediacy, pure presentification that blurs the boundaries between the percept and the percipuum.
At the second level, the percept comes as a sudden surprise, producing the effect of astonishment and even shock. The *percipuum* responds as an instant reaction not mediated by any dispositional interpretive habits.

It is only at the third level that the perceptual judgment is produced. Once the percept is translated into the *percipuum*, it is immediately captured by the general schemes of interpretation with which human beings are provided. That is why Peirce says that the *percipuum* is the percept as it is immediately interpreted in the judgment of perception. The schemes correspond to the general guiding principles or mental habits that regulate the formation of the judgment of perception. It is through the perceptual judgment that we recognize what is perceived. The percept is something external hitting insistently on the door of our perception. It is dumb, because it does not evince any generality. The conceptual schemes are the ones that are responsible for the general interpretative elements that enable the identification and recognition of the percept.

Music performs an outstanding role in the exemplification of the perceptual triads. As it is well known, the physical acoustic sound is not the sound that is perceived by our sensitivity. This distinction was discussed with crystal clarity by Duchez (1991, pp. 49-50):

> The physical sound is an energetic phenomenon, consisting of regular oscillations (i.e. switches of compressions and expansions of this elastic medium); the sensitive perceived sound is a fact of consciousness, having close relations with the physical sound that conditions it. But they are neither absolute nor constant (because they depend on physiological properties of the ear and on the psychological modalities of hearing).

The correspondence with Peirce’s triad is patent there. The physical sound is the percept, it is the external stimulus that can be objectively studied by science with increasing precision (quantify, measure, record, electronic manipulation, synthesis). The perceptual organization that is manifested in the perceived relationships as sensitive qualities is the perceptual judgment. Between the sound out there as a physical percept, and its perceptive interpretation, which depends on the construction of models, patterns that join the signals in sensitive qualities, there is the *percipuum*, the sensory physiological system of hearing that begins in the ear and is transmitted to the brain by the nervous system. The brain interprets the *percipuum* thanks to the cognitive structures that are available to it. These structures include memory, anticipation and learning, so that cultural conditioning is added to the neural mechanism. This interpretation of the percept is just what Peirce called perceptual judgment. Let us now see what are the roles that the *rhetic iconic qualisign* plays in these processes.

To perceive, as we have seen, is to be aware of something external to us: the percept. The sound I hear on the CD as I write, that comes to be the Concerto for Piano and Orchestra no. 5, Beethoven, continues to exist independent of my hearing. The external stimulus of that physical sound is not exhausted by being
perceived by me, for my hearing will never be able to capture all the features and aspects of this music. There will always be many attributes that are missed in each act of perception or private listening, even when the listener is an expert in music. The physical sound outside of us is the percept. When it is captured in the sensory system of our hearing, the percept is translated into the *percipuum*. This may present itself in the dominance of Firstness, Secondness or Thirdness. At the first level, the *percipuum* is just a mere quality of feeling, vague, fuzzy, an imprecise simple qualitative immediacy, without limits. But the *percipuum* may also appear in a surprising and conflicting way or in accordance with the general schemes that regulate our judgments of perception.

Although the third level predominates in the vast majority of perceptual acts, there are unexpected perceptual situations that may even be shocking. The predominance of Firstness, in turn, is rarer, because it depends on the mind being in a certain state of perceptual availability, a state that only happens in special moments. Music, however, given its referential weakness, compensated by its enormous evocative power, is apt to produce in us a kind of predisposition to the dominance of the *percipuum* in its level of Firstness. Not having behind it, as in visual image, a real or perceived object, not being prey, as in verbal language, to more or less fixed concepts, music is almost pure presence, *presentness* as it is present, able to narrow the gap between the percept and the *percipuum*, producing a fusion between both. The physical sound that is there, outside of me, it felt as if sprouting here, in the inside, the physical and the sensitive joining in an iridescent immediacy, volatile, unstable, moving in the path of life.

Certainly, one cannot deny that the laws of gestalt operate in the perception of sounds since there is a clear tendency to perceive the acoustic environment around the interpreter and also music as a unit, as a whole. It is important to notice here a possible comparison with “sound object”, the famous concept of Pierre Schaeffer (1966), considered as the phenomenological or intentional representation of a sound. This gave rise to his concept of “acousmatic listening” which reduces sounds to the field of hearing with emphasis on the content of perception. However, this possible comparison will not be pursued here for two reasons: first because to be accomplished with rigor, the comparison would ask for another type of study. Second because pursuing it even with brevity here would take us far from the scope of this paper. Hence, let us return to it.

In fact, not only aspects of Secondness, which we could find in “acousmatic listening”, but also several aspects of Thirdness in the perceptual judgment do not cease to be present. While listening to the Beethoven concerto, I can recognize that it is Beethoven, I can recognize the instruments with which the sounds are produced, I can predict the direction the music will take, a prediction that is due to both the memory left from other hearings, and the knowledge of the internal determinations of the tonal system. Without denying these elements of Thirdness, without also denying the renewed element of surprise that comes with each
repeated hearing of a great work, we have to consider that, by its very nature, music has the power to present itself as presentness, sound in itself.

The timbre of an orchestra dense metal chord can fascinate our ears and we are taken by the impact of that perception, of which we can only, at that moment, capture the perceptual raw material quality. It does not matter which chord is that neither which metals are those. It does not matter what is the relationship of that sound with the other parts of the work. There is nothing that interests us in that Edenic moment except the revelation that the pure sound sensation awakens in us. (Coelho de Souza 1994, pp. 30-31)

In this perceptual level, the interpretive act will not go beyond fleeting conjectures, which Langer (apud Fisette 1999, p. 50) calls emotional satisfaction and Peirce classifies as the emotional dynamic interpretant. In fact, music is one of the few types of signs whose interpretive process may stop at the level of qualities of feeling, because this level is enough for semiosis, that is, the action of the sign, to initiate. Even when advancing to more intellectual and logical levels, the interpreter of the musical sign in most cases does not go beyond the rhematic hypothetical level. This was greatly accentuated in contemporary electroacoustic music, when predetermined systems for music composition are less valid.

Where does this power of music to the monadic dominance of the qualitative come from? The answer to this question requires examination of the specific role that the icon plays in perception, especially in sound perception.

5. The cognitive role icons play in perception

As was pointed out by Duchez (1991, pp 49-50), there are close links between the physical sound as an energetic phenomenon and the sensitive sound perceived as a fact of consciousness, but these links are not absolute nor constant. This same disparity between the percept and the perceptual judgment appears in all acts of perception, whether visual, tactile, olfactory etc. One of the most important aspects of Peirce’s theory of the icon is in the fact that it enabled Peirce to combine the doctrine of representative cognition with the doctrine of immediate perception of the object. According to Ransdell (1979), in the role that the icon plays in perception, the combination of these two doctrines can be seen in a privileged way.

Perception is cognitive and representative because the way the percept is translated into the percipuum and into the judgment of perception cannot be materially identical to what the percept is in its existence. The regular oscillations of the physical sound out there do not have the same materiality of the sound as it hits the senses to be interpreted in consciousness. This is the doctrine of representative cognition.

Although they are not identical, however, there is an undeniable correlation between the physical sound and the perceived sound. It is not a physical match, but
a formal one. While it is representative, the perception of sound is also immediate, that is, if the perception is true, the form in which the sound appears is its own true form. It is precisely the form that the sound embodies. Even if there is no physical identity between the object (percept) and the percipuum, there is a formal similarity between them. In this formal similarity, is the key role that the icon plays in perception. This role is necessarily schematic. We can never perceive more than an extremely limited selection of the formal aspects of what is perceived. Nevertheless, this schematic iconic correspondence is enough to give us the illusion that the percipuum, that is, the percept as immediately perceived by consciousness, is the percept itself, is the very stimulus that comes from the outside.

Despite the illusion that is born from the iconic correspondence, there is always a physical disparity between the act of perception and the perceived. That is why immediate perception, presentness as it is present, is always inextricably linked to representative cognition. Our perceptual judgments are a kind of representation of the percept. There are privileged perceptual experiences, however, when immediate perception jumps like a flash to the foreground. What we call the aesthetic effect has a lot to do with that kind of experience, as much as the hearing of music. The illusion that the sound sensitively noticed is the very physical sound imposes itself on hearing because both perception and music take place in time, so that in musical perception we do not lose the feeling of perceptive immediacy. While in a visual percept, for example, the sense of externality, something that is there, outside of us, different from us, is prominent, in sound the sense of otherness and externality tends to dissipate in the iconic fusion of the physical sound and the perceived sound. This merger corresponds to the first level of the icon in perception. While this first level concerns the more receptive aspect of perception, the second level corresponds to the reaction it provokes. What are the perceiver’s reactions to quali-signs?

6. The reactions of the perceiver to quali-signs

To react to something that presents itself to our perception is to produce perceptual judgments. Which kind of judgments quali-signs are able to produce? If quali-signs are qualities functioning as signs, these qualities can only have as their objects of reference the same or similar qualities. Now, identity and similarity of qualities depend on our assertions that this is so. Hence, to say that a quality resembles the other is at most to raise a hypothesis. Hypotheses can at least have three levels. On the first level, there is a merger between the quali-sign and the quality that is taken as its object to the point of dissolution of the limits between them. The green tone of the curtain and the wall are so identical that both amalgamate in an inseparable whole. In music, the threshold of the identity between qualities can be so radical that, before adopting a hypothesis, however vague it may be, sounds produce body affection. This is because
[...] sounds have the ability to stimulate, with great efficiency, bodily reactions which present a similarity with the stimulus. This is undoubtedly the physiological basis for the significant efficiency of rhythmic pulse. A constant sound pulse, especially at low frequencies, can quickly establish a resonance with our unconscious body rhythms and cause changes in our state of awareness. This could explain the hypnotic trance reactions triggered by percussion in the rituals of Candomblé (Coelho de Souza 1994, p. 33).

In the second hypothetical level, an individual quality is taken as the object of another individual quality, this one functioning as a qualisign. Thus, for a blind man, the sound of a trumpet can function as a qualisign for red color. At the third level, there is the adoption of a hypothesis of similarity, generally postulated as valid and consensual. It is on this basis that certain musical modes can be linked to certain Ethos.

In all the iconicity levels considered above, from pure icon to icons in perception, we have not yet reached what Peirce called hypoicons. These were worked by Peirce in a more systematic way. This explains why most commentators regard as icons only cases of hypoicons ignoring all other previous levels, where iconicity is shown to be more tender and fragile, what is a loss given the importance of this tenderness and fragility to music.

7. Hypoicons in music

When Peirce speaks about hypoicons, he is already referring to signs in a more strict sense, that is, certain phenomena that function as signs because they certainly have a similar relationship with something else. The hypoicons are of three types: image, diagram and metaphor, as will be exemplified below.

According to Martinez (1991, 1996) and Coelho de Souza (1994), the importance and diversity of the hypoicon, that is, of iconic representations in music deserves to be overemphasized. The iconic nature of music can already be easily recognized in systematic occurrences of similarities among the parts of a musical work. These events range from mere repetition of a section within the musical form to the motive that requires imitation and variation, both sharp revelations of the iconic facet of the musical sign (Coelho de Souza 1994, pp. 35-36).

For Martinez (1996, p. 73), musical images occur throughout the history of Western and non-Western music. These include nature sounds such as birdsong, rain, thunder and the like. Coelho de Souza (1994, pp. 28-29) gives us some curious examples: “a wooden whistle that simulates the singing bird of the opposite sex to attract the partner that will be the next victim of the hunter, or the touch of the horn that mimics the cattle lowing, and is used by the cowboy to ease his task.” Other examples of images can be found in descriptive music.
It may not be easy to recognize immediately the birds’s dialogue in Rameau’s *Rappel des Oiseaux*, or the suggestion of an imaginary storm designed by the rumble of the timpani in Beethoven’s Pastoral, or yet the design of reflections of light on moving water suggested by the delicate piano arpeggios in *Reflets dans l’eau*, by Claude Debussy. But it is impossible not to succumb to the reading suggested by the association of these images when we are informed of the intent of that content by the composer (Coelho de Souza 1994, p. 29).

While images show a similarity in appearance, the diagrams show an analogy in the internal relations of a given phenomenon or process. Martinez (1996: 74-75) divides the musical diagrams in motion similarities and formal similarities. The first are exemplified in program music and in Debussy; the second, in the music of spheres and fractals. In a very rich vision of metaphors in music, Martinez (Ibid. pp. 81-83) groups them into three levels: (a) paraphrase and parody, (b) quotation and (c) allegorical reference.

Paraphrases can be considered a first kind of metaphor. In music, it is the mere imitation of a work that is taken as a model. In the same category, parodies exacerbate aspects of imitation. In quotation, the second kind of metaphor, the insertion of a fragment of a composition generates an interplay of meanings. Although it is similar to quotation, the third kind of metaphor differs from it because it does not make a direct quote from a work, but is inspired in a set of special dispositions already established by usage or convention. Martinez cites the bell canto as a metaphor of traditional opera.

Given this variegated picture of possibilities for iconic manifestations in music, there seems to be no doubt about the sovereignty of iconicity in sound and musical signs. This does not mean at all that the indexical and the symbolic aspects do not exhibit similar richness in music whose discussion would demand another study. Nevertheless, my argument here is that music is the sign system that takes the manifestations of the *rhematic iconic qualisign* to its limiting point.

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