

MUSICAL REPRESENTATION, EXPECTATION AND EXPRESSION OF EMOTIONS IN MUSIC

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Introduction

The concept of representation has been the object of many discussions in the aesthetic of music. While in the case of other arts (like painting, sculpture and literature) it is clear what a representation is, in the case of music there is no such agreement. One of the main questions that has been addressed by authors like Scruton (1976), Kivy (1984), Walton (1998) and Robinson (1981; 1994) is: 'can music ever be, properly speaking, a representational art?'

For the most part of aesthetic theories music is not a representational art. As Frances Berenson observes, "the standard denial of the possibility of representation in music is that music is abstract and, being abstract, it cannot, by definition, represent anything; there is nothing there to represent" (Berenson 1994:61). Following Roger Scruton, music is an abstract form of art that is not propositional and does not create fictional worlds: "one reason for denying that music is a representational art is that it provides our paradigms of pure abstraction: of forms and organizations that seem interesting in themselves, regardless of any 'fictional world' which this or that listener may try to attach to them" (Scruton 1997:122).

Eduard Hanslick observed that music does not produce a clear and distinct content (such as object, persons, events): "[t]o represent, however, is to produce a clear and distinct content, to put it before our very eyes (*darstellen – daher stellen*). How, then, can we designate something as what an art represents, when the very dubious and ambiguous elements of that art themselves are perceptually subject to debate?" (Hanslick 1986:14). In Jenefer Robinson's opinion, even when a piece of music does sound like what it represents, this depends on arbitrary conventions and recognizing a representation depends upon understanding the style or musical 'language' in which it occurs (Robinson 1994:179). This implies that anyone unfamiliar with a particular musical idiom finds great difficulty in detecting any resemblance between the music and what it is supposed to represent.

Finally, to be representational the musical significance should be internal to the music itself, but emotions, for example, are not the object of a musical composition, nor they are contained in the composition itself: a piece of music cannot be sad, and music cannot be the object of my sadness.

Thus music is not representational in the same sense that other arts are and, for most theories, music is not representational at all. However music is used by composers to express emotions and it arouses emotional states in listeners. Even if a piece of music cannot be the object of an emotion because it is not representational of objects or events in the world, through music composers describe emotional experiences and the music characterizes some qualities of the experienced emotion. On this basis, I think that there still is a form in which music can be considered representational.

This work is an attempt to understand what 'representation' means in music and to discuss a different way of understanding music as representational. In particular, I analyse the form that musical representations have for both composers and listeners in the case of pure instrumental music.

Following Charles Nussbaum's naturalistic theory of musical representation (founded on the collusion between the physics of sound and the organization of the human mind-brain), particular attention is given to the cognitive processes involved during the perception of music by listeners: such processes are helpful for a better comprehension of the way musical representations are created in consciousness.

The principal aim of this paper is to propose a theoretical discussion that accounts for the representational character of music through the analysis of the relationship between musical representation and expression of emotion in music, assuming that emotions are a kind of extra-musical semantic content based on a representational rule-governed system.

This assumption is related to the problem of meaning in music, which has been the object of controversial debates. Considering music as the bearer of meaning, one of the main questions addressed by philosophers of music is: 'is there anything, other than itself, that music means?'

In contrast with a narrow formalist view (for which the meaning of a musical composition is in the music itself and its compositional structure; Hanslick 1986; Kivy 2001, 2002; Lerdahl and Jackendoff 1983), music is considered by various theorists as carrying extra-musical meaning, which arises because of a reference or analogy with some other events or emotions. According to referentialists such as John Hospers (1946) and Donald Ferguson (1960), musical meaning "lies in the relationship between a musical symbol or sign and the extramusical thing which it designates" (Meyer 1956:33). Such a perspective involves those theories for which music is a representational system (Nussbaum 2007; Davies 1983; Langer 1994, 1942; Zbikowski 1998). Nussbaum, for example, relates meaning to a representational rule-governed musical system: the meaning of a musical event relies on extramusical content, which is based on a specific syntax.

The extra-musical meaning has often been related to the emotions expressed by the composer through music and aroused by music in the listener. In the paper 'Meaning and Music', for example, Donald Sherburne defends the view that the meaning of music is a referential meaning that refers to the extra-musical world of emotional states (Sherburne 1966).

With this work, I am not focusing on the problem of meaning, but on its relationship to the question of representation in music. Assuming that also pure instrumental music is meaningful and its meaning lies in extra-musical semantic contents that has usually been defined as 'emotional contents', I consider representation as part of the process through which emotional meanings are constituted in consciousness and expressed in a musical form. At the same time, a subjective musical experience takes the form of a musical representation carrying an extra-musical emotional meaning.

Through an interdisciplinary approach –involving musicology, phenomenology, aesthetic of music and music cognition– the goal is to better understand the listener's musical experience and the way it is represented in consciousness as having a specific meaning.

Finally, I shall try to highlight the contribution of music cognition to a better comprehension of such experience.

Representation in music and musical representation

Considering music as an artistic means of expressing emotional states, I agree that music does not represent emotions in itself (music is not sad) and that it is not representational

of meanings and objects in the same way other arts do, but I argue that there still is a way of interpreting 'representation' that accounts for it as an essential part of the process by which meaning is produced and exchanged between members of a culture.

I propose that a musical idiom can be considered as a symbolic system carrying representational functions that are used by composers to express extra-musical semantic contents in a specific cultural context and 're-present' particular emotional experiences through music.

Music then arouses emotions by virtue of its power to evoke certain emotional qualities in listeners, who 're-present' in their consciousness emotional experiences with which they are familiar. This definition implies that such emotions do not necessarily correspond to those the composer intended to express.

It follows that music displays representational functions even if it is not representational in a narrow sense. Such representational functions become clear if we analyse the 'experience' and perception of music both in the case of the composer and the listener, rather than music as an artistic object 'per se'.

The essential idea is that instrumental music does not represent objects of the world (as painting do), but it is a means to express and arouse subjective emotional experiences that are re-presented through representational systems and thanks to representational (cognitive) functions (such as imagination, memory, expectation). The expectation process, for example, plays an interesting role in the determination of the listeners' musical representations, and it is very insightful for a description of how musical meanings are 're-presented' in consciousness.

Focusing on the 'experience' of music, the basic idea is (1) the composer expresses her emotion through representational systems; (2) to be aware of the emotional experience aroused by music, the listener unconsciously uses representational (cognitive) functions of the mind-brain.

In this way music does not represent, but it expresses and arouses emotions through representational functions. The result of the process takes the form of 'musical re-presentations'. At this point the question is: how can we describe such musical representations?

General definition of representation and the concept of 're-presentation'

In order to answer this question, I will start by describing a general definition of 'representation'.

The term representation carries a range of meanings and interpretations. Stuart Hall claims that "[t]o represent something is to describe or depict it, 'to call it up in the mind by description or portrayal or imagination'; to place a likeness of it before us in our mind or in the senses. To represent also means 'to symbolize', 'stand for', to be a specimen of, or to substitute for. It is the link between concepts and language which enables us to refer to either the 'real' world of objects, people or events, or indeed to imaginary worlds of fictional objects, people and events" (Hall 1997:15).

Illustrating the richness of the concept of representation, Berenson observes that "basically, it [the concept of representation] embraces the notion of something which presents itself in some of a number of possible guises and is then re-presented in some manner or under some aspect" (Berenson 1994:60).

In my opinion, of particular interest is the concept of re-presentation, which has been analysed by Edmund Husserl in his phenomenology of internal time-consciousness and in his account of phantasy and imagination (Husserl 1893-1917, 1898-1925).

“All actual experiences are originally constituted impressionally in internal consciousness, but all experiences can also be reproduced, which is precisely what occurs in re-presentation. An actual re-presentation is an experience itself, of course, and is therefore originally constituted in internal consciousness. In the constituted re-presentation, another experience “is ‘re-presented’ reproductively”. Acts of re-presentation, we noted earlier, are characterized by a double intentionality. They re-present not only an object – something remembered or phantasied – but also an act, and it is by re-presenting the act that they re-present their objects” (Brough 2005: LXIII-LXIV).

Re-presentation is best defined as memory or imagination of an object or experience which is recalled and presented again to the consciousness. It is re-presentation of something presently existing but absent from the perceptual field of regard (not present to me).

Within this framework, music perception is an immediate experience during which past emotional experiences that have been evoked by the characteristics or qualities of music are re-presented in consciousness. It is important to note that such emotions are not perceived because the object of the emotion does not actually exist.

Moreover, re-presentation is part of the temporal movement of constitution of meaning and consciousness of experienced objects. It is characterized by constant modifications that allow us to interpret in new and interesting ways what is already familiar. Re-presentation, in fact, is not only the mere act of presenting again to the consciousness a past emotional experience. It is part of a dynamic process that develops itself in time and involves memory and expectation in their constant relation to the actual now-present. In this way what is re-presented acquires a new meaning.

The composer’s musical ‘re-presentation’

In this section I will discuss the form that musical representation takes in the case of the composer and the listener’s musical experience.

For what concerns the composer’s musical representation, the focus is on the act of composition rather than the perception of music. The essential idea is that every composition is, to a large extent, representational of the composer’s life experiences. She uses a symbolic system carrying representational functions to express emotions and represent them in a musical form. In this way she ‘re-presents’ in a new and artistic way a lived emotional experience. Music in this case can be considered as representational in the sense that it can be construed as a symbolic system carrying extra-musical content. Musical events are physically capable of performing representational functions and they are used to re-present subjective experiences by their producers and consumers.

Through the articulation of the musical structure (within and between the dimensions of pitch, time, timbre, harmony, tempo, rhythm, phrasing, and articulation) and the organization of musical sounds, the composer represents the emotional content she intends to express through her musical work. Structural elements are used to express emotional qualities and re-present an

emotional experience. In this way an emotional demand is re-presented by a musical structure and expressed through a musical movement.

From this point of view, music is a human construction made up of sounds that are highly organized and embedded in an elaborate system of rules and practise which are used to communicate something within members of a cultural group. This implies that musical representations acquire different forms in relation to the musical idiom a composition belongs to and the symbolic system used to express a particular emotional experience. They are intentionally produced structures that re-present a composer's emotional experience in a musical form.

In the following figures we can see the form that a musical representation can have in relation to the musical culture and style a composer belongs to. From this point of view musical compositions are historical individuals that express extra-musical emotional meanings through the system of conventions used in a particular musical culture and style.

In the case of Western tonal art music since 1650 –which is an example of a norm-governed representational practice– such musical representations take the form of score and performances, which contain the structures, combinations, cadences, modulations, and the like, of a piece of music (fig. 1). They are syntactically organized symbols that functions as informational vehicles carrying extra-musical meaning.

Morton Feldman's early *Projections* and *Intersections* pieces (fig. 2), written between 1950 and 1953, are series of 'graph' compositions in which time is represented by space, and in which the spaced boxes specify only instrument, register, number of simultaneous sounds, mode of production, and duration.

In the case of Ligeti *Artikulation Visualization* (1958) the music predates the modern analog synthesizers of the late 60's and early 70's, as the sound sources are a combination of generated sound and tape manipulation. The score is based on a timeline measured in seconds, using shapes and colors instead of notes on a staff. Dots represent impulses and combs for noise. Colors stand for variations in timbre and pitch (fig.3).



Figure 1: Ludwig van Beethoven, *Symphony No. 5 in C Minor, op. 67* (1804-08)

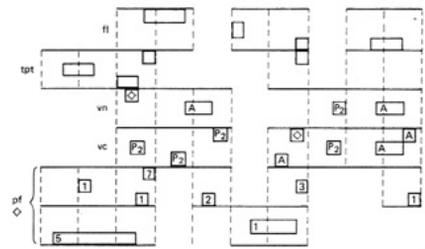


Figure 2: Morton Feldman, *Projection II* (Opening; 1951)

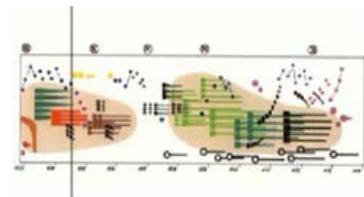


Figure 3: György Ligeti, *Artikulation Visualization* (1958)

The listener's musical 're-presentation'

According to the definition of representation previously suggested, we could argue that music arouses familiar emotions in the listener, which are 're-presented' in consciousness by calling them up by portrayal or imagination and in relation to the actual musical listening.

In this way music carries an extra-musical emotional meaning which arises because of a reference or analogy with some other events or emotions of which the listener has already had experience (for example, exuberance or anguish, gaiety or agitation, serenity or anger).

A musical representation in this case becomes a subjective mental content, the way the emotional experience aroused by a musical event in a particular context and situation is present to the consciousness after having been coded by the brain into a mental representation (which indicates the way brains code the external world). The listener thus re-presents in her conscious mind an emotional experience thanks to representational functions of the mind-brain. In this way she attributes a meaning to her auditory experience and becomes immediately aware of the emotion aroused by the music through a musical representation.

Conveying certain qualities of emotions, music expresses, for example, sadness but it does not make the listener really sad: through music she re-presents an emotional experience which has the quality of being sad. This means that often there is not real experience of feelings because there is nothing really sad and music is not the object of my sadness, but a vivid imagining of experiencing it. As noted by Kendall Walton: "music that induces me actually to feel exuberant, thereby induces me to imagine feeling thus, and music might induce me merely to imagine feeling anguish when I don't really" (Walton 1998:56).

Thus, when a listener says 'this piece of music is sad' it means that the music aroused sadness in herself and its extra-musical emotional meaning is 'being sad'. This does not mean that music is sad in itself, nor that it is the object of the listener's feeling of sadness. The listener imagines being sad because music evokes emotional qualities that are re-presented in consciousness by referring to familiar sad experiences. Representational functions of the mind-brain allow for the representation in consciousness of such extra-musical semantic contents of which the listener becomes aware. Thus the meaning of a piece of music (being sad, in this case) is given to the consciousness through a representation of sadness or a re-presentation of a sad experience.

At the same time, this demonstrates that music is not representational in the same way as other arts, but it is representational in that it has representational functions.

The question now is: how does the human mind-brain operate in the processing of information and representation of extra-musical contents? Is a musical representation the mere reproduction of past emotional experiences?

The expectation process

The question of musical representation can be related to the investigation about the emergence in consciousness of the musical experience from the audition of organized sounds. Music is composed using individual sounds which are then heard as a continuous connected whole. The listener is able to find relationships among the sound events occurring in the acoustical environment thanks to specific perceptual mechanisms, cognitive principles and neural processes. In particular, this allows her to integrate the sounds she hears into a structural whole

and to understand the acoustical environment in terms of musical forms. Such organization is fundamental for both the representation of the environment perceptually by means of the body and the re-presentation of the emotional experiences that the music is able to arouse. As Nussbaum observes, “for the cognitivist, the human mind-brain is an organically embodied representational system, a system that enters into states that are systematically interrelated and that stand in intentional relations to the environment in which the human organism is embedded” (Nussbaum 2007:xi).

By taking into account cognitive studies about the perception of music we can investigate the processes through which sounds that are perceived in a complex auditory environment arouse emotions that are then re-presented at a conscious level. The mind-brain organization of sounds becomes very important for the comprehension of the musical experience and the way music can be understood as being representational.

In order to understand how listeners move from the auditory experience of sounds to the representation of such experience at the conscious level, I propose to pay particular attention to the temporal structure of human consciousness. Through a dynamic temporal movement involving specific cognitive principles and perceptual structures, memories of what has transpired and projections of what is to follow are in dialogue with the present perception of music in order to interpret in new interesting ways the musical experience and the extra-musical content it acquires for the listener. Particularly interesting in this movement is the expectation process.

Expectation is a constant part of one’s mental life, and it is relevant in all realms of experience. In its broadest sense, expectation may be considered as a basic strategy of the human mind that reflects an intentional movement toward the future and which is based on previous experiences. The ability to create musical expectations reflects an unconscious tendency to project forward in time, to predict future sound events and the ongoing of a musical experience on the basis of previous experiences, learned schemata and cultural exposure.

When listening to music, or in the case of any auditory event occurring in the environment, listeners experience a particular state of expectation that guides them to unconsciously anticipate future sound events. On the basis of the relationships between sounds that they dynamically build while hearing music, they create expectations about the future ongoing of music or the incoming events, thus influencing both the perceptual organization of music and the meaning (emotional, musical or otherwise) their auditory experiences may acquire.

The most well-known theories about musical expectations (Meyer 1956; Huron 2006) characterize expectation as a process that strongly influences listeners’ emotional and affective response to music. According to Leonard Meyer, “affect or emotion-felt is aroused when an expectation –a tendency to respond – activated by the musical stimulus situation, is temporarily inhibited or permanently blocked” (Meyer 1956:31).

In this case, expectations involve syntactical relationships between different parts of the musical structure. Their fulfilment or violation may arise particular emotions in the listener, as when the violation of an expected melodic attack arises a strong feeling of surprise that might be followed by another emotional response. From this perspective, emotions themselves are a function of relationships within the music itself.

According to Husserl’s account of phantasy and imagination (Husserl 1898-1925),

expectation, like memory, is a type of re-presentation of something which is absent to the perceptual field of regard but anticipated as it will appear in a perception yet to come (for example, the timbre of a chord).

Such re-presentation of what is not present is subjectively and culturally determined and, due to the dynamic temporal movement in which expectation is embedded, constantly modified and modifying the ongoing of the musical (emotional) experience.

Thanks to this dynamic and creative movement, musical representations are not only re-presentations (in the sense of a mere reproduction) of past emotional experiences, but new interpretations of them. What is familiar is represented in a new way in relation to the context and situation in which music is perceived.

Relating both the past and the present to the future and to the context in which music is perceived, expectation makes the experience of music always new and not restricted to a fixed semantic content. As Berenson observes, “[m]usic, most often, re-presents to us a unique experience of sadness, pain, joy, longing and expresses in a particular, unique way some aspects or quality of it which is not to be found elsewhere” (Berenson 1994:64).

The same piece of music appears in different ways to the listener even after repeated listenings and if perceived under different conditions, which determine the creation of different expectations. What is familiar to the listener already is thus re-presented in a new and interesting way. This shows that musical systems are not constraint by a fixe semantic in the arousal of emotions and reflects the cognitive value of the mind’s representational functions: by giving us a different version of the world, they teach us new ways of perceiving things and organizing our experience. Moreover, this indicates that the emotion felt by the listener and its representation depends upon the way she perceptually organizes the music.

Subjectivity and cultural influence

The study of the way listeners mentally organize music is interesting also for the comprehension of the subjective character of musical representations and the extent to which they are culturally determined.

The majority of theories (Meyer 1956; Narmour 1990, 1992; Huron 2006) and empirical studies (Margulis 2003; Larson 2004; Margulis and Levine 2004; Unyk and Carlsen 1987; Krumhansl and Agres 2008) about musical expectations have tried to explain them as based on the syntax of the Western tonal system and according to the structural regularities that listeners ‘learn’ through cultural exposure. From this perspective expectations are built on the basis of syntactical relationships and their frequency of occurrence.

Because of the influence of subjectivity and culture, listeners set up different mental organizations even when they listen to the same piece of music.

In an interesting work by Mondher Ayari and Stephen McAdams (2003) different mental organizations of musical sounds have been noticed between listeners of European and Arabic cultural origins while listening to Arabic improvised music. For example, strong differences in identifications and segmentations were found between subjects belonging to these two different cultures. Both groups made segmentations on the basis of salient surface features such as pauses and register changes, but Arab listeners made segmentations that were defined by subtle modal

changes that often went unnoticed by the Europeans. This suggests that listeners from different cultures use the same basic principles of segmentation and grouping, but then organize sounds according to musical schemata acquired during their respective cultural exposure. This implies the creation of different expectations about the ongoing of music which drive to the constitution of musical representations having different emotional meanings.

Moreover, even if the music is unfamiliar to the listener, she is still able to represent her musical experience as having a particular emotional meaning. An interesting example comes from Huron's experience with Lakota music (Huron 2006:215-216). By misconstruing the meaning of a Lakota song – lullaby instead of horse-stealing song – he suggests that listeners create different representations of music on the basis of the musical schemas they use and the expectations they create. The fact that he represented the song he listened to as an experience of spirituality and death when spiritedness and machismo were more appropriate, shows that listeners are able to represent music as emotionally meaningful even if it is unfamiliar and they do not get the gist of it.

Conclusion

The analysis of the cognitive processes involved in the perceptual organization of musical sounds can provide new insights into the nature of musical representations, showing that they are both subjectively and culturally determined. Moreover, the study of the perceptual organization of heard sounds allows to describe how meanings arise in consciousness and musical representations are constituted. For example, the way expectations are created –as well as their violation or fulfilment– explains how and why some emotional experiences are re-presented in consciousness instead of others (for example, agitation instead of serenity in listening to the same piece of music: in the former case there is a constant violation of expectations which determines tension without release, while in the latter the music is very familiar to the listener and all her expectations are fulfilled).

It follows from this discussion that music is not representational in the way other arts are, but both its perception and production are characterized by the use of representational functions that allow composers and listeners to re-present (in a phenomenological sense) emotional experiences in a dynamic way.

As long as music arouses emotional experiences which are re-presented in the listener's conscious mind, allowing her to interpret the auditory environment in a variety of different ways, then to that extent music is representational of the human experience. In Berenson's words, "as long as music conveys something/anything to us then that something is represented" (Berenson 1995:65).

In conclusion, the analysis I have proposed is an attempt to provide new insights into the philosophical investigation about the human experience in the living world. In particular, the discussion considering the way listeners perceptually organize sounds and 're-present' emotional experiences while hearing music may suggest new ways of thinking about the way human beings understand and become familiar with the environment in which they live. Further empirical research and cross cultural studies are necessary in order to provide further evidence that may support the influence of the expectation process on the particular meaning a subject's musical experience acquires and the way it is represented in consciousness.

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