

Some Considerations on the Relationship between Humanist Thinking and the Change in Texture in the Music of the Early Baroque

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Abstract

This study aims to carry out some considerations about the changes that took place in music during the late 16th and early 17th centuries. We discuss Humanism as an intellectual, philosophical, and artistic movement, as well as its consequences in the way art was produced and in the techniques that express these changes. Painting and literature serve as theoretical frameworks for the introduction of elements that help to understand more specific changes in the field of music, particularly the change in texture. Some studies in the field of cognition are also considered, so as to determine fundamentals of perceptual psychology that may justify such changes in musical texture.

Keywords: Humanism, Texture, Figure-ground, Perspective, Lyrical self.

Introduction

This study aims to carry out some considerations about the changes that took place in music during the late 16th and early 17th centuries. As an axis of Renaissance thinking, Humanism inevitably spawned profound changes in the conception, and therefore in the production of arts such as literature and painting, at first, and later music. Thus, we discuss Humanism as an intellectual, philosophical, and artistic movement, as well as its consequences in the way art was produced and in the techniques that express these changes. Painting and literature serve as theoretical frameworks for the introduction of elements that help to understand more specific changes in the field of music. *Perspective, lyrical self, figure-ground* and *quantity and quality of information* are important concepts in articulating the backbone of the work.

A great quantity of transformations can be observed in the music of this period; however, this work takes an approach that focuses on the change in texture, with all its theoretical and practical implications, as a significant axis of the changes in thought between the middle Ages and the Renaissance. Moreover, the change in texture from polyphony to accompanied melody is treated not in the traditional way, but with tools that were introduced in the author's master's thesis. This is followed by a discussion of some concepts from the book *The History of Music Aesthetics*, by Enrico Fubini, a musicologist and professor at the University of Turin. Finally, we discuss the changes in Western thinking that led to the forsaking of the established model of texture during the period in question.

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Humanism

Humanism is the major intellectual, philosophical, and artistic movement of the European Renaissance. It originates in the Italian peninsula, during the 15th century, as a return to the ancient Humanism of the Golden Age of Classical Greece. Renaissance Humanism proposes *anthropocentrism*, the idea of man as the center of philosophical thought, as opposed to *theocentrism*, which supports the idea of God at the center of philosophical thought.

It is also a way of life centered on human values and interests, and a philosophy that emphasizes the capacity for personal self-fulfillment through the use of reason. In science, such cultural flourishing manifests itself in the creation of theories that explain nature from the point of view of human knowledge, of logic, of natural sciences, underpinned by the scientific and experimental method, of Cartesian basis. In the arts, the subjects no longer refer to religious, theological, or spiritual matters, but rather to themes designed to represent the thought of man as an individual: the subject of art “descends” from the heavens to Earth.

Humanism in the visual arts

Renaissance art was modeled in sharp contrast to medieval art, taking it as a pattern of exclusion. Art, in the Middle Ages, was conceived as a teaching tool: images conveyed the dogma of Christian cosmogony, and were thus the main vehicle of a religion directed to an illiterate universe. Art had a practical, educational, and spiritual purpose, representing an invitation to meditation; it bore no relation to the concrete everyday reality of the world. The figures, mostly religious ones, were static, their shapes and expressions invariable, their volumes and dimensions uniform, as commonly seen in reliefs in the architecture of cathedrals and mortuary monuments. They had no representation of depth or volume, and were placed against the background with no idea of space. The composition followed strict rules, such as hierarchy by size, formality, isocephaly, and hierarchization of space. More than norms, these were religious dogmas, and breaking them was a sacrilege; art was austere and sacred, like the society it represented. Whereas most pictorial art produced up to circa 1425 was quite stylized, even schematic, later paintings, on the other hand, feature an almost photographic realism. *The Arnolfini Wedding* (fig.1), for example, painted by the early Renaissance master Jan van Eyck (1390?-1441), introduces aspects of three-dimensionality, presence, individuality and psychological depth not found in earlier works.³

³Scientific American Brasil, Óptica e realismo na arte renascentista, issue 32 - January 2005

http://www2.uol.com.br/sciam/reportagens/optica_e_realismo_na_arte_renascentista_imprimir.html accessed March 4th, 2011, at 4:24 PM.



Fig.1: *The Arnolfini Wedding*

The new style was concerned about giving people, objects and landscapes as natural an appearance as possible. Renaissance painting introduced several innovative features, such as:

- Use of *chiaroscuro*: a play of contrasts in the treatment of light in order to enhance the suggested volume of bodies.
- *Realism*: the world is thought of as a reality to be understood scientifically, and not just admired as the greatest expression of God himself.
- Emergence of the idea of *personal style*: this period is marked by ideals of freedom and, consequently, of individualism.
- Popularization of the ideas of authorship and artistic market: artists start signing their paintings without exception.
- *Perspective*: a method for representing three-dimensional situations on two-dimensional layers, corresponding to the way human beings visually interpret the environment.

Perspective places the self as the observer and reference point of the artistic object. Therefore, to observe a Renaissance painting is to do it from a human, naturalistic point of view. The observing self is the measure of things.

The lyrical self in humanist literature

The lyrical genre has its origins in classical lyrical poetry, which was originally sung and accompanied by musical instruments. The word “lyrical” itself, which stems from “lyre” (a stringed instrument used by the people who formed the Greek nation), evinces this relationship. The lyrical genre is a literary genre in which the individual expresses his or her subjectivity. The *lyrical self* is used in literature to display the thoughts of the character who narrates the text, as it enables the externalization of the subject’s poetical feelings. The individual thus expresses his or herself through art; an art that takes the human being as its measure, reference, and object.

The lyrical self from texts by Torquato Tasso, Marino, or Strozzi is transposed to music by the madrigalists, such as Monteverdi, or by the members of the Camerata Fiorentina, which causes significant and lasting change; a change that reflects, in the construction of music, the perspective of the individual and of the lyrical self.

Humanism in music

All of the changes hitherto observed, both in the visual arts and in literature, begin to find their late correlatives in music only in the second half of the 16th century. Among all of the changes observed in the sonic discourse from the late Renaissance and early Baroque⁴, the change in texture represents the shaping of a textural model that will dominate musical architecture for three centuries to come. In its traditional conception, the study of texture follows a taxonomical approach, creating categories such as poliphony, homophony, or heterophony. In this work, however, we will use an original definition of texture, which is part of the analytical tools used in the master's thesis "Quatro critérios para a análise musical baseada na percepção auditiva" (four criteria for musical analysis based on auditory perception):

Texture is the result of the quality of the sonic material, from the point of view of the sonic object's typomorphology and of the modes of organization to which it is submitted, namely the quantity of sound layers, hierarchies and criteria of relationship between the layers, and their behavior in time. (Falcón 2011, 28)

The concept of sound plane is equivalent to Bregman's (1999) concept of *auditory streams*⁵, and is herein defined as

a sound or collection of sounds which, because of their psychoacoustic constitution (i.e. the nature of their typomorphological conformation) or of their function (sounds of different typomorphological characteristics that relate to each other by identical or similar behavior), are perceived as a unity of function and meaning within the texture of the music.

The hierarchical relationship between sound layers, as it appears in the above definition of texture, can be described in terms of the sound layers' tendency to appear more or less important to the listener's perception relative to each other. Three types of relationship between sound layers are thus defined:

(1) *Subordination*

(2) *Integration*

(3) *Independence*

Subordination refers to a relationship in which one of the sound layers is perceptually more important, presenting itself as a clearly outlined figure on a background consisting of other, perceptually less important, sound layers; but sound layers can also be *integrated* (as in sound blocks, chords, webs and integrated lines), when the information they contain is quantitatively and qualitatively balanced; or *independent*, when they appear, by diversity of material and/or behavior, as distinguished from each other, but none is perceived as hierarchically predominant. As an example, we could describe polyphony, based on this definition, as a superimposition of various sound layers that relate to each other by the criterion of independence, which does not establish hierarchical predominance or permanence of one plane over the others.⁶

4 These changes include the incipient functionalization of modal harmony that will give rise to Rameau's 1722 Treatise on Harmony, the creation of new genres and styles, and the "descent" of music to earthly grounds: use of vernacular languages, secular themes, approximation towards popular genres, use of music as a defining element of social identity, etc.

5 For more information, see Falcón (2011), Bregman (1999), and Levitin (2007).

6 For more details on the classification of textures, see Falcón (2011)

In painting, the systematic use of perspective, as an expressive element of the new way of thinking, establishes a system of perceptual hierarchies that allow a very different appreciation of a Renaissance art object compared to medieval art. Paintings are now appreciated in their depth. In this reading, whichever object is closest is placed in perceptual hierarchy over those found in the background. We are thus in the presence of the figure-ground principle. Gestalt theory shows that our brain more easily interprets objects with clearer, stronger, closed, simple, or previously familiar structures. A figure appears as more important to our perception when the information it contains is more significant, compared to another whose information is lesser or poorer in quantity and/or quality (Falcón, 2011).⁷



Fig. 2: Leonardo da Vinci's *Gioconda*

In Leonardo da Vinci's *Gioconda* (fig. 2), painted between 1503 and 1506, one can clearly observe the figure of a person with a superior perceptive hierarchical level, as it contains plentier, more interesting information than the landscape in the background, both due to its proximity from the observer's perspective and to its gestaltic pungency. In contrast, in H. Bosch's tryptich *The Garden of Earthly Delights* (fig. 3), painted in the same period, it is difficult to establish a perceptual hierarchy because none of the figures or scenes takes on any superior importance, in terms of quantity or quality of information, to assert itself as a principal figure. Creating an analogy between painting and music, Bosch's canvas represents a polyphonic composition in typical medieval style, as per the above definition of polyphony, whereas Leonardo embodies the new humanistic paradigm.

⁷ *Quantity* of information refers to the variability of significant information, i.e. that which can be measured in scales, and to how said measures relate to perception; the study of *quality* of information, on the other hand, considers variations in category, concept or identity in order to evaluate significant variables.



Fig. 3: H. Bosch's triptych *The Garden of Earthly Delights*

In the song *Yesterday* by the Beatles (as in a lied by Schubert or in countless other situations in the Western music of the last 400 years), the sung melodic line is perceived as differentiated and hierarchized over the instrumental background, which appears as subordinate to the melody. The criterion of *subordination* is the organizational principle that structures works in which a figure appears hierarchized over the background, which is in turn perceptually subordinate to the principal figure.

An analysis of some limits of the perception of auditory events

There are limits to the quantity and quality of events our brain can perceive. According to Anderson (2004), there is a point beyond which it is no longer possible for our brain to process information in parallel. This is called a *serial bottleneck*. Our brain has trouble processing and interpreting simultaneous discourses or information; this is why we can't understand two sentences spoken at the same time, sing a song while listening to another one or watch two TV shows simultaneously. The polyphonic phenomenon, both in painting and in music, appears as a solid block of information in which we perceive the overall object or structure before we can make out any details in the elements that constitute it. In order to comprehend any of these coexisting elements, we must direct our attention to one of the figures, as in Bosch's painting, or to the melody of one particular voice in a polyphonic motet, losing focus of the others. Moreover, when we listen to an isorhythmic, multilingual motet from the 14th century, with its superimposed texts – often of different musical characters, with different literary themes, and in different languages – it is difficult to conceive the possibility of any of the messages being individually understood. This kind of situation requires an active interpretational approach, as it forces one to direct one's attention towards framing and apprehending one object among several others bearing similar qualities or information. The texture of an accompanied melody, on the other hand, has a hierarchized "figure" perceptually highlighted over a "background", rendering it apprehendable with much less effort from our cognitive system.

Schurmann (1989) speaks of polyphonic structures, which work "because of their global configuration", as being implicitly opposed to the act of speech, suggesting that the latter, whose goal is to communicate, requires clarity and "transparency" to allow for the intellection of its object. In other words, a solid event containing plenty of information in several dimensions does not allow for a precise observation of details.

According to Miller (1956), our one-dimensional attention is fairly uniform, even when comparing evaluations across different senses (such as hearing, taste, or vision). When asked to identify the pitches in a melodic sequence, both musicians and non-musicians were unable to identify sequences with more than seven notes. From this limit up, mistakes became more and more frequent as more pitches were added. At fourteen pitches, mistakes became very frequent. Miller used the binary system to assign values to the results he obtained, with 7 hits corresponding to 2.5 bits. Other perceptual limits in different categories, according to Miller, are:

- Volume: 2.3 bits
- Salinity: 1.9 bits
- Position of a point within a linear interval: 3.25 bits.

It can be observed that there are limits, inherent to our cognitive system, which seems to be constant. Based on the evidence, it is plausible to say that we have a small, finite capacity to make one-dimensional evaluations (i.e. within a single category), and that this capacity does not vary substantially from one category to another. When the number of categories was increased to two, the results were surprising. In an example given by Pollack (apud Miller 1956, 87), listeners were asked to evaluate pitch and volume at the same time. The expected result was the sum of the individual values for each category: 4.8 bits. The obtained result, however, was 3.1, which indicates that adding a second category does increase the capacity for processing information, though not as much as was expected. In other words, when we have to identify notes based on both pitch and volume, the interrelations between the two dimensions increase our ability to perceive information, from six events (2.5 bits for pitch evaluation) to only nine events (3.1 bits for pitch and volume simultaneously). The case seems to be that, as variables are added, the total capacity increases, but the precision for any particular variable decreases; put in another way, we can only evaluate very rough approximations of various elements simultaneously⁸.

In a piano sonata, it is relatively easy to determine pitches, contours, rhythms, or volume because the parameter of timbre is a null variable: it is homogeneous and regular, there are no surprises, nor original or unpredictable information. In a piece with diverse instrumentation, the timbric heterogeneity offers a complexity of stimuli that does not allow one to more precisely interpret the information in other dimensions. Homogeneous dimensions can extend our ability to interpret stimuli in other categories, because they don't force us to use part of our perceptual capacity for decoding unpredictable information. Highly heterogeneous and/or irregular musical situations do not allow for the perception of specific details, demanding thus a more "solid" kind of listening. This explains, by another route, the serial bottleneck, i.e. the limit to our attention to simultaneous stimuli. Whenever a bottleneck occurs, our cognitive processes need to select which fragments of information must be heeded and which must be ignored⁹. To refine our perception of any particular dimension, we must "switch off" other dimensions, losing the ability to interpret events from different simultaneous auditory streams. However, it can be suggested that unheeded auditory stimuli can still be organized by our perception, because they interact with the structure of the material on which our attention is focused.¹⁰

8 In evolutionary terms, in a world in constant change, it is better to have little information about many things than plenty of information about few things (Miller 1956, 89).

9 According to Anderson, psychologists have not yet reached an agreement as to whether the selection of heeded stimuli is (1) early: attention filters stimuli, rendering unheeded ones weaker, so that they are perceived as a "background", but not eliminated, or (2) late: all stimuli are perceived in the same way, however only one is selected, according to some criteria.

10 The melody to a song like The Beatles' *Yesterday* is not just a succession of pitches superimposed over an instrumental accompaniment, since these pitches are closely related to the chords in the rhythm section. In the Western musical system of the last five centuries, a pitch not in agreement with the harmony of the accompaniment "sounds bad". This relationship is due to the systemic

Kiefer (1981, 239) points out that, while Renaissance music is polyphonic – always involving, therefore, a human group whose members participate in the same event – the musical drama of the Baroque highlights an individual whose story can be told through music. Renaissance polyphonic writing proved inadequate for the expression of individuality. It became necessary to conceive a compositional technique in which song, the prime vehicle for a character's emotions, could develop freely. Accompanied melody became thus a fundamental musical tool for expressing the lyrical self in music. The humanist poetry of Tasso, Marino, Strozzi and other writers and poets could now be communicated by an individual, rather than an impersonal group. Music found a way to transform itself and adapt to the new humanist expectations, necessities, and ideals.

Fubini's mistake

In discussing the importance of these changes in music, Fubini (1976, 172-3) states that the famed, much discussed *recitar cantando* or recitativo is, undoubtedly, *the ephemeral realization of the humanist ideal*, through which language, enhanced by all the musical, expressive, and theatrical elements (of which we had been deprived by the polyphonic civilization, which corrupted the old simplicity of Greek music), can express what best suits it: moving the affections. Later on, the author states that, as early as 1628, theorists and musicians such as Giustiniani and Doni consider the *recitar cantando* lacking in variety, uncouth, inopportune and tiresome, thus affirming the ephemerality of this new musical element. When Fubini uses the adjective *ephemeral*, he directs his critique to a specific formal practice, an incipient incarnation of manifestations particular to this new type of texture that began to outline itself as the paradigm of the new way of thinking. The author thus misses the mark by reducing the change resulting from humanist thinking to such a particular detail as *recitar cantando*. The true change and realization brought about by the humanist ideal does not lie in a particular style or format, but in a much more global, perceptually hierarchized object, one that proved sufficiently consistent to rise as the predominant textural model in music for 400 years following its resurgence: the accompanied melody.

Final considerations

The aim of this work is to establish relationships between the change in thinking that led to the Renaissance and the artistic manifestations of the time, primarily in painting and literature, and investigate how this reflected in music. In music, this change takes on several aspects; however, it is in texture that we find strong links demonstrating the importance of the self elevated to that of a principal figure, particularly as the melody is set off against the background to become an expressive vehicle for the humanist individual. The need for the expression of the literary lyrical self was reinforced by the changes that had taken place in painting, in which the subject, observer and measure of all things, found in perspective and in realism a way to reconfigure the compositional process, adapting it to the new philosophical paradigms. The change from polyphonic texture to accompanied melody (taken as analogous to a figure-ground setup) provides the composer of this period with an ideal formal structure for coherent expression of the humanist ideals, establishing a relationship between form and content that constitutes an efficient and lasting communicational model. Moreover, this work points out some correlations between the process of transformation of texture and studies justifying the application of the figure-ground model based on cognitive approaches, suggesting that further investigation is needed to establish more precisely the extent and type of bond by which they are related.

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