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Structuralist and Heuristic Convergence between Architecture and Music

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Abstract

The convergence between the two fields, music and architecture, through structuralism and heuristics is explained by the very principles demonstrated in the evolution of this orientation of ideological, philosophical and artistic nature. The gradual abandonment of the decorative and demonstrative art of the bel-canto of Classicist patterns is akin to the Realism in architecture, more prominent and persistent with the passing of nineteenth century decades. The tension of librettos, with obvious psychological connotations, marked by the expansion of vocality is congruent with rational directions in architecture, which bypass and occult the balanced and symmetrical beauty, suggesting atypical, slightly abstract volumes.

Keywords: Architecture, music, heuristic, structuralism, Romanticism, The Romantic Opera, lied, bel-canto, volumes, timbrality

1. Introduction

Notions such as structuralism and heuristics need to be explained for a better understanding of the convergence of both subjects: music and architecture.

The structuralism is an option, a method of analysis, emerged in psychology. "The aim of the structuralism, considered the first major school in psychology, was to understand the structure (the configuration of elements) of the psyche and its perceptions through the analysis of them, starting from its components" [1] Extrapolating the term, the relation between music and architecture can also be approached in a structuralist manner, because there is, as we shall see in our study, a concord between the elements of the two fields, through the evolution of human consciousness and the very psychic characteristics with which they both operate, sensations and emotional images.

The heuristics is determinative for any human activity which starts from imagination and approximation; it aims content and is omnipresent. In DEX (Romanian Explanatory Dictionary), we decode this notion as “a part of science aiming to discover new facts” [2]. The sense thus decelated signifies “a novel idea in composition, a research theme originally designed differently than currently contemplated.....an unconventional interpretive requirement” [3].

Thus, we try with modest initiative to build bridges, similarity tracks, to find areas in which architecture and music converge. “The artistic beauty penetrates and floods the entire structure of the psyche with vitality – strengthening it” [3].

2. Convergence between architecture and music

We shall see that this time too, in the paradise of Romanticism, ties between the two arts and sciences are woven. They are so different in expression, the architecture from the concrete, material towards the symbolic level and music on vibrational level, from weightlessness and evanescence towards the materialization level.

Both subjects operate with archetypes. Carl Jung, who has defined the archetype, enough so that we can stop thinking of our existence outside the patterns, suggests the following definition: “a matrix which influences human conduct, both in terms of ideas and those of moral, ethics and conduct in general” [4]. Artistic archetypes of music and architecture belong to “the universally unconscious dimension. Being sediment of the experiments of the species...” [5]. There lays the custodian of models, Jung outlining that the archetypes operate with symbols and suggesting that all archetypal markings are symbols. Thus, in the dimension of the two subjects, the symbols ever so present are projections of archetypes, with direct lineage from the collective unconsciousness.

The convergence between the two fields, music and architecture, through structuralism and heuristics is explained by the very principles demonstrated in the evolution of this orientation of ideological, philosophical and artistic nature.

The esthetical categories decisive for this period would shape the thinking of the creators, effectively regulating the balance between the Gothic past, the Romantic present and modern future for Romanticism: humour with its nuances, satire, sarcasm, irony, tragedy, sublime, grotesque and fantastic.

Romanticism, an aesthetic of the end of eighteenth century and the entire nineteenth century, proved to be a custodian of several tendencies, values and renewals. The tumult of the French Revolution (1789) has triggered the voluntary effort of a nation, then through mimesis and of others, to free itself from any constraints. Liberté, Egalité, Fraternité was the impulse which drove a generation and others in the future, towards a new dimension of consciousness, of the power which needed to be removed. It was followed by independence wars of nations, which entailed the break-up of Feudal and the imminence of Capitalist relations. The undetermined potential of consciousness, accountable for the evolution of mankind “provides, at the same time, a pragmatic map of the obstacles which need to be overcome in order to reach the optimal

and more beneficial levels of consciousness" [6]. The obstacle of that time was the aesthetic of Classicism, one of the most important orientations of universal culture, which has promoted righteousness, rigor, balance and harmony. These characteristics have become redundant, inflexible for a Romantic hero animated by feelings, restlessness, imagination, bucolic, endless, Thanatos and transfiguration.

2.1. Elements of language

In architecture, in the nineteenth century, there is an overlaying of tendencies, which meet and complete each other in their temporal rush to aesthetically settle the volumes: Romanticism and Neoclassicism. The tendencies are contemporary, they are both linked to the past but the manner in which they relate to it is much different. The Romanticism in architecture is more than a style; it is a human state of mind, a contemplative and nostalgic attitude which denies the Neoclassicism. It denies it because of the excessive canonization, since the creative spirit of a Romantic architect cannot obey a set of strict rules, him being at the same time a demiurge which imagines and constructs an entire universe. The artist, the Romantic architect, is the creative genius, who is guided by his own sensitivity and the created ambiance is addressed to the soul and human sensitivity, not the mind or reason. The beauty is not a wish, but rather the expressiveness and capability of a building, of a landscape or interior decoration to carry you to a different universe. The state of reverie, of contemplation, of escapism from the present is due to the social, economic and political context of the time (the demographic boom, industrialization), but also the much easier travelling in this period, which has allowed people to come in contact with civilizations and cultures of the past or long gone, with the role to ignite imagination or even nostalgia.

The period perhaps most focused upon by the Romantics is the Middle Ages, therefore we also encounter the term Neogothic architecture, being a source of inspiration for the ecclesiastical architecture, such as the façade of Church Santa Maria Novella or that of Church Santa Croce (1853–1863), both in Florence. Expressing the human individuality coincides with the will and deeds of nations in the Middle Age period, all the more reason to look upon those times with nostalgia.

The countries where Romanticism was widespread were England, which has left the English picturesque garden as legacy, Germany which turns towards its glorious past and the architectural and not only drive of Gothic and France which after the Revolution of 1790 was compelled to find solutions of restoration and conservation of monuments, the tragedy being the trigger of breaking new grounds with beneficial effects for what was to become the architectural heritage.

The Gothic is the undeniable source of inspiration in this period, both from ideological and structural and architectural point of view, but the nineteenth century signals an original building material which allows openings that seem to defy gravity and heights which aim to the sky: metal. Thus, the Trinity Church and Brooklyn Bridge, both in New York are designed and built which proves the drive of Romanticism, not only in Europe but also on other continents. In the south of Germany, in Bavaria, the Neuschwanstein, the castle of Ludwig II, was built and would serve as inspiration for the world of Disney's fairy tales. In England, the

Parliament (1839–1888) and Tower Bridge (1886–1894) were both built in Neo-gothic style and became some of the landmarks of London and the nation.

The technique would be the foundation of the architectural aesthetic ambiance. The reality of the end of eighteenth century shall be guarded by a novel repertoire, that of the mechanic, physics and mathematical inventics. The discoveries of Isaac Newton (1687), Robert Hook (1687) and James Watt (1782) are decisive. The cognitive transformation from the field of exact sciences shall support that from the field of arts, each following an alchemical track, worthy of the leap of an aesthetic orientation.

In music, the Romanticism signifies mind-blowing universe dominated by fantasy, imagination, feelings, liberty, anxiety, national history, specific folklore, conflict and retreat towards mythical themes. The return to the distant past of the Middle Ages, at the expense and to the discrediting of the Classicism is a global approach in all arts. Musical languages, conditioned by the expressive implications and Romantic impulses, have responded to some social needs, themselves conditioned by the emancipation of thought, caused by the elevation of human consciousness. The early Romanticism, the first blossoming of national schools, Post-romanticism, are just as many dimensions generated by the thought of creators determined to alter the symmetry and formal balance of classical creations, of tonal functions which imprint a sound much too balanced, much too delicate for the passionate experience of the Romantic hero, of a predictable timbrality.

The melody, conspicuous in the first part of the orientation, is increasingly evanescent towards the Post-romanticism. The chromatic insertions would alter its recognized melodiousness, translating a dynamic melodic track, with interval leaps which bring about restlessness, disturbances and even anxieties generating sound intermittences into the level of consciousness. The harmony, in its expressiveness, through the increasingly atypical, indefinite successions, opposable to Classicist rules, joins the characteristics of the melody, so conspicuous, clear and transparent in the past aesthetics.

Both of them combined would shape the vibrant Romantic sound images. The timbrality is the bold renewal of Romanticism, in the sense of its activation after a few centuries of instrumentalism, in which composers have neglected this quality of sound. In Romanticism, melody, harmony and timbrality would be sustained, being integrated into the aesthetic and philosophical principles of the time.

2.1.1. Romantic musical genres

Romantic musical genres are akin to the principles of architecture, of generous proportions, with innovative solutions which stir troublesome affects and images.

The lied—centuries old emanation of the German culture, embodying various forms, which have unveiled the lapse of time and determined a constantly different processing of the sound material. It is the genre corresponding to the cultural dimension of the Middle Ages, fitting exactly the pattern of a Romantic genre which feeds on the Gothic era. The poetic images unveiled by the sensitive verses, with frequent temporal tracings in the past, create the expressive Romantic background. We refer to the verses of the poets J.W. Goethe, F. von

Schiller, J.P. Richter, Novalis and F. Holderlin. Yet the music is like the verses, with a surplus of vibration which provides ineffable suggestions of magic idealism. Following the trace of the Romantic lied of the nineteenth century, the more than 600 lieder of Franz Schubert (the cycles *The Beautiful Miller Girl*, *Lady of the Lake*, *Winter Journey*, *Swan Song*) allow us the understanding of an animated style, with interval volutes, with unexpected contrasts, with rhythmic cascades, with involvements of the piano in the spirit of the convincing vocality and dynamic endings of voice and backing.

Franz Schubert was followed by Felix Mendelssohn Bartholdy, Robert Schumann (*A Woman's Love*), Franz Liszt with a creation of more than 70 lieder, Richard Wagner with his love story *Wesendonk-Lieder* and Johannes Brahms with the 11 vibrant lieder volumes.

Post-romanticism is a distinctive school of composition, through the initiatives of its representatives to explore the innovative timbral combinations by Hugo Wolf (*Morike-Lieder*) or by replacing piano with orchestra by Gustav Mahler (*Songs of the Death of Children*) or to exceed the limits of the intonational tonal system in the creation of Arnold Schonberg (*Gurre-Lieder*), Alban Berg (*Altenberglieder*) and Richard Strauss (*Last Four Lieder*).

The miniaturist genres of Romanticism are clear-cut playing which creates unity in diversity, in the animated landscape. The small size of studies, waltzes, barcarolles, nocturnes, mazurkas, impromptus, scherzos, ballads, in contrast to the size of symphonic works, are manifestations of instrumental virtuosités which evolve in parallel to the grandiose sounds, with multiplied timbrality and the commanding orchestral dynamics. Composers such as N. Paganini, F. Chopin, F. Schubert, F. Mendelssohn Bartholdy, R. Schumann, J. Brahms and F. Liszt have built a literature of considerable musical imagination.

The symphonic genre. The Romantic symphony has perpetuated in the first part of Romanticism, though its string of creators of the time, F. Schubert, F. Mendelssohn Bartholdy, R. Schumann, J. Brahms and F. Liszt, a range of elements which emphasized the classical form of the genre, through the intonational system and architecture. Then, the ideological changes have reconfigured the genre and the programmatic music has exceeded tradition, allowing the prosody to lead the musical thought. H. Berlioz (*Fantastic Symphony*) and F. Liszt (*Faust*, *Dante*) are composers who would evoke the torment and conflicting ideas of the Romantic hero through the size of the sections, timbral combinations and ardent dynamics which uncovers the literary libretto the works are based upon. Then, the last part of the Romantic symphonism, similar to the constant struggle of the creator for the fulfilment of ideals, many times defeated and abandoned, on the verge of the fantastic, grotesque and tragic: G. Mahler, A. Bruckner and C. Franck.

The pragmatism is a tendency of the Romanticism generated by the polyvalent comprehension of this orientation and music is joined by literature in a new vision, differently than in vocal music. A literary theme, written by the composer or undertaken, is the resistance structure of the musical work on which the musical grid is woven. The genres subjected to such transformation can be small or large in size, depending on the creator's inspiration: sonata, quartet, concerto and symphony. An illustrious work in music history, the *Fantastic Symphony* by H.

Berlioz (1830) makes up an incipit of this tendency. It was followed throughout the twentieth century by other creations adjusted to other genres, original architectures of Romanticism.

The symphonic poem is the most important among those works and *What is Heard on the Mountain* (1849) by F. Liszt, after V. Hugo, became the genre's pattern. It has an obvious logic, being designed for symphony orchestra in an extensive display, in a single part which may include several sections, shaped, however, after different types of lied, sonata and rondo or in composite form. The melodic naturalness and harmonic richness are characteristics of those works which "the composers of Central Europe and Russia would practice in order to praise the native land and its originality, in relation to the established musical powers (Italy, Germany and France)" [7].

Researching the wide range of Romantic genre creation we mention a few important titles: *Mazeppa*, *Preludes*, *Hungaria* by F. Liszt, *Night on the Bald Mountain* by M. Musorgski, the cycle *My Fatherland* by B. Smetana, *The Sorcerer's Wizzard Apprentice* by P. Dukas, *The Sea* by C. Debussy, *Don Juan*, *Till Eulenspiegel*, *Thus Spoke Zarathustra* by R. Strauss, etc.

The Romantic Opera becomes the Romantic drama, the national opera. The genre of lyrical theatre remains prominent in the creation of Romantic composers through its complexity and the complementarity of aspects with regards to music, literature, scenography, choreography and makeup. This genre, designed according to the Baroque pattern, includes the overture, two–three or four acts, soloist moments, choral and ensemble moments with soloists, choir and orchestra, follows the stylistic adjusted on the modulating and transforming stages of this orientation: early Romanticism, middle Romanticism, the first blossoming of national schools and late Romanticism. Thus, we shall gradually emphasize the emergence of several interpretation styles in this composite orientation, the musical Romanticism. The large concerto range is the pivot of the show, the extension of that of Baroque *Aria da Capo*. The recitative, constant in the first period, would undertake alterations, being amplified from *secco* to *espressivo* recitative, when the orchestral development would achieve an additional stage.

The first stage, that of the seraphic and translucid Carl Maria von Weber (*Freischütz*, *Euryanthe*, *Oberon*), amplifies the genre of German lied through orchestration and vocality. In Italy of the same period, the triad G. Rossini, V. Bellini and G. Donizetti makes proof of the craftsmanship of *bel canto*, the technique of vocal agility and virtuosity, which overshadows the importance of text through *cavalcades*. A few achievements of the time become unique moments, a combination between ideal, expressiveness, virtuosity, cheerfulness and lyrism: *The Barber of Seville*, *Cinderella* (G. Rossini), *The Elixir of Love*, *The Daughter of The Regiment* (G. Donizetti), *Norma*, *The Puritans* (V. Bellini). The era of G. Verdi would mean engaging on a track of musicality, lyrism, of high-pitched female and male voices, of the subtle capitalization of Italic melody and rhythm. It was the undertaking of another stage that of the vocality sustained by the presence of dramatic timbre.

"The dramatic soprano—whose richly nuanced Italian type is entirely the result of the Romantic theatre—dominates the famous musical scores, from *Norma* by Bellini to *Leonora* from *The Power of Destiny*, *Aida* or *Desdemona* from *Othello* by Verdi" [7]. The deliberate

passion of the characters, the vocal generosity, the rhetoric of tragic intent, the dramatic peaks, sustained by a melodic musicality on harmonic unfolding are attributed to this period.

Then, the original fantasy of the folk melody would be instilled into the meaningful cultivated musical language, fulfilling the works of the Eastern European lyrical theatre through melodic freshness and rhythmic vitality. The modal principle would support the melodic expressiveness, reconfiguring the harmonic relations. We encounter an original aura in the Russian opera creation where “the signs of harmonic-melodic innovation orientated on the track of modalism are much more obvious” [7]. Grigore Constantinescu suggests to us that there are two directions of modal thought which converge with the cultivated music through the penetration of Oriental elements (Glinka – *Ruslan and Ludmila*, Rimsky-Korsakov – *Sadko*, Borodin – *Prince Igor*) and Russian essence in the Slavic songs and dances (S. Musorgski – *Boris Godunov*, Hovanscina). The choir, which signifies the people, is invested with attitudes and affects, it would revitalize the genre, bestowing it with authenticity and picturesque.

In the last mentioned period, the main element of the musical language, the melody, would have a track oriented towards the dissolution of expressiveness for the purpose of harmonic and timbral configurations. The avalanche of chromatic scales which would construct the melodic notes foreign of tonal chords, the uncommon modulations towards remote tonalities would shape unexpected harmonic colours. The harmonic-melodic substance changes with the Wagnerian creation, leaving the lyrical and inspired limits becoming more incandescent and more nonconformist. The voices, imprints of human typology, are distinguished through dramatism as the extreme pitches of all types of voices are increasingly preferred. Thus, a particularized stylistic of the Wagnerian interpretation outlines through rhetoric unusual interval leaps and abundant chromatic scales unveil the passionate experiences of legendary heroes: *Tristan and Isolde*, *Lohengrin*, *The Ring of the Nibelung* (*Valkyrie*, *Siegfried*), *Parsifal*. The orchestral background is under permanent watch with the same volcanic outbursts, translated into twisted harmonies and grandiose sound.

Then, the verismo delights us with the vocal maturity of a late Romanticism. The wide unfolding of the musical moments, with minimal pauses, the symphonization of the opera work and instrumentalization of voices because of the psychological profiles anchored in the ruthless social-cultural context describe a new stage in the history of the lyrical theatre. R. Leoncavallo (*Pagliacci*), P. Mascagni (*Cavalleria Rusticana*) and G. Puccini (*Tosca*, *La Boheme*, *Madame Butterfly*, *Turandot*) emphasize the novelty of harmonic language prefigured from R. Wagner.

A century of lyrical theatre, almost with the genre’s most important works, depicts us the engaging on a different orbit which combines different stylistics, deep, poetical vocality, sustained and capitalized by the orchestra, through the gradual emphasizing of the elements: melody, timbrality, agogics and rhythm.

3. Conclusions

The congruence between elements of Romantic language and architecture is obvious.

The stylistic quests of both converge towards the unveiling of creativity, through languages with additional visual and audible spectacularity and the willingness to appreciate and capitalize a certain part of the past. The lyrical theatre, the most important and majestic genre of Romanticism and the Romantic symphony, the symphonic poem, the lied and the genres and miniature forms construct the uneven, yet fiery image of Romanticism. The vocality, the art of vocal sustaining in the generous dimension of the lyrical theatre, the instrumental virtuosity, the timbrality and agogics in symphonism are language elements proving the spark of genius of the Romantic creators, namely, the gradual waiver of symmetries and consonances in favour of the unsymmetrical melodic arch forms, of the harmonic capriciousness by inflaming chromatic scales.

The gradual abandonment of the decorative and demonstrative art of the bel-canto of Classicist patterns is akin to the Realism in architecture, more prominent and persistent with the passing of nineteenth century decades. The tension of librettos, with obvious psychological connotations, marked by the expansion of vocality is congruent with rational directions in architecture which bypass and occult the balanced and symmetrical beauty, suggesting atypical, slightly abstract volumes. Traditional materials are added by unconventional ones for that period, such as glass and metal. The accumulated science overlapped on the overflowing creativity initiated the expansion at the end of nineteenth century, when the Romantic architecture would promote the eclectic style that of regrouping some elements, symbols of past aesthetics, on the burning dimension of nineteenth century aesthetics. It is the period when the South-Eastern European cultures mature and express in their own language, accessing that folkloric heritage, symbols and archetypes. The blossoming of national cultures was the certain manner of an artistic expression of essences, both in music and architecture.

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