

THE FUNCTIONAL PYRAMID IN BACHIAN MUSIC

Ciprian ȚUȚU¹

Abstract: *Being at the border between the polyphonic and the harmonic period, J.S. Bach's creation represents a synthesis of the values of past and the referential founding of the classic harmony. The exploitation of the field of his creation reveals the multitude of parametric nuances which the author combines in each opus, exquisitely offering a valuable simplicity, enriched by spirit and love. This study proposes a review of the functional presences and of their continuation in different hypostases, imagined under the form of a pyramid of harmonies, part of Bach's spectromorphologic universe.*

Key words: *harmony, parametric nuance, pyramid of harmonies, spectromorphology, functional coloring, functional cellularity.*

The spectromorphology has as object of study the revelation of the multitude of facets that a musical entity may contain, the “multiplicity” that they can exist into. Permanently submitted to an influx of multi-parametric selections, the analysis focuses on the different segmental paths which compose the architectural spectral “multiplicity”, starting from the detail of the uniqueness and going to complex sonorous constructions.

The multiple existence of an entity is perceived at the level of two basic standards:

- a. “the actant” which represents the main, active and explicit level where the information is directly presented;
- b. “the adjuvant” which represents the passive, shadowed, implicit level, companion of the main level, where the information is latently present, waiting for the appropriate context for manifesting and explaining.

The spectromorphology presupposes formal launchings in the analysis of a song focalized on several levels, starting from the explicit level (the analysis according to the “classic” parameters: rhythm, melody, polyphony, harmony, heterophony, etc.) and continuing with more refined analyses. The latter part implies a collection of the analytic material and a division into plain samples of specific or connective inter-parametric particularities as well as a pyramidal structuring of the sonorous material.

It is this type of structuring that I intend to focus on by reviewing their functional presences and their manifestations in different, singular or complex hypostases on different contextual levels. This fact triggers a complex spectrum which demands organizing rules for the functional typologies and their classification. These typologies and their classification are established according to the pyramidal model under the form of “absorbing columns of functional

¹ Faculty of Music, *Transilvania* University of Braşov.

consistencies whose organizing sight projects against a referential scale which derives, in a different manner, from the very typological development of all classifications with conjectural-parametric fulfillment”[3]. At the same time, the analytic focalization on the functional detail, latently or explicitly formulated, imposes a detached approach by the proof of a real pyramid of vertical, multi-layered harmonies.

A. THE FUNCTIONAL COLORING

In the tonal-functional system (musical system based on the gravitation of sounds towards a tonal centre) any accord can reveal its functionality, according to its “relationship” to the tonal centre, where its contribution to the support of the gravitation is tributary to a pre-established hierarchy. On the one hand, the accord, as a functional cell, manifests in different hypostases, revealing its valences according to ornamental-functional criteria.

1. **The simple functional cell (blank)** – the zero accord: is a “pure”, unique accord, free of any dissonance (element that does not belong to the accord) which supports by its own power, more exactly, by its constitutive elements (tierce, quint, dominant seventh or, as the case may be, lowered seventh).

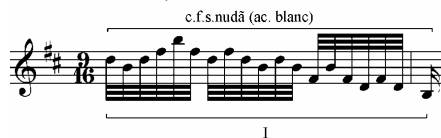


Fig. 1. *Three-part invention in B minor, m. 3 (the second thematic motive)*

2. **The simple functional cell (ornamental)** – the colored accord: consists in ornamentations of unique accords by the help of an isolated melodious note (passage, embroidery, etc).



Fig. 2. *Two-part invention in D minor (the theme)*

3. **The complex functional cell:** it is noticed by functional launchings in more complex hypostases, charged with ornamental accords (with coloring functions) whose composition comes from the cooperation of the foreign sounds among them, or by the conversion of a base component. The functional units which compose the functional cell are: the main accord (referential) and those of ornamental coloring. There are several types of composed functional cells, starting from the palette of the melodious-ornamental formulas by rapport to the main accord. Thus, each ornamental accord “acts” according to the model imposed by the corresponding melodious-ornamental formula.

COLORING FUNCTIONS, COMPONENTS OF THE COMPLEX FUNCTIONAL CELL

a. **Passage-coloring function: $Ax B$**

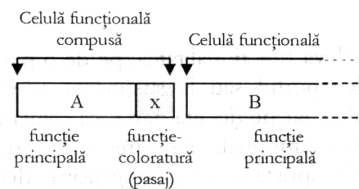


Fig. 3

There are two different main functions (A and B), and the coloring function (x) placed, by substitution, at the end of the first accord (A), is related (by the help of the passage) to the second accord (B).

Thus, there are involved three functional units (pylon-ornament-pylon) placed in the formula of the passage, Ax B, within two functional cells, one complex (Ax) and one simple or complex (B).

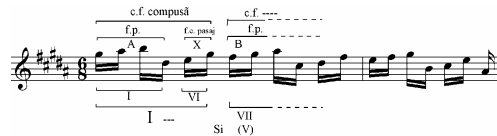


Fig. 4. *WK I, Prelude in G-sharp minor, m. 3-4*

b. Embroidery-coloring function: $A \ x \ A$

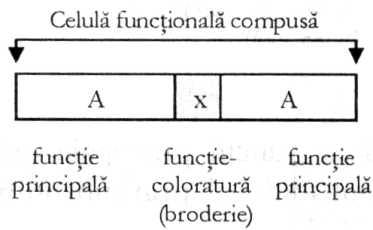


Fig. 5

There is one main function (A), and the coloring function (x) placed, by substitution, inside the pylon accord (A).

Thus, there are involved two functional units (pylon-ornament-pylon), which, by the repetition of the former, justifies the embroidery function (type $A \ x \ A$) within a single complex functional cell ($A \ x \ A$).

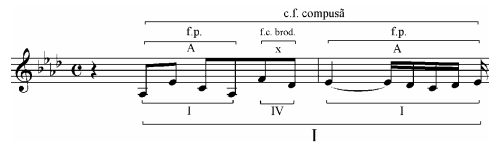


Fig. 6. *WK I, Fugue in A-flat major, (the theme, m. 1-2)*

c. Appoggiatura-coloring function: $A \ x \ B$

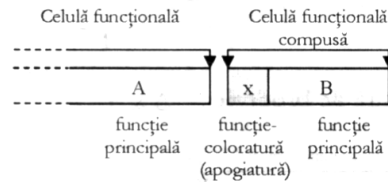


Fig. 7

There are two main different functions (A and B) and the coloring function (x) placed, by substitution, at the beginning of the second main accord (B).

Thus, there are involved three functional units (pylon-ornament-pylon) placed in the formula of the appoggiatura, Ax B, within two functional cells, a simple or complex one (A) and a complex one (xB).

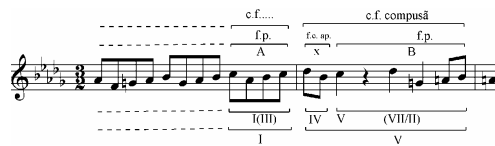


Fig. 8. *WK II, Fugue in B-flat major, thematic answer (fragment, m. 7-8)*

d. Anticipation-coloring function: $A \ b \ B$

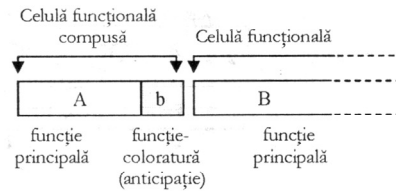


Fig. 9

There are two main different functions (A and B), and the coloring function (b) placed, by substitution, at the end of the first accord (A), which has an anticipatory function for the second accord (B).

Thus, there are involved three functional units (pylon-ornament-pylon) placed in the

formula of the anticipation, AbB , within two functional cells, a complex one (Ab) and a simple or complex one (B).

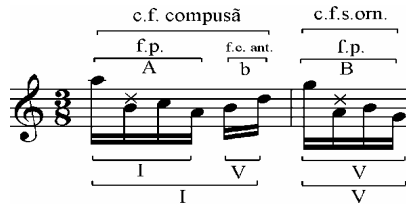


Fig. 10. *Piano Partita no. 3 in A minor (Fantasia), m. 10-11*

e. Delaying-coloring function: AaB

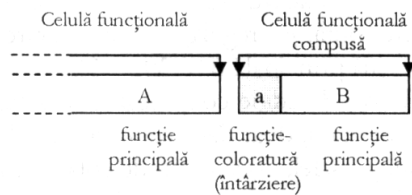


Fig. 11

There are two main different functions (A and B), and the coloring function (a) placed, by substitution, at the beginning of the base accord (B), as a lengthening of the first functional pylon on the territory of B, which suggests the already-known pattern of the delaying formula.

Thus, there are involved three functional units (pylon-ornament-pylon) placed in the specific formula of the delay, AaB , within two functional cells, a simple or complex one (A) and a complex one (aB).



Fig. 12. *WK II, Prelude in D minor, m. 3-4 (the theme)*

B. THE FUNCTIONAL CELLULARITY

As it was pointed out in the previous pages, in Bach's composition the functional cell is presented in two hypostases:

- the simple functional cell, which has a single accord, as main unit equivalent from a dimensional-metric point of view to the cell itself.

- the complex functional cell, which is denser than the simple cell, and marked by the presence of some secondary functions of an ornamental coloring, whose contribution increases proportionally to their dimension and linear consistency.

Some further explanations shall clarify the proposed terminology.

1. **The main function** represents a main functional unit, a pylon accord, a harmonious resistance structure which sustains the melodic, harmonic, polyphonic and heterophonic paths (see example 1 - 12).

2. **The additional function** refers to any coloring accord which, usually, substitutes a main functional unit; more exactly, it is about the replacement of one segment in the development of the main function with a supplementary accord, different from this one. This additional functional unit appears because of the cooperation of notes that are exterior to the main functional unit (see example 1 - 12).

The components of an additional function cooperate either for the definition of an accord or for the confirmation of the accord's identity: either both elements are exterior to the base accord, or an element of the main function cohabitates with an element exterior to it.

As a consequence, the addition function can be expressed differently, more precisely or more ambiguously, depending on the degree of detachment to the reference accord, such as:

a. The real additional function of sounds exterior to the main functional unit (see example 6).

b. The ambiguous additional function which is composed of hybrid elements: at least one exterior sound and, respectively, one component of the main functional unit (see example 4).

c. The ornamental additional function (the ornamental function) which is composed of sounds exterior to the main accord, which have, each, melodious-ornamental and expressive formulas.



Fig. 13. *WK I, Fugue in A minor, .m.49*

d. The additional function is composed of sounds exterior to the main accord, which enter the composition of this additional function, isolated sounds whose functionality cannot be inserted in the already-known formulas.

3. Particularizations of the additional function

As it was pointed out before, the additional function, localized within the functional cell, is to be found in five variants, differentiated by the involvement manner in correlation with the pylon, the supporting accords. Each of these state their affiliation to or their detachment from the main function by the status of sounds which compose them, as exterior notes to

the main accord pylon which they can ignore or to which they can adhere under the form of a known melodious formula (ornamental or expressive) as functions of the ornamental addition.

By cumulating these two categories, an entire vision on the ornamental addition results, which is mixed on the grouping of the five types of functional coloring:

- Passage addition functions – ornamental
- Embroidery addition functions - ornamental
- Appoggiatura addition functions – ornamental
- Anticipation addition functions – ornamental
- Delaying addition functions – ornamental

4. The typology of the functional cellularity

The variety of the functional particularizations on a determined temporal-metric unit forms a rich typological palette of functional cells, starting from a simple accord to most elaborate formulas resulted from the interference with the additional units, with multi-layered productions according to the cumulative densities, in direct or latent expressions.

Bach's harmonic recipes rely on three categories of constituents:

a. The simple functional cell is made of a single accord – the main function, dimensionally equivalent to the cell itself, which we can find in two variants previously presented:

- The blank functional cell, where the zero accord is expressed in exclusive formulations by only its basic constituents (see example 1);
- The colored functional cell, whose main function is enriched by melodious-ornamental, expressive, unique notes, without having the intention of deriving from an additional accord (see example 2).

b. The compound functional cell is made of two functional entities, a main, referential one, and an additional one. The typology of the compound functional cells derives from the nomenclature of the additional cells which enter their constituency:

- Ornamental compound functional cells: of passage, of embroidery, of anticipation, of appoggiatura, of delay;
- Additional functional cells: of passage, of embroidery, of anticipation, of appoggiatura, of delay.

c. The complex functional cell is made of a minimum of three functional units (a main one and additional ones) whose linear and between-level combinations generate a typological pyramid which is much more elastic and complex than the previous one.

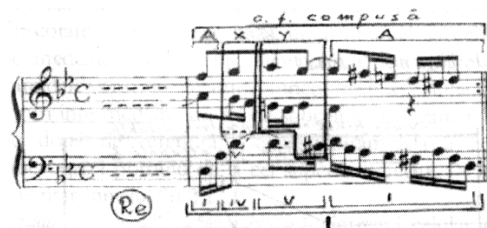


Fig. 13. Goldberg Variations, var.21,
Canone alla Settimana, m. 8

Known as “melodic note”, the melodic dissonance does not belong to the composition of the accords [2]. The traditional harmony accords them a special treatment. At the opposite side of this vertical harmonic concept is the linear concept promoted by Ernst Kurth [1], who assigns an absolute priority to the melodic vector, considering the harmonic parameter a “secondary phenomenon”.

The bachian style is positioned at the crossing of both orientations (the horizontal and the vertical one), as a symbiosis of the harmonic concept and the melodic/polyphonic one.

References

1. Kurth, E. *Grundlagen des linearen Kontrapunkts, Bachs melodische Polyphonie*. Bern, 1917.
2. Toduță, S. *Formele muzicale ale barocului în operele lui J.S. Bach*, vol. I. Bucureşti: Editura Muzicală, 1969.
3. Țuțuiianu, T. *Spectromorfii în partituri palestriniene și bachiene*. Bucureşti: Editura Vergiliu, 2005.