

Physiognomic Diversities of Aleatoric Music in the Conception of Several Spanish Composers

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Abstract: *Around 1951, after a period of artistic advancement, when Spanish composers adapted their own requirements to expressionist aesthetics, the dodecaphonic method and the serial system, they arrived simultaneously with serialist and post-serialist practices, at aleatoric techniques. They formed a new generation called The 1951 Generation. The list of representatives contains many names, including: Luis de Pablo, Carmelo Bernaola, Juan Hidalgo, Ramón Barce, Cristobal Halffter, Josep Cercós, Xavier Benguerel, Riudoms Joan Guinjoan, Josep Soler, Leonardo Balada, etc. The present study attempts a musical analysis of some scores selected from the creations based on random language authored by the first three above mentioned composers.*

Keywords: *random; structure; configuration; creation; form; mobile; typography;*

Introduction

The definition of aleatoric music refers to the totality of post-serialist avant-garde trends - i.e. the next stage of integral serialism - present in the second half of the 20th century. Based on special composition techniques, the aleatory music composer processes the musical parameters, under variational configurations; these variations will be the cause of a number of alterations operated on the basis of the formal structure, so that, with each separate version, the form is being highlighted during the interpretation of the work. The versions are being differently transmitted and captured, and in this way the creation is subject to the process of improvisation (in its entirety or in part). The control of the compositional process is determined by the composer, first of all, and then by the performer (who is given some interpretive/creativeom). That is why the necessity of an explanatory part (Legend) to clarify the composer's graphic signs marked in the score and to help the performer understand the manner of execution, is obvious. The creator's task, therefore, is to find the most appropriate technical solutions capable of clarifying and concretizing the the process governing the evolution of the mobile structures which are given an improvisational character.

The concept of random music includes three notions: *the mobile form*, the *flexible form* and the *open form* of musical participation. Thus, music or *the mobile form* of a creation can be defined as the metamorphosis of formal structures, operated through the organizational character given in advance by the composer, based on some structures selected at the very beginning of the process.

The form of *flexible creation* emphasizes the elasticity of the musical discourse; musical flexibility is often configured by the rhythmic parameter, by the continuous pulsation, by changes in tempo and surface rhythm (duration and pauses), and last but not least, by the context in which the rhythmic flow is brought, a necessary quality of music, within the limits of temporal perception.

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Aleatoric music of *open configuration* (opera aperta) contains a predominant factor of chance; this aspect makes possible the interaction between the performer and the composer, an interaction triggered by the dialectic of the technical and expressive language of the creator, who uses specific signs in his musical score, that is, he uses a type of personal graphics.

Aleatorism presents, as can be seen, special configurations, due to its capacity to render the musical sound (music itself) abstract; therefore, the feedback action between the creator and the performer is created. Changes of this type, but also other types of alterations (the sociological position of music, globalization and/or stylistic eccentricity), all lead to other artistic aspects of the creative process. This constitutes the natural evolution of aleatorism towards other post-serialist and neo-avant-garde musical orientations (minimal, repetitive, non-evolutionary music, polystylism, metastylism, etc.).

1. A modality of aleatoric expression through *modules*

The first aleatoric creation of a strictly mobile type is that of **Luis de Pablo**, entitled *Mobil I* opus 7 for two pianos (1959), a work that will later be transcribed for instrumental ensemble and electronic music (according to the information provided in the previous subsection). Not long before, during the same decade of the 1950s, composers such as Karlheinz Stockhausen and Pierre Boulez popularised the first examples of mobile creations in Europe: *Klavierstück*, the first four pieces for piano (1953) and *Sonata III for piano* (1957–58).

As a result, the work *Mobil I* (1957) by Luis de Pablo presents, basically, the principle of random mobility, in which fixed and mobile parts alternate. These differences are noticeable in the following examples where the fixed parts can be recognized as being written in a continuous script, in *Molto adagio* tempo, and the mobile parts become recognizable due to the rotating random sequences, as isolated fragments, written in live tempos (*Vivo*).

Sinfonia

Cl. pice. *ff subito* *ff* *p subito* *[m.d.]*

Cl. *ff subito* *p* *[m.]*

Cl. basso *ff subito* *[m.]*

Xil. 1 *[m.]*

Xil. 2 *[m.]*

Pf. 1 *[m.]*

Pf. 2 *[m.]*

Molto adagio [mano sinistra] *[m.d.]*

Quart. d'archi *col legno battuto [irregolare]* *arco* *col legno battuto*

Fig. 1. Luis de Pablo: *Mobil I: the alternation of fixed and mobile parts (the principle of random mobility)*, section A2.

Furthermore, the composer proposes an imprecise technique of organizing the sound material, a technique related to the distribution of the pitches. These can be distributed in two ways: according to a defined order of the appearance of the sounds (we aim for neutralizing sound effects, from a functional point of view and possible harmonic dispositions) or in undefined sound configurations (with an improvisational aspect). Based on his research Luis de Pablo concludes that the second sound organization "tiene origen en un cuadro temporal inexacto e indefinido en el cuyo interior funcionan por medio de los valores non-susceptibles de la reducción de un sólo unidad o categorías de sonidos de referencia"². By rendering an immense palette of possibilities

² Luis de Pablo. 1968. *Aproximacion a una estetica de la musica contemporanea* [An Approach to an Aesthetic of Contemporary Music], „originates in an imprecise and undefined temporal frame, where it functions through the mediation of particular values

related to the sonorous distributive imagination, in the ad libitum passages, the creator of such sound universes, leaves room for aural surprises.

D5

The musical score is titled "D5" and is divided into three main sections: "Andante", "Allegro", and "Andante sul G".

- Andante:** This section features three staves for Cl. piccolo, Cl., and Cl. basso. The Cl. piccolo staff has a TACET instruction. The Cl. staff has a TACET instruction. The Cl. basso staff has a TACET instruction. The Xil. (Xylophone) staff has a TACET instruction. The section ends with a "1/2 GIRA DEL C" instruction.
- Allegro:** This section features three staves for Pf. 1, Pf. 2, and Quart. d'archi. The Pf. 1 staff has a TACET instruction. The Pf. 2 staff has a TACET instruction. The Quart. d'archi staff has a TACET instruction. The section ends with a "1/2 GIRA DEL C" instruction.
- Andante sul G:** This section features three staves for Cl. piccolo, Cl., and Cl. basso. The Cl. piccolo staff has a TACET instruction. The Cl. staff has a TACET instruction. The Cl. basso staff has a TACET instruction. The section ends with a "1/2 GIRA DEL C" instruction.

Fig. 2: Luis de Pablo: *Mobil I*: example of orderly distribution of pitches, D5.

The last example configures a type of interpretative freedom at the level of sound, pitch, duration, intensity and timbre parameters. Through his own composition technique and his language, Luis de Pablo integrates the microstructures into macrostructures, includes them, superimposes axis-groups (or other type of instrumental groupings), without altering the entire macrostructure of the work. The result engendered by the heterogenous acoustic components, in

particular, leads, sometimes, to the sound complexities of the instrumental groups in which the status of the modules³ stands out.

2. *Spatialised* aleatoric formal configurations

Within the flexible technique of aleatoric music, **Carmelo Bernaola** arouses the interest of the listener and of the analyst by presenting a fusion between the conception of aleatoric creation as a temporal art and its comprehension as a sound practice. The random game proposed by this composer in creations of this kind sets free (theoretically) infinite possibilities of interpretative performance, where the creation is permanently under the control of the composer. The formal configurations acquire different aspects, with each version, due to the movement of the microstructures inside the macroform, as for instance in *Symphony no. 2* (1980).

³ Piet de Volter. 1998. *Encuentros con Luis de Pablo [Encounters with Luis de Pablo]*, the definition of the modules was previously provided. Madrid: Ediciones y Publicaciones Fundación Autor.

This page of a musical score is for a large orchestra. The instruments listed on the left are: Piccolo, Flauta I, Flauta II, Oboe I, Oboe II, Clarinete I, Clarinete II, Clarinete III, Fagot I, Fagot II, Contrafagot, Trompas I, II, III, IV, Trompas V, VI, Trompetas I, Trompetas II, Trombones I, Trombón II, Trombón III, and Arpa. The score is written in a single system with multiple staves. It includes various musical notations such as notes, rests, and dynamic markings like 'cresc.' and 'pizz.'. There are also circled numbers 35, 40, and 45 indicating specific measures. The Arpa part at the bottom is marked with 'x' symbols, indicating a specific rhythmic pattern.

Fig. 3: *Carmelo Bernaola: Symphony no. 2 - formal configurations at the infrastructural level (total spectrum of the work, random play, interpretive freedom, the composer's control over the execution of the score), bars 33-40.*

Throughout the entire cycle of "surfaces"⁴ written between 1961 and 1979, Carmelo Bernaola reveals the same technical compositional procedures, under different guises, within his musical universe: the timbral homogeneity of the elements of the musical material and the interpretive freedom found, most of the times, under the control of the composer (*Surface no. 4*, 1968–1969); the timbral heterogeneity, the continuous transformation of the instrumental material,

⁴ Tomás Marco. 1976. *Artistas españoles contemporáneos: Carmelo Bernaola [Contemporary Spanish Artists: Carmelo Bernaola]*, some of Carmelo Bernaola's pieces: "Surface no.1" for woodwind quartet (1961), "Surface no.2" for cello (1962, 1965); "Surface no. 3" for chamber ensemble (1963) and "Surface no.5" for double bass. Madrid: Publications Service of the Ministry of Education and Science.

the spatial arrangement of the performers on the stage in continuous movement and the active participation of the audience (for example in *Chamber Music* for 13 instruments, 1967).

The collection or the series of surfaces, already briefly discussed in the previous paragraph, contains: *Surface no. 1* for woodwind quartet (1961); *Surface no. 2* for solo cello (1962, rev. 1965), *Surface no. 3* for chamber ensemble (1963), *Surface no. 4* for string quartet (1968-1969), *Surface no. 5* for double bass (1979).

The concept of *surfaces* comes from the idea that on the extent of a sound surface, i.e. a fragment or a constant sound space, other surfaces of smaller sizes are being organized, and they succeed one another in the form of a permanent dialogue between instrumental groups or between different sound parameters (in the case of an instrument). The structure of the surfaces allows the increase and decrease of the musical content (tension-climax-relaxation) under the plastic form of an arch, the musical developments approaching or moving away from the climactic point, through changes in the sound densities (sound masses, isolated sounds, etc.). Once again, the timbre plays an important role in the delimitations of the formal structures (the cohesion of the work), but also as an orchestral/instrumental ornament. Carmelo Bernaola uses a polyphonic writing in combination with flexible elements, under the maximum control of the interpretive material.

A special place is held by the orchestral work entitled *Various spaces* (1962, revised in 1969), where Carmelo Bernaola proves to be a born artist, who knows how to manipulate variable structures, based on elements of sound morphology, capable of continuous variations. The unity of the work is achieved due to the way the intervallic content is treated, as an invariable background sound, throughout the *spaces*, maintaining in this way the same intervallic material throughout the entire length of the work, which gives it structural and expressive unity. The structures constantly vary according to the morphological language of the respective creation.

The composer thus obtains four instrumental groups, which interpret the musical fragments in a *perpetuum mobile*, according to rules he himself imposed and included in the Legend. In turn, each group contains eight spaces with a metamorphosing character, with the exception of the first, leading group. Therefore, there is an obvious oscillation between fixed metric structures (classical notation) and mobile structures (without bars).

The image displays a musical score for the work 'Various spaces' by Carmelo Bernaola. The score is written for a woodwind quartet and a string ensemble. The woodwind section, at the top, includes parts for Flute (Fl.), Oboe (Ob.), Clarinet (Cl.), and Bassoon (Fg.). The string section, below, includes parts for Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), Violoncello (Vc.), and Double Bass (Cb.). The score is marked with a rehearsal cue '10' at the beginning. The woodwind parts feature complex, ascending melodic lines with many beamed notes. The string parts consist of dense, rhythmic patterns, with some measures marked 'pizz.' (pizzicato) and 'arco' (arco). The overall texture is polyphonic and dense, characteristic of Bernaola's style.

Fig. 4: *Carmelo Bernaola: Various spaces: the technique of metamorphosing sound spaces, a permanent oscillation between fixed metric structures (with bars) and independent ones (without bars).*

In other words, the flexibility of the musical discourse, according to Carmelo Bernaola, goes beyond the simple rhythmic freedom, due to the structural coherence and sonorous transformations (special sonorities) of the instrumental groups. The series is performed in all possible variations. The only component that Carmelo Bernaola leaves aside when embracing his serialist technique is that of transposition. Thus, the series is repeated, with the help of structural functions, of metric overlaps, irregular values or continuous rhythmic pulsation.

The so-called open form aleatoric music is promoted by another composer, Juan Hidalgo, and it is later on embraced by others, such as Luis de Pablo or Ramón Barce. The other composers, Cristóbal Halffter, Tomás Marco, Agustín González Acilu among others, use it as a simple experiment in musical writing.

3. The open aleatoric type of interpretive freedom

After the account made in the previous paragraph, **Juan Hidalgo** represents one of the graphic composers, who work on relevant sound processes. The realization of these special sonorities is based on temporal indeterministic characteristics, configured on time units (marked in the score as minutes, seconds, fractions, decimals of time, etc.) and on the aspect of improvisation. Interpretive freedom is taken to the extreme, just as the virtuosity of the instrumentalist requires a lot of skill and agility. Graphic representations of this kind can be found in creations such as *Offenes Trio* (1959) or *Kuuntamo* (1961) – as colourful graphs. Here is an example of a score without musical notation, where only the text is able to express the composer's artistic intentions:

PRIMER TIEMPO

SALE EL DIRECTOR, SALUDA, SE GI-
RA HACIA LOS ATRILES Y SILLAS VA-
CIOS Y SE CONCENTRA DURANTE UN
CIERTO TIEMPO

PAUSA

TERCER TIEMPO

A UNA SEÑAL DEL DIRECTOR TO-
DOS LOS INSTRUMENTISTAS ESECU-
TARÁN EN ACORDE Y "FORTISSIMO".
LA NOTA MÁS GRAVE DE SU INSTRU-
MENTO

EL DIRECTOR PODRÁ AD LIBITUM
REPETIR ESTE ACORDE (SIEMPRE
"FORTISSIMO") CUANTAS VECES CREA
CONVENIENTE

Fig. 5: Juan Hidalgo: in the absence of the Kuuntamo score, where the graphs obtained after the distribution by colors, (the manuscript, whose xerox copying is forbidden, was borrowed

within the premises of the Conservatory of Madrid), another example of random score without musical notation is brought, the work entitled Las horas/The Waves.

After the stages of integral serialism, after conceiving the aleatory forms and the electronic processes, we are confronted with even more diversified musical elements, transformed under the influence of various values, systems, concepts and ideas. The phenomenon will be called postmodernism, which in a generic sense denotes an evolution of the modernist culture, of the artistic avant-garde, towards the inclusion of other trends, directions, orientations and various musical genres, such as: minimalism, repetitive music, world music in all its meanings, the happening show, the aesthetics of the absurd, postmodern (or contemporary) theatre, non-opera, informal music, experimental music, etc. (mostly derived from the idea of chance in music, a Dadaist concept).

4. Conclusions

Around the middle of the 60s, in Spain, music will therefore acquire a series of expressive forms, where instrumental combinatorial elements (proper to electronic music) will be merged with the visual aspect of sound art.

As a consequence, the *contemporary theater* will be born. It will use unique criteria for treating the text, the word, not only in musical/extra-musical contexts, but also in the form of the interaction between visual and sound components.

The notion of a text adapted to music acquires a very special meaning: the exclusion of any relatedness to texts, viewed through the expressive aesthetics of the work of art and the application of special techniques coming from the phonetic area, to result in the modification of the semantic content of the dialectic. Theatrical action also undergoes rigorous changes (in a spectacular fusion of gestures, actions, stage movements, sound and visual objects), thus offering a type of interactive show between the audience-performers-composers-actors, with real moments of improvisation.

The contemporary theater, discovered by John Cage, captures the attention of the Spanish composers. The first to initiate this trend will be Juan Hidalgo. In 1964, he founded an experimental laboratory promoting random music (but also all open artistic orientations), known as *Zaj* of Madrid. Within the premises of the *Zaj* laboratory, many creators, such as: Juan Hidalgo, Ramón Barce, Arturo Tamayo, Eduardo Polonio, José Luis Téllez or Tomás Marco, among others, will carry on their activity.

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