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### Choral Writing in Iannis Xenakis' Late Compositions\*

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**Abstract.** The article is devoted to the peculiarities of choral writing in the compositions of the outstanding representative of the postwar avant-garde Iannis Xenakis (1922–2001) created during his final creative decade. Examination is made of the questions of the correlation between the music and the words, the use of techniques of “phonemic composition” (Konstantin Floros) in the composer’s works *Nekuia*, *Serment-Orkos*, *Knephas*, *Pour la paix*, and *Sea Nymphs*. Special attention is given to a unique case of encoding of Arthur Rimbaud’s literary text in Xenakis’ composition *Pu wijnuej we fyp*. The vocal-orchestral work *Nekuia*, a central composition in the evolution of the composer’s choral writing, signified, along with the theme of Greek Antiquity, the existential problem range connected with the images of death, war and violence against personality. The present subject matter becomes determinative in Xenakis’ late choral compositions.

As part of textural analysis of the work the following parameters are disclosed as the main textural varieties: the newest techniques of “artificial reverberation” (Iannis Xenakis), elements of “diagonal texture” (Valentina Kholopova), types of exposition which are characteristic for the romanticist composers, the classical techniques of juxtaposition of *solī — tutti*. The main resources of the parameter of timbre include changes of the vocalization of the tone by means of a continuous transition from one vowel to another, sounded out successions of inhalations and exhalations, juxtapositions of ordinary and laryngeal singing, *glissando*, both in alternation with *tremolo* and carried out by means of overlapping. At the same time, starting with the composition *Pour la paix*, certain elements of Xenakis’ early writing return — “sound clouds” (Iannis Xenakis), the image of which is created by non-standardized cries, complementary contrapuntal texture characterized by thematic and rhythmic resemblance of independent voices. In total, all of this stipulates the bright individuality of Xenakis’ artistic method.

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## Современное музыкальное искусство

Научная статья

### Хоровое письмо в поздних сочинениях Янниса Ксенакиса

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**Аннотация.** Статья посвящена особенностям хорового письма сочинений выдающегося представителя послевоенного авангарда Янниса Ксенакиса (1922–2001), созданных в его последнее творческое двадцатилетие. Рассматриваются вопросы соотношения музыки и слова, использования приёмов «фонемной композиции» (Константин Флорос) в пьесах *Nekuia*, *Serment-Orkos*, *Knephas*, *Pour la paix*, *Sea nymphs*. Особое внимание уделяется уникальному случаю кодирования литературного текста Артюра Рембо в пьесе *Pu wijnuej we fyp*. Узловой в эволюции хорового письма композитора вокально-оркестровая пьеса *Nekuia* обозначила, наряду с античной темой, экзистенциальную проблематику, связанную с образами смерти, войны, насилия над личностью. Данная тематика становится определяющей в поздних хоровых произведениях Ксенакиса.

В рамках фактурного анализа выявляются как основные текстурные разновидности: новейшие приёмы «искусственной реверберации» (Яннис Ксенакис), элементы «диагональной фактуры» (Валентина Холопова), характерные для композиторов-романтиков виды изложения, классические приёмы сопоставления *sol* — *tutti*. Основные ресурсы тембрики включают изменения огласовки тона посредством континуального перехода от одной гласной к другой, озвученные последовательности вдохов и выдохов, противопоставление обычного и гортанного пения, *glissando* как в чередовании с *tremolo*, так и в наложении друг на друга. Вместе с тем начиная с *Pour la paix* возвращаются некоторые элементы раннего хорового письма Ксенакиса — «звуковые облака» (Яннис Ксенакис), образ которых создаётся ненормированным криком, комплементарной полифонической фактурой, характеризующейся тематическим и ритмическим подобием самостоятельных голосов. В совокупности всё это обуславливает яркую индивидуальность творческого метода Ксенакиса.

**Ключевые слова:** современная хоровая музыка, послевоенный авангард, Яннис Ксенакис, фактура, тембрика, фонемная композиция, музыка и слово

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French composer of Greek descent Iannis Xenakis (1922–2001) is one of the most radical representatives of the postwar avant-garde, who consciously aspired not to fit in with its overall direction. By his rejection of serialism, popular in the 1950s, which was closely connected with acoustic pointillism, he outraged the leaders of new music Pierre Boulez and Karlheinz Stockhausen. After Xenakis wrote a polemical article about the serial method, he, obviously, “set the entire European avant-garde against himself.”<sup>1</sup>

However, speaking out with criticism of serialism and pointillism, the composer, as paradoxical as this may be, in his own system gave the greatest amount of attention particularly to the aesthetics of tone. [1]

Guiding himself by the set theory of German mathematician Georg Cantor (1845–1918), Xenakis was convinced, as Yulia Azarova observes, that a musical composition presents a multiplicity of separate elements

of tone which demonstrates that “the most important is the moment of appearance of any particular tone in the overall structure of a composition.”<sup>2</sup> And this multiplicity depends on the audibility of the sounds in various time lengths, in connection with which there appear unexpected timbral effects, which differentiate such sonorics (in correspondence with Xenakis’ gradation) into various forces of acoustic flow: “sound waves,” “sound clouds” and “sound mass.”<sup>3</sup>

Xenakis himself describes the method of creation of his compositions the following way: “The scientific approach is rather limited, since it is dry and complicated in its application, and musicians frequently disdain it and concentrate exclusively on the musical side. Science and music have many things in common, even though they use different methods.”<sup>4</sup>

Stemming from such an approach, which is not only aesthetic, but also scientific, on the part of the composer towards the nature of

<sup>1</sup> Gorokhov A. *Iannis Xenakis. Nemetskaya volna*, 2001 [The German Wave, 2001]. URL: <https://muzprosvet.ru/xenakis.html> (accessed: 02.03.2023).

<sup>2</sup> Azarova Yu. O. *Filosofiya muzyki Ya. Ksenakisa* [The Philosophy of Iannis Xenakis’ Music]. *Iskusstvo i khudozhestvennoe obrazovanie v kontekste mezhkul'turnogo vzaimodeistviya: materialy VI Mezhd. nauchno-prakt. konf.* [Art and Artistic Education in the Context of Intercultural Interaction: Materials of the Sixth Scholarly-Practical Conference]. Kazan, 2017. P. 140.

<sup>3</sup> Ibid. P. 141.

<sup>4</sup> Cit. ex: Obrist Kh. U. *Kratkaya istoriya novoi muzyki* [A Concise History of New Music]. Moscow: Ad Marginem Press, 2015. P. 74.

sound and, first of all, towards the phoneme of the language of music<sup>5</sup> and towards the flow of sound, we shall analyze Xenakis' vocal-orchestral composition *Nekuia* (1981). It demonstrates the existential problem range, characteristic for all the periods of his music, connected with the images of death, war, and violence over personality. These morbid images appeared from the composer's own life experience. During the years of World War II he himself fought in a partisan unit against the Nazis, and then (at the end of 1944) — against the British "liberators." As the result of a heavy wound and concussion, he lost an eye. As a communist, he was declared to be a national criminal and sentenced to death, but escaped to France (the death sentence was revoked only in 1974).<sup>6</sup> Thereby, the wartime events, upon the just observation of Andrei Gorokhov, were conducive to forming Xenakis' idea of music as a crowd and an elemental force. For this reason, it is not accidentally that his music "sounds much more abundantly and expressively in terms of its timbre than the works of his competitors Boulez and Stockhausen. Xenakis' music is much more dramatic and tragic."<sup>7</sup> The motive of death, one of the most determinant themes of the first musical tragedies, also becomes crucial in the subsequent compositions, asserting

themselves either in the literary text (*Pour la paix, Pu wijnuej we fyp, Sea Nymphs*), or in the titles of the compositions (*Knephas*), sometimes in both (*Nekuia*).

The tragic theme in Xenakis' worldview obtained more massive proportions, which was intrinsic to Ancient Greek philosophy, based on the universal theme of man, and Xenakis as a Greek felt great kinship to this. Elena Ferapontova defines this theme as a "macro-theme,"<sup>8</sup> which connects with each other the choral works written on the text of the Ancient Greek tragedians, and the works which the composer bases himself on other literary sources, thereby, defining the conditionality of the boundary between the Ancient Greek and the existential theme proper. These received especially broad dissemination in the composer's late oeuvres, in many ways having also stipulated the changes in the style of choral writing.

The first work in Xenakis' musical output to have demonstrated a combination of the principles of phonemic<sup>9</sup> and more traditional musical-literary composition based on the interaction between musical and verbal elements was *Nekuia* (in translation from the Ancient Greek, it means the ritual of calling up the dead in order to foretell the future).<sup>10</sup>

Unlike many of his colleagues, the composer did not turn to polytextuality

<sup>5</sup> The word phoneme (from the Greek φώνημα — sound or voice) signifies the minimal semantic unit in language. In this particular case, the author of the article means the succession of vowel sounds.

<sup>6</sup> See: Gorokhov A. Ibid.

<sup>7</sup> Ibid.

<sup>8</sup> Ferapontova E. V. *Vokal'naya muzyka Yannisa Ksenakisa kak fenomen ego kompozitorskogo tvorchestva: dis. ... kand. iskusstvovedeniya: 17.00.02 [Iannis Xenakis' Vocal Music as a Phenomenon of his Compositional Creativity: Dissertation for the Degree of Cand. Sci. (Arts): 17.00.02]*. Moscow, 2007. P. 11.

<sup>9</sup> Phoneme composition is a type of vocal music based on free operation of phonemes which are independent of any definite verbal text. The concept of phoneme composition is used in his work by Konstantin Floros. See: Floros K. *György Ligeti: beyond Avant-garde and Postmodernism*. Trans. by E. Bernhardt-Kabisch. Frankfurt am Main: Peter Lang GmbH, 2014. P. 96.

<sup>10</sup> Surette L. *The Birth of Modernism: Ezra Pound, T. S. Eliot, W. B. Yeats, and the Occult*. Canada, 1994. P. 68.

in *Nekuia*: the texts in French (Françoise Xenakis) and in German (Jean-Paul Richter) are presented isolated from each other. At the same time, Xenakis can dis sever the text into parts, disarticulate separate words from it, and unfold various sections of the phrases from each other (Scheme 1).

However, instances of detachment of words into syllables or phonemes are virtually absent here. Only in two fragments of the score it is possible to discern such an approach. Thus, in the phrase “*Sternen-Schnee gestöber*” the last word *gestöber* is presented in a disguised, toned down fashion ([ge] — [o]), initiating the start of the unfolded section of phonemic composition (mm. 55–86), and subsequently is sounded out fully. In the word *Orkanen* transferred into the second phrase the prolonged vibrant [r] stands out, also typical for the choral scores of some of Xenakis’ contemporaries (for example, Mauricio Kagel’s cycle of seven pieces for chorus *Rrrrrrr... and Luciano Berio’s Canticum novissimi testamenti*) (Example No. 1).

It must be observed, however, that the detachment of the phonemes from the literary text does not occur, as such. Xenakis, here, similarly to Luigi Nono, who perceived phonetics as the most important constituent of words, makes use of the phonetic resource of the verbal set, whereas

Example No. 1

Iannis Xenakis. *Nekuia*.  
Tenor and bass parts, mm. 205–206

The image shows a musical score for the Tenor and Bass parts of Iannis Xenakis' *Nekuia*, measures 205–206. It consists of four staves. The top two staves are for the Tenor (Tén.) and the bottom two for the Bass (Bas.). Each part has a vocal line and a line with '(OR)' below it. The vocal lines contain the syllables 'OR - KA - NEN'.

the predominating phonemic sections in the composition, based, as in *Cendrées*, on a succession of the main vowels [A], [I], [O], [U], [E], exist independently of Jean Paul Richter’s texts — as yet another text (or, to be more precise, a *quasi-text*). It is noteworthy that in the composition *Nuits* (*Night*), written in response to the coup organized by the military junta in Greece at that time and dedicated to the political prisoners, Xenakis, who created a phonemic composition for the first time in 1967–1968, did not reject the use of its resources in his subsequent compositions. This confirms the thought expressed by us earlier: “... in ‘*Nuits*’ Xenakis, having freed himself from the obligations exerted upon him by the availability of the verbal element and the presence of the stage action,

Scheme 1. A Fragment of the Poetic Text from Iannis Xenakis' *Nekuia*:

“Écoute” (Françoise Xenakis):

“*Le vent qui décoiffe les morts, casques roulés au loin*, (mm. 40–49)

[*ventre ouvert ...*]

[*corolle étalée*]” (mm. 261–262).

“Siebenkäs” (J.-P. Richter):

“*Orkanen; Sternen-Schnee\_ge\_[o] <phonemes> gestöber* (mm. 50–54 <...> mm. 87–91);

*funkelnde Tau [Or\_kanen] der Gestirne ausblinkt (Rede des toten Christus...)*” (mm. 197–208).

is concentrated, first of all, on the use of an abundant spectrum of possibilities which the contemporary art of choral writing and singing offers the composer.”<sup>11</sup>

The literary texts included in the composition, despite the absence of polytextual unfolding, are practically inaudible in the listeners’ perception, which is conditioned by the textural solutions of composition demonstrating an aspiration toward the effects of so-called “artificial reverberation.”<sup>12</sup> What is meant in this case here is the application of the principles of canonic composition with a minimal amount of distance between the thesis and the arsis (Example No. 2). [2] *Such textural*

*organization creates an evidently perceptive stereo sound stipulated by a consistent transference of the sounding tone from one vocal part to another.*

Unlike Gyorgy Ligeti (in his *Requiem* and *Lux Aeterna*) and Luigi Nono (*Ha venido: canciones para Silvia, Sarà dolce tacere*), Xenakis’ attention is centered on the effect of reverberation, which in the aforementioned composers’ works presented the “side product” of timbral modulation. Xenakis is not very interested in separate tones, or even in separate lines. This can be distinctly seen in the understanding of the possibilities of “diagonal texture,”<sup>13</sup> principally different from Nono’s. Whereas

Example No. 2

Iannis Xenakis. *Nekuia*, mm. 40–41

The image shows a musical score for five vocal parts: Alto (A), Echo (E), Soprano (sop.), Alto (U), and Bass (I). The lyrics are in French and appear to be: "A DÉ - COI - DÉ -", "E DÉ - COI -", "sop. O VA - VA - - ENT MO -", "U VA - - ENT DÉ -", and "I VA -". The score is marked with a forte dynamic (ff) and includes various musical notations such as slurs, ties, and accidentals.

<sup>11</sup> Ryzhinsky A. S. Khorovaya muzyka Yannisa Ksenakisa 1960-kh godov: ot iskusstva Antichnosti k Avangardu [Iannis Xenakis’ Choral Music of the 1960s: from the Art of Antiquity towards the Avant-garde]. *Vestnik Akademii Russkogo baleta imeni V. Ya. Vaganovoi* [Herald of the V. Ya. Vaganova Academy of Russian Ballet]. 2018. No. 6 (59). P. 217.

<sup>12</sup> In the introduction to his score, the composer focuses our attention on two technical approaches: “On the technical level there is, for example, the inclusion and processing of non-octave scales within the framework of my theory of the sieve, moreover, the multiplication of the transferred melodic examples as a sort of *artificial reverberation* [my italics. — A. R.]”. See: Xenakis I. *Nekuia*. Paris: Salabert Editions, 1992. P. IV.

<sup>13</sup> The term *diagonal texture* belongs to Valentina Kholopova. The researcher observes that “the appearance of the concept of the textural diagonal was evoked by certain innovations of composition in 20th century European music, especially starting from the 1950s.” See: Kholopova V. N. *Teoriya muzyki* [The Theory of Music]. St. Petersburg: Lan, 2002. P. 190. In the present work what is understood by diagonal texture is the musical statement within the framework of which the sounds or groups of sounds of the melodic line are brought in consistently in a diagonal direction in ascending (from the bass parts to the soprano parts) or descending order (from the soprano part to the bass part).

in Nono's music diagonal texture becomes a means of construction of a sort of broad-range polytimbral monody, Xenakis perceives the textural diagonal as the point of departure for the creation of a dynamic *textural stratum with a rapidly expanding density of sound*.

The composer creates a complex textural space based on a constant change of density of the sound of the strata comprising it in the conditions of the artificial reverberation manifested by it.<sup>14</sup> At the same time, as Rudolf Frisius observes, even such a simple element as a scale becomes a means of creation of complicated sound complexes, stipulated by the fact that “the tones of the scale seem to contract vertically,”<sup>15</sup> leading to the intonational derivation of the vertical element from the horizontal.

*The utilization of the unison texture in Nekuia* (m. 85–91) virtually becomes a rudimentary phenomenon reminding of the quasi-archaic quality of the early choral works. The complexity of the choral parts expands to the utmost limit, creating an unprecedented phenomenon even in the context of choral composition of the postwar avant-garde. We must pay attention, for example, to the characteristic element of Xenakis' late compositions, which first asserted itself in *Nekuia* — the use of semitone couplings between the individual voices intoning the ascending and the descending chromatic lines (!) (Example No. 3). And what kind of figurative element does the semitone coupling provide?

Example No. 3

Iannis Xenakis. *Nekuia*, m. 279

The image shows a musical score for four voices, labeled Sop. (Soprano), Alt. (Alto), and two unlabeled staves. The score is for measure 279 and is marked 'staccato'. The notes are arranged in a diagonal pattern across the staves, with semitone couplings indicated by arrows between notes in adjacent staves. The notes are U, E, and A, and the couplings are U → E and E → A.

Along with such kinds of dynamic sonorics, use is made of stable, pulsating clusters, organized by means of semitone coupling of consonant verticals. In this particular case, the composer demonstrates his interest, typical for such compositions as *Nuits*, in contrasts of registers appearing as the result of juxtaposition of the parts of the female and male voices.<sup>16</sup>

Just as in his pair of works from 1977, *À Colone — À Hélène*, in his works from 1981, *Nekuia* and *Serment-Orkos* we observe certain definite analogies in the interpretation of the chorus in the vocal-orchestral scores and in the choral *cappella* scores. It can even be stated that *Serment-Orkos* is in a well-known sense a reflection of *Nekuia* in the organization of the interaction of the verbal (phonemic) and musical components, as well as in the use of the timbral-textural resources of the chorus.

<sup>14</sup> By “artificial reverberation” we presume the textural technique based on exact imitation of the motives of the thesis and the arsis with a minimal temporal interval recreating the physical effect of reverberation of the vocal sound in resonant insular premises.

<sup>15</sup> Frisius R. Iannis Xenakis: *Nekuia*. *Musik über Krieg und Tod*. URL: <https://www.frisius.de/rudolf/texte/NekuiaInternetversion.pdf> (accessed: 15.01.2023).

<sup>16</sup> The piece *Nuits* appeared as Xenakis' first experiment in transferring the techniques typical for his orchestral compositions into the domain of vocal music.

In both compositions Xenakis works both with the verbal (in *Nekuia* — Françoise Xenakis and Jean Paul Richter’s texts, in *Serment-Orkos* — the text of Hippocrates’ oath in Ancient Greek<sup>17</sup>) and the phonemic material (to remind the reader of the succession of vowel sounds). However, unlike *Nekuia*, the phonemic and the verbal components of the score of *Serment-Orkos* may unfold themselves not only being isolated from each other, but also simultaneously (Example No. 4).

Let us highlight the similar techniques in the organization of the choral texture:

- a) the alternation between *solis* and *tutti*;
- b) the timbral and registral juxtapositions of the parts of the male and female voices;
- c) bringing in contrast between the overall intonation and the vocal *tremolo*.

The evidence for the further expansion of the timbral resources of the chorus carried out in Xenakis’ compositions was the inclusion in *Serment-Orkos* of loud singing inhalations and exhalations familiar from Gyorgy Ligeti’s scores (*Aventures, Nouvelles Aventures*), which due to the precise articulation of the preassigned rhythmic

figures carry out the acoustic function of noise-generating percussion instruments, creating an additional timbral element in the score.

The similarity of the techniques of vocal writing in the compositions representing the two different thematic groups, conditionally labeled by us as the Ancient Greek (*Serment-Orkos*) and the existential (*Nekuia*), bear witness to the universality of Xenakis’ compositional methods during this period, their independence from any concrete thematic direction in any particular composition.

The radiophonic composition *Pour la paix* (1981), created upon the commission of Radio France, turned out to be Xenakis’ only work containing such an explicitly stated pacifistic subject matter. What is meant here is not only the content of Françoise Xenakis’ text, which had already been used prior to that in *Nekuia*, but also the commentaries written by Xenakis in the introduction to his score about the destinies of his friends who ended up in mutually antagonistic camps during the war: “How inconsiderable turned out to be the feeling which have confronted

Example No. 4

Iannis Xenakis. *Serment-Orkos*, mm. 41–42

The image shows a musical score for four vocal parts: Soprano (S), Alto (A), Tenor (T), and Bass (B). The score is for measures 41 and 42 of Iannis Xenakis's 'Serment-Orkos'. The vocal lines are written on staves with various musical notations including notes, rests, and dynamic markings like 'mf' and 'ff'. Below the vocal lines, there are two lines of lyrics. The first line contains Greek lyrics: ΔΕ Ο - Υ - ΔΕ ΦΑΡ - ΜΑ - ΚΟΝ Ο - Υ - ΔΕ - Ι. The second line contains Latinized lyrics: DE O - U - DE FAR - MA - KON O - U - DE - I. Above the Tenor and Bass parts, there are vowel symbols with arrows: A → E → O → A → U → E →.

<sup>17</sup> The piece *Serment-Orkos* was written upon the commission of the organizing committee of the International Congress of Cardiovascular Surgery, which took place in September 1981 in Athens.



with the evildoing of ceaseless wars. But the sighs of their memories cannot hinder them from flying to their deaths.”<sup>18</sup> Most likely, in no other work of his did Xenakis express his feelings so directly. The composer, who was left without a homeland and undergone the personal experience of the senselessness of political theories, was worried all his life about the problem of the defenselessness of the human being in the face of war or terror unleashed in the mane of the ideals of various ideologies (it suffices to remember *Nuits* and *Nikuia*). Unlike the well-known examples of “protest music” — Arnold Schoenberg’s *A Survivor from Warsaw*, Luigi Dallapiccola’s *Canti di prigionia*, Bruno Maderna’s *Quattro lettere* and Luigi Nono’s *Il canto sospeso* and *Intolleranza 1960*, Xenakis avoided the “dogmatic” opposition of “false” and “true” ideologies (such as, for instance, Nazism vs. Christian humanism, or Nazism vs. communism), since it was important for him to preserve his inner independence, including that from concrete political doctrines. Once he said particularly the following: “The most important thing in art and life is to be independent.”<sup>19</sup> In all likelihood, it is particularly for this reason that for him *Pour la paix* was a special composition which, notwithstanding the unusual quality of its first solution (it was initially a work written for the radio with recitation, chorus and electronic sounds recorded on magnetic tape), he wished to preserve in the most important element — successions of choral episodes (sequences) based on Françoise Xenakis’ text.

The extent to which the text written by Xenakis’ wife turned out to be important for

the composer can also be perceived in the *use of a single syllabic ensemble of choral parts in the verbal sequences* (sequences 1, 2, 7, 8), which was virtually unprecedented in Xenakis’ choral work. In addition, *Pour la paix* is one of the few works based on the contemporary French language — in neither the title nor the verbal component does he in any way turn to Ancient Greek, the use of which was explained by Xenakis as his wish to distance himself from the emotional component of vocal composition.<sup>20</sup> This fact also bears witness to the special position *Pour la paix* held in the composer’s overall musical output.

At the same time, in *Pour la paix* we can witness the return of certain elements of Xenakis’ early style of choral writing. The latter include *sound clouds created by non-standardized cries* (it must be reminded that in *Nekuia* and in *Serment-Orkos* the cries were performed in particular rhythms prescribed by the composer), as well as the fragment of complementary contrapuntal weaving between the two upper voices (*Sequence 10*) resembling the choral writing in *Medea Senecae*. But while the lines of the voices complementing each other according to the principle of *punctum contra punctum* based on similar intonations presented the main principle of organization of texture in a number of choral episodes of *Medea Senecae*, in this case the *complementary texture of the soprano voice becomes one of the constituents of a two-layer fabric of the sequence, being juxtaposed to the monorhythmic parallels of the intonational lines of the other voices*.

<sup>18</sup> Xenakis I. *Pour la paix*. Paris: Salabert editions, 2009.

<sup>19</sup> Stoyanova A. V. *Elektroakusticheskaya kompozitsiya Yannisa Ksenakisa: dis. ... kand. iskusstvovedeniya: 17.00.02 [Iannis Xenakis’ Electroacoustic Composition: Dissertation for the Degree of Cand. Sci. (Arts): 17.00.02]*. Moscow, 2016. P. 32.

<sup>20</sup> Matossian N. *Xenakis*. Lefcosia: Moufflon Publications, 2005. P. 245.

The connection in *Pour la paix* with the principles of choral writing of the early and middle periods of the composer's music presents a reflection of the general tendencies of the evolution of his style, which is confirmed also by the choral compositions of the late period, which can be in all fairness called the synthesizing period. [3] First of all, these tendencies disclose themselves in the character of the verbal (phonemic) constituent of composition: along with the return to the musical-theatrical compositions typical for the early period (*Bakxai Evripidou*) and the phonemic compositions (*Knephas*), in the 1990s Xenakis continues his *experiments in creating mixed compositions based on the transformation of the source verbal material* (*Pu wijnuej we fyp*, *Sea Nymphs*).

In the composition for a cappella children's chorus *Pu wijnuej we fyp* the composer ciphers the text of Arthur Rimbaud's long poem *Le Dormeur du val*, inviting the little performers to decipher the original text.<sup>21</sup> It turns out that the key to the cipher is the *principle of mutual replacement of phonemes in phonetic pairs* organized from the center to the periphery of the alphabet succession is differentiated in relation to a set of vowels and a set of consonants (see Scheme 2).

In *Sea Nymphs* it is possible to witness a *perception of sound as an abstract assemblage of sonorities used outside of content-based specificity*, [4] which is typical for Luciano Berio's late compositions. But whereas in the scores of Berio's works (*Canticum novissimi testament*, *Stanze*) this kind of transformation takes place with two-

syllable words ("tocca," "piedi," "terra"), in *Sea Nymphs* Xenakis prefers one-syllable lexemes ("were," "that," "them," "hour," "thing," etc.). The functional switch of these lexemes takes place in succession: first, the element of verbal content, then, the acoustic element (Example No. 5).

This has to do with the timbral-textural peculiarities of the composer's late works: along with the preservation the principle of juxtaposing the soli and the tutti strengthened by the contrast of registers, characteristic for Xenakis' late compositions, here we also observe him operating with thick textural layers based on the connection of several chromatic horizontal progressions doubling each other at intervals of minor seconds — a device typical for Xenakis' late compositions. The rejection of mixed verbal-phonemic composition (*Nekuia*, *Serment-Orkos*) in favor of "orthodox" phonemic composition (*Knephas*) leads to a departure of the technique of continual change of vowelization from the composer's choral writing, which *presents one of the consequences of the return to operating with syllables, rather than separate vowel phonemes*.

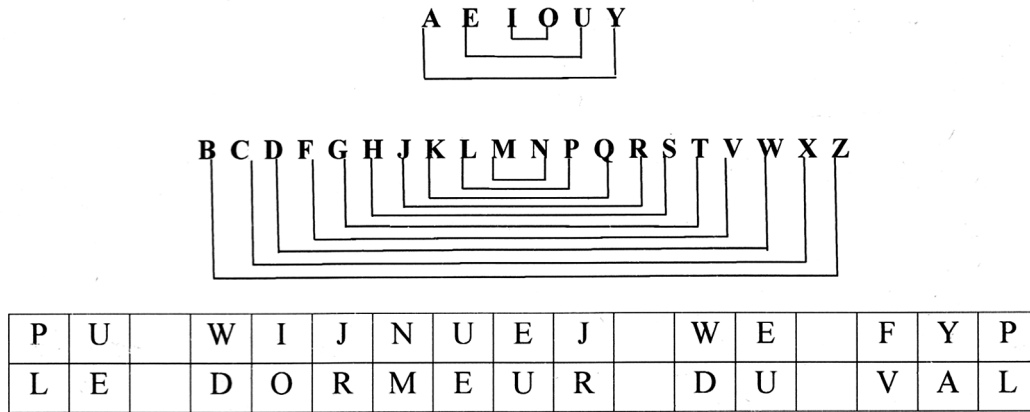
Here the consonant phonemes ([w], [d], [z], [q], [p], [n], [s], [m], [r], [k], [t], [j]) used in conjunction with the vowel phonemes, just as in the works of Mauricio Kagel and Gyorgy Ligeti, *create the conditions for differentiating the character of vocal attacks, as well as for additional accentuation of the tones within the soloists' lines which are complex in their rhythmic organization*. In his late compositions Xenakis also puts bounds in a noticeable manner on the use

<sup>21</sup> In the introduction to the score Xenakis writes: "Here Arthur Rimbaud's wonderful poem is used. His phonemes are subjected to mutual display (replacement)." See: Xenakis I. *Pu wijnuej we fyp*. Paris: Salabert editions, 1993.

Scheme 2. The Mutual Replacement of Phonemes in Phonetic Pairs

Example No. 4

Iannis Xenakis. *Serment-Orkos*, mm. 41-42



Example No. 5

Iannis Xenakis. *Sea Nymphs*. Bassi 1-6, mm. 19-21

of *glissandi*. The composer is drawn to a greater degree to operating with thick choral layers with painstaking work on details of the content of each one of them. The figurative content of the composition *Knephas* (*Darkness*, 1990)<sup>22</sup> is expressed by massive wrathful lamentation without words based on a phonetic text. In the *textural solution the principle of the contrast between the solo voices and the tutti chorus is manifested*. However, particularly here this

technique possesses a sort of “dramaturgy” of development. At the beginning of the composition the contrast between *solo* and *tutti* is emphasized texturally (with the juxtaposition between the vertical harmonies of the chorus and the horizontal lines of the soloists), timbrally and registrally, as well as rhythmically (the more complex rhythms of the soloists is contrasted by the lapidary rhythms of the entire chorus). “In the beginning” is there, while “later” is not

<sup>22</sup> The composition is created in memory of Xenakis’ deceased close friend Maurice Fleur.

stated. For this reason, the technique of *solo* vs. *tutti* breaks off.

*Knephas* noticeably stands out in Xenakis' legacy in the amount of various choral texture used. In the first half of the score an important role is played by the homophonic-harmonic (the accentuation of one relief voice against the background of the other voices of the chorus) and the homophonic-polyphonic statement (the accentuation of two or more relief voices against the background of the other voices of the chorus) formed by the simultaneous imposition of the *solo* (*solis*) and the *tutti* of the chorus. In the second half of the composition a distinct role is played by the antiphonal texture, as well the strata polyphony formed by the interaction of several sub-textures organized for the most part by chordal statement.

The diagonal textures also play an important role in the textural profile of Xenakis' two last compositions for a cappella chorus *Pu wijnuej we fyp* (1992) and *Sea Nymphs* (1994). In the solo episodes of *Sea Nymphs* they make it possible to achieve the effect of verticalization of the quasi-horizontal line (it was particularly for this reason that the composer prefers to make use of diagonals within the confines of one choral voice), which reminds of the analogous technique in *Knephas* (Example No. 6).

The *diagonal textures of the tutti episodes already use not separate tones, but complex chordal structures, which initiate rapid textural crescendos*. In *Pu wijnuej we fyp* the diagonal textures are brought in, primarily, for the creation of stereophonic effects: they appear because of the mutual exchange of the tones of one vertical complex between the choral voices.

In the architectonic organization of all of Xenakis' late compositions a *determinative role is also played by the textural contrasts*. Most of them are connected with sudden changes of the density of sound occurring by means of juxtapositions of the solo voices and the *tutti* chorus. Xenakis provides additional emphasis to this contrast with changes in the harmony: the complex semitonal *tutti* complexes are juxtaposed with clearly perceptible intervallic sets in the groups of solo voices.

Thereby, the synthesizing character of Xenakis' late works emphasized earlier manifests itself not only in regard to his work with the verbal texts, but also within the framework of the timbral-textural solutions of his compositions. Along with the preservation in the choral pieces from the 1990s of the attention to the resources of the textural contrast between *solo* and *tutti*, as well as to the effects of "artificial

Example No. 6

Iannis Xenakis. *Sea Nymphs*. Basses 1–6, mm. 40–42

reverberation” typical for his compositions from the 1980s, here we also observe a *desire to return to separate techniques of early phonemic composition (Nuits)*.

In total, the provided analysis of Xenakis’ late choral compositions makes it possible to disclose his systematic thinking which was formed on the basis of the tragic events he experienced during the years of World War II, the acts of terror during peace time, and the composer’s subsequent memories of them. This tragic vision of the picture of the world stipulated a new system of expressive musical means in which the essentially significant role was played by the composer’s attitude towards sound and its flow. [5] The nature of such a phenomenon expressed in the interconnection between texture and timbre was defined by Victor Tsukerman on the example of the work of Nikolai Rimsky-Korsakov as “timbral-textural functionality,” with the aid of which the artistic image may be demonstrated in various boundaries of his.

Let us summarize certain timbral-textural innovations of Xenakis with the consideration of the commentaries of the early and late styles of writing which have already manifested themselves in *Nekuia* in concentrated form.

1. The absence of splitting words into syllables or phonemes, fragmented use of texts in French and German. Only vague traces of the technique of word splitting can be found.

2. The phonemic basis of the texture becomes a source of stereo sound stipulated by the consistent transfer of the sounding tone from one vocal voice to another.

3. The creation of the textural diagonal as the point of departure for the appearance of the dynamic textural layer with a rapidly ascending density of sound, as the result of which there arises the feeling of complex reverberating textural space.

4. The incorporation of unison texture as a symbol of a rudimentary phenomenon reminding of the *quasi*-archaic attribute of the composer’s early choral music.

5. The use of two types of sonorities: the dynamic semitone couplings between the voices intoning the ascending and descending chromatic line, and the stably pulsating clusters organized by means of the semitone correlation of consonant vertical harmonies.

7. Two types of unfolding the phonemic and verbal components — isolated from each other and simultaneous (*Serment-Orkos*).

8. Dynamic timbral organization of the textural fabric by means of:

a) continual transition from one vowel to another;

b) incorporation of the sounded successions of inhalations and exhalations;

c) juxtapositions of ordinary and guttural singing;

d) use of *glissandi* in alternation with *tremolos* and in imposition with one another).

9. An interpretation of loud inhalations-exhalations (as the result of intensified articulation of rhythmic figures conceived of by the composer) as an acoustic function of noise-generating percussion instruments.

10. The return of a few traits of the composer’s early choral writing:

a) “sound clouds” created by non-standardized cries;

b) fragments of complementary textures;

c) the use of a unified syllabic ensemble of choral voices in the verbal sequences;

d) the principle of juxtaposition of solo voices and the *tutti* chorus, emphasized texturally (the contraposition of the vertical structures of the chorus and the horizontal lines of the soloists), applied as techniques of development in the composer’s late period (*Knephas*).

11. The transformation of the complementary texture of the soprano

voice into one of the constituent elements of the double-layer fabric of the sequence contraposed by monorhythmic parallels of intonational lines of the other voices.

12. A continuation of the experiments in creating mixed compositions based on the transformation of the source verbal material.

13. A perception of sound as an abstract assemblage of other sounds used beyond the content-based specificity on the basis of single-syllable lexemes (“were,” “that,” “them,” “hour,” “thing”) the functional switch of which takes place in succession: first, the element of verbal content — then, the acoustic element.

14. The cessation in the composer’s choral compositions of continual changes of vowelization, which is one of the consequences of the return to operating with syllables, rather than vowel phonemes.

15. The differentiation of the character of vocal attacks and additional accentuations

of tones within the soloists’ lines which are complex in their rhythmic organization.

16. The use in textural diagonals of the *tutti* episodes not of separate tones, but of complex chordal structures initiating rapid textural *crescendos*.

17. The desire on the part of the composer to return to certain techniques of his early phonemic composition.

Notwithstanding all the schematization of the indicated phenomena, we must not forget of the remarkable aesthetic and compositional integrality of Xenakis’ choral works. Despite the very strong perception of him as a mathematician-composer who does not feel as much as he computes his compositional structures, a familiarization with his choral legacy makes it possible to see in him a sincere, sensitively feeling artist who touches upon relevant issues which are eternal in the art of music.

## References

1. Ryzhinsky A. S. Major Trends in the Development of Choral Music by the Western European Avant-Garde of the 1960s. *Problemy muzykal'noi nauki / Music Scholarship*. 2022. No. 4, pp. 38–52. (In Russ.) DOI: 10.56620/2782-3598.2022.4.038-052
2. Pereverzeva M. V., Anufrieva N. I., Kats M. L., Kazakova I. S., Umerkaeva S. S. Interdisciplinary Approach to the Mastering of the Music of the 20th Century. *Journal of Advanced Research in Dynamical and Control Systems*. 2020. Vol. 12, No. S3, pp. 772–778. DOI: 10.5373/JARDCS/V12SP3/20201316
3. Gorbunova I. B., Zalivadny M. S. The Complex Model of the Semantic Space of Music: Structure and Features. *Problemy muzykal'noi nauki / Music Scholarship*. 2020. No. 4, pp. 20–32. (In Russ.) DOI: 10.33779/2587-6341.2020.4.020-032
4. Fuksman M. A. Objects of Musical Composition and their Modifications. *South-Russian Musical Anthology*. 2020. No. 4, pp. 65–73. (In Russ.) DOI: 10.24411/2076-4766-2020-14008
5. Fartushka O. Choral Polyphony as a Methodological Problem of the Contemporary Research in Choral Singing. *European Journal of Arts*. 2019. No. 3, pp. 37–42. DOI: 10.29013/EJA-19-3-37-42

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## СПИСОК ИСТОЧНИКОВ

1. Рыжинский А. С. Основные тенденции развития хоровой музыки западноевропейского авангарда в 1960-е годы // Проблемы музыкальной науки / Music Scholarship. 2022. № 4. С. 38–52. DOI: 10.56620/2782-3598.2022.4.038-052
2. Pereverzeva M. V., Anufrieva N. I., Kats M. L., Kazakova I. S., Umerkaeva S. S. Interdisciplinary Approach to the Mastering of the Music of the 20th Century // Journal of Advanced Research in Dynamical and Control Systems. 2020. Vol. 12, No. S3, pp. 772–778. DOI: 10.5373/JARDCS/V12SP3/20201316
3. Горбунова И. Б., Заливадный М. С. Комплексная модель семантического пространства музыки: структура и свойства // Проблемы музыкальной науки / Music Scholarship. 2020. № 4. С. 20–32. DOI: 10.33779/2587-6341.2020.4.020-032
4. Фуксман М. А. Объекты музыкальной композиции и их модификации // Южно-Российский музыкальный альманах. 2020. № 4. С. 65–73. DOI: 10.24411/2076-4766-2020-14008
5. Fartushka O. Choral Polyphony as a Methodological Problem of the Contemporary Research in Choral Singing // European Journal of Arts. 2019. No. 3, pp. 37–42. DOI: 10.29013/EJA-19-3-37-42

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