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THE PECULIARITIES OF SPEECH AND MUSIC INTERACTION IN SPEECH-AND-MUSIC WORKS

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The article is devoted to revealing the peculiarities of speech and music integrated functioning in the generative process of a speech-and-music work. Various forms of speech and music interaction are presented, among which the simultaneous generation of speech and music component is regarded as the most productive while a speech-and-music product created by adding a musical component to the poetic text is considered to be the most controversial. In the paper the author dwells on the importance to understand what exactly helps the composer to feel the most essential points in such a complex unity that is a poetic text and to adequately convey the poet's original intention. Factors enabling adequate speech-and-music synthesis include the elements of intonation system, primarily rhythm and meter. Additionally, the nature of a speech-and-music work is predetermined by the means of lexical and syntactic language levels: The author stresses upon the special role of emotional-and-pragmatic potential, which accumulates the author's concept of a poetic text, conveyed with the help of the integrated interaction of all language means. The paper substantiates the expediency and feasibility of the further study of speech and music relations by the comparison of emotional-and-pragmatic potentials of a poetic and a speech-and-music work.

Key words: speech, music, speech-and-music work, intonation, rhythm, meter, emotional-and-pragmatic potential.

Introduction. The problem of language and music interrelation has proven to be a fertile area for research, repeatedly drawing interest from a wide range of scientists in diverse spheres, including philosophers (Aristotle, Plato), linguists (D. Bolinger, R. Jacobson), musicologists (T. Adorno, L. Bernstein), neurologists (S. Koelsch, J. Sloboda), neurolinguists (N. D. Cook, A. D. Patel), cognitive linguists (R. Jackendoff, F. Lerdahl), psychologists (V. Petrushin, R.W. Frick), educators (U. Quast, L. Svetukhina), etc.

Within the framework of language-music relations, the scholars' attention has been mostly focused on, for instance, the comparison of language and music as semiotic systems (M. Bonfeld, E. Tarasti, K. Agawu, T. Adorno), the peculiarities of speech and music perception (B. Asafiev, Ye. Nazaikinskii, R. Jackendoff) with regard to both its neurological aspects (S. Koelsch, S. Grafton) and the role of intonational and articulatory experience (Ye. Nazaikinskii). Equally important for the scientists are the studies of the communication of emotions by speech and music means (V. Morozov, P. N. Juslin, P. Laukka, N. D. Cook), communicative nature of speech-and-music works' actualization (N. Harypova, Yu. Poplavska-Melnichenko, A. Friberg), the comparison of poetry and music (Plato, I. Kant, V. Vasina-Grossman, P. Friedrich), the study of a speech-and music text as synthetic (V. Gavrikov), creolized (Yu. Plotnitskii) or polycode (I. Bolshakova) within its functioning in the song discourse (M. Bukata, S. Shvachko, T. van Dijk, H. Hodge) and many other aspects related to speech and music.

As is evident from the foregoing brief review, language-music relations have been explored from a variety of perspectives. The findings of these explorations indicate that language and music each should be seen as complex assemblage of features, some of which are shared, and others are not. Hence, the study of speech-and-music works, within which so similar yet quite different language and music elements align and function as a single whole, is of the utmost interest. However, the lack of theoretical and empirical research in the mechanisms of speech and music synthesis does not allow shedding light upon the factors which enable the alliance of speech and music and therefore make the generation of speech-and music work possible.

Thus, the **objective** of this paper is to reveal the specificity of integrated functioning of speech and musical elements in the generative process of speech-and-music works.

The ways language and music interact. In terms of deeper understanding the mechanisms of speech and music interrelation, the study of their functioning within the integration of music with literary works, especially poetry seems to be most enlightening. It is of no wonder since in the ancient world poetry, music, and dance constituted triunique syncretic art which was never to be

split. Generally speaking, the connection between literature and music could be described in three basic respects [11; 12]:

a) literature and music (program music), i.e. music works which were inspired by literature, or are viewed as an attempt to embody a particular literary work, e.g. *Richard Strauss' "Don Quixote"* or *Carl Ditters von Dittersdorf's Symphony No. 1 – No. 6 after Ovid's "Metamorphoses"*;

b) music in the literature, i.e. literary works in which implication, imitation, or any other indirect approximation to music occurs with the help of language means and literary techniques, e.g. *fugal, rondo and symphonic structures in J. Joyce "Ulysses"* or *the description of Bach's B minor suite for flute and orchestra in A. Huxley's novel "Point counter Point"*;

c) symbiosis of literature (speech) and music (vocal music), i.e. the study of the issues of either speech or musical prevalence in speech-and-music works, various relations of poetic and musical image, and variants of synthesis.

Within the latter aspect, various variants of speech-music synthesis could be differentiated, such as songs, ballads, operas, musicals, spoken word, reciting poetry to music, etc. Yet the most effective is the one generated in the process of synchronous creation of verbal and musical parts in the author's mind. Such a synthesis undoubtedly helps avoid certain adaptation problems of one semiotic system to another, such as, for instance, the discrepancy between the prosodic organization of a poetic phrase and a music phrase. Moreover, the simultaneous combination of verbal and musical parts removes some content-related constraints which could emerge if the author's concept is initially laid out within either language or music semiotic system.

Alternately, the most complex and disputable is the kind of synthesis produced by adjusting musical accompaniment to the already existing self-contained poetic work, e.g. *Emily Dickinson's "Hope" set to music by Trailer Bride*, or *E.E. Cummings' poem "Since feeling is first" adapted by Thrice into their song "A Living Dance Upon Dead Minds"*. In the framework of our research such a product of speech-music synthesis is called a **speech-and-music work** [6, p. 106]. A speech-and-music work could be defined as *a product of speech-and-music communication, a complex integrated system which is generated in the process of synergetic interaction between components of the sender's verbal and music culture and which could be adequately decoded by the receiver (the listener), provided that the spheres of the sender's and the receiver's supersubstantial cultures overlap*. It is worth mentioning that the verbal (prose or poetic) constituent is seen as the principal one, while music is regarded as the background that could be changed depending on the way the verbal part is perceived by the composer.

Given the fact that the poetic work in itself is a monolithic unity, a complex fusion of many heterogeneous elements, like plot, syntax, stylistic connotations of words, rhythm, a variety of intonation contours within a poem and its composition, the obvious question is what exactly helps the composer to feel the most essential points in such a complex unity that is a poetic text and to adequately convey the poet's original intention.

The factors determining an adequate speech-and-music synthesis. Language and music each have their own structures, but in a speech-and-music work these systems must cooperate. It is widely believed [5, p. 93; 8] that the alignment of words and music is most likely to occur under the influence of a certain element which appears to be the leading one in the semantic structure of a poetic text, e.g. the rhythmic structure in T. S. Eliot's "The Naming of Cats", Edward Lear's "The Owl and the Pussy-cat" or the prevalence of obscure macabre vocabulary (lexical units) in Edgar Allan Poe's poetry. According to some researchers (see [7, p. 40]) the melodic contour of the song is determined by intonation organization of a poetic work, its rhythmic figures in cooperation with the lexical and syntactic factors. Most scholars argue that the most influential in this respect are intonation components, which seems quite logical, since being viewed as the principal attribute of both speech and music actualization, intonation in these two domains shares some common features both structurally and semantically.

Pursuing the idea of the leading element in speech intonation which determines the prosodic realization of a speech-and-music work, we cannot but mention the so-called M-bases – motive bases, i.e. verbal sources of musical motives that become the ground for the prosodic contour of a speech-and-music work [5, p. 93]. According to the preliminary analysis of speech and music

correlation in speech-and-music works, most frequently the role of the M-bases is played by rhythmic and metrical structure of the poetic work.

Rhythm and meter as the ground for speech-and-music work generation. The selection and arrangement of rhythmic figures and rhythmic schemes, their intonation organization allows a poet to convey their own vision of its intoning in a written text. As a rule, these features of intonational organization are clearly reflected in vocal music [5; 7].

Some scholars emphasize [9; 10] that the rhythmic correlation of verbal and musical texts arises due to the similarity of their internal organization. Strong parts of poetic stanza (stressed syllables) correlate in one way or other with the strong beats of the music accompaniment. The following four variants of metric units' juxtaposition are usually distinguished: a) strong beat – strong syllable; b) weak beat – weak syllable; c) weak beat – strong syllable; d) strong beat – weak syllable. The overlap of strong beat and strong syllable (i.e. double stress accentuation) indicates that the selected text segments are of particular importance for the realization of the author's intention [9].

Describing the alignment of syllabic stress patterns with the musical rhythmic patterns in song musicologists use the term "textsetting". It has been suggested that musicians intuitively produce good textsettings, in which stressed syllables appear on musically strong metrical positions, in order to focus listeners' attention on the stressed syllables and more efficiently encode the speech-and-music work into memory [8].

Besides, it is known that each type of meter could convey specific emotions. For instance, trochaic meters (a stressed syllable, followed by an unstressed syllable) are often associated with awe and the suspension of reality, as in W. Blake's poem "The Tyger", in which trochaic patterns prevail the first three lines of the first stanza [10, p. 154]. This kind of rhythm is inconsistent with normal English speech rhythm and thus gives the speech an enigmatical feel. This kind of feel is successfully conveyed through music means by Jeff Gillet in his speech-and-music variant of "The Tyger".

The research carried out by A. Patel also showed that verbal stress frequently anticipated metrical accent in rock songs by a fraction of a beat, as in the Beatles' "Here comes the Sun". As the author notes [10, p. 156], this systematic anticipation contributes a sense of syncopation and rhythmic energy to the song, and provides an example of how the systematic misalignment of verbal and musical stress adds dynamic energy to speech-and-music works.

Similarly to rhythm, tempo characteristics of a speech-and-music work are partly determined by the poetic text, namely by its meter. Thus, tetrasyllabic foot is usually associated with a slow and decelerated tempo, while disyllabic foot is related to an accelerated one [5, p. 94].

Apart from the phonological units, vocabulary and syntax of a poetic text might as well convey the author's idea and thus influence the choice of music components. For instance, lexical units with positive connotation might provoke a composer to use major key while words with negative connotation will probably challenge a composer to apply minor key.

The melodic contour of a speech-and-music work can be determined by different types of sentences presented in a poetic text – declarative, interrogative or exclamatory, each represented by a certain intonation pattern. Interestingly, the rising or falling melodic contours, the terminal tones realized within the sentences are very often precisely reflected in speech-and-music variants, e.g. *Doris Day's "Que Sera, Sera" or Robert Burns' "Auld Lang Syne"*.

The role of emotional-and-pragmatic potential in a speech-and-music work generation. Taking all of the above into consideration, it may be concluded that while setting poetic text to music the composer focuses on some leading verbal components that most clearly convey the meaning inherent by a poet. In this respect it is worth pointing out that the generative process of any utterance and poetic work in particular is realized in quite a wide range of an individual's emotional states varying from simply the interest excited by consciousness to the unconscious stress [2, p. 6].

Emotions that arise in the sphere of individual's existential being generate chaos [2, p. 6-7]. At the initial stage of the chaos the energy of the pragmatic intention together with the emotional energy create fairly precise emotional-and-pragmatic potential (*a term introduced by Kalita A.A., hereinafter – EPP*) of the utterance or the text. The above-stated EPP remains intact during the

actualization of either the utterance or the text due to stochastic redistribution of energy between the means of all language levels involved in its realization [2, p. 8-9]. Thus, we may conclude that it is the psychic energy that acts as the basis for speech-and-music work generation. It is quite compatible with the thoughts of Ernst Kurt the composer who believed that the driving force of any musical phenomena is some "transcendent psychic energy" [4, p. 55-61], which, in fact, objectifies the author's unconscious desire to express their thoughts and feelings.

In support of this view we might refer to another famous musicologist and composer B. Asafiev who used to link primary theoretical musical models with physical-energetic principles, defining music as a "capacitor of emotional flows" [1, p. 10], and at the same time noting that the perception of music is "the embodiment of sound energy into a nervous reaction" [1, p. 21].

Eventually, if the energy that excites the composer's emotions and determines the melodic contour of a prospective speech-and-music work is accumulated in the EPP of the poetic text, then according to the principle of EPP preservation [2, p. 7], we may assume that the EPP of poetic work also remains unchanged after the addition of a musical component, resulting in the creation of a basically new speech-and-music work.

The study of speech and music interaction through emotional-and-pragmatic potential appears to be even more informative, since the dimensionless criterion has been specifically developed for its quantitative evaluation [3, p. 478]. With the help of the criterion it is now possible to unmistakably determine the level (low, medium, high) of emotional-and-pragmatic potential actualization in a speech (poetic) text and compare it with the emotional-and-pragmatic potential of its speech-and-music variant. Such a comparison in its turn might enable the researchers to reveal more components of intonation or any other language systems which affect the level of emotional-and-pragmatic potential actualization.

Conclusions. The performed analysis of the peculiarities of speech and music interaction in the process of speech-and-music work generation enables us to argue that the basic formative means of a speech-and-music work are rhythmic and metric systems of a poetic text. At the same time, the rhythmic and metric aspects, as well as the use of the means of other language levels are determined by the author's concept incorporated in the emotional-and-pragmatic potential of a poetic work.

We believe that the further study of speech and music interaction through emotional-and-pragmatic potential will help identify the variants and invariants of the intonation realization of speech and speech-and-music works.

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В. В. Марченко. Особливості взаємодії мови і музики у мовленнєво-музичних творах.

Стаття присвячена виявленню особливостей інтегрованого функціонування мовлення і музики у процесі породження мовленнєво-музичного твору. У ній розглядаються різні види взаємодії мовлення і музики, серед яких найефективнішим убачається синхронне породження мовленнєвої і музичної складової, а мовленнєво-музичний твір, утворений шляхом додавання музичного компоненту до поетичного тексту, є найбільш суперечливим та проблемним. Наголошується на важливості розуміння того, які саме компоненти поетичного твору допомагають композитору передати задум автора музичними засобами. У роботі показано, що до чинників, які забезпечують адекватність мовленнєво-музичного синтезу, доцільно відносити елементи інтонаційної системи мовлення, насамперед, ритм і метр. На вибір темпу у мовленнєво-музичному творі впливають й особливості розміру поетичного тексту: багатостопні розміри пов'язані з повільним і сповільненим різновидами темпу, а короткостопні – з прискореним. Підкреслюється також, що характер мовленнєво-музичного твору зумовлюють і засоби лексичного і синтаксичного рівнів мови: лексичне забарвлення впливає на вибір мажорної або ж мінорної тональності, у той час як синтаксична будова поетичного твору впливає на загальний мелодійний контур мовленнєво-музичного твору. Акцентується увага на особливій ролі емоційно-прагматичного потенціалу, який акумулює задум автора поетичного тексту та забезпечує інтегровану взаємодію засобів усіх рівнів мови. Указується на перспективність подальшого вивчення взаємозв'язку мовлення і музики шляхом зіставлення емоційно-прагматичних потенціалів поетичного і мовленнєво-музичного творів.

Ключові слова: мовлення, музика, мовленнєво-музичний твір, інтонація, ритм, метр, емоційно-прагматичний потенціал.

В. В. Марченко. Особенности взаимодействия речи и музыки в речемузыкальных произведениях.

Статья посвящена выявлению особенностей интегрированного функционирования речи и музыки в процессе порождения речемузыкального произведения. В ней рассматриваются различные виды взаимодействия речи и музыки, среди которых наиболее эффективным представляется синхронное порождение речевой и музыкальной составляющей, а речемузыкальное произведение, образованное путем добавления музыкального компонента к поэтическому тексту, является наиболее спорным и проблемным. Показано, что к факторам, обеспечивающим адекватность речемузыкального синтеза, целесообразно относить элементы интонационной системы речи, прежде всего, ритм и метр. Подчеркивается, что характер речемузыкального произведения предопределяют также и средства лексического и синтаксического уровней языка. Акцентируется внимание на особой роли эмоционально-прагматического потенциала, аккумулирующего замысел автора поэтического текста и обеспечивающего интегрированное взаимодействие средств всех уровней языка. Указывается на перспективность дальнейшего изучения взаимосвязи речи и музыки путем сопоставления эмоционально-прагматических потенциалов поэтического и речемузыкального произведений.

Ключевые слова: речь, музыка, речемузыкальное произведение, интонация, ритм, метр, эмоционально-прагматический потенциал.