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TECHNOLOGICAL AND PSYCHOPHYSIOLOGICAL SPECIFICITY OF THE VOCAL DUET

The purpose of the article is to identify the technological and general prerequisites for professional success of a vocal duet. The methodology is a comparative analysis of the specifics of duet singing of various duets, a technological and imaginative semantic analysis of the prerequisites for the success of professional realization of various duets. The scientific novelty consists in explaining the potential professional success of the duet through the technological features of singing, the similarity of the psychophysical data of the participants of the duet. The concept of "duet timbre" is formulated and justified. Conclusions: the vocal duet as a professional creative phenomenon has several defining specific features. The potential of professional success of a vocal duet can be predicted based on musical and non-musical components: musical – the specificity of sound formation, predetermined by the composition of the duet (same-sex, heterosexual) and the manner of singing (solo vocalists, choirmaster); extramusical – dependence of the duet's professional success on the identity of the psychophysical characteristics of the performers.

Keywords: vocal duet, "duet timbre", psychophysical characteristics.

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Технологічна та психофізична специфіка вокального дуету

Мета статті — виявити технологічні та загальні передумови професійної успішності вокального дуету. Методологія статті — компаративний аналіз специфіки дуетного співу різних за складом дуетів, технологічний та образно-семантичний аналіз передумов успішності професійної реалізації різних за складом дуетів. Наукова новизна полягає у роз'ясненні потенціальної професійної успішності дуету через технологічні особливості співу, спорідненість психофізичних характеристик учасників дуету. Сформульовано та обтрунтовано поняття «дуетного тембру». Висновки: вокальний дует як професійне творче явище має декілька визначальних специфічних рис; потенціал професійної успішності вокального дуету може бути прогнозований, спираючись на музичні та позамузичні компоненти: музичні — специфіка звукоутворення, визначена складом дуету (одностаттєвий, різностаттєвий) та манерою співу (солісти-вокалисті, хормейстери); позамузичні — залежність професійної успішності дуету від ідентичності психофізичних характеристик виконавців.

Ключові слова: вокальний дует, «дуетний тембр», психофізичні характеристики.

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Технологическая и психофизиологическая специфика вокального дуэта

Цель статьи — выявить технологические и общие предпосылки профессиональной успешности вокального дуэта. **Методология** — компаративный анализ специфики дуэтного пения различных по составу дуэтов, технологический и образно-семантический анализ предпосылок успешности профессиональной реализации различных по составу дуэтов. **Научная новизна** состоит в разъяснении потенциальной профессиональной успешности дуэта через технологические особенности пения, схожесть психофизических данных участников дуэта. Сформулировано и

обосновано понятие «дуэтного тембра». **Выводы:** вокальный дуэт как профессиональное творческое явление имеет несколько определяющих специфических черт; потенциал профессиональной успешности вокального дуэта может быть спрогнозирован, опираясь на музыкальные и внемузыкальные компоненты: музыкальные — специфика звукообразования, предопределенная составом дуэта (однополый, разнополый) и манерой пения (солисты-вокалисты, хормейстеры); внемузыкальные — зависимость профессиональной успешности дуэта от идентичности психофизических характеристик исполнителей.

Ключевые слова: вокальный дуэт, «дуэтный тембр», психофизические характеристики.

The relevance of the research. Duet (Italian: Duetto – deuce) is a musical composition for two instruments or two voices, in which each part has an independent character.

The specifics of ensemble performance are distinguished by the fact that the general plan of a musical work, all the details of interpretation are the result of deliberation and creative imagination of not one, but several performers. To realize such an idea is possible only by joint efforts. V. I. Krasnoshchekov notes that "the artistic unity of the performance is always determined by the unity of understanding of the work figurative content by all members of the performing collective and the community of their professional skills" [2, 59].

V. V. Kharlamova divides the work in the ensemble (and in our case - in a duet) into 3 stages: theoretical, artistic and practical and final. A certain time is allocated for each of the stages, during which the duo masters improve new skills [5].

Stage I is the theoretical one, which involves working on the system and all types of ensemble sound: a harmonic vertical, setting a dynamic ratio of the voices sound.

Stage II is the artistic and practical, involving work on vocal difficulties, articulation and plastic.

Stage III is the final, taking place on stage, during the performance.

The proposed stages of work on the piece reveal several basic problems in understanding the specifics of the vocal duet as a professional creative phenomenon:

- singing in a duet involves a special technology for the formation of vocal sound;
- there are criteria that determine the creative harmony of a duet and its professional success.

The aim of the article is to identify the technological and general prerequisites for the professional success of a vocal duet.

Object of study is the vocal duet.

The subject of the study is the vocal and technological analysis of the vocal duet specifics, the identification of the prerequisites for professional success.

Presenting the main material. In contrast to the choral academic sound, the duet uses slightly different methods of sound production, thereby forming a new intonational and musical image. V. L. Zhivov, considering choral performance, introduced the concept of "collective sound", which can be transferred to duet performance [1].

However, the "collectivity" of this sound has its own specifics, determined by the composition of the duet.

In this regard, we note the fundamental difference between heterosexual and same-sex duets, both in sound and in terms of the semantics of the interpretation of a musical text.

In particular, the military and men's style of clothing is very different from the female or male. The heterosexual duet presupposes both technological and figuratively-semantic dialogism. The same-sex duet shows that in the classical musical sense it is an interweaving of equivalent melodic lines, their influence and difference, but always a timbre and figurative-semantic unity. Characteristic semantic dialogue, timbre "conflict", figurative-semantic confrontation, isolation, individualization of education; then for a same-sex duo is more likely to have the conflict within the texture of the work: for dynamic - intercepting the lead voice in polyphony, timbre - adding with your timbre the missing color in the sound palette (the upper voice is complemented by overtones of the lower one and vice versa). In such a duet there is no opposition of semantic, figurative-semantic, dynamic or timbre. There is a desire to merge, but not through depersonalization, but through the mutual enrichment of the timbre of two soloists.

Based on the foregoing, let us designate another problem in the problem - sound merging / enrichment, but not depersonalization, characteristic of duets consisting of two vocalists. The vocalist, unlike the choirmaster, is characterized by cultivating an individual vocal timbre. Technologically, this task is achieved by using low abdominal breathing, which contributes to the appearance of chest overtones in the sound and the manifestation of an individually colored timbre, which is the result of voicing of the air movement of all cavities, including the chest. In addition, the sound formed by low abdominal breathing has a pronounced hormonal collaboration. It is not for nothing that professional training of a vocalist begins after a mutation, when a stable hormonal background of the singer is already established. In such vocal duets of soloists there is the phenomenon of the birth of a new "duet timbre" that consists not of two voices, but of intertwined overtones of two voices. At

the same time, in a duet, both soloists intuitively strive to fully exhaust this "layered timbre" and not to the overtone conflict that is characteristic of heterosexual duets.

It should be noted that the conflict of overtones in heterosexual duets works as the realization of the figurative-semantic component of the work, and in the same-sex duet, if there is a conflict of overtones, then it works as destroyer of the "duet timbre".

In connection with the peculiarities of timbre coloring, determined by various methods of sound production, we will consider another type of same-sex duet consisting of choirmasters, that is, singers trained in a particular manner of singing, characteristic of the choir: diaphragmatic breathing, as a result of which a very accurate intonation sound is formed, but hollow in timbre, perfectly cleared of individual overtones. Such duets are characterized by maximum fusion of sound that is similar to instrumental sound. A new "duet timbre" does not appear in such duets, the hollow sound cleared of unnecessary overtones merges into a single sound that is not enriched with new colors. The artistic impact of such a duet is based on purely instrumental ensemble features - the floridity of the chord, perfect intonation, fusion with accompaniment into a single timbre chord.

While the duo, consisting of vocalists, is characterized by the characteristic features of just solo singing - in the presence of a harmonious vertical in the overall sound, the separate timbre role of accompaniment and the separate timbre of the vocal parts sound are clearly pronounced. Thus, the artistic impact of a general musical chord depends more on the individual colors of the voices of the duet members, forming a complex palette of "duet timbre", than on intonation harmony. The voices give a timbre, and the type of singing (technology) of sound production and sound reproduction gives the consolidation of two different-height (lower and upper voice) sounds. As a result, it is not two voices that sound, but a single voice chord, a kind of consonance performed by a human voice, in which tones "merge" into a single sound. In the sound of such duets it is often impossible to precisely distinguish the timbre of one or another voice by ear. In a certain sense, the formation of a new timbre takes place which includes the overtone filling of the individual voices of the duet participants, while not impoverishing their timbre and not conflicting with each other, but mutually enriching each other.

Thus, we consider the vocal duet as an artistic form, overcoming the individual limitations of the soloist and gaining a new artistic individuality of sound fusion - "duet timbre".

Based on the foregoing, we offer the concept of "duet timbre".

Duet timbre is a characteristic sound of voices in a same-sex duet, characterized by the merger and addition of the overtones of the lower and upper voices into a single sound that has a consistent timbre.

As for the musical score, it should be noted that, in comparison with the extended ensemble, where the collective beginning prevails, the duet is characterized by a greater degree of individualization. In duet compositions, the semantic functions of parties are more personified, and personal expressiveness becomes the basis for the realization of the figurative and semantic content of a work based on correlation of the positions of the duet participants, in other words, "mutual understanding, increment and enrichment ... of the possibilities of artistic creation" [4].

A construction in which the semantic structures of a musical text are not fixed strictly to the basic definitions of a two-line texture is characteristic for duets, especially modern composers. They migrate from one voice to another, appearing in different layers of texture with different semantic accents. Various textured positions, both explicit and hidden, often acquire dialogical structures in a musical text. The specificity of musical dialogue is manifested in the conditional, generalized-encrypted nature of musical art, therefore, it is necessary to take into account non-musical and proper musical components in analyzing the specifics of vocal duet performance.

As for the musical components of vocal duet performance, it should be considered that the unfolding of the semantics of musical text in a duet is based on register-timbre decoding of text segments, on detailed articulation of intonational vocabulary, on the variability of the semantic meaning of the voices of the texture. A situation where the performer is misled by the grammar of the musical text occurs most often when decoding a musical text. For example, the alleged equality of voices identical in meaning in some duets. But such an imaginary textural identity of voices in a musical text presupposes a figurative and semantic realization of a work precisely through the "duet timbre", which also reflects its duality in the intonational vocabulary of voices - stable turns with fixed semantic meanings. Moreover, these independent stable turns of various parties work in a general articulatory manner, namely, even if the text of the parties is very different in the texture of durations or nuances, the musical, and therefore semantic accents, are still interconnected. They can "converge" in a strong proportion, they can "transfer" accents from one part to another, they can "focus"

accents with shredded short durations, they can be "bricked up" into pauses or lined notes, they can migrate to the theme of texts, enriching the musical language and specifying the content of the work, but both parts of the duet always exist in a single articulation.

This conclusion opens up the problems of another aspect of the analysis of duet singing - figuratively-semantic unity of the duet participants. We will consider this aspect as an extra-musical component of a duet performance, and here's why.

We focus on the fact that the figurative-semantic unity of two soloists can take place only if the psychophysical data of the duet participants allow this, which means their psychophysical apparatuses are "related" in a certain sense. This "relation" is manifested not only at the level of perception and decoding of musical impressions, but also at the banal similarity of the physical constitution, which determines the external harmony of the duet, suggests the potential quality of the "duet timbre", determines the related "intonation plastic" and the related characteristics of "intonational singing" (terms of O. V. Oganezova-Grigorenko) - singing of gravity, depending on the severity and vagueness of the singer's intonation hearing [3].

In this regard, we turn to the concept of autopoiesis. An artist, like any person, is an autopoietic system, and any autopoietic system develops and lives as defined by its biological nature. In other words, the perception and processing of musical material by a singer depends on their biological characteristics, and it follows that a duet will be successful if the two performers are close in psychophysical data - the biological characteristics of the autopoiesis system. It determines the extramusical components of the duet performance.

The specifics of the creative process in a duet is best reflected in the concept of "mutual understanding", which includes the unity of understanding, empathy and co-creation. Considering that the literary text belongs to the texts of "generative semantics" (J. Schreider) and has an associative character, the artistic tasks facing the duet can be solved not only at the level of conscious technological work and analysis of the work, but also at an intuitive level. The intuitiveness of coordination is explained by the nature of the artistic profession, and duet singing implies an organic merging of individuals. In this sense, the duet is harmonious not only "horizontally": common artistic tasks, a similar manner of singing, consistent interpretation, etc., but also "vertically": the harmony of psychophysical data, which implies the identity of music perception, the identity of artistic experiences,

along with the birth of a "duet timbre", as a result of the creative creation of music and its creative play.

The technique of working on the intonational-semantic embodiment of a musical text in a duet includes not just learning your own part, further coordinating it with a part of another voice or singing musical material. The specificity of the vocal duet is that the process algorithm at all technological stages of text development does not imply individual solo work, but duet technology: there is no individual singing, the process is carried out simultaneously by two participants of the duet. Thus, the actual process of singing already includes the process of harmonizing the figurative-semantic component of music; the process of harmonizing the articulation component, including accents, nuancing, etc.; development of a performing component - plastic and singing intonation.

Conclusions: a vocal duet as a professional creative phenomenon has several defining specific features, the potential for professional success of a vocal duet can be predicted based on musical and extramusical components:

- musical components the specifics of sound formation, predetermined by the composition of the duet (same-sex, heterosexual) and the manner of singing (soloists, vocalists, choirmasters);
 - extramusical components the dependence of the duo's professional success on the identity of the psychophysical data of the performers.

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