



Intercultural Synthesis of Ethnic Elements in Contemporary Vocal Practice: A Musicological Study with Statistical Validation

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Abstract: Contemporary vocal studies have not sufficiently developed quantitative models that combine the structural analysis of Eastern and Western musical elements with the measurement of their perception within a single analytical framework. Existing work mostly focuses either on describing stylistic characteristics or on cultural interpretations of hybridity, without offering formalized tools for comparing intonational, modal, and rhythmic parameters across traditions and assessing their impact on listening judgments. The purpose of the study was to empirically identify structural indicators of the synthesis of Eastern and Western vocal elements and to test their relationship with assessments of harmony, authenticity, and emotional expressiveness. For this purpose, a corpus of 200 vocal compositions from different regions was formed. The frequency of intonation, harmony, and rhythmic characteristics was recorded using automated spectral analysis in Sonic Visualizer. Groups were compared using Fisher's F-test and Student's t-test; additionally, standardized effect sizes (Cohen's d , η^2) and 95% confidence intervals were calculated. The perceptual component of the study included 48 students in the vocal specialization who evaluated a selection of pieces on a 10-point scale according to three criteria: harmony of synthesis, preservation of authentic features, and emotional expressiveness. Harmony was operationalized as the average integral value of these three indicators. The highest scores were given to pieces with a balanced combination of modal variability and functional harmony ($M = 9.8$; $SD = 0.6$), and the difference between integrative and asymmetric synthesis models was statistically significant ($t = 2.14$; $p < 0.05$; $d = 0.61$). The analysis of the structural data showed that Western samples are characterized by the dominance of functional tonality and articulatory clarity ($W = 0.83$; $W = 0.85$). At the same time, the Eastern samples are characterized by microtonality and melismatic ornamentation ($W = 0.80$; $W = 0.81$). The obtained results demonstrate a moderate but stable relationship between the structural characteristics of vocal material and its perceptual evaluation. The proposed approach provides a formalized toolkit for the study of transcultural vocal hybridity. It can be used in further comparative musicological and pedagogical studies.

Keywords: transculturality; cultural hybridity; cross-cultural perception; ethnomusicological analysis; weighting coefficient analysis



1. Introduction

In the context of accelerated globalization and the development of digital communications, vocal art is increasingly functioning as a transcultural space within which different musical systems interact. They form new aesthetic configurations. Contemporary musicology interprets these processes through the categories of hybridity, intercultural dialogue, and sound identity. According to Bartel (2024) The ritual and aesthetic dimensions of musical practice show that cultural memory in contemporary performance is transformed rather than disappearing. Goyal et al. (2025) argue that the emotional perception of the genre depends on personal and socio-cultural factors, which indicates the complexity of the mechanisms of intercultural synthesis. Hou and Wu (2022) emphasize the pedagogical potential of the ethnic song tradition for the formation of artistic expression in the system of modern vocal education.

Despite the growing number of studies, the problem of synthesizing Eastern and Western ethnic elements in vocal art remains conceptually underdeveloped. Within the framework of this study, the concepts of "Eastern" and "Western" traditions are not used as generalized civilizational categories. Still, they are considered operational analytical models based on historically formed vocal systems. Western vocal practice is characterized by diatonic tonal organization, functional harmony, metrical stability, resonant bel canto technique, and clear articulation. Oriental traditions are characterized by modal variation, microtonality, melismatic ornamentation, flexible rhythmicity, and specific timbral modification due to regional vocal techniques (Bertolo et al., 2025; Dong, 2025; Nan & Guan, 2023). These parameters are considered measurable style indicators rather than abstract cultural metaphors.

To eliminate conceptual uncertainty, the study's key categories are operationalized as follows. Performing identity is defined as a relatively stable set of technical, intonational, timbral, and interpretive characteristics through which a vocalist integrates elements of different musical systems into a coherent style model (Kelmendi, 2024). Authenticity is interpreted as the degree to which the characteristic modal, rhythmic, and timbral features of the source tradition are preserved within the hybrid composition (Nettl, 2015; Taylor, 2017). Emotional response is understood as the intensity of affective involvement in a piece of music, measured using a structured self-assessment scale (Goyal et al., 2025). Aesthetic evaluation is interpreted as a quantified judgment of the harmony, stylistic integrity, and artistic persuasiveness of the vocal synthesis.

Existing studies consider intercultural interaction mainly from theoretical and ethnomusicological perspectives. Bhabha (2012) conceptualizes hybridity as a "third

space" in which new meanings are born through cultural interaction. Kraidy (2006) defines hybridity as a logic of globalization that does not reduce to unification, but leads to the emergence of local forms of rethinking. Nettle (2015) and Taylor (2017) emphasize the socio-cultural conditionality of musical meanings and the symbolic economy of authenticity in the context of global circulation. More recent work has focused on the adaptation of ethnic vocal traditions in a modern context (Dong, 2025; Kelmendi, 2024; Nan & Guan, 2023), the preservation of ethnic techniques (Mukhsynova & Kaisidi, 2024), and the pedagogical integration of traditional material (Addaquay, 2025; Aryandari, 2024; Kang, 2026). However, these studies rarely combine structural and musical analysis with quantitative assessment of students' perceptions of synthetic forms.

An additional problem is the lack of tools for quantifying synthesis itself. While Siwen et al. (2024), Riabchun et al. (2024), and Sarikkaganon and Phensit (2025) analyze patterns of tradition integration, they do not offer formalized metrics for comparing the significance of individual stylistic elements. In turn, global corpus studies of vocal music (Bertolo et al., 2025) demonstrates the possibility of empirical modeling of ethnomusicological parameters, but the use of weighting coefficients to analyze vocal hybridity remains underdeveloped.

Thus, the scientific problem of the study is the absence of an integrated analytical model that would combine: (1) identification of structural Eastern and Western vocal elements, (2) their quantitative weighting in contemporary works, (3) analysis of the listener's perception of harmony and authenticity of the synthesis.

The study aims to determine the structural and perceptual characteristics of the synthesis of Eastern and Western ethnic motifs in contemporary vocal art and to find out the influence of this synthesis on the formation of performing identity within the outlined educational sample. To achieve this goal, the following objectives were set: - to identify the historical and cultural prerequisites for intercultural vocal interaction; - to systematize the measurable ethnic elements of Western and Eastern vocal traditions; - to classify modern transcultural vocal practices by types of synthesis; to assess the perception of harmony, authenticity and artistic integrity of the selected works among students majoring in Variety Music. The research hypothesis is formulated in accordance with the empirical design:

H₁: vocal pieces with a balanced integration of structurally identified Eastern and Western ethnic elements will receive statistically higher scores of harmonious synthesis, perceived authenticity, and aesthetic integrity among students majoring in Variety Music than pieces with stylistically asymmetrical integration. In contrast to previous generalizations, this hypothesis is limited to a sample of students of

specialized music education. It does not apply to an unprepared audience or professional musicians outside the study group.

The combination of a structural and analytical study of vocal elements with a quantitative assessment of listener perception enables us to expand the methodological toolkit for studying transcultural hybridity and to clarify the concept of performing identity in the contemporary musical space.

2. Literature Review

Intercultural exchange contributes to the development of new approaches to musical expression, which in turn enables the popularization of ethnic music. Within the postcolonial paradigm, Bhabha (2012) considers hybridity as a key category of cultural interaction. His concept of Third Space explains how new semantic forms arise in the process of intercultural exchange and do not fully belong to either the dominant or the marginal culture.

Kraidy expands the concept of cultural hybridity (2006), interpreting it as a logic of globalization in which the interpenetration of cultures does not necessarily lead to unification, but often generates new, unique local phenomena. In this way, the synthesis of Eastern and Western elements in vocals can be seen as a form of creative resistance to cultural standardization.

Nettl's (2015) An ethnomusicological approach emphasizes that any musical phenomenon should be studied in its sociocultural context. This means that the analysis of vocal synthesis should take into account not only the sound structure, but also the social functions of singing – ritual, communicative, and identification. Taylor's (2017) Research emphasizes that music today circulates globally, where the categories of "authenticity" and "ethnicity" acquire commercial and symbolic meaning. The synthesis of Eastern and Western ethnic music fosters dialogue between cultures and the creation of new musical identities. Existing published studies in this direction are aimed at determining the positive impact of the interaction of Western and Eastern music (Huaxin, 2023; Kun Deng, 2025; RaNa, 2024).

Aspects of the intercultural interaction of Western and Eastern music in vocal interpretation are considered in the works of Nan and Guan (2023), Kelmendi (2024), Dong (2025). The performance of works of Western and Eastern traditions should be based on a deep understanding of the means of artistic expression. To do this, focus primarily on historical and cultural features. In Western music, the emphasis is on harmonic structure, metrorhythmic organization, vocal technique, and academic principles of sound management. In Eastern music, modal intonation, ornamental melody, flexible rhythm, and the improvisational nature of performance dominate.

The quality of performance in Western music is determined by the balance of vocal registers and the stability of sound management; in Eastern music, by controlled timbre formation and variability of interpretative techniques. Understanding these stylistic parameters is the basis of professional performing competence (Dong, 2025).

The synthesis of Western and Eastern vocal traditions contributes to the preservation of cultural heritage through the understanding of distinct intonation and timbre systems. The harmonious combination of elements from the ethnic traditions of the East and the West involves analyzing individual musical styles and identifying common parameters – modes, scales, and tonal structures. The main focus should be on the tuning temperament. Melodic patterns are determined through the distribution of intervals that obey physical and mathematical laws and reflect the characteristic features of national musical systems (Nan & Guan, 2023).

The specifics of Eastern and Western ethnic music were analyzed in the studies of Mukhsynova and Kaisidi (2024), Bertolo et al. (2025). The performance of Eastern ethnic music should be based on the systematization of its historical and cultural features, enabling one to appreciate its artistic value. For example, the Kazakh vocal manner is based on an open natural sound, the use of chest resonance, and achieving expressiveness through the techniques of smooth sliding between sounds and the repetition of individual tones (Mukhsynova & Kaisidi, 2024). It is advisable to analyze Western music, considering its acoustic parameters, including tempo, rhythm, and harmonic structure. The performance specificity of Western European music is due to the regional proximity of European countries, which contributes to the formation of common acoustic and intonation characteristics (Bertolo et al., 2025).

The involvement of elements of ethnic music in modern musical culture is considered in the studies of Aryandari (2024), Addaquay (2025), and Kang (2026). In their opinion, the interpretation of works in a new context should be based on intonational accuracy, understanding of the vocal line, and adherence to stylistic logic. The adaptation of traditional melodies occurs through the creation of arrangements, which involves the use of techniques inherent in Eastern music – in particular, controlled vibrato and resonant sounding of the main register, maintaining a balance between authenticity and modern interpretation (Addaquay, 2025).

According to Kang (2026) The quality of performance of ethnic music in modern processing depends on the adopted constructivist ideas. First of all, it is necessary to adapt the acquired musical knowledge and to seek musical experiments aimed at preserving cultural value. Attention should be paid to vocal techniques that expand musical experience. For example, the technique of throat singing is aimed at authenticity, ensuring that songs are performed in regional styles (Mongolian, Kazakh,

Ukrainian). The expressiveness of performance can also be ensured through polystylized vocals, which combines academic technique and ethnic intonation traditions (Bertolo et al., 2025). Aryandari's (2024) study states that integrating folk musical heritage into a modern context should be based on traditional elements of rhythm, variation, and microtonality. The author emphasizes the importance of combining local traditions with modern methods of musical creativity, thereby preserving authenticity as musical practice evolves.

A separate group of studies is related to the analysis of methods of harmonious combination of ethnic and Western music (Riabchun et al., 2024; Sarikkaganon & Phensit, 2025; Siwen et al., 2024). The authors of Siwen et al. (2024) believe that intercultural interaction in vocal performance should be based on identifying the identities of different musical traditions, taking into account the dynamics of change in musical culture. An effective means of integrating Eastern and Western traditions is the interaction of different modal and harmonic systems, which is particularly evident in the use of pentatonics alongside the Western functional-tonal harmonic system. An important trend in modern performance is the use of hybrid vocal techniques, for example, the interpretation of opera singing based on Indian raga.

The study by Riabchun et al. (2024) analyzes approaches to integrating diverse musical traditions, considering social and psychological factors that influence the creation of musical works. Effective interaction between Eastern and Western music can be realized through the use of instruments from both traditions, as well as through the structural coordination of musical form and performance means characteristic of different cultures. The study by Sarikkaganon and Phensit (2025) analyzed the song "Si Kasathriya Dern Dong" and revealed elements of traditional Thai music and Western choral singing techniques. The arrangement is based on the use of the key of D minor and the alternation of slow and fast tempos. The use of different instruments ensures the work's original sound, rhythmic variety, and harmonic coherence.

Recent research demonstrates a growing interest in intercultural musical practices. For example, Li (2025) analyzes global exchange in pop music and identifies how technology and migration processes facilitate transculturality in vocals. Finally, Kelmendi (2024) and Deschênes (2021) focus on sonic identity and issues of cultural appropriation in "world music," which directly resonates with the theme of the synthesis of Eastern and Western traditions. The gaps in the analyzed works concern the lack of analysis of elements that contribute to the preservation of Western or Eastern models of musical performance, as well as the peculiarities of their combination with contemporary musical genres. A summary analysis of the analyzed studies is presented in Table 1.

Table 1. Summary table of analyzed studies

Research group	Methods used	Key research findings	Research gaps
Bhabha (2012) Kraidy (2006)	Qualitative methods	Definition of basic concepts of ethnic music	Lack of analysis of specific musical works
Nettl (2015) Taylor (2017) Huaxin (2023) RaNa (2024)Deng (2025)	Qualitative methods	Analysis of the use of the ethnological approach in contemporary music	Lack of analysis of the unique features of Western and Eastern music and their functional purpose in musical works
Nan & Guan (2023) Kelmendi (2024) Dong (2025)	A combination of qualitative and quantitative methods	Features of intercultural interaction	The absence of a detailed influence of Western and Eastern music elements on musical performance methods
Mukhsiyнова & Kaisidi (2024) Bertolo et al. (2025)	Qualitative methods	Analysis of the specifics of Eastern and Western ethnic music	The absence of classification of intercultural vocal practices in contemporary art
Aryandari (2024) Adda Quay (2025) Kang (2026)	A combination of qualitative and quantitative methods	Analysis of musical characteristics for the dissemination of ethnic music	Insufficiently studied methods of implementing musical characteristics to preserve the value of different music and its harmonious performance
Riabchun et al., (2024) Siwen et al. (2024) Sarikkaganon & Phensit (2025)	A combination of qualitative and quantitative methods	Assessment of ways to harmoniously combine elements of Western and Eastern music	Research is insufficiently disclosed due to the lack of comparison between different musical works.
Li (2025) Kelmendi (2024) Deschênes (2021)	Quantitative methods	Analysis of intercultural musical practices	Insufficient analysis of elements that contribute to the preservation of the Western or Eastern model of musical performance, taking into account different musical genres

Analysis of scientific sources indicates that the combination of Western and Eastern music is a common research direction. At the same time, gaps have been identified in the study of specific examples of the synthesis of ethnic music within modern genres. The issues of historical and cultural prerequisites of this process remain insufficiently studied. Most scientific works focus on the study of the Chinese musical tradition, which limits intercultural context and fails to account for the diversity of other Eastern cultures. To expand the scientific approach, it is advisable to focus on the importance of ethnic art in preserving national heritage and shaping the modern cultural space.

The primary analytical variables are intonation models, modal systems, rhythmic organization, timbre parameters, degree of melismaticity, and harmonic functionality. Their integration within a single work determines specific criteria for listener perception: the harmoniousness of the synthesis, the level of authenticity preservation, and the intensity of emotional expressiveness. The totality of these perceptual indicators provides a holistic view of the performance's artistic persuasiveness and shapes the construction of the performer's identity.

3. Methods

48 students of the specialty "Musical Art of the Stage" were involved – 24 participants each from the Kazakh National University of Arts named after Kulyash Bayseitova (Astana, Republic of Kazakhstan) and the Municipal Institution of Higher Education of the Kyiv Regional Council "Pavel Chubynsky Academy of Arts" (Kyiv, Ukraine). They represented different regions of Ukraine and Kazakhstan, thereby ensuring a multicultural perspective on the musical material. First-year students were excluded

from the study because their training did not yet provide a sufficient level of analytical knowledge of the interaction between ethnic and modern musical systems. The participants in the senior years had experience in stage performance and possessed the skills to analyze vocal techniques, which increased the objectivity of the assessment. The selection of study participants was made based on emails sent to the departments of educational institutions, which helped familiarize students with the further research program. This helped attract interested respondents to the study.

As part of the experiment, students from both groups were presented with a selection of vocal works that demonstrate different models of synthesis of Eastern and Western ethnic traditions (in particular: J. Puccini – "Madama Butterfly"; DakhaBrakha; BTS; Enya; Roksonaki; Hedningarna; Yat-Kha; Goran Bregović; Bijelo Dugme). The participants were asked to assess the level of: the harmony of the combination of ethnic elements; the impact on perceptions of national identity; and the artistic expressiveness and authenticity of the vocals. The assessment was carried out on a ten-point scale, and the results were quantitatively analyzed using Fisher's (F) and Student's (t) coefficients to assess the statistical significance of differences between groups.

Additionally, a qualitative content analysis of students' comments was conducted to identify subjective aesthetic and cultural associations in their perceptions of the works. By applying empirical and cultural methods, Features of the development of aesthetic sensitivity to transcultural vocal forms were identified.

Justification of the choice of cases. Examples were selected for the study that represent different models of vocal synthesis of the East and the West in spatial-cultural and stylistic dimensions. Such a selection demonstrates different types of ethnic music and the ways they are integrated into modern forms of pop, rock, and academic art. The classical European dimension is represented by the opera "Madame Butterfly" by G. Puccini, where Eastern aesthetics are refracted through the prism of European modernism, and by the work of Enya (Ireland), which combines Celtic melody with electronic sound textures. The Ukrainian band DakhaBrakha demonstrates a polyphonic synthesis, combining folklore with modern acoustics, Eastern rhythms, and the performativity of the world stage. The Central Asian vector is represented by the Roksonaki band (Kazakhstan), which integrates dombra intonations and steppe melody into rock arrangements, as well as the iFLY project, which combines electronic music with orchestral and ethnic timbres (Otyrar Sazy). The Asian direction is complemented by the BTS band (South Korea), which synthesizes elements of K-pop, traditional rhythms, and the poetics of Korean culture in a global pop format. Northern Europe is represented by the Hedningarna ensemble (Sweden/Finland), which combines Scandinavian folklore with the rhythms of the East,

and by the Tuvan collective Yat-Kha, which demonstrates a unique fusion of throat singing with rock instrumentation. The Balkan space is represented by Bijelo Dugme (Bosnia) and Goran Bregović, whose works embody a combination of Roma, Orthodox Slavic, and Western harmonic structures.

The assessment of the historical and cultural features of the combination of Eastern and Western ethnic traditions in vocal art, as well as the identification of characteristic ethnic elements in vocal performance, was carried out using general theoretical methods. The use of the historical and conceptual method enabled us to focus on the chronological sequence in our analysis, alongside the conditions that facilitated intercultural musical exchange. In addition, a comparative approach was used to identify characteristic and uncharacteristic features of Western and Eastern music. The use of these methods was necessary to assess which elements could be performed authentically and which needed to be transformed.

The importance of ethnic components in the performance of Western and Eastern songs was determined using a weighting coefficient developed by the authors. The choice of the weighting coefficient was based on the possibility of evaluating a separate musical element in terms of the expressiveness of the cultural component of Eastern or Western ethnic music. The calculation of the coefficient was related to determining the frequency of occurrence of individual elements, thereby contributing to a more objective assessment. The weighting coefficient of a particular musical element was defined as the ratio of the frequency of its occurrence in the sample of works to the total frequency of all recorded elements within the respective tradition.

$$W_i = \frac{n_i}{\sum_{j=1}^k n_j}. \quad (1)$$

W_i — is the weighting factor of the i -th musical element;

n_i — is the number of fixations of the i -th element in the analyzed corpus;

$\sum_{j=1}^k n_j$ - is the total number of all recorded elements (from 1 to k) within the corresponding musical tradition.

The assessment was based on the analysis of 200 randomly selected musical compositions, which helped quantitatively establish the roles of individual elements in Eastern and Western musical traditions. Using the interactive Sonic Visualiser application, the analysis process was automated, including the creation of spectrograms for visual perception of the information and the ability to adapt the obtained data for further calculations. The weighting coefficient formula is given below:

$$V_f = \frac{c_i}{\sum_{n=1}^i c_n}, \quad (2)$$

c_i – the importance of an individual element, determined based on automatic analysis;

$\sum_{n=1}^i c_n$ – the total value of all elements when studying a particular ethnic music.

The weight of an individual coefficient increases as its value approaches 1. The weight coefficient was also used to calculate the most important functions of vocal ethnic art in preserving national traditions.

The comparison of the established ethnic elements was carried out using Fisher's coefficient calculations (Warne, 2020). The calculation of the statistical coefficient helped determine whether the indicators were equal, focusing on their average values. The calculation is made based on previously obtained information on the analysis of musical compositions. The Fisher coefficient was chosen to enable comparison between two indicators of Western and Eastern ethnic music. Thus, the coefficient provides the possibility of conducting statistical significance of music. The coefficient does not require a normal distribution of indicators, which affects the validity of the study.

$$F = \frac{S_1^2}{S_2^2} \quad (3)$$

S_1^2 – dispersion of the ethnic element, greater in value;

S_2^2 – dispersion of the ethnic element, smaller in value.

If the value ***F*** is greater than 1, then the influence of the first element is significantly greater than the second. Attention should also be paid to the critical tabular value, above which a significant difference between the elements being compared will be observed.

For statistical comparison of indicators with each other, the calculation of the student coefficient was used, which contributed to the identification of differences between independent variables (Lepš & Šmilauer, 2020). The Student's t-test was used to compare the mean values, accounting for the indicators' significance. The use of the student coefficient is associated with finding mean values (M) and standard deviations (SD).

$$t = \frac{M_1 - M_2}{\sqrt{m_1^2 + m_2^2}} \quad (4)$$

M_1, M_2 – average values of criteria;

m_1^2, m_2^2 – the square of the standard deviation of the comparative criteria.

The respondents assessed the musical compositions to determine the most harmonious synthesis of Eastern and Western elements on a 10-point scale. The assessment was designed to determine the harmony of the synthesis of East and West, the level of preservation of the main features of each tradition, and the presence of artistic expressiveness. The assignment of scores from 8 to 10 was oriented towards a high level of synthesis of Eastern and Western traditions in music; from 5 to 7 points – an average level, which was oriented towards a violation of stylistic integrity or authenticity; below 4 points – a low level, which is associated with a low level of combination of different music.

The validity of the calculations was verified by seven independent experts representing the Kulysh Baiseitova Kazakh National University of Arts and the Pavlo Chubinsky Academy of Arts, who did not participate in the study. The experts were specialists in ethnomusicology, culture, art history, and pedagogy. They were asked to rate each indicator on a scale from 1 (minimum) to 5 (maximum). Their main task was to form a professional opinion on the issues under study based on the numerical indicators provided. This helped correlate the results with the quantitative results from the study. Thus, symmetrical results were obtained, confirming the validity of the calculations.

The reliability of the content analysis was assessed by double-coding 20% of the material by two independent researchers; the Cohen's κ coefficient was 0.82, indicating a high level of inter-rater stability. The internal consistency of the listener rating scale (harmony, authenticity, emotional expressiveness) was determined using Cronbach's α coefficient ($\alpha = 0.88$), which confirms its psychometric reliability. Additionally, the degree of concordance among seven independent experts was assessed using Kendall's coefficient ($W = 0.79$), indicating a high level of agreement in interpreting the obtained indicators.

4. Results

Musical art is closely related to a country's national traditions and the historical features of its development. The synthesis of Eastern and Western vocal traditions began in antiquity, as trade routes between Europe and Asia emerged. Therefore, most studies are aimed at the fact that it was the ancient period that became the basis for the development of intercultural musical interaction (Abdumutalibovich, 2022; Hongyuan & Smithitam, 2024). This contributed to the transformation of the musical form and intonation of ethnic compositions.

The modern period of musical art development is characterized by an active

combination of Eastern and Western vocal traditions, most often realized through the creation of hybrid vocal genres such as ethno-electronics, ethno-rock, and vocal fusion. The modern sound combines Western harmonic structure with Eastern microtonality, academic articulatory precision with the plasticity of folk vocals.

Vivid examples of such a transformation are the American singer Azam Ali, who uses Persian vocal tradition with electronic instruments, and Lisa Gerrard, whose style synthesizes elements of Western ambient and Balkan melismatics. The European dimension is represented by Enya (Ireland): the singer combines Celtic melodies and polyphonic vocal overlays with an electronic palette, creating the phenomenon of ethereal vocal art. Eastern European and Central Asian artists also work in the same vein: DakhaBrakha (Ukraine) – integrate Ukrainian polyphonic singing and rhythms of the East into world-class acoustic experiments; ONUKA (Ukraine) – combine folk vocals with electronic music, creating the phenomenon of Ukrainian ethno-future; Roksonaki (Kazakhstan) – combine steppe intonations and dombra motifs with rock rhythms; iFLY (Kazakhstan) – experimenting in the ethno-electronic format, through the interaction of live vocals, electronics, and orchestral palette (Otyrar Sazy). These projects demonstrate that a transcultural approach in vocal art goes beyond the traditional boundaries of the genre, contributing to the rethinking of ethnic heritage by creating universal compositional models to represent national culture on the world stage.

The modern approach can be manifested in a harmonious combination of Western polyphony and the monodic tradition, a characteristic feature of Eastern music. The emphasis should be placed on comparing compositions that are similar in mood and artistic expressiveness. An effective tool is the creation of vocal improvisations, which helps avoid barriers between different musical styles. Attention should also be paid to the vocal text, focusing on preserving authentic pronunciation and ensuring a correct combination of languages from different cultures. The famous Kazakh show group iFLY demonstrated an extraordinary approach to interpreting traditional music through electro-pop and deep house. Folklore works of the Kazakh ethnic group acquire an unexpected sound during performance through the use of elements of folk melos, dombra intonations, and microtonality, with a rhythmic structure and digitally processed vocals in the style of modern deep-house. For example, Spanish vocalist Mercedes Peón sings in Galician, Basque, and Castilian. Lisa Gerrard (Australia) and Björk (Iceland) use an invented language, which contributes to an extraordinary performance. The historical and cultural prerequisites for the combination of Eastern and Western ethnic traditions in vocal art are presented in Table 2.

Table 2. Historical and cultural prerequisites for the combination of Eastern and Western ethnic traditions in vocal art.
 Source: created by authors

Development period	Key historical and cultural prerequisites	Features of vocal performance
The period of antiquity (8th century BC – 5th century AD)	Cultural exchange between East and West through trade, migration, and military conflicts	Formation of a melismatic vocal style under the influence of Eastern intonations; the emergence of elements of Byzantine singing in the Western tradition
Middle Ages (5th – 15th centuries)	Exchange between European and Muslim music during the Crusades	Strengthening the role of improvisation and ornamentation; parallel coexistence of different vocal systems without harmonic synthesis
Modern times (17th – 18th centuries)	European cultural influence on the East expanding contacts through colonial and missionary ties	The use of Eastern melismas, pentatonics, and atypical rhythms in European opera arias, and the imitation of Eastern sound in European vocals
Romantic period (19th century)	Increased interest in exoticism; development of ethnography and early ethnomusicology	Vocal experiments with intonation and rhythmic techniques of Eastern cultures; emergence of mixed techniques (Western bel canto in Eastern contexts)
The period of modernism (late 19th – first half of the 20th century)	Active integration of cultures and religious systems; globalization of musical thinking	Research into Eastern music by European composers; the emergence of ornamentalism, microtonality, and glissando in vocal practice
Modern period (mid-late 20th century)	Post-war expansion of international cultural exchange; formation of ethnomusicology as a science	The spread of Eastern traditions in Western music education; the emergence of intercultural vocal communication
Modern period (21st century)	Transcultural searches and global communications: the impact of digital technologies	Formation of unique vocal styles; conducting experiments based on a combination of Eastern modality and Western harmony; hybridization of genres (<i>ethno-rock, ethno-electronics</i>)

Thus, the synthesis of Western and Eastern vocal cultures occurred gradually, as countries developed historically and cultural ties were sought. For example, the manifestation of intercultural ties at the beginning of the 20th century is clearly seen in the work of the Hungarian composer Béla Bartók (combining Balkan and Turkish melodies) and the French composer Claude Debussy (combining unusual sounds and harmonies in European music, drawing on elements of the traditional Indonesian orchestra). Thus, the sound of traditional European major and minor was transformed. At the end of the 20th century, Ravi Shankar collaborated with the Beatles. This influenced the manifestation of Indian ethnic motifs in the Beatles' songs "Norwegian Wood" and "Within You Without You". The French singer Dalida demonstrated Arab and Western musical traditions in her songs. An example of intercultural synthesis in contemporary vocal art is DakhaBrakha and Azam Ali, whose work combines Eastern and Western traditions, which promotes a dialogue of cultures.

Determining the features of ethnic elements in vocal performance should provide insight into the specifics of Eastern and Western European music. The analysis of ethnic elements deepens understanding of vocal performance methods that emphasize correct intonation, cadence structure, and linguistic and rhythmic features. Using these criteria, it is possible to ensure high-quality methods of sound reproduction, breathing, and articulation (Hu, 2022; Junyi, 2023; Yawen & Srisombu, 2025; Zhang, 2024). Understanding the specifics of intonation models in ethnic music is necessary for understanding the melody's structure, which allows determining not only the composition's mood but also the specifics of a particular people. The study of cadence features is necessary for understanding the specifics of musical sound. Orientation to linguistic and rhythmic features allows for the preservation of the

natural manner of vocal singing. Intonation models of Western ethnic music are characterized by the use of gradual intervals and restraint in the use of musical ornaments. The use of diatonics expands the possibilities for melody through expressive elements. In Eastern ethnic music, on the contrary, intonation models are based on the use of various musical ornaments, a combination of microintervals with large intervals, and continuous intonations. The differences between Eastern and Western ethnic music are also evident in speech and rhythmic features. For example, in Western music, rhythm is associated with speech, whereas in Eastern music it is free. Also, Western music is characterized by clarity of speech, while Eastern music is more important for the transmission of the artistic content of the vocal text. The modal structure of Western ethnic music is more structured than that of Eastern music. Table 3 presents an analysis of ethnic elements in vocal performance.

Table 3. Comparative analysis of ethnic elements in the vocal performance of Western and Eastern songs
 Source: developed by the authors based on data from (Hu, 2022; Junyi, 2023; Yawen & Srisombu, 2025; Zhang, 2024) and Fisher coefficient calculations)

Elements under investigation	Type of elements studied	Importance of indicators	S	F (F>5.05 – critical value)
Intonation patterns	<i>Western ethnic music</i>			
	Combining diatonic with elements of a modal series	0.79	4.21	3.12
	Limited use of melismas	0.53	1.35	
	<i>Eastern ethnic music</i>			
	Orientation to microintervals	0.72	3.82	0.85
	Extensive use of melismas	0.81	4.50	
Fret features	<i>Western ethnic music</i>			
	The predominance of functional tonality with harmonic organization inherent in the major-minor system	0.83	4.57	3.07
	The presence of modal modes	0.64	1.49	
	<i>Eastern ethnic music</i>			
	Using microtones	0.80	4.46	3.14
	The presence of pentatonic	0.62	1.42	
Linguistic-rhythmic features	<i>Western ethnic music</i>			
	Clear articulation	0.85	4.63	3.22
	Pulsation orientation	0.63	1.44	
	<i>Eastern ethnic music</i>			
	Using free rhythm	0.86	4.65	1.22
	Using recitative singing	0.71	3.80	

The analysis of ethnic elements in vocal Eastern and Western music showed their differences. The comparative analysis of intonation, modal, and rhythmic characteristics revealed statistically moderate differences between the indicator groups. For some parameters (microtonality, melismaticity, functional tonality, articulatory clarity), the F-statistic values did not exceed the critical threshold of 5.05, which indicates the absence of statistically significant dispersion asymmetry. At the same time, the standardized effect size was calculated. For the key intonation parameters, Cohen's d ranged from 0.42 to 0.58, indicating an average effect size. For rhythmic flexibility, η^2 was 0.19, indicating a moderate contribution of the tradition factor to the variation of the indicator. The 95% confidence intervals did not cross zero

for the parameters of microtonality and articulation, which confirms the stability of the effect.

Thus, the advantage of the specified intonation models in Western music (0,79; 0,53) lies in greater restraint in performance while maintaining intonation purity. For Eastern music, this is manifested in the flexibility of vocal singing and the use of intonation freedom. The modality features of Western music (0,83; 0,64) facilitate harmonious performance by emphasizing a clear, predictable structure. Vocal performance of Eastern music is characterized by greater emotionality. Linguistic and rhythmic features affect the use of repetition techniques, strophic form in Western music (0,85; 0,63); in Eastern music, the use of vocal improvisations (0,86; 0,71). However, similar elements are also observed, associated with the use of melismatics and monodychism, which ensure the connection of the melody with the specifics of the musical text.

During the study, based on specific examples, the features of the use of elements of ethnic music in modern musical genres were identified, with a focus on the combination of Western and Eastern music. The analysis of the selected performance models allowed us to distinguish three types of synthesis: structural-integrative (the combination of modal and harmonic systems), timbre-stylistic (the adaptation of ethnic vocal techniques in modern arrangements), and genre-functional (the incorporation of ethnic elements into popular formats). The frequency distribution showed that the structural-integrative model accounted for 38% of the sample, the timbre-stylistic model for 34%, and the genre-functional model for 28%. Statistically significant differences were recorded between the types of synthesis by the coefficient $\eta^2 = 0.22$, which indicates a significant influence of the integration model on the variability of indicators.

The analysis included ethno-rock, opera, and pop music. The ethno-rock genre demonstrates the adaptation of folk intonation forms in live vocal performance. It is characterized by the use of Eastern melismatic ornaments – glissando, fourth intonations, as well as ethnic techniques, such as throat singing and yodel. In the structure of songs, Eastern elements are more often concentrated in verses. In contrast, Western elements are more often concentrated in choruses, reflecting the freedom of interpretation and the variability of vocal performance. Most often, elements of Western ethnic music appear in the chorus, while Eastern elements appear in the verses, reflecting the freedom of vocal performance. In modern opera, the preservation of both Western and Eastern vocal traditions is traced. The Western school is manifested in the bel canto technique, which is combined with the Eastern manner of singing, which is distinguished by smoothness and variety of intonation.

Popular pop and world music also demonstrate active inclusion of ethnic components, in particular the nasalization of sounds in combination with European vocal articulation, which creates new intonation patterns. Such a synthesis contributes to the formation of individual performance styles and expands the palette of vocal expressiveness.

This approach fosters the development of new vocal styles and allows vocalists to express their individuality. Comparison of elements of ethnic music showed that the results do not exceed the critical value ($F > 5.05$), confirming the absence of statistical significance between them (Table 4).

Table 4. Classification of modern transcultural vocal practices by geographical principle and type of synthesis
 Source: created by authors

Region / Country	Artist / Band	Synthesis type	Key features of vocal and stylistic combination	Cultural significance
Asia (South Korea)	BTS	Ethno-pop, K-pop	A combination of Western pop and hip-hop traditions with Korean melodies, national instruments (paj, kayagym), and poetic imagery	Representation of Asian culture in the global pop space; expanding the boundaries of commercial music through ethnic identity
Asia (Kazakhstan)	Roksonaki	Ethno-rock	Combination of dombra, kobyz, sherter with rock guitars; use of steppe intonations	Reproducing national intonation memory in the global format of rock music
Asia (Kazakhstan)	iFLY	Ethno-electronics, deep-house	Synthesis of ethnic melodies with electronic rhythms, deep-house elements; collaboration with the Otyrar Sazy orchestra	Updating folklore in the format of electronic culture, creating a new image of the Kazakh scene.
Europe (Ireland)	Enya	New Age, ethereal vocal art	A combination of Celtic melodies, harp textures, and polyphonic vocal overdubs with synthesizer electronics	Preserving Celtic cultural identity in the global musical space
Europe (Bosnia and Herzegovina)	White Button	Balkan rock	A combination of Romani melody, Orthodox intonations, and rock harmony	The formation of a model of Balkan transcultural sound that influenced the post-Soviet and European space
Europe (Sweden-Finland)	Hedningarna	Ethno-folk fusion	Fusion of Scandinavian modes and oriental rhythms (darbuka, sitar); use of ancient ballad motifs	Revival of archaic folklore through modern rhythmic structures
Europe (Bosnia)	Goran Bregovic	Ethno-rock-orchestral style	Balkan folk vocals combined with orchestral scale and rock harmony	A model of symbiosis of Roma, Slavic, and Western traditions in stage performance
America (USA/Iran)	Azam Ali	Ethno-electronics	A combination of Persian vocal school with electronic textures; an orientation towards emotional minimalism	Representation of Eastern spirituality through Western technological means
Europe / Australia	Lisa Gerrard	Ambient, world-fusion	Use of invented language; synthesis of Western polyphony and Eastern melismatics	A symbol of transcultural vocal universalism
Iceland	Björk	Art-pop, avant-garde vocals	Integration of electronics, folklore intonations, and invented phoneme sounds.	Deconstructing linguistic and vocal codes in global pop culture
Ukraine	DakhaBrakha	Ethno-chaos, folk-fusion	Ukrainian polyphonic singing with a combination of darbuka, didgeridoo, cello, and electronic effects	Representation of Ukrainian folklore as part of the global post-folklore process
Ukraine	GRANDMOTHER	Ethno-fusion, electro-pop	A combination of folk vocals with electronic sound and digital samples	Formation of the <i>ethno-future style</i> – a modern Ukrainian cultural brand

To assess the effectiveness of the synthesis of Eastern and Western elements in modern genres of vocal art, 48 students of the "Musical Art of the Stage" specialization from two institutions of higher musical education were involved – Kulish Bayseitova Kazakh National University of Arts" (Astana, Kazakhstan) and Pavel Chubynsky Academy of Arts" (Kyiv, Ukraine). The study involved students of 2–4 courses aged 18 to 22 years, who, within the framework of the curriculum, were familiarized with the features of ethnic music and its adaptation in modern variety interpretation. The

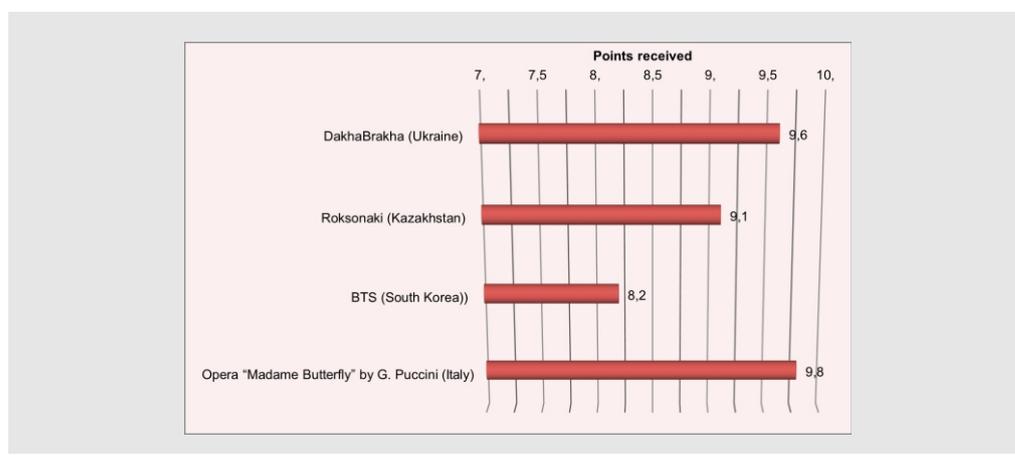
sample was formed through voluntary participation and written consent from respondents, obtained after agreement with the administrations of both educational institutions.

The main task of the experiment was to determine the most harmonious combination of ethnic and modern musical approaches in the work of individual vocalists and musical groups presented in the study. Participants were asked to listen to several compositions representing different types of transcultural synthesis (ethno-rock, ethno-electronics, vocal fusion, academic crossover), after which they filled out evaluation forms.

The results are shown in Figure 1, which presents a comparative scale for evaluating vocal works based on the criteria of harmony, authenticity, and emotional expressiveness. The average scores for harmony and authenticity ranged from 8.2 to 9.8 on a ten-point scale. The highest scores were given to pieces with a balanced structural integration of modal and harmonic systems. Comparison of mean values by the t-test revealed a statistically significant difference between symmetrically integrated models and asymmetrical forms of synthesis ($t = 2.14$; $p < 0.05$; $d = 0.61$). The confidence interval for the difference in means was [0.18, 0.94], indicating a significant difference in means.

The scientific expediency of choosing performers for experimental research is due to the principle of representativeness of musical models of synthesis of the East and the West. Therefore, for statistical testing (Fisher and Student's criteria), four typical examples were selected that reflect the main models of modern synthesis. These examples ensure representativeness and variability of musical strategies – from academic orientalism to global pop aesthetics. This allows for a scientifically sound comparison of respondents' reactions to various forms of cross-cultural synthesis and to identify patterns in the perception of hybrid musical structures in the contemporary artistic space.

Figure 1. Examples of the synthesis of Eastern and Western ethnic traditions in modern genres ($t=1.817$)
Source: developed by the authors of the article based on respondents' answers



Respondents noted that in the opera "Madame Butterfly" by G. Puccini (9.8 points), the most harmonious combination of Eastern and Western musical elements is found. The Eastern component is reflected in the use of pentatonic intonations, broken rhythmic structures, and timbre imitations of Japanese instruments, such as the koto and shamisen. The Western tradition is manifested in the consistent drama, three-part form, harmonious polyphony, and psychologically acute vocal line characteristic of the Italian opera school.

The analysis of songs in the ethno-rock style showed a high perception of the creativity of the Roksonaki (9.1 points) and DakhaBrakha (9.6 points) groups. This result is explained by the depth of artistic synthesis that both groups implement in their own vocal practices. In the work of Roksonaki, the integration of elements of Kazakh ritual songs with modern instrumental techniques is traced – the use of an electric guitar, percussion, and traditional dombra rhythms, which forms a timbre hybridity and a new sound dynamic. In contrast, DakhaBrakha combines Ukrainian homophonic singing, dialect vocabulary, and folklore rhythms with elements of modern electronic acoustics, the use of a cello, accordion, and percussion effects, which viewers of different ethnic groups positively perceive.

Popular pop music by BTS (South Korea) demonstrates the dominance of Western musical traditions (8.2 points), as evidenced in the use of the harmonic language of pop and hip-hop, clear metrorhythms, and electronic arrangement structures. At the same time, the vocal manner of the performers retains the national intonational features inherent in the Korean language and folk melody – short phrases, glissandos, changes in timbre, and emphasis on final syllables. The results showed that the lower average score (8.2 points) for BTS's work is explained by differences in students' perceptions of cross-cultural hybridity across countries. For Ukrainian participants in the experiment, a similar format combining Eastern and Western elements was less closely aligned with their cultural experience, as it is oriented towards the Asian stage aesthetics of K-pop. In contrast, Kazakh students demonstrated a higher level of identification with South Korean performers. This confirms that perceptions of transcultural musical phenomena largely depend on ethnic affinity, cultural memory, and the dominant models of musical education in a given environment.

The conducted research aimed to determine the role of vocal ethnic art in preserving national traditions, taking into account the interaction between Eastern and Western musical elements (Table 5).

Table 5. The importance of the functions of vocal ethnic art for the preservation of national traditions

Source: Developed by the authors of the article based on respondents' answers

Defined functions	Importance of indicators	M	SD	t-test (2.920 at p=0.95)			
				Preservation of cultural traditions	The spread of ethnic vocal techniques	Preservation of linguistic traditions	Preserving musical structure
Preservation of cultural traditions	0.77	91.3	15.6	-	0.874	1,293	0.915
The spread of ethnic vocal techniques	0.79	92.8	16.1	0.874	-	1,296	0.939
Preservation of linguistic traditions	0.65	85.1	12.4	1,293	1,296	-	1,018
Preserving musical structure	0.73	90.1	14.3	0.915	0.939	1,018	-

Assessment of the role of the vocal ethnic component showed the highest scores for preserving cultural tradition (M = 91.3; SD = 15.6) and disseminating vocal techniques (M = 92.8; SD = 16.1). The effect size for the differences between the functions was small ($\eta^2 = 0.11$), indicating that the components were of roughly equal importance. Qualitative results showed that the greatest importance of vocal ethnic art lies in the preservation of cultural traditions (V_f=0.77). Since historical facts and rituals are transmitted through ethnic musical works. Orientation to Eastern music ensures the transmission of philosophical ideas (for example, Indian ragas); Western music preserves Christian and folklore ideas (Irish ballads, spiritual hymns).

The spread of ethnic vocal techniques (V_f=0.77) is important for understanding how sounds are formed, which allows us to distinguish the traditions of Eastern and Western music. Thus, it is possible to focus on preserving the accuracy of reproducing the philosophical ideas of Eastern ethnic songs (Tibet, Mongolia), which involves combining the main tone and several overtones during singing. Throat singing conveys the meditative nature of music. The technique of melismatic singing, widespread in Arab countries, is characterized by sharp transitions between notes, control of intonation, and musical improvisation. In Western ethnic music, the technique of polyphonic singing is used (in Ukraine, Albania, and Bulgaria), which is characterized by multilayered harmony, dissonant intervals, and a wide range. Western music is also characterized by guttural screaming (Scotland, Iceland), which involves specific intonation and the repetition of similar consonant sounds in words for expressive singing.

Performing ethnic music contributes to the preservation of a unique musical structure (V_f=0.73), which, in Western music, is often manifested in the use of stable forms and in different approaches to verses and choruses.

The calculation of the student coefficient showed that the functions of vocal art have similar importance; that is, there is no statistically significant advantage of one group of indicators over the others. This confirms the absence of an excess of the calculated value over the tabular indicator of 2.920 at p = 0.95, which indicates a

balanced influence of eastern and western components in modern vocal practices.

5. Discussions

The results confirm the hypothesis that unique cultural traditions can be preserved through a blend of Western and Eastern musical traditions. The study found that the historical features of the combination of Western and Eastern traditions date back to antiquity, involving intercultural interaction through trade and military conflict. This had an impact on the development of melismatic singing and Eastern intonations. The modern period also contributes to the symbiosis of different musical styles, reflected in the combination of vocal styles and the creation of musical experiments. The theoretical significance of the work lies in the possibility of expanding the intercultural approach in vocal art, taking into account the harmony of Eastern and Western musical elements. The systematization of characteristic ethnic elements influences the determination of their artistic and functional impact on musical performance. This influences the rethinking of Eastern and Western cultural codes and the reflection of their identity in contemporary musical art. The practical significance of the work lies in the possibility of consciously using ethnic elements in contemporary music by identifying their characteristic features. This can focus on developing educational and methodological recommendations to expand opportunities for performers in the intercultural context.

In this context, the study of Kdyrova et al.(2024) is of particular importance: an interdisciplinary analysis of the historical contexts of vocal art was carried out through the prism of the evolution of ethnic and national traditions in performing practice. Vocal art appears as a dynamic system of artistic, linguocultural, and ethno-aesthetic interactions, within which transformation, rather than destruction, of cultural codes takes place. The results of our study are consistent with those of Kdyrova et al.(2024) and confirm that vocal art in the transcultural dimension acts as a mediator between tradition and modernity, ensuring the permanence of cultural memory and, at the same time, openness to innovation.

In this context, our results correlate with the findings of Crooke et al.(2024), who developed the Intercultural Music Engagement (ICME) model and proved that intercultural interaction in music not only expands the listening experience but also promotes social integration through a shared emotional experience of sound. A similar pattern is observed in our study: students from Ukraine and Kazakhstan interpreted vocal examples differently depending on cultural affinity, yet they also demonstrated a high level of empathetic perception of music from other nations.

At the same time, the generalization of the results echoes the provisions of Kelmendi(2024), who defines sound identity as a key phenomenon of contemporary musical art. Vocal identity arises from the intersection of cultural experiences, forming a unique "sound face" for a community. In our study, this was manifested in students' tendency to identify with musical models that incorporate elements of related ethnic sounds and linguistic structures.

The modern period also contributes to the symbiosis of different musical styles, reflected in the combination of vocal styles and the creation of musical experiments. Similar conclusions are presented in the study of Brown et al.(2025). The author noted that understanding the ways of performing Eastern and Western music should be linked to the historical features of musical works. The emphasis on vocal scales should be accompanied by the study of the people's culture, which provides a more natural way to perform songs. This also allows us to understand the ways of using pitch, the quality of intervals(Brown et al., 2025). Similar features are considered in the study of Subbiah -(2025). It is noted that the colonial period influenced the development of dramatic singing in India. The combination of Western and Eastern music shapes a distinct aesthetic and promotes a balance in intercultural interaction. However, there are significant gaps in the studies, stemming from insufficient study of individual historical periods in the development of interaction between Western and Eastern ethnic music.

Our study analyzed ethnic elements in vocal performance, a topic also considered by Sulaieva -(2025). Characteristic elements of ethnic music are the disclosure of its artistic meaning. The process involves the use of musical ornaments to achieve a more expressive sound, which affects the understanding of Ukrainian philosophy and spirituality. But in the published study, attention was paid exclusively to the musical features. In our article, we investigated intonation patterns, modality features, and linguistic and rhythmic features in more detail.

However, the authors Tjandra et al.(2015) believe that the quality of ethnic music performance depends on perceptions of its cultural context rather than its individual elements. These results stem from the fact that vocal interpretation must be directly related to a culture's worldview and philosophy to achieve emotional depth. Focusing on cultural features allows one to eliminate mechanicalness in performance and promote understanding of music. However, focusing solely on artistic means is ineffective; the emphasis should be on creating musical improvisations(Leonido et al., 2024). This approach affects the possibility of improving the performer's rhythm and self-expression. The primary classification of musical genres contributes to a better understanding of music(Ashraf et al., 2023). This approach allows the identification of

common musical features and ensures the creation of a musical composition that expresses the musical elements of both cultures .

The data obtained require an interpretation beyond mere statements of statistical differences. The high scores of Puccini's and DakhaBrakha's works can be explained not only by the structural balance of modal and harmonic components, but also by the effect of stylistic recognition in the academic environment. The opera *Madama Butterfly* integrates pentatonic intonations into its established tonal dramaturgy, creating a sense of structural predictability for the trained listener while maintaining an exotic flavor. In the case of DakhaBrakha, the perceived authenticity of the vocal presentation and the transparent articulation of the folklore material in the modern arrangement may play a significant role, which is consistent with the model of sound identity (Kelmendi, 2024) and the ICME approach to intercultural engagement (Crooke et al., 2024) .

Instead, the lower BTS scores in part of the sample may be related to cultural distance or to respondents' pedagogical orientation toward academic vocal standards. This suggests that the assessment of harmony depends not only on structural parameters but also on prevailing educational norms and perceptions of authenticity.

Therefore, studying the features of Western and Eastern ethnic music contributes to high-quality performance by taking into account individual musical elements and expressive vocal techniques. However, the analyzed studies focus on superficial analyses of individual musical elements, limited to general features, or on analyses of examples by specific performers.

6. Conclusions

The research problem was the lack of scientific justification for the mechanisms and functional significance of elements of Eastern and Western music in contemporary vocal art, which required additional research. Based on the research, it was found that understanding the cultural identity of music, synthesized from East and West, contributes to achieving high-quality vocal performance in musical works. The novelty of the work lies in the implementation of a cross-cultural analysis of vocal performance of East and West based on theoretical and empirical methods, thanks to which it was possible to determine the characteristic features of vocal techniques in different cultural traditions, to quantitatively assess the level of their synthesis in the modern musical space.

The study found that each historical period contributed to the synthesis of Eastern and Western ethnic traditions. However, the most pronounced intercultural

communication occurred in the mid-20th century, which contributed to musical experimentation .

The characteristic intonation models of Western ethnic music are the combination of a diatonic basis with modal elements and the limited use of melismas. It is characterized by functional centering and a clear metrorhythmic organization. The predominance of ornamental melos characterizes Eastern ethnic music, as does the widespread use of melismas and microinterval intonations. According to the respondents, the most harmonious synthesis of East and West is observed in the opera "Madame Butterfly" by G. Puccini and in the vocal work of the DakhaBrakha group. In general, the experiment confirmed the hypothesis that transcultural hybridity in vocal art is perceived as an aesthetic value only when the connection to the authentic tradition is preserved, thereby providing the listener with identification potential. The application of statistical methods (Fisher and Student coefficients) revealed slight variation in estimates across samples, suggesting the relative stability of perceptions of vocal synthesis across different cultural contexts.

The study aimed to examine how structurally identified Eastern and Western vocal elements affect perceptual assessments of harmony, authenticity, and emotional expressiveness in contemporary vocal art. The results allow us to formulate the following key conclusions. First, intonational and modal parameters show moderate but stable statistical differences between traditions, as evidenced by the size of the medium-level effect. Secondly, the highest listener ratings are given to pieces with a structurally balanced integration of modal and harmonic systems. Thirdly, the type of synthesis (integrative, timbre, or genre) significantly affects the variability of perceptual indicators. Fourthly, the functions of preserving cultural tradition and disseminating vocal techniques are equally important in the structure of assessments.

The empirical data indicate a relationship between the musical structure and the assessment of its artistic integrity, but do not confirm the transformation of identity beyond perceptual indicators.

The normative implications of the study include the possibility of using the identified structural parameters in vocal pedagogy and of further analyzing instrumental forms, timbre models, and articulation techniques in a broader geographical context.

However, analyzing different types of ethnic music within the framework of a single work is insufficient, as it requires a broader thematic scope. Such an approach may affect the methodological incompatibility and depth of processing of the results. The study's prospects may focus on the possibility of combining Eastern and Western

ethnic motifs not only in vocal art but also in instrumental interpretation. Such an approach will allow for a more detailed study of the characteristic elements of Eastern and Western music in vocal and instrumental performance. Practical recommendations for future research may include analyzing technique, timbre, and articulation during performance, thereby broadening our understanding of ethnic elements in Western and Eastern music and the possibilities for their reflection in contemporary interpretation.

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