

Advanced String Instruments in the Musical Culture of Kazakhs, Kyrgyz, and Uzbeks

Instrumentos de Cordas Avançados na Cultura Musical dos Cazaques, Quirguizes e Uzbeques



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Abstract: The study's relevance lies in exploring the significance, uniqueness, preservation, and popularization of the unique art of interpretation on stringed instruments in Central Asia, including modified ones, in the modern world. The study aims to examine the features of using the "prima-kobyz" and advanced string instruments in contemporary musical art in Kazakhstan and among Turkic peoples (Kyrgyzstan, Uzbekistan). The methods employed include analysis, comparison, and synthesis. The study identified several aspects: understanding the fundamental properties of instruments (timbre, sound formation, tuning, production resources, form), examining their reconstruction process (establishing uniform temperament, introducing metal strings), and illuminating the principles of preserving traditions of oral professional and folk music by modern composers. It also revealed the features of performance practice on stringed instruments in Central Asia, noting the technical potential and versatility of the "prima-kobyz" in translating large-scale compositions, including Concerto No. 1 by A. Zhaiym. The study noted the outcomes of modernizing ancient stringed instruments. Positive outcomes include broad coverage of classical and modern global repertoire, concert, ensemble, and orchestral functions. Negative outcomes include the disappearance of the authenticity of sound and unique timbral color. The study highlighted the significance and demand for parallel development of performing skills on authentic and reconstructed folk instrument models. The practical importance of this study lies in its relevance to fields such as musicology, cultural studies, history and theory of professional music in oral tradition, music education, and solo, ensemble, and orchestral performance on folk instruments.

Keywords: uniform temperament. chromatic scale. metal strings. model reconstruction. ethnic culture.

Resumo: A relevância do estudo reside em explorar a significância, singularidade, preservação e popularização da arte de interpretação em instrumentos de cordas na Ásia Central, incluindo os modificados, no mundo moderno. O objetivo do estudo é examinar as características do uso do “prima-kobyz” e instrumentos de cordas avançados na arte musical contemporânea no Cazaquistão e entre os povos turcos (Quirguistão, Uzbequistão). Os métodos empregados incluem análise, comparação e síntese. O estudo identificou vários aspectos: compreensão das propriedades fundamentais dos instrumentos (timbre, formação de som, afinação, recursos de produção, forma), exame do processo de reconstrução (estabelecimento de temperamento uniforme, introdução de cordas metálicas) e preservação das tradições da música profissional e folclórica oral por compositores modernos. Também revelou as características da prática de performance em instrumentos de cordas na Ásia Central, destacando o potencial técnico e a versatilidade do “prima-kobyz” em composições de grande escala, como o Concerto No. 1 de A. Zhaiym. O estudo notou os resultados da modernização de instrumentos de cordas antigos. Resultados positivos incluem ampla cobertura do repertório clássico e moderno global, funções de concerto, conjunto e orquestra. Resultados negativos incluem o desaparecimento da autenticidade do som e da cor timbral única. O estudo destacou a importância e a demanda pelo desenvolvimento paralelo de habilidades de performance em modelos autênticos e reconstruídos de instrumentos folclóricos. A importância prática deste estudo reside em sua relevância para campos como musicologia, estudos culturais, história e teoria da música profissional na tradição oral, educação musical e performance solo, de conjunto e orquestral em instrumentos folclóricos.

Palavras-chave: temperamento uniforme. escala cromática. cordas metálicas. reconstrução de modelos. cultura étnica.

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1. Introduction

The relevance of examining the subject of this study is determined by the necessity to illuminate the special role and significance attributed to one of the oldest, well-known, and popular instruments in the Central Asian region – the kobyz, and the varieties of stringed instruments, among which the leading ones are the prima-kobyz, prima-kyiak, and ghijak. The research problem lies in revealing the phenomenon of enhanced stringed instruments in Kazakhstan, Kyrgyzstan, and Uzbekistan, as one of the key components of the modern musical art system of Central Asia and the world at large. These instruments not only preserve the foundations of national traditions but also enrich the artistic creativity of humanity in the era of globalisation (Karshibaevna et al., 2022; Studinski, 2023).

The use of the Kazakh prima-kobyz and enhanced stringed instruments in the musical culture of the present day (including among Kyrgyz and Uzbek people) has its own features. Various modern researchers address certain aspects of their functioning. For instance, Karsakbayeva and Jumaniyazova (2020) explore the historical path of the unique and distinctive school of kobyz playing. They emphasise the special role of the method of tradition continuity, passed orally from mentors to students for centuries. They also highlight a new chapter in the artistic and technical evolution of Kazakh national performance related to the use of musical notation in teaching the basics of kobyz interpretation and the modernisation of this instrument, which entails the need to create an updated system of strokes and rules for their use when playing.

The process of making the prima-kobyz by modern masters is examined. One of them, Petr Kruch, uses components such as Canadian spruce, Caucasian maple, walnut, Indonesian rosewood, African blackwood, and others. Moreover, the goal of creating a new model of prima-kobyz is illuminated. As Kungurtsev (2018) testifies, “prima-kobyz is a variety of kobyz specially developed for

performances in orchestras and other ensembles by the People's Artist of Kazakhstan Akhmet Zhubanov".

Kongyratbay (2023) emphasises the relevance of studying a wide range of issues related to the traditions of using kobyz in the musical culture of Turkic peoples. These issues include: revealing methodological aspects related to finding and defining typical features of the historical prototype of the modern instrument, described in "Grandfather Korkut's Book"; investigating the geography of kobyz distribution in past centuries; comprehending the image and activities of Korkut as a legendary pan-Turkic figure; shedding light on a genre branch of Kazakh folklore, such as legend; examining the processes of developing playing techniques (from saryn to kyu). According to the researcher, musical instruments akin to the term "kobyz" gained popularity not only among Kazakhs but also among Turkic and Slavic peoples. He concludes that the term "kobyz" in the Middle Ages served to denote a musical instrument in general, and later, it came to indicate chordophones (plucked and bowed instruments).

Yeginbayeva (2020) explored the processes in the musical culture of Kazakhstan from the perspective of the rich variety of events in the global context of social life over the past 20 years. According to her, the foundation for the development and prosperity of national culture (as well as the economy, politics, sociology) is the independence gained by the Kazakh people in the early 1990s. This fact served as a stimulus for the in-depth, multifaceted study of the centuries-old culture of the ethnic group, particularly the art of playing the kyl-kobyz. The researcher notes that modern music intended for performance on the kyl-kobyz is extremely enriched with elements of European genres, styles, techniques, and has become the basis for genres such as ethno-rock, art-rock, and folk. This reveals, on one hand, the rich potential of the kyl-kobyz as a unique instrument of the Central Asian peoples, and on the other hand, raises questions about preserving the authenticity of its sound for future generations.

Rancier (2014) covered the Kazakh “two-string violin kyl-kobyz”, the strings of which are made from horsehair. Such instruments belong to the early types that reflect the general historical, social, cultural, and psycho-emotional context of the formation of the modern instruments among several Central Asian peoples (Kazakhstan, Kyrgyzstan, Uzbekistan). This is extremely important for contemporary performers as it contributes to preserving ethnic traditions and, thus, the national identity of the Kazakh people in the process of interpreting music. Professor Utegalieva (2016) conducted a computer analysis of the musical scales on the Kazakh dombra and kyl-kobyz, which have fixed (dombra) and free (kyl-kobyz) tunings. This analysis was conducted using the computer programme SPAX (Haruto).

Yerzhanov and Yeginbaeva (2019) investigated the history of the development and modernisation of the Kazakh folk bow instrument (kobyz), based on the works of ethnographers. In particular, the objective study of the leading types of the instrument, its technical resources, and the system of sound extraction techniques are significant. The question of adapting the kobyz to the conditions of new musical sounds in the 20th-21st centuries, in the context of the classical composition of the symphonic orchestra and solo performance, is considered. Therewith, the importance of folk origins and, above all, forms and genres of professional music of the oral tradition of the Turkic peoples of Central Asia, in which the role of improvisation, original ornamentation of melodic-thematic models is so great, has manifested itself widely and in many ways in the music of composers of Kazakhstan, where modernity is combined with antiquity.

Nevertheless, the problem under study still awaits its comprehensive and multifaceted exploration. An attempt to do so is made in this paper. The purpose of the study is to examine the kyl-kobyz and improved stringed instruments in the sphere of modern musical art of the Central Asian peoples (Kazakhstan, Kyrgyzstan, Uzbekistan). The study focuses on the interconnections

between these phenomena, presenting the researched subject as a complex phenomenon of contemporary musical culture.

2. Materials and methods

This study employed methods such as analysis, comparison, generalisation, and synthesis. The method of analysis was applied because the problem explored in this paper required comprehensive examination as a multifaceted yet integral phenomenon, encompassing a range of fundamental components. This method helped determine the number of categories (key aspects) of the problem related to the use of the prima-kobyz and other stringed instruments in the contemporary musical culture of Kazakhstan and neighbouring countries (Kyrgyzstan, Uzbekistan). The method of comparison was necessary to shed light on the identified categories (key aspects) of the system, constituting the object of the study, in terms of their content, role, and functions in the overall context. This method facilitated the directionality of each category (key aspect) of the researched subject and their distinctive features and naming, in accordance with their content and functional significance. The method of generalisation was applied to establish elements capable of uniting the identified categories (key aspects) through their inherent commonalities alongside differences. It served as the foundation for the subsequent method (synthesis), the task of which was to illustratively depict the usage of kobyz and its varieties in the musical practice of Kazakhstan and Turkic peoples (Kyrgyzstan, Uzbekistan), portraying it as a complex multi-vector phenomenon in contemporary performing arts. The synthesis method served as a way to panoramically present the examined problem as a structure that unifies all its categories (key aspects) into a unified whole, functioning due to their continuous interaction. This method provided the opportunity to reveal and scientifically substantiate the phenomenon of using kobyz and its varieties in the context of the contemporary musical culture of Asian peoples (Kazakhstan, Kyrgyzstan, Uzbekistan) as a holistic and comprehensive system, synthesising all previously identified

categories (key aspects) based on their direct interaction, which, in turn, was determined by the role of each of them within the scope of the extensive object of this study.

The materials of the paper included data related to the compositional and performance artistry of representatives of Kazakhstan's and Central Asian Turkic peoples' musical arts (Kyrgyzstan, Uzbekistan). In particular, the foundation consisted of such a branch of the mentioned field as the skill of interpreting works of various genres and forms on the prima-kobyz, as one of the modifications of the ancient Turkic ethnic group's more ancient instrument, kobyz, as well as on prima-kyzak and ghijak. The sources also included information about the historical path of stringed instruments in Central Asia (Kazakhstan, Kyrgyzstan, Uzbekistan), their differences and similarities, and the consequences of radical modernisation (introduction of equal-tempered tuning and metal strings). Video recordings of performances on prima-kobyz, prima-kyzak, and ghijak playing music created in the present period, considering the reconstruction of the national instrument and transformations in its sound, played a crucial role as material for investigating the problem. Through their application, the analysis of studies from the contemporary academic compositional school of Kazakhstan (A. Zhaiym) was conducted. This analysis contributed to the understanding of the mechanisms of transformation based on the national art form into the most significant and complex form (cyclic sonata) in the history of global classical instrumental creativity.

3. Results and discussion

3.1 The nature of the kobyz (leading properties of the instrument)

In examining the functioning of the kobyz in the creative practices of the peoples of Asia (Kazakhstan, Kyrgyzstan, Uzbekistan), it was disclosed that one of the most well-known and prominent representatives of stringed instruments in Kazakhstan and its

neighbouring states serves two parallel functions. One of them involves preserving the authenticity of the sound of professional music in oral tradition and folk samples by using the ancient model of kobyz (its strings are made of horsehair). The other is based on realising the potential of the modernised type of kobyz (its strings are made of metal) by actively participating in the folk instrument orchestra and positioning it as a solo concert instrument. In this paper, the explored subject represents a complex and holistic phenomenon containing several key categories related to areas such as performance, compositional practice, mastering various genres and forms of academic creativity. Figure 1 shows the prima-kobyz in modern musical culture.

Figure 1 - Prima-kobyz in modern musical culture



Source: compiled by the authors

The process of investigating the unique properties of kobyz, as one of the leading representatives of the stringed instrument group in Asia (Kazakhstan, Kyrgyzstan, Uzbekistan), contributed to the disclosure of its qualities such as: the incomparable soft timbre “konyr” (formed within the sound system of Turkic peoples); the

principle of sound production on kobyz, capable of imitating sounds of the surrounding environment (wind, rain), voices of birds and animals, human speech (in various emotional states). The following aspects were also highlighted: the type of the instrument (a bowed bowl-shaped lyre) to which kobyz belongs; its manufacturing form (materials and their qualitative characteristics); and the musical tuning system it possesses (more differentiated than on the dombra); the factors (changing the length indicators of one or several strings; the acoustics of the surrounding environment) leading to the appearance of a whole range of harmonics during play on the instrument. Distinctive features of the traditional model of kobyz and its updated version as prima-kobyz were identified. The timbre of the former is perceived as velvety, soft, and warm in its sound (“qonır dawıs”). The timbre of its reconstructed model is characterised by the brightness of sound, with a light and slightly cool shade. Preserved from ancient times are playing techniques on kobyz: the harmonics-nail method of sound extraction and the vertical placement of the instrument during play. Related to the widely popular Kazakh instrument are the Kyrgyz (kyiak) and Uzbek (kubyz) stringed instruments. The Kyrgyz one has a ladle-like shape (Figure 2), made from apricot or walnut trees, and a bow (kamoncha) made of tabylga (a mountain plant of Central Asia). Its reconstruction was performed in the 1930s (Kyrgyzstan), as a result of which it became an integral part of the national instrument orchestra and acquired its varieties such as prima-kyiak (Figure 3), alto-kyiak, bass-kyiak, and double bass-kyiak.

A similar instrument is the komuz (an ancient three-stringed plucked chordophone with two bourdon strings and one melodic string) with a pear-shaped body and a long neck (a type of lute). The Uzbek kubyz was mainly found in the regions of Fergana and Bukhara, as well as in the Surkhandarya and Kashkadarya regions of Uzbekistan. It was popular among the local population as a musical instrument designed for performing folk melodies, motifs, entertaining tunes, and larger forms of professional music in the oral tradition. Also known in the musical culture of Uzbekistan is

the ghijak (bearing a resemblance to the popular kamancheh in the Caucasus). Its updated model, like the modernised prima-kobyz, has four strings tuned in fifths (Figure 4). The reconstruction of this instrument took place in the 1940s and gave rise to instrument variations such as ghijak-prima, ghijak-alto, ghijak-bass, and ghijak-double bass.

Figure 2 - Stringed instrument of Kyrgyzstan – Kyiak



Source: compiled by the authors

Figure 3 - Reconstructed version of the instrument – Prima-kyiak



Source: compiled by the authors

Figure 4 - Ghijak – stringed instrument of Uzbekistan



Source: compiled by the authors

All the mentioned instruments, to some extent, underwent modernisation (introduction of equal temperament, use of metal strings) throughout the 20th century and became an integral part of ensembles and larger groups (orchestras) with a wide variety of genres and rich stylistic repertoire.

3.2. Reconstruction (kobyz modernisation process)

The leading historical milestones on the path of modernising the national stringed instrument belonging to the culture of Kazakhstan and neighbouring Turkic peoples (Kyrgyzstan, Uzbekistan) were identified. The first stage of kobyz reconstruction dates back to 1934 since this period is marked by the organisation of the folk instrument orchestra under the Kazakh Central Executive Committee (founded by artistic director and chief conductor Zhubanov). It was during this time that the process of establishing tempered tuning on the kobyz began (by craftsmen Romanenko and Kasymov under the guidance of Zhubanov), the presence of which contributes to the harmonious and unified sound of the folk instrument orchestra (Zhumabekova and Yeginbaeva, 2019).

Modernisation of the kobyz, the Kyrgyz kyiak, and Uzbek ghijak, through adaptation based on the European tuning system, where the octave is divided into twelve equal parts (half-tones), allowed performers of the 20th-21st centuries to interpret masterpieces of world music literature. In particular, works by composers of the Viennese classical school, romanticism, and later epochs and styles became accessible for performance on the kobyz, kyiak, and ghijak. The result of the initial stage of updating the traditional instrument was the emergence of a whole group of kobyz varieties: "prima-kobyz", "alto-kobyz", "bass-kobyz", "double bass-kobyz". In this case, the prima-kobyz preserves the original body structure (ladle-like type) and the curved elongated neck. However, the number of strings changes: now there are three (G in the small octave; D and A in the first octave), instead of the previous two (G in the small octave and d in the first octave). The material from which the strings are made is also updated (in addition to the gut strings, which give the instrument a soft, melodious sound, a metal string is added, significantly expanding the range and opening up wide possibilities for the development of concert performance in the European style).

The consequence of the second stage (1950-1958, coinciding with the heyday of the activities of the first national orchestra named after Kurmangazy) of modernising the kobyz (a significant role here belongs to the honoured teacher of Kazakhstan, Tezekbaev, and the master Pershin) was the appearance of its later version, where four strings (metal) are used, tuned in fifths (in addition to the existing g in the small octave, D and A in the first octave, e in the second octave is added), and a leather cover on the deck and the possibility of using the flageolet-nail playing technique (Zhumabekova and Yeginbaeva, 2019). The body of the instrument becomes more similar to the violin (indentations on the sides of the body), the fixation of specific pitch heights becomes more distinct (chromatic pitches are reproduced in full), its repertoire gains versatility and volume (it is able to perform works from world classics), and the orchestral sound, in general, acquires a colourfulness distinguished by a variety of timbres

and has a broad potential for dynamism in the performance of musical compositions. The reconstruction of similar instruments (kyiak, ghijak) among several peoples of Central Asia (Kazakhstan, Kyrgyzstan, Uzbekistan) also offered broad prospects for creative experiments by representatives of the national compositional schools of these countries. They gained the opportunity to create music of a wide range of genres and structural diversity: from miniatures (original pieces and arrangements of folk melodies) to large cyclic forms (Concerto).

3.3. Performance culture traditions on stringed instruments in the music of composers from Kazakhstan, Kyrgyzstan, and Uzbekistan

Composers of academic music explored unique ways to preserve the traditions of oral-professional and folk music of Kazakhstan and neighbouring Turkic peoples (Kyrgyzstan, Uzbekistan). Among these methods for creating musical works were the adaptation of folk sources, the creation of compositions based on them in small forms, extensive use of cantilena reflecting the specifics of kobyz performance, the application of new European genres and structures in national music, and the addition of piano accompaniment (Figure 5).

Figure 5 - Kazakh folk melody arranged for kobyz and piano

We are the flower of life The Kazakh folk song
Kobyz was composed for the piano
by G. Boltaeva

Fun, fast

The musical score is arranged in two systems. The first system contains the kobyz melody (treble clef) and the piano accompaniment (grand staff). The second system continues the melody and accompaniment. The key signature is one sharp (F#) and the time signature is 2/4. The tempo/mood is indicated as 'Fun, fast'. The score ends with a double bar line.

Source: compiled by the authors

The following works by Kazakh composers gained the greatest popularity: "Aria", "Romance", "Koktem" by A.K. Zhubanov; "Andante" by K.Kh. Kuzhamyarov; "Toi Bastar" by G.A. Zhubanova; "Romance" by N.M. Mendigaliyev; "Omira Guli" by M. Koishybaev; "Saz" by B. Zhumaniazov; "Tol-fau" by A. Zhaiymov; "Bozzhorfa" by A. Tolganbayev; "Qigash Zher, Shalgai" by E. Kusainov; "Kuzgi Auin" and "Omira-Dastan" by E. Usenov; "Zher Ana" and "Aynalayyn" by A. Abdinurov; "Nazerke" and "Sagym" by E. Andosov; "Akan-Seri Aktoty" by Mukhamedzhanov (Famous Kazakh composers..., 2017). A number of such works were transformed into compositions intended for the orchestra: "Korkut Turaly Poem", "Legend of Ykylas" and "Farabi Sazi" by K. Kumysbekov; "Qaldybek Baqsy" by B. Qydyrbek; "Korkut Ata" by E. Myrzalieva.

Kyrgyz composers played a significant role in popularising the prim-kobyz and other Central Asian folk instruments: Mukash Abdraev (1920-1979); Sovkhozbek Kozhomkulovich Ayitkeev (born 1953), to whom the concertino for flute and orchestra of folk instruments belongs (1984); Akhmat Amanbaev (Kyrgyz - Акмат Аманбаев; 1920), who created the "Ballad-Poem" for the orchestra of folk instruments (1954); Muratbek Akimovich Begaliev (born 1955), who wrote "Uzory" for the quartet of percussion and traditional Kyrgyz instruments, "Hymn to the Creator" for soprano, chamber choir, ensemble of traditional Kyrgyz instruments, and chamber orchestra (created specifically for the opening ceremony of the II Issyk-Kul Forum, which took place in Kyrgyzstan in 1997 under the auspices of the great contemporary writer Ch. Aitmatov); Kalyi Moldobasanovich Moldobasanov (1929-2006), who gave the world culture works and arrangements for the orchestra of Kyrgyz folk instruments; Atai Ogonbaev (1900-1949), (virtuoso-komuzist and akyn - master of Kyrgyz folk singing) created a multitude of love-lyric songs widely popular among the people ("Kuydum Chok", "Oy Bulbul", "Gul" became masterpieces of Kyrgyz song lyrics); pieces for komuz (or ensemble of komuz players): "Mash Botoi", "Kara Ozgoy", "Mash Kambarkan", "Chon Kerbez", "Kyz Kerbez", "Chaikhalma", "Ak Tamak Kok Tamak"; songs for voice

and komuz: "Toska", "Molodezh", "Molodye Naezd", "Pomnyu", "Tsvetok", "O, Solovei", "Sgorayu ot Lyubvi"; Ybrai Tumanov (1888-1967) created pieces for komuz: "Uluz Oktyabr" (1919); "Zhazh Tilek" (1924); "8-e Marta" (1925); "Parovoz" (1936); "Marsh" (1939); "Kutobuz" (1942); "Dostor" (1951); "Ala-Too" (1954); "Issyk-Kul" (1960); "Kosmonavt" (1962); "Gagarin" (1963); "Karylyk" (1964).

Among the composers of Uzbekistan, the following names gained fame (simultaneously with compositions for folk, including string instruments of Central Asia): Boris Fedorovich Gyenko (1917-2000), who wrote Symphony (1947) for the orchestra of Uzbek folk instruments; Concertino for Kashgar Rubab and orchestra of Uzbek folk instruments (1966); Viktor Alexandrovich Uspensky (1879-1949), to whom belongs "Lyrical Poem" in memory of Navoi (1947) for the symphony orchestra, ensemble of Uzbek folk instruments (nay, koshnay, chang, doyra, safayil), female and three male voices; Mirsadyk Makhmudovich Tadzhiyev (1944-1996), who created Overture "Shodiena" (Celebration, 1973) for the orchestra of folk instruments; Fahri's Poem "Uzbekistan" for mixed choir, ensemble of folk instruments, and symphony orchestra; Concertino (1977) for piano and orchestra of folk instruments; Felix Markovich Yanov-Yanovsky (1934), to whom belongs the music for Uzbek folk instruments.

3.4. A large cyclical form in kobyz music

Using folk instruments, including kobyz and its variations, composers of Kazakhstan, Kyrgyzstan, and Uzbekistan also expanded the range of compositional structures within which modern academic music is created. They actively developed, based on the unique folklore of the ethnic groups of this region, the highest form of instrumental classical creativity – sonata. Examples include compositions: Concerto for kobyz by Shabelsky, Shargarodsky; Concerto for prim-kobyz with orchestra by Mukhamedzhanov; Concerto for kobyz with orchestra by A. Zhaiym; Poem for kobyz and orchestra of Kazakh folk instruments "Qigash Zher Shalgai" by Khusainov.

In this study, it is proposed to analyse one of the popular works of the modern academic compositional school of Kazakhstan: Concert No. 1 for prim-kobyz by A. Zhaiym, written in 2004. The work is written in a three-part form, traditional for the academic concert genre. The first and third parts constitute a complex structure and are played at a rapid pace. The second part embodies a world of tranquillity and lyricism (monothematic). The concentration of dynamics and drama occurs in the 1st part (sonata allegro) and 3rd part (finale, with traits of rondo-sonata) of the work. The first part (its exposition) opens with a swift, focused, severe, minor melody of the main theme (MT). Its basis is a melodic theme that is small in its range but highly expressive and has a relief intonation-rhythmic pattern. It is later transposed partially, which contributes to the dynamism when revealing the image embedded in it. The composer also uses the technique of timbral interplay for this purpose: the theme transitions from prim-kobyz to piano, and later both lines merge into a single textured and colourful layer.

The Subsidiary Part (SP) represents a widely melodic minor theme with elements of pentatonic scale. Here, the composer uses colourful harmonies of seventh chords on the piano, creating a voluminous, multifaceted, and modern sound for the theme, which has deep roots in folk art. In the development of the First part, individual intonations-replicas from the MT sound expressively. They are followed by material related in character to the SP theme but accompanied by swift-sounding accompaniment (reminiscent of a very fast scherzo in tempo). The culmination of the most unstable section of the First part – the development – is marked by an episode where the basso ostinato technique is used, and the tension is maintained due to the nature of its execution. Then, a cadenza of the solo prim-kobyz follows in a recitative style. The final section of the First part (reprise) stands out for its compactness. The material of the MT is mainly presented here. This technique helped the composer make a vivid, expressive comparison between the imagery of the First part and the subsequent Second part.

The Second part of Concerto No. 1 embodies the image of vast space, tranquillity, and at the same time, profound tenderness and lyricism. Its melody is presented in major and has a significant range. Its colour is enriched by the presence of the lowered sixth degree. Here, as in the First part, the principle of timbral interplay is present (the material of the prim-kobyz transitions to the pianist's part). The Second part concludes with a short coda, reminiscent of a chorale in a modern version.

The structure of the Third part of Concerto No. 1 is close to the rondo-sonata form. Its main theme (refrain) characteristically resembles the material of the First part, especially the MT, as it is also played at a swift tempo. It is presented in a dance-like manner, with sharp, abrupt, accentuated harmonies of the prim-kobyz in combination with piano accompaniment. The dynamics in the development of the material of this part are introduced by alternating between minor and major; the expressive intonations of the main theme are transposed (a tendency of ascending movement of sound mass is outlined); techniques of playing the prim-kobyz with pizzicato are employed. The culmination of the finale is associated with a solo episode on the prim-kobyz, serving as a striking concert cadenza. Concerto No. 1 concludes triumphantly, affirming life, with a timbral interplay between prim-kobyz and piano.

Therewith, the composers preserved several principles of formative composition related to the oral professional musical tradition of Kazakhstan and neighbouring countries in their works. These principles include variability (here referring to the renewal of the intonation-rhythmic content of the musical theme while preserving its core micro-model, which is characteristic of kuy: "Elimai", "Zhelmaya", "Saryn"); rondo structure ("Abyz Tolgau", "Muñlyq-Zarlyq", "Je Kiik", "Jalğyz Ayak", "Bashpay"); and improvisation as a foundational and leading principle in the development of compositions, especially large-scale ones.

3.5. Performance and assessment of the results of modernisation of string instruments in central Asian countries (Kazakhstan, Kyrgyzstan, Uzbekistan)

The centuries-old culture of the Kazakh people has given the world outstanding kobyz players from various eras. Among them, it is necessary to mention: Tilep Aspan-taiuly (1757-1820), Shozhe (1803-1895); Iqylasa Dykenuly (1843-1916); Nyshana Shamenuly (1883-1979); Dauleta Myktybaeva (1904-1976); Zhappasa Kalambaeva (1909-1970); Gulnafiz Bayazitova (1917-1987); Fatima Balgaeva (1926-2005); Raushan Nurpeisova (born in 1929); Meruert Kalenbaeva (born in 1939); Bazarkhan Kosbasarov (born in 1950); Galiya Moldakarimova (born in 1956), and Zhankash Zhumabekov and Smatay Umbetbayev. For musicians of the 20th and 21st centuries, the following characteristics are typical in performance practice: professional mastery, synthesis of wide cantilena and various expressive shades of the sound of the prima kobyz (Balgaeva); the uniqueness of vibrato sound (Bayazitova); reference to the heritage of the distant past and modernity; creating author transcriptions based on sources of professional music of oral tradition and folklore (Kalenbaeva); a comprehensive approach to the process of sound extraction, through a certain management of the bow and the use of resources of the left hand (Kosbasarov); the use of an extensive arsenal of technically complex techniques of interpretation, imitation of sounds of the surrounding environment (Zhumabekov); transforming the prima kobyz into a solo instrument of concert type, accessible to works that arise in the present time (Moldakarimova).

Therewith, it is necessary to note that the brilliant achievements of the modern performing school of playing the prima kobyz and other string instruments, due to their reconstruction (establishment of equal temperament, use of metal strings) should be strongly supported and further developed in parallel with purely traditional oral-professional manner of playing, where the system of materials that form the basis of the manufacture of the ancient kobyz and its varieties is preserved, and the character of sound and the unique

soft timbre that differs with a voluminous range of overtones reflecting its uniqueness. In this regard, the professional activity of one of the outstanding representatives of the kobyz performance school, Raushan Nurpeisova, serves as a relevant example. She uses kobyz with three gut strings, which contributes to preserving the special colour inherent in the sound of the national instruments of the Central Asian countries (Kazakhstan, Kyrgyzstan, Uzbekistan).

3.6. String instruments of Turkic peoples in central Asia in contemporary scholarly literature

The issue of the application and modernization of national musical instruments of the peoples of Central Asia (Kazakhstan, Kyrgyzstan, Uzbekistan), in this case, the kobyz and its varieties, is being explored by modern scholars from the perspective of the significance of its individual aspects.

Sharipbaeva (2020) shares the timely idea of preserving the status of the traditional bearer of musical performance art on the kobyz in the context of modernity. She highlights the fact of continuity of traditions in playing the national Kazakh instrument, as manifested among the dynasty of musicians, followers of Iqylas Dykenov. The researcher also notes the hypothesis that the Ukrainian instrument kobza and the Kazakh kobyz have a common Turkic origin. This concept aligns with the opinion of the author on the necessity of maintaining the phenomenon of authenticity of the Kazakh musical instruments, as it forms the foundation of ethnic identity awareness in the era of globalisation and preserves their centuries-old unique traditions.

Kongyratbay (2023) raises the question of studying the etymology of names and, in general, the essence of ancient instruments of the peoples of Central Asia (including instruments like dombra, sherters, zhetigen). The researcher states the fact that the monodic nature of Kazakhstan's music undergoes fundamental changes in sound with the advent of polyphony and the practice of collective performance (ensembles, orchestras). This conclusion resonates with the information presented in this

paper, where the consequences of updating the usage of ancient musical instruments in the conditions of cultural modernisation and globalisation are discussed.

Researchers Demirci et al. (2022) consider the *kobyz*, including the modernised *prima kobyz*, as an integral instrument of the centuries-old epic culture of the Kazakh people. It accompanied them throughout history, and with its participation (as well as the *dombra*), masterpieces of oral literature and poetry of the ethnic group were performed: *gaşıgtik jir*, *romandik epos*, *liro epostik jir*. This concept correlates with the position of this study, according to which, the preservation of authentic traditions of musical culture in Central Asia, including techniques of making musical instruments and principles of interpretation, becomes particularly relevant.

3.7. Ethnic musical instruments in the context of technological progress

The present period is marked by the implementation of numerous projects across various fields, including the realm of musical arts, based on engineering technologies (information and communication tools, software, artificial intelligence). These technologies are designed to optimise experiments conducted to make discoveries in areas such as music education, music theory and history, and methods of teaching performance. Their function also lies in creating specific sound models, sound systems, and recreating almost the entire spectrum of musical expressiveness inherent to a particular instrument. This directly concerns the *kobyz* as one of the vivid, distinctive, and popular instruments in Asia (Kazakhstan, Kyrgyzstan, Uzbekistan).

A group of European researchers Kouroupetroglou et al. (2021) concluded that modern software and information and communication technologies can unveil the origins of musical instruments used today. This information helps comprehend the extent of transformations they have undergone throughout history and enables the creation of unique compositions using archaic

authentic sound types. The prospect of such studies is evident concerning the Kazakh national instrument, the prima-kobyz.

Specialists Kaselouris et al. (2022) are searching for an optimal research model for modernised elements of string instruments. They focus on stages of establishing the finite element method (FEM), such as material reactions based on which the deck of bowed, plucked, and hammered string musical instruments is produced; the condition of the body of bowed and plucked string instruments; the thermal stability of the structure of modernised musical instruments of the mentioned type; and the interaction of the resonator with the surrounding air. This project reflects one of the aspects of the contemporary musical culture of the Central Asian peoples, aiming to create an ethnically distinctive instrument of the new generation with future prospects.

This same idea finds its continuation in the study where the indicators of vibration levels of the upper plate of bowed string instruments (which directly influence sound quality) are analysed based on their thickness and material properties. Researchers, considering modern objective external conditions, notably the pronounced warming trend, propose that manufacturers of these instruments consider using composite materials (including epoxy elements and carbon fibre) alongside conventional materials like wood (Kaselouris et al., 2021; Boiko & Kuleshov, 2023; Novosiadla, 2023).

The role of artificial intelligence in tuning and manufacturing modern string instruments while preserving traditional production methods is being investigated (Gonzalez et al., 2021; Molotkina & Khmelnytska, 2032). The concept, in demand among modern masters dedicated to inventing modernised models of prima-kobyz and other types of Central Asian bowed string instruments, is evident.

Specialists Stanciu et al. (2023) also explore two leading aspects of perception and evaluation (including using specialised software) of the sound of bowed string instruments, using violins

as an example (which can be applicable to prima-kobyz as well): psychoacoustic (artistic perception of the quality of performance by professional musicians) and vibroacoustic (spectral analysis of vibrations and sounds produced during instrument play). This inherently comprehensive approach contributes to obtaining more objective results in monitoring sound quality and performance techniques.

The structure of sounds of bowed string instruments obtained through their digitisation is analysed. The complexity of obtaining sound characteristics that arise solely from live interpretation, conveying not only the perfection of technique but also the musician's emotional state, is noted. The approach of software to achieve the task of creating universal sound practically indistinguishable from authentic traditional sound will allow composers of future generations to create extensive scores for computer games and cinema comfortably (Zhang, 2023; Kalashnyk et al., 2024). This idea appears relevant concerning the music industry (the sphere of music for kobyz and its varieties) in present-day Central Asia and subsequent historical epochs.

Researcher Matsumoto (1992) explores the possibilities of generated musical tones while playing a bowed string instrument, which reacts flexibly to manual control by the musician. This technique (successfully implemented by interpreters of music on the electric guitar) can be experimented with in performance on prima-kobyz and other varieties of bowed string instruments (kyl-kobyz, ghijak) in Central Asia (Kazakhstan, Kyrgyzstan, Uzbekistan) that have undergone modernization and gained popularity.

3.8. Production of ethnic string-bowed instruments in the context of modernity

The problem of updating the design of bowed string instruments is considered. In particular, the significance of playing this type of instrument for global art (including prima-kobyz and several other national instruments of Central Asia) is examined, related to the innovations in making stands initially by craftsmen in France

and Belgium (early 19th century), and later by the Amorim family in Italy. As stated by Lodetti et al. (2023), this innovation allows controlling vibrational processes and regulating the static state while using the instrument. This aspect might also be of interest to contemporary prima-kobyz manufacturers, as the question of updating its manufacturing technology to substantially improve overall sound quality is one of the leading concerns for the music of several Central Asian nations (Kazakhstan, Kyrgyzstan, Uzbekistan) in the era of globalisation.

The degree of influence of wood properties as a material for making bowed string instruments on the sound quality is established through modern combined analysis of deck elements (Paiva et al., 2022; Rui et al., 2023; Hromchenko, 2022). The data of this kind resonate with the field of tackling the issue of preserving traditional ethnic instruments (particularly kobyz), addressed in the proposed study.

Researchers Stanciu et al. (2022) emphasise the fact that for the efficient production of contemporary bowed string instruments, it is crucial to consider key components such as materials for their construction (including bow production), precision calculations of each part, and the composition of the varnish coating that regulates plate stiffness over time. The issue raised by the experts there is consonant with that considered in this study. Specifically, it modulates the optimal possibilities for instrument preservation and manufacture, contributing to its conservation for future generations and sound improvement.

Researchers Gliga et al. (2020) pay special attention to alternative wood species (particularly hornbeam, willow, ash, maple, walnut, poplar), which contribute to high-quality production and establish more precise acoustic characteristics for bowed string instruments (violins). This approach is relevant for finding optimal solutions concerning varieties of prima-kobyz as well as kyl-kobyz and ghijak.

The value of the aforementioned studies is notable. However, each of them was aimed at in-depth and multifaceted examination of specific individual issues. In some cases, they are associated with the instrument-making processes, involving the search for optimal and innovative solutions. This leads to an expansion of the spectrum of possibilities while maintaining fidelity to classical standards in sound quality. Several sources delve into the realm of historical past and the evolutionary period of ethnic instruments, touching upon the effect of reconstructing their prototypes. Certain studies aim to shed light on the emergence, development, and flourishing (accompanied by outstanding achievements) of national performance schools, particularly in playing the kobyz and its variations. In the proposed study, the issue of fulfilling the potential of the prim-kobyz and other stringed instruments of Kazakhstan and neighbouring Turkic peoples (such as the Kyrgyz kyiak and Uzbek ghijak) is presented as a complex and, at the same time, integral system. It embodies a synthesis of key elements of ethnic instrumental performance practice, their content and functional significance, the interaction of which holds fundamental importance for national musical art in the era of globalisation.

4. Conclusions

The results of this study provide grounds to state the presence of several key aspects related to the usage of the prima-kobyz and other stringed instruments in the modern culture of Kazakhstan, Kyrgyzstan (kyiak), and Uzbekistan (ghijak). These aspects are deeply interconnected and form a holistic system represented by the phenomenon explored in this paper. They include: exploring the nature of ancient and modernised ethnic instruments; uncovering the processes of their reconstruction in the 20th century; highlighting the principles of preserving oral professional and folk music traditions by contemporary composers; understanding the peculiarities of performance practices on kobyz; and drawing conclusions from the outcomes of the modernisation of the ancient Kazakh instrument.

The properties of kobyz (and prima-kobyz as its variety), including kyiak and ghijak, were defined. These properties include: timbre; sound production characteristics; tuning; form and quality of materials used for making stringed instruments; distinctive features of ancient and modern types of kobyz. The history and key elements of the reconstruction of kobyz, kyiak, and ghijak were illuminated. These include establishing equal-tempered tuning on the instruments, using metal strings, and updating the instrument's form (approximating it to the violin). The principles of preserving oral professional music traditions by contemporary composers were disclosed. Among these principles are the active use of intonational and rhythmic sources from the musical culture of Kazakhstan and the peoples of Kyrgyzstan, Uzbekistan; their processing and transcription; and the embodiment of variation, rondo-like structures, and improvisation, as leading techniques in shaping the form of professional oral music traditions in Kazakhstan and neighbouring Turkic peoples. The principles of updating the repertoire and structure of compositions for kobyz and its varieties, as well as kyiak and ghijak, were identified. In particular, the genre and form of the classical instrumental concert found extensive expression in the works of composers from different generations in Central Asia. One of the concerts (No. 1) for prima-kobyz and orchestra (in a piano arrangement) by A. Zhaiym was analysed, leading to the identification of the main elements of the extensive instrumental form (sonata) development of musical material based on the national arts of Kazakhstan and neighbouring Turkic peoples (Kyrgyzstan and Uzbekistan).

The question of performance practice on kobyz and its varieties, as well as kyiak and ghijak, were examined. Through the exploration of interpretation methods used by outstanding musicians of past centuries and the present, their key types were illuminated: playing on ancient and modified models of national stringed instruments; sound extraction techniques that recreate both ethnic and European traditions. The results (both positive and negative) of the modernisation of kobyz and other varieties

of stringed instruments (kyiak, ghijak) were provided, along with the future prospects of performing on them. The positive aspect of updating these popular instruments in Central Asia has been their active participation in ensembles and orchestras (including symphonic ones) and their appearance on stage as solo concert instruments. The negative aspect of this process has been the loss of the original natural features of kobyz, kyiak, and ghijak (such as horsehair strings, a rich spectrum of overtones during sound extraction, and unique timbre). The future development prospects of performance practice on kobyz and other stringed instruments (kyiak, ghijak) were defined as the parallel mastery of the basics on both the original and modernised models.

The scientific and practical significance of the study lies in unveiling the issue of using kobyz and its varieties in the modern musical culture of Kazakhstan and neighbouring Turkic countries of Central Asia as a complex system containing several fundamental aspects. It also encompasses the analysis of one of the peaks of the repertoire for prima-kobyz (Concerto No. 1 by A. Zhaiym). The prospects of further exploring this subject reside in the potential for making new extensive discoveries related to the realisation of the boundless performance potential on kobyz, kyiak, and ghijak (both ancient and updated types) and creating works for them within the context of contemporary global music art.

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