

A black and white photograph of a piano keyboard and a control panel. The keyboard is in the upper half, with several keys visible. Below it is a control panel with various knobs and buttons. A central text box is overlaid on the image. The text box has a black background and a gold border. The text inside is white and reads: "The sound imitation of some national instruments in piano music".

**The sound imitation of  
some national instruments  
in piano music**

DIRECO

**THE SOUND IMITATION OF SOME NATIONAL INSTRUMENTS IN PIANO MUSIC**  
**LA IMITACIÓN SONORA DE ALGUNOS INSTRUMENTOS NACIONALES EN MÚSICA DE PIANO.**

**ABSTRACT**

The article reveals the textural, timbre-dynamic, harmonic, performing and other musical means of imitating the sound of national instruments in piano music. Based on the analysis of literature and works by M. Mussorgsky, S. Rachmaninov, F. Liszt, Wang Jiangzhong, Zhu Wanhua, A. Rudenko, R. Kasimov and other composers, summarizing the performing and pedagogical experience of studying piano works shows the means of implementing various instruments to groups of idiophones, membranophones, chordophones and aerophones according to the instrumental classification of Hornbostel-Sachs. The article shows that onomatopoeia is based not only on the sound image of the primary source instrument, but also on recreating the playing techniques of playing it. At the same time, the traditions of academic art, the achievements of European pianism and the sound capabilities of the piano are actualized. Imitation of the sound of the bell, one of the idiophones, occupies an important place in foreign and domestic music. In the works of Russian composers, various types of Orthodox bells ring out, such as Blagovest, Perebor, Perezvon, and Trezvon. In the works of Chinese composers, the sounds of ancient bianzhong ceremonial bells are displayed. The imitation of a bell is based on the reproduction of its timbre-acoustic characteristics, rich in overtones of a booming sound, long and smoothly dying out, accompanied by other harmonies or figurations, pedalization of the piano. The imitation of string-stringed chordophones is notable for its expressiveness, melodic expressiveness, improvisation, and rich ornamentation. Piano playback of plucked chordophones of the zither type is based on the use of arpeggiated figures, pizzicato, vibrato, glissando, etc. wind themes are distinguished by an abundance of melisms (trillare, acciaccatura, glissando, repetitio).

**KEYWORDS:** piano music, composers, national instruments, onomatopoeia, texture, timbre.

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**RESUMEN**

El artículo revela los medios de textura, timbre-dinámico, armónico, de interpretación y otros medios musicales para imitar el sonido de los instrumentos nacionales en la música de piano. Basado en el análisis de la literatura y en los trabajos de M. Mussorgsky, S. Rachmaninov, F. Liszt, Wang Jiangzhong, Zhu Wanhua, A. Rudenko, R. Kasimov y otros compositores, que resume la experiencia pedagógica y de interpretación de las obras de piano. Medios de implementación de diversos instrumentos para grupos de idiophones, membranophones, chordophones y aerophones según la clasificación instrumental de Hornbostel-Sachs. El artículo muestra que la onomatopeya se basa no solo en la imagen de sonido del instrumento de origen principal, sino también en la recreación de las técnicas de reproducción de la reproducción. Al mismo tiempo, se actualizan las tradiciones del arte académico, los logros del pianismo europeo y las capacidades de sonido del piano. La imitación del sonido de la campana, uno de los idiófonos, ocupa un lugar importante en la música extranjera y doméstica. En las obras de los compositores rusos, varios tipos de campanas ortodoxas resuenan, como Blagovest, Perebor, Perezvon y Trezvon. En las obras de compositores chinos, se muestran los sonidos de antiguas campanas ceremoniales bianzhong. La imitación de una campana se basa en la reproducción de sus características timbreacústicas, ricas en armónicos de un sonido atronador, largas y suaves que se apagan, acompañadas de otras armonías o figuraciones, y la pedalización del piano. La imitación de los acordes de cuerda es notable por su expresividad, expresividad melódica, improvisación y rica ornamentación. La reproducción en piano de acordes de punta pulsada del tipo de cítara se basa en el uso de figuras arpegiadas, pizzicato, vibrato, glissando, etc. Los temas de viento se distinguen por una gran cantidad de melismos (trillare, acciaccatura, glissando, repetitio).

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	<b>SVETLANA V. KARKINA</b>		<b>GULNARA I. BATYRSHINA</b>		<b>LILIYA G. SAFIULLINA</b>
	Kazan Federal University, Russian Federation		Kazan Federal University, Russian Federation		Kazan Federal University, Russian Federation
	<a href="mailto:arpeggio@mail.ru">arpeggio@mail.ru</a>				
			<b>EKATERINA V. KOVRIKOVA</b>		<b>LORETTA S. AGASARYAN</b>
			Kazan Federal University, Russian Federation		Armenian State Pedagogical University. H. Abovyan, Russian Federation

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## 1. INTRODUCTION

The rich timbre and color potential of the piano and the possibilities of imitating various musical instruments made it attractive for composers throughout the history of piano art. The traditions of the onomatopoeic “instrumental” interpretation of the piano go back to organ performance, are reflected in the harpsichord and clavier art, and later developed in the piano work of many composers, especially in the 19th and 20th centuries.

A special place in the piano literature is occupied by works that recreate the sound of national musical instruments of various cultures and ethnic groups. Genuine folklore melodies and dance pieces, elements of secular and religious instrumental music, as well as the stylization created by the composers, create an original national flair by means of piano sonority, revealing the pedagogical potential of folklore (Imamova et al, 2016).

Piano works by such European composers as F. Liszt, J. Brahms, E. Grieg, O. Messiaen, C. Orff, Z. Kodaly, and others, each of which reflected the instrumental traditions of their people, occupy an important place in this field of creativity.

The sound of national instruments involved in the performance of folk and ancient ceremonial music of China is recreated in the piano works of Chinese composers: Wang Jianzhong, Chu Wanghua, Li Yinghai, Chuanxin Shen, Zhao Xiaosheng, etc. Among Russian composers who broadcast the sound of national instruments: S. Rachmaninoff, M. Mussorgsky, A. Borodin, P. Tchaikovsky, G. Sviridov, and others. The piano works of Tatarstan composers N. Zhiganov, R. Belyalov, A. Luppov, A. Rudenko, and others reflect the sound of instruments from the peoples of the Volga region.

The purpose of this work is to analyze the problem of sound imitation of some national instruments in piano music and to characterize the means of realizing the sound potential of the piano. The tasks of the work are: analysis of textural, dynamic, articulation and other means and ways to recreate the sound of national instruments in the works of composers from different countries; Expansion of ideas about the timbre and color possibilities of the piano.

## METHODS

The study used the methods of scientific knowledge, comparative historical and comparative typological methods, the study of scientific literature was carried out, the analysis of musical works was carried out. The study was based on the instrumental classification of E.M. von Hornbostel and C. Sachs, positions in the field of folklore, theory and history of piano music.

## RESULTS AND DISCUSSION

Idiophones, or self-sounding instruments, the sound source of which is the material of the instrument itself, includes most percussion instruments.

The sound of the bell, one of the idiophones, occupies an important place in music, where they act not only as a musical and signal instrument, but also a carrier of deep symbolic meaning.

In the play “The Great Gate of Kiev” from the piano cycle “Pictures At An Exhibition” (1874), the Russian composer M. Mussorgsky (1839–1881) recreates the Orthodox bells: “Blagovest” and “Red Ringing” (a type of “Pealing”).

“Blagovest” can also be heard in the introduction in the first part of the Piano Concerto No. 2 (1900), the Prelude code cis-moll op.3 No. 2 (1892) and other piano works by S. Rachmaninoff (1873–1943) - the greatest Russian master of the bell tower.

“Red ringing” sounds in the fourth part of “Russian Easter” from Suite No. 1 op. 5 for two pianos (1893) S. Rachmaninoff (Example 1). The colorful sound array is differentiated vertically into several melodic-harmonic la-

yers, allowing you to hear large, medium (ringing) and small (ringing) bells.

Example 1. S. Rachmaninoff "Russian Easter". (See Annexes)

The "Chime" is heard in the main part of the first part of the Piano Concerto No. 2 of S. Rachmaninoff: it is created by means of harmonic figurations with a supporting line of expressive bass in the piano part accompanying the orchestral theme. The sound of the theme is compared with the "Yegorievsky" ringing bell tower of the Assumption Cathedral in the city of Rostov the Great, which is notable for its special softness, grandeur and severity.

A special "melodic" interpretation of the bell tower is in the third part of "The Tears" of the above Suite No. 1 op. 5 S. Rachmaninoff. The initial ostinato motif of four sounds, passing through the textural framing of the accompaniment through the whole part - "the theme of tears" (Bryantseva & Rachmaninov, 1976), which was the sound of bells Bell rings of the Sofia cathedral in Veliky Novgorod. These sounds S. Rachmaninoff remembered from childhood as "silver weeping notes" (Bertensson & Leyda, 1956).

The bells of the ancient Chinese bianzhong ceremonial bells, known from the era of Zhou dynasty (1045–221 BC), are heard in "Capriccioso suite: the poetry of China" (1982), "Preludes" from the "Prelude and tokkata" cycle (2000) Chinese composer Chu Wanghua (born in 1941).

The ritual bells of the ancient Buddhist temple Tōshōdai-ji in the Japanese city of Nara are heard in the play by the Chinese composer Wang Lisan (1933–2013) "The Sound of the Waves" from the suite "On the Painting of Kaii Higashiyama" (1979). The play has a program related to the history of the Chinese monk Jianzhen (688–763 AD) - a Buddhist missionary who brought this religion to Japan.

The theme of the play is based on the motifs of Chinese Buddhist chants; Wang Lisan doesn't interpret the bells with the help of uniform chord sounding, but metro-and-rhythmically free (Example 2). (See Annexes)

Example 2. Wang Lisan "The Sound of the Waves". (See Annexes)

The booming chords of the second-quart structure in the upper register of the piano imitate the timbre and sound of the bells, while the five-sounded chord cluster in the lower register conveys the distant sound of the temple gong.

Kubyz, a Bashkir jew's harp, a kind of plucked idiophones, sounds in the play "908" by the Bashkir composer R. Kasimov (born in 1947). N.F. Garipova writes about the use of cubyz, hollow octaves, intonations of the call, as well as the limited sound range characteristic of the folklore epic, the use of high register and large range in the composition of the intonation vocabulary, specifying the composer's finger "on the strings, simulating the sound of the cubyz" .162–163]

The chordophones are stringed instruments, the sound source in which are one or more strings.

The masterful incarnation of piano instruments characterizes the works of F. Liszt (1811–1886) - the great Hungarian composer and pianist, a virtuoso in the technique of sound imitation of orchestral and folk instruments on the piano.

In his "Hungarian Rhapsodies", colorful cimbalom can be heard, virtuoso violin - instruments of the instrumental ensemble of Hungarian gypsies.

The themes of gypsy violin in Liszt's works, always very expressive and colorful, are characterized by rich ornamentation (trills, gruppetto, forshlags), improvisational cadenzas, expressive passages in combination with the "Hungarian" scale and peculiar dashed rhythm.

In "Hungarian Rhapsody" No. 7 (1853), the author points to the "gypsy style" of performance, which means accentuation of theme sounds, rhythmic freedom.

The imitation of cimbalom is created, for example, in "Hungarian Rhapsody" No. 14 (1853), with the help of tremolo, arpeggiated chords, passages and tremoly-like rehearsals (example 3).

Example 3. F. Liszt “Hungarian Rhapsody” No.14. (See Annexes)

The sound of the guqin, the oldest Chinese seven-string chordophon, is transmitted in the piano works of Chinese composers: “Three variations of the Yangguan pass” (1957) Li Yinghai (1927–2007), “Three variations on the plum blossom theme” (1973) Wang Jianzhong (1933–2016) , “Tai Chi” (1987) Zhao Xiao-Sheng (born in 1945) and others.

The transcription of “Three variations on the plum blossom theme” by Wang Jianzhong is based on a genuine piece for the guqin of the Ming dynasty period (1368–1644) - an arrangement of the flute pieces of the periods Jin dynasty (265–420) and Tang dynasty (618–907).

The sound of the instrument reflects the aesthetic ideas of the ceremonial music “yayue”, characterized by the airiness of the musical fabric, transparency and subtle timbre of color. The play uses exquisite passages of pizzicato melodies, booming chords with bass sounds forshlagami, guqin playing techniques (tweaks of a finger not pressed by a finger, vibrato on a pressed string, glissando of fingers along a string, flageolet, etc.).

In the play “Bamboo in the Wind” from the series “Six Preludes” (1961), Chu Wanghua reproduces the sound of another ancient Chinese chordophones - guzheng, akin to guqin and differing from it in a larger number of strings. Arpedge melodies in the right hand, imitating gliding along the guzheng strings, accompany the melody of the xiao flute in the left hand (example 4).

Example 4. Chu Wanghua “Bamboo in the Wind”. (See Annexes)

Transcription “Flute and Drum at Sunset” (1975) by Li Yinghai is based on a pipa piece known from the 18th century in the southern provinces of China for a four-string plucked lute instrument. Fang Bing writes that the dialogue of the two instruments - flute and drum - is interpreted by the composer as “a comparison of contrasting intonation-thematic layers, but not in conflict, but as shading each other” (Garipova, 2017).

The imitation of playing Chinese stringed string instruments is used in Chu Wanghua

pieces: the erhu sound is played in “Two springs mirroring the moon” (1972); banhu - in the play “Days of emancipation” (1964), etc.

Aerophones, the sound source in which is the flow of air, include, according to the classification of Hornbostel-Sachs, “wind instruments themselves” and “free aerophones” - harmonics.

The sound of the ancient Udmurt wind instrument chipchirgan is recreated in the play “Chipchan’s Echoes (tune)” from the cycle “Udmurt Watercolors” (1974) by Tatarstan composer A. Rudenko (1947-2013).

Chipchirgan - a longitudinal natural pipe, the sound of which is extracted by drawing in air into itself - is interpreted by the composer in a lyric vein (Example 5). This is due to the fact that chipchirgan is not only considered to be a hunting signaling instrument that serves as a decoy for birds, but is also associated with the archaic cult of the swan in Udmurts (Pchelovodova, 2017).

Example 5. A. Rudenko “Chipchirgan echoes (tune)”. (See Annexes)

At the heart of the thematism of the play Rudenko are genuine Udmurt tunes on the instrument, performed by I.A. Shabalin, a native of the Udmurt village Kelmovyr-Zhikya (Travina, 1964).

It should be noted that in the works of composers of Tatarstan there is an original fusion of Western and Eastern cultures, their artistic and religious features, due to the integration of the achievements of European music and folk traditions of various peoples living in the Volga region (Faizrakhmanova & Kovrikova, 2017; Nurgayanova et al, 2017; Karkina S.V., Fajzrahmanova, 2016).

The play “A Hundred Birds Paying Respect to the Phoenix” by the Chinese composer Wang Jianzhong is a transcription of China’s famous suona and ensemble of folklore, distributed in the provinces of Shandong, Anhui, Henan, Hebei (Chong, 2010).

Suona has a sharp, piercing sound, traditionally used in Chinese holidays, wedding and funeral ceremonies, military ceremonies.

The programmatic content of the play picturesquely represents the character of Chinese mythology, the king of the birds of Phoenix ("Fenghuang") and numerous inhabitants of the avian world. In the original source, the suona part recreates roll calls and all sorts of bird sounds: singing, chirping, cooing, screaming, clucking, chirping, etc. To imitate suona playing techniques, the composer uses piano articulation and textural techniques, melodies and alteration.

Imitation of instrumental accompaniment, in particular, sheng, a Chinese reed wind instrument of the harmonic family (the organ of the mouth), is heard in the chord texture of the quart-quint structure, melodic echoes and rhythmic figurations.

An imitation of the game on the Chinese xiao longitudinal bamboo flute (trillare, acciaccatura) is featured in the piano pieces by Chu Wanghua "Bamboo in the Wind" (example 4), "Flute and Drum at Sunset" by Li Yin-gai, and others.

The techniques of playing the dizi Chinese transverse flute (trillare, acciaccatura, glissando, repetitio) are featured in the piano pieces "Buffalo Boy's Bamboo Flute" He Luting (1903–1999), "Flute music of North Hebei" from the series "Six etudes for concert" Zhao Xiao-Sheng et al.

In the play "Tai Chi" (1987) Zhao Xiao-Sheng, various traditional Chinese instruments sound: guzheng, guqin, erhu, xiao, sheng, and others. The play demonstrates the techniques of playing instruments using the original original composing system.

The sound of bagpipes, a wind reed instrument, is widely represented in piano music. A typical bourdon for him is most often created through a continuously stretching tone or musical interval (quint or concord of the quintoctava) in his left hand, against the background of which the melody unfolds in his right hand with his right.

An imitation of its Hungarian variety - duda, with two double and one bass tubes, a goat head in the upper part of the instrument, is reproduced in the first part of the Sonatina by the Hungarian composer B. Bartok (1981–1945).

Membranophones, whose sound source is a tightly stretched membrane, include most of the drums, as well as a number of instruments where the membrane changes the sound.

The sound of percussion instruments drums and gong is heard in the transcription of the "Yunnan folk song" by Shen Chuanxin, "Dance with a drum" by Qi Wei. In the play "The morning breeze blows" by Ding Shande (1911–1995), the booming timbre of plates bo, etc. is heard.

### SUMMARY

Onomatopoeia is based not only on the sound image of the original source instrument, but also on recreating the playing techniques of playing it.

Thus, the "red ringing" of Orthodox bells in works by Mussorgsky, Rachmaninoff is recreated in piano texture as several melodic-harmonic layers, including large, medium (ringing) and small (ringing) bells.

In the works of Liszt, chordophones are represented by the instruments of an ensemble of Hungarian gypsies. The imitation of cimbalom is created by means of tremolo, arpeggiated chords, passages and tremol-like rehearsals. The imitation of violin is created by virtuoso and expressive intonations, rich ornamentation (trills, gruppetto, forshlags), improvisational cadenzas.

The sound of the ancient Chinese seven-stringed chordophon guqin reflects the aesthetic ideas of the ceremonial music "ya-yue", which is conveyed by the melodic figurations of pizzicato, booming chords, tweaks, vibrato, glissando, flageolet and other techniques.

The reproduction of aerophones is diverse in timbre-dynamic aspect, transmitted by means of articulation, intonation vocabulary, etc. The imitation of membranophones is based on rhythmic formulas and timbre-coloristic effects typical for instruments.

### CONCLUSIONS

By citing or recreating patterns of national instrumental culture, creatively breaking them with traditional and modern means of composition, composers contribute to their preservation and development in the context of academic music.

Despite the similarity of instruments and methods of playing them in different cultures, their significance is different, reflecting the originality of ethnic musical traditions and the originality of artistic representation by composers.

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ANNEXES

Example 1. S. Rachmaninoff "Russian Easter"

Example 2. Wang Lisan "The Sound of the Waves"

Example 3. F. Liszt "Hungarian Rhapsody" No. 14

Example 4. Chu Wanghua "Bamboo in the Wind"

Example 5. A. Rudenko "Chipchirgan echoes (tune)"