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Description of musical instruments in treatises of IX-XI centuries

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Abstract:

This article provides information about the musical instruments presented in the treatises of medieval Eastern scientists. In particular, in the encyclopedic work of Abu Abdullah Al-Khorezmiy "Key to the knowledge", more than 10 musical instruments that were in practice in the Middle Ages were described. It is necessary to admit that the "organ" was in practice in Central Asia. He listed various instruments such as "Barbat", "Shakhrud", "Oud".

Musical instruments are one of the factors that determine the national-spiritual values of each nation and reveal its soul and moral world. Each nation has had its own musical instruments since time immemorial, which are created on the basis of its values and traditions in the social and cultural life. These national instruments reflect the moral and spiritual world of the nation. Perhaps, that is why the attention to musical instruments has continued for centuries and has also been promoted by people and increased their dignity.

The sharp development of social and various sciences in the creativity of the countries of Central Asia and Middle East in the IX centuries is stated in the sources. The science of music has also begun to develop. Its first steps and development process are related to the name of the unique scholars of their time such as Abu Nasr Farabiy, Abu Abdullah al-Khorezmiy, Beruniy, Abu Ali Ibn Sina. In their practical researches, we can observe that the perception of

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music is carried out in different sciences (directions).

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Introduction:

A great artist, singer, musician, who lived and worked in the time of the Sassanids (V-VII centuries), Borbat made an invaluable contribution to the development of music science. A number of sources provide information on the activities of such famous singers and musicians as Sarkash, Bamshod, Nokus, Romtin in the palace of Khusraw Parviz. However, Borbat was very popular in the field of art with his unique talent and creativity [Begmatov S. 2017]. Information about the fact that borbat invented the instrument "borbat" was also preserved [Homidiy H. 2011].

It should be noted that medieval scientists also paid great attention to musical instruments in the study of the theoretical aspects of music. As T.S. Vizgo highlighted in his research: "The science of music in the countries of the Middle East has developed since the IX – X centuries" [Vizgo T. 1980] .

They gave information about the characteristics of musical instruments depending on their types. In particular, from the ancient string instruments – oud, harp (chang - in uzbek) (still arfa at that time), nuzkha, qanun, rabab, tanbur, navkhi, wind instruments – flute, sunray (trumpet), organ etc. are described or remembered. The tracts and other sources written in the following centuries demonstrate information about string musical instruments – dutor, gijjak, qobuz, rod, and wind instruments – Nayi anbon, chagona, ruhafzo, bulaman, shammoma and other musical instruments is presented.

The medieval world of the musical instruments is characterized by its versatile and colorfulness. The instruments mentioned by Al-Khorezmiy in his encyclopedic work "The Key of Knowledge" show that they were played and, of course, have been perfected and preserved in practice to the present day. Al-Khorezmiy gave a brief account of 10 instruments of his time. Emphasis was placed on the fact that these instruments were popular not only in Central Asia, but also in the East, and to which family they belonged. As Al-Khorezmiy wrote, especially Lyre (اللور) was the Sanj (الانج) of the Greeks and Romans. Sanj has been as a string instrument in peoples since ancient time. Al-Khorezmiy mentioned how the lira was an instrument and that it was a string instrument of the Greeks. Although the kithara (القتارة) [guitar] was string instrument like a tanbur, but its appearance reminded the guitar.

Methodology:

The term "tanbur mizani" (الميزانى الطنبور) was used in relation to the long-necked Baghdad tanbur, and this fact was repeated in "The Key of Knowledge", the book of Al-Khorezmiy. Al-Farabi'ys account of the tanbur in his book "Kitabul muzika al-kabir" gives information about two examples of tanbur, the Khurasan tanbur and the Baghdad tanbur. Al-Khorezmiy's "The Key of Knowledge" mentioned only the Baghdad tanbur. Hence, it can be concluded that the Baghdad tanbur was more practiced during that period.

The term "Rabab" was used in relation to the stringed instrument rabob. Rabob (الرباب) is a popular stringed instrument in Iran and Khorasan. This was stated in the book of Ibn Sina "Collection of Musical Science", that the Rabob was a stringed and percussive instrument. However, it was played with a fiddlestick, not a click (bang) [Oripov Z. 2008]. Rabob, which was in practice during the time of Al-Khorezmiy, also noted as a stringed instrument with fiddlestick.

Al-Khorezmiy also briefly touched upon the homeland and appearance of the musical instruments in the process of their describing. For instance, Mi'zafa (المعزفة) [instrument like a harp] is a string instrument of the Iraqi people. The term "Mi'zafa" was used in relation to this instrument.

Mustaq (المستق) is a Chinese wind instrument consisting of tubes. His name is biyshe mushta (بیشه مشته) in Persian.

Results:

Flute, mizmar, surnay, saffara - when referring to instruments, he points out that they are wind instruments and are made of reeds. He particularly emphasized the mouthpiece musical instrument among wind instruments. This is exactly the mizmar. Al-Khorezmiy grouped the four wind instruments into a group and gave them a general description; mentioned their common features, and gathered them all in one group, since they were wind instruments and were made of reeds. Mizmar (tongue blowing instrument) was explained in more detail. That is, he explained that the mizmar is blown through the mouthpiece, forming a sound from the constriction and expansion of its tongue, and its head will be surrounded by reeds. Al-Farabiy wrote about wind instruments such as flutes and trumpets. The difference between the statements of Farobiy and Khorezmiy is that he not only gave a brief account of the fact that nay (flute) was an instrument, but also described the formation of the sound. He said that it had seven holes on the surface and two on the back. The surnay (trumpet) had eight holes on the surface, one on the back and two on the sides. [Vizgo T. 1980] Ibn Sina also mentioned these instruments, in particular, a mizmar without strings, blown from one side by mouth or wind instruments such as a trumpet which is known like a “yaro” blown into a hole, or blown into a device made like a mesh trumpet. [Oripov Z. 2008].

Arganun (organ) (الارغانون) is a Greek and Roman instrument, described in the treatise Al – Khorezmiy. In it, three (cover) leather meshes made of black cattle (buffalo) skin are connected to each other, and a sound tube is installed in the middle of the head of the largest mesh. As a result of blowing the tubes through the holes of the meshes, as well as by closing the desired holes, pleasant and attractive sounds are produced at the musician's request [Liber Mafatih al-Olum. 1895]. Among the written sources of the IX-XI centuries, al-Khorezmiy left detailed information about the organ of the Greeks and Romans. While describing the appearance of the instrument, he points out that it consists of three large meshes, and that it is made of black cattle skin, the largest of the meshes being made of a solid body, with a sound-producing and tube-mounted head. He said that in order to make a sound from an organ, it was necessary to blow the tube and close the necessary holes. When Ibn Sina described the organ, he first acknowledged that it had a good effect on the human psyche, and was especially popular among the Romans as a relaxing instrument.

There is a legend about the creation of instruments: it is said that “a piece of gut hung on the tree, and over time, as the wind grew stronger, it began to make various melodies (sounds) day and night. Meanwhile, there was a young man in love suffering in the torment of parting. The man adjusted the strings of his soul like a harp, shed tears on all side like strings of the instrument. Suddenly, he began to hear a pleasant sound and a heartfelt melody from inside. His torn soul calmed down, and he made an instrument like a bow himself. [Hasanxoja N. 1993].

Shalyaq (السالیق) is one of the stringed instruments of the Greeks and Romans, which resembles harp. Al-Khorezmiy also made a comparative analysis of this instrument, acknowledging that it was similar to harp, but that it was not. We mentioned a while ago that the lira is a harp of the Greeks. Hence, the shalyak belongs to the family of plucked string instruments.

Sanj (نجڸال) [plucked string instruments] - "it is called chang (harp) in Persian, as al-Khorezmiy wrote it was a musical instrument without strings. Khalil said that harp is daf (round instrument) of Arabs, sounds like ring of bell. Al-Khorezmiy gave us valuable information about the historical origin of the sanj, the fact that its first appearance in the Arabs was circular as a percussion instrument, and later it came in the form of a stringed instrument. Ibn Sina also mentioned about sanj. He said that, Sanj and Shalyaq the instruments where the strings, are pulled from the air, not from the top of the lid, and are joined the sides" [Oripov Z. 2008].

Shahrud (الشرود). It is a new name (modern instrument). It was founded in 300 AH by Hakim Ibn Ahwas Sogdi from Baghdad. Al-Khorezmiy informed that a new version of the harp-shaped instruments, which were in practice in his time, was created and their sound range was relatively long, and its shape also became angular. The instrument that was widely used in the Middle Ages is the barbat. This instrument is later known as the ud (harp). Medieval sources describe this instrument as follows:

1. Regarding the formal details of the instrument, he wrote: "Barbat (البربط) is the Arabic name for ud. It is a Persian word meaning "duck breast". Because it looks like a duck's chest and neck. "

2. Expressing the components of the Ud musical instrument in harmony with the form, al-Khorezmiy describes each part of the musical instrument separately. He explained everything from the material of the part of the instrument to the properties of the instrument. The strings of the ud were called by special names and contained four strings. The thickest, that is, the lowest-sounding string - bam (lowest), the second string - maslas (Arabic - three times higher), masna (Arabic - twice as loud) and the fourth string - the thinnest string - zir (loudest) is written.

The thickest tori is bam (ạlbm). After that, the opening of the maslas (المتالت) is like a "matlab" consisting of a fatha mim and a light lam. The opening of the masna (المتاني) after the masla consists of a fatha mim and a light nun. As in the word of meaning. The fourth string Zir (larninglzyr) is the thinnest of the strings [Liber Mafatih al-Olum. 1895].

In addition to counting the strings, al-Khorezmiy also mentioned which word in Arabic it was close to and how it should be pronounced. T.S. In Vyzgo's book Musical Instruments of Central Asia, he expressed the reflection of the four strings in four elements.

Similar to the element of narrow fire called "Zir," the sound it emits corresponds to the heat and flame of fire;

The Masna string is similar to the air element, the sound it emits corresponds to the humidity and softness of the air;

The "Maslas" string is similar to the water element, the sound it emits corresponds to the coldness and humidity of the water;

The “bamm” string is similar to the earth element, and the sound it emits corresponds to the weight and majesty of the earth. The description of the properties of the strings is consistent with the relationship between them and how the sounds they emit affect the listener ”[Vizgo T. 1980].

He said that the oud has strings attached to the ears and they can be tuned when it is necessary. Even today, the strings of the ud are collected in its ears and it should be tuned by twisting them.

Al-Khorezmiy touched on the shape of the ud and told that its’ bridge holds the strings like a ruler . The nose of the ud “bridge of the devil” would gather all the strings together. He also called oud's handle as "ibriq." As in the case of stringed instruments, it also has two eyes, which are located on the surface of the oud. It means that these holes are on the cover of the oud, they are necessary in order to extract the sound from the instrumental resonator. Oud is played by strumming with the help of plectrum (a small instrument that beats). To find out if the oud strings are tuned, it is checked by clicking with the thumb or index finger. And it is called "jas". In order to get the desired tone in the setting, it is necessary to tighten or loosen the strings.

It is obvious that the first written details of music were reflected in the musical treatises created in the Middle Ages. Taking into account the importance of sounds interaction in the formation of music, al-Khorezmiy touched on the resonating curtains of the instrument.

According to the definition of al-Khorezmiy, the tone is the place of frets in the neck (fingerboard) of the oud. He notes that in his time and before it was also called "dastan" (epopee). For instance, “dastan va ad-dastan”, “dastan sabboba”, “dastan vusta”, “dastan vusta qadima”, “dastan vusta furs”, “dastan vusta zalzal”, “dastan binsir”, “dastan xinsir” [Liber Mafatih al-Olum. 1895].

3. He gave information about the of sounds on the instrument, that is, the tone on which sound is produced. He describes oud’s tone as a place which is pressed by the fingers.

He emphasizes that another form of naming of the tones (dastan) is called “dastan va ad-dastan”. At the same time, he notes that the name of the tunes belonging to the Borbat is also called "dastan". However, then the dastan came into the theory of music as a tone and was called an oud tone. The names of the oud tones are drawn by the name of the fingers that press them. There are five tones in al-Khorezmiy, which are as follows:

1. Sabboba.
2. Zoid.
3. Vusta.

A) Vustai qadima.
B) Vustai furs.
V) Vustai zalzal.

4. Binsir.
5. Xinsir.

The first tone is the sabboba, which means "index finger." The term represents the tone that produces sound with the index finger. In al-Khorezmiy, the index finger tone is located on one-ninth (9/1) of the instrument.

The second tone is called the zoid, that is, amplified. Al-Khorezmiy says of the zoid, "As the tension increases, the instrument becomes stiffer, and sometimes the tone at the top, called the zoid too." Although al-Khorezmiy did not dwell on the zoid tone in detail, he gave information about its usage in his time.

The third tone is the vusta, i.e. the middle finger tone,and here sound is extracted by the middle finger. Khorezmiy described three different appearances of the middle finger tone.

The first is Vustai qadima, which is called the ancient middle finger tone. The ancient middle finger tone is fixed to a quarter (4/1) between the sabboba and the binsir tones. A ratio of 4: 3 corresponds to the current quart interval. So, tuning of in ancient middle finger and binsir tones create a quart interval.

The second is Vustai furs, which is called the Persian middle finger tone. Since this tone was invented by the Persians, it was given the ratio of the Persian middle finger tone. The Persian middle finger tone is located in about one-half (2/1) of the sobbaba tone and the binsir tone. A 2: 1 ratio forms the current octave interval. The Persian middle finger curtain is located between the sabboba and binsir tones, which is in the ratio of an octave interval.

The third is called Vustai Zalzal. Zalzal (died 791) was a famous Arab king, scholar, and musician. He established the Vustai Zalzal. Al-Khorezmiy wrote about Zalzal in his treatise, “Zalzal was the first to establish this tone. The Zalzal pool in Baghdad is also named after him. Vustai Zalzal is a sound-producing tone, where a middle finger is used. The middle finger Zalzal tone is located approximately three-fourths (4/3) of the space between the sobbaba and the binsir tones near the hinsir tone.

All middle tones are the same, they produce the sound with the help of middle finger. Al-Khorezmiy said that sometimes two of these middle finger tones could come together. Hence, only one of the Vusta tones was used during the performance.

The fourth tone is expressed by the term binsir, meaning "nameless finger."In the unnamed finger tone the sound is produced by this finger. This tone is located in one-ninth (9/1) of the harrak and sobbaba tones.

And the fifth tone – hinsir is the name of the pinkie, and the tone that produces sound through this finger also belongs to this name. The pinkie tone is located in a quarter (4/1) of the space between the sobbaba and the harrak tones. The pinkie tone is also located in a quarto ratio between the sobbaba and the harrak tones. Because the 4: 3 ratio corresponds to the current quart interval.

4. The most striking aspect of al-Khwarizmiy's defitition of the oud is describing the features of the scale structure of music. The possibility of creating unique scales from the tones created on the instrument is reflected in their intermediate criteria. That is, two views of a tone (interval).

Conclusion:

There is an open bamm naghma (the tone which is created with the help of bamm string) in "Famous tuning", and the naghma of the masna sabboba is the siyah of the open bamm melody - the octave-rising naghma, with other words, the peak. If we explain this notion by examples of notes, then the open bamm naghma forms the sol note, and the masna sobbaba also forms the sol note. If we take the octave-reduced melody as the "basis", then it becomes clear that the masna sobbaba is the upper left note and the open bamm string is the

lower left note. That is, al-Khorezmiy justified that the peak of the bam is an octave above it. Hence, the lower left note is siyah and the upper left note is sajah.

Al-Khorezmiy described the next version of the "Famous tuning" as follows: bam sabboba - an octave decreased melody is “basis”, man binsiri (nameless finger tone) - an octave increased melody is the peak. If we the current concept on the notes as an example, then it will be as follows: the bam sabboba forms the note of la, the masna binsiri also forms the note of la. If we take into account the fact that the Khorezmiy bamm Sabbath is given as an octave diminished melody, then it can be recognized that if it is a lower la note, then masna binsiri formed an octave above the la note. Hence, in both appearances, it is clear that the notes in the bamm string are its base, and that the notes above one octave are their peak. Al-Khorezmiy narrated: Therefore, one of the two melodies in the interval is called Saqil - low (heavy) melody, and it is sajah – melody, where one octave decreases; "basis", and the other, khada – "high melody", and it is – melody, which rises to one octave: "peak". In order to come to an agreement (consonance), one replaces the other and is called as-sijahul-isjah, as-siyahus-sayha and id'af. But the truth is that without al-isjah as-sijah is a melody that is one octave lower: “basis” [Liber Mafatih al-Olum. 1895]. That is, one of these octave intervals is “saqil”, i.e. the tone in the lower bam string is “saqil”. The above tone is hada, that is high melody.

In short, musical instruments are one of the factors that reflect the identity of each nation. It is no exaggeration to say that it reflects the identity of the nation. When it comes to instruments that have been formed and developed over the centuries, their value has been passed down from generation to generation. We can say that it is the duty of each of us to study and research them.

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