



# AL-FARABI'S PHILOSOPHY OF MUSIC: "THE LEGALITY OF MUSIC"

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Gulzhikhan Nurysheva<sup>1</sup>,  
Nurfer Tercan<sup>1</sup>

<sup>1</sup> Al-Farabi Kazakh National University (Almaty, Kazakhstan)

**Abstract.** This article's approach is to acquire Al-Farabi's point of view on the philosophy of music. Under the heading of Farabi's music philosophy, we determine that music is not just about art and entertainment. For this reason, he carried the theme to a higher level in terms of science and philosophy with his proof method studies. First of all, we aimed to discover the traces of Farabi's inquiry method from his works. A philosopher and musician, Abu Nasr Al-Farabi, wrote on the perfect city, logic, astronomy, linguistics, politics, mathematics, geometry, medicine, optic, philosophy, and music, known as the 'second teacher', the first being Aristotle. This investigation contributes to practical and theoretical music proposing formation in the context of correlation. From this perspective, a musical system's consistency level relies on a sense-perception, a method of relevant indications within other comparable and correlated systems. This inquiry analyzes correlations' modalities, exploring their general and particular attributes and their operational bounds. This article evaluated the description of meaning from one cognitive domain to another mental part, such as from mathematics to music or astronomy or psychology correlated with music science. Approaching music science with dimension and paradigm determined the requirement for detailed music research in science and measurement criteria. His book '*Ihsa*', which describes the nature and enumeration of science in philosophy and science classification, was recognized in the Middle Ages. However, '*Musiqa*' tops the list of Arab theoretical studies and has had a remarkable impact on later Arab music theory.

**Keywords:** Al-Farabi, Music. Philosophy of Music, Sociology of Music, Music Culture, Psychology of Music, Neuro Musicology, Musicology, Music Theory.

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## Introduction

In this general work, we focus on the thoughts that form the philosopher's music to understand the scholars' perspectives and ways of thinking

in medieval Islam. The philosophy concerning music is separated from the concept referred to as music theory. During this time, the music theorist takes care of matters like the elements of music: tone, intervals, melody, rhythm,

modes, transitions, composition, musical instruments and their use in the theory and performance of music. We see a medieval music philosopher that answers questions about the nature of theoretical science, which dominates the music and its origin, the theoretical and practical or practical sides of music, the location of music. Alternatively, again, music or harmony is the concord of several different things blended into one. Al-Farabi raised most of his philosophy and theory on Greek philosophers such as Aristotle, Pythagoras and Plato. Furthermore, they are thought to have made progress beyond their contribution and not disclosing the uncertain, agreeing or choosing from different ideas. He uses the practical music of his time in the Arab Empire as source data to understand what is 'natural' in music. He lived just after the early Abbasid period of Islamic civilization (750–847 AD) (M. S. 872–950). He was educated at the House of Wisdom (recognized as the first known university), especially in Baghdad, by several Greek authors who were recently translated into Arabic. In music, he pioneered the mathematical calculation of intervals. To strengthen his arguments, Al-Farabi studied music with other sciences such as astronomy, physics, mathematics, geometry and medicine. It is not mainly at the heart of logic science, and in doing so, it gives an idea about the method and epistemology. Al-Farabi had aspired to understand his first existence. One of the main topics that Al-Farabi addressed in the first introductory section of *Musiqā* concerns specific sciences' epistemological foundations.

In the beginning, was the 'Word'... So what was the beginning of the word? Was the world a brief moment outside of our time? The real question must be, did it happen long before the dawn of time? Logos does not just mean 'word' in the language of the Greeks. It also includes the meaning of 'sound'. Word or sound is vibration and motion that is amplified. Its

first meaning is awareness, and it is the first moment when creation recognizes itself. Word, sound, light and thought are highly interdependent. Because each is the frequency to the others, the scope of each other, intertwined in neurological, philosophical and theological contexts. Before the beginning of time and space, the absolute and perfect universe existed with the knowledge of 'life'. The epistemology and philosophy of science also existed with their inquiries on this thought and formed the whole world of thought.

Al-Farabi's *Kitab Al Musiqā Al Kabir* involves a wide range of experience, observation in philosophy, along with proof theory. However, the great book explains the importance of induction in the most systematic and detailed approach. Al-Farabi provides more specific information on the role of experience in astronomy. He writes that the situation of musical science agreement with other sciences. Many of the principles are acquired through sensitivity experience, as in astronomy, optics, medicine and other sciences.

## Methods

This research is a qualitative study using library data. The method used in this research is interpretative analysis with content inquiry techniques, that is, analyzing the text of the works associated with Al-Farabi's thought in both primary and secondary data by conducting a form of books, journals, and previous results research. Besides, data analysis was made by distinguishing one concept from other concepts to obtain the desired data.

## Results

The research results are the resolutions of *Kitab al Musiqā* regarding the impact of music on science and support our inquiries. Farabi compared the thoughts of the previous philosophers in music, which is cited as an essential subject. Al-Farabi

tried applying Aristotle's methodological ideas to specific sciences such as music and astronomy. This study based on his general approach to the classification of the sciences. Al-Farabi apprehends that the human ear can be unreliable from time to time. Infrequently people experience pleasure following perfections of what is not the natural course for man. One of Al-Farabi's main issues in the first introductory section of *Kitab al Musiqā* concerns the particular sciences epistemological foundations. To strengthen his arguments, Al-Farabi compares music to other sciences such as astronomy and medicine, and by doing so, provides insight into their method and epistemology. Farabi's advice to approach this science of music reminded us that we should examine the relationship between astronomy, mathematics, geometry and physical sciences with music.

## Discussion

Farabi's division of music clearly theoretically and practically, with all the established inclusions and exclusions we have discussed, actually formed a tight hedge against Kindi's Pythagoreanism and others like him in the Islamic tradition. The principal theorists main difference was that Al Kindi went deeply into Pythagorean speculations on the harmony of the spheres, whereas Al-Farabi and confined themselves to consonance theory and its corollary, the division of the octave. Al-Farabi's purpose is not to react strongly to the theory of music in Pythagoras. Farabi's aim is to prove why he did not accept the theory of music that Pythagorism defended. Farabi was inspired by Aristotle's distinction between theoretical and practical aspects of all research before him. He is a loyal follower of Aristotle; therefore, Farabi developed it in his philosophical thought system, adopting this method. In this case, if one were pursuing Pythagoreanism's history within

the Islamic intellectual tradition, Farabi's assumption is notable, and Ibn Sina also joined later to Farabi's views.

Music review, research authors have written exceptional works, making particular reference to themes written by past authorities. They also wrote their life stories, citing stories and legends about various wise men's musical works. While some research writers cite Al-Farabi as an authority based on his texts, others tell the story of the musical performance that is not included in any of his known writings, making people laugh, cry and fall asleep at court. During our research on Al-Farabi's music philosophy, we could access this whole story in only one author's work. Many authors and researchers do not mention the source and reference that contains this history that has told.

## Understanding Music and Cosmology in Al-Farabi's Philosophy

Al-Farabi begins by identifying the method necessary to structure his first principles, dividing them into various categories and creating a system. His work '*Ihsa al-ulum*' has been the prime tract for all eras as the sciences' classification methodology. In this labour, he scientifically emphasized music within the scope of the sciences. All these explanations to the sciences classification belong to '*al-Musiqā*' and '*Ihsa al-ulum*'.

"Here is the Escorial text of the section on the Him '*al-musiqā*' in the *Ihsa al-ulum* of Al-Farabi: And as for the Science of Music, it comprises, in short, the investigation into the various kinds of melodies, and what they are composed of, and for what they are composed, and how they are composed, and in what forms it is necessary that they should be in order that the performance of them be made more impressive and effective. And that which is known by this name [i.e. 'music'] comprises two sciences. One of them is the science of practical music, and the second is the science of theoretical music" [1, pp. 571–572].

If one found a paradigm case of seeing, it would be better to regard as such, not the visual apprehension of intensity applications. Still, things like seeing what extent it is, seeing what key a piece of music is written in.

“Al-Farabi also states that matter is receptive to form: it does not exist without the form. Al-Farabi states matter must receive forms to exist; otherwise it will be a privation in actuality, that is, it will not exist. Although it was potentially (in the sense of possibly) lacking in existence, when matter receives form, it becomes substance. Therefore matter includes the potentiality to receive form. The material elements thus form part of a thing’s quiddity. Al-Farabi’s use of the *root j-s-m* in the active participle of the Fifth Form *mutajassim*, the form that means making into a body, graphically illustrates his definition” [2, pp. 79–80].

The Enumeration of Sciences is, to some extent, the most essential for understanding Al-Farabi’s philosophy of other sciences, which is a copy of ancient artefacts. Hence arithmetic is the science of numbers. Music is the differentiating of sounds and the diversity of voices. About encore, music or harmony is the consensus of several different things blended into one. Al-Farabi highlights the application of Aristotle’s methodological ideas to the sciences such as music and astronomy. He understood the significance of the inductive approach and experience, especially in searching for the first principles, and reflected in his profound understanding of the relationship between practice and theory.

“It is this latter aspect in the development of ilm *al-hay’ah* that is relevant to our analysis of Al-Farabi’s cosmology, since this particular endeavour on the part of Arabic astronomers overlaps with the early history of falsafah. Indeed, both groups reflected on the relation and interactions between the various sciences and on the principles of the astronomical discipline in particular. Now, this is a question that also preoccupied

the Second Teacher. Not only did he write works in which he discusses the classification, status, and method of the philosophical sciences (including astronomy) as in *‘Ihsā’, Burhān, and Mūsīqā’* but Al-Farabi’s own attempt at providing a cosmological synthesis betrays a similar concern for harmonizing the latest astronomical findings of the age with the main principles of Aristotelian physics [3, p. 36].

Al-Farabi hypothesizes that the celestial nature may be reducible to the celestial souls responsible for causing the motions that produce the powers that emanate from the world of generation and corruption. The primacy of the soul can perhaps explain this feature.

“Its utility [lies] in tempering the character of living beings that digress from the mean (*æqualitas*) and in perfecting the fitness of those that have not yet been perfected, and in maintaining those that appear [to possess the] mean (*æquales*) and have not yet gone to any of the extremes [in digressing from the mean]. It is also of utility to bodily health whenever the body is weakened by a languid soul and is impeded by the existence of its own impediment. Thus the cure of the body is affected by the cure of the soul through the adjustment of its own constitution, and combining this with its own substance by means of effective sounds, such as concordant [sounds]” [4, p. 49].

Utilizing Aristotelian’s concept of time, Al-Farabi easily conceives it impossible to show that the creative action is untimely, that the universe did create unbeginning and never-ending. However, even in this way, it points to Al-Farabi’s awareness of the radical possibility that its formation doctrine requires the universe.

In his treatise *The Principles of Existing things*, Al-Farabi divided six types of bodies on which accidents subsist in six major levels: “The principles by which the six types of bodies and accidents subsist are divided into six major levels, each one

comprising a single kind. The First Cause is in the first level. The secondary causes are in the second. The Active Intellect is in the third. The soul is in the fourth. Form is in the fifth. Matter is in the sixth. In the first level there cannot be many but rather only a single one. In each of the other grades” [5, pp. 81–82].

The heavenly bodies do not accept contrary forms; they cannot be caused by the same potential element that composes sublunary beings. Contrariety and potency influence sublunary substrates, although the celestial substrates are affected by neither. To answer this question, we must consider Al-Farabi’s theory of emanation which symbolizes his cosmology. Heavenly bodies do not convey anything to the existence of the tenth intelligence. Below are the material world of four elements (fire, air, water and soil), form and substance, and change. Al-Farabi provides more than one way to notify about emanation.

effects of the scope of Islam. It is also a result of the discovery of new cultures.

“The centrality of music in early Islamic discourses contrasts with the marginality of images. Music’s proponents and detractors both described it through a cosmology of similitudes, ranging from our internal experience to the physical world, the universe, and the divine. Its therapeutic, spiritual, sinful, divine, rational and irrational effects exceed the physical experience of audition. The symbolic role that the modern episteme assigns to the outward, visual image may have been addressed by inward musical apprehension in the Islamic realm. Yet music lies in the blind spot of art historical oculo-centrism” [7, p. 57].

The mathematical literature of astronomy is modified to inquiring problems that require observations, calculations, and measures, such as the conditions, sizes, and distances of the planets. Nevertheless, it is

“God = *the First (al-Awwal) (The Necessary Being)*  
 The following intellects *are emanated from the Necessary Being*  
 First Intellect (‘aql): *The second Existent:*  
 The Soul and Body of the *First Heaven (Al Sama’al ‘Ula)*  
 Second Intellect *Fixed Stars (al-KawakibThabita)*  
 Third intellect *Sphere of Saturn (Zuhal)*  
 Forth intellect *Sphere of Jupiter (Al-Mushtari)*  
 Fifth intellect *Sphere of Mars (Al-Marreekh)*  
 Sixth intellect *Sphere of the Sun (Al-Shams)*  
 Seventh Intellect *Sphere of Venus (al-Zahra)*  
 Eighth Intellect *Sphere of Mercury (‘A tared)”*  
 [6, p. 119].

### **The Legality of Music**

The philosophers and scientists of the Middle Ages Islamic geography led many science branches such as geography and cosmology, astronomy, mathematics, and philosophy. They have profoundly influenced the scientific disciplines in Europe and discovered essential knowledge that also profoundly influenced music. A very intense translation movement started in the Islamic world of the eighth century. This process is one of the most significant

clear that the inquiry into invisible things, e. g., the causes of the celestial bodies, cannot be carried out through mathematics since the philosopher is dealing in this case with entities that cannot be perceived and measured.

“Below this rank, Al-Farabi goes on to argue, is that of those who perceive all these things, either in their sleep or waking state, and are able to imagine them in themselves, but do not perceive them visually. Below this rank still is that

of those who perceive those things in their sleep only and express their perceptions in terms of analogies, symbols, enigmas or simulations [8, p. 90].

The law of nature, the functioning of collective consciousness, is the characteristic of being human. It is as essential to imagine voices mentally 'in mind' as visualizing them in the 'eye of the mind'. Everyone is compulsory to hear spontaneous sounds. The vibrancy of sounds in their imagination differs between individuals. When they listen to music, most people imagine various things: a singer, a rising line, a swirl of activity, an impending disaster. Some of these dreams seem to be a closer connection to music than others. However, how do we understand the concept of 'intimacy' and if such imagination is necessary?

"For instance, lines, planes, bodies, stars, and celestial spheres would have to exist there; then movements and rotations for these celestial spheres would [have to] exist. Furthermore, sciences like the science of astronomy and the science of melodies, of harmonic and non-harmonic sounds, of medicine, of geometry, of straight and curved measures, of hot and cold things, and, in general, of active and passive qualities, of universals and particulars, and of matters and forms would [have to] exist there. [These and] other repugnant things articulated in those statements are such that it would take too long to mention here" [9, p. 160].

When we detect the intensity of sound or vibrations, how does the interaction occur in our minds? Sound is vibration, and the vibration is physical. We can feel sound by touch. We are feeling the combination of notes in music with the inner eye. How does our mind perceive and shape the feeling it creates when frequencies turn into sound waves? These questions raise whether the physical and metaphysical approaches demonstrate the same attention for demonstrative severity as the mathematical one.

"Discussion of human communication through music, by Al-Farabi and others, is informed by commentaries on Aristotle's *De anima*, *Poetics* and *Nicomachean Ethics*. Al-Farabi's conception of music as an art (*si nā'a*) that can engage our faculties of sense perception (*ḥa sāsīya*), imagination (*takhayyul*) and intellect ('*aql*) is one application of Aristotle's view that the exercise of the intellect presupposes imagination, which in turn presupposes sense-perception (*De anima*, III,). Some musicians, Al-Farabi acknowledges, can merely replicate melodies they associate with concrete material realities; others can imagine new melodies without the support of familiar circumstances; and the most complete musicians can reason about all the products of their imagination. According to Farabi, experienced listeners imagine the likely course of a melodic progression, which then proves itself either 'faithful' (*wafīy*) or 'deceptive' (*khātil*) with respect to the listener's expectations" [10, p. 113].

Musical art aims to create harmony with sounds and clarify the universal functioning in life. Human talent can distinguish musical phrases from each other through the ear. Human perception can distinguish good and bad sounds between harmonious and dissonant. According to Al-Farabi, every theoretical art has logical and scientific principles.

"A sense organ is a *potentia passiva*, the actuation of which is due to a stimulus, and ultimately to an object. Second, when the object acts upon the sense-organ, it must produce therein a modification which is like to itself, and generally called sensible species. In receiving the sensible species, the sense passes from *potentia passiva* to act. Hence, when sensible species are produced in a sentient organism, they must produce a corresponding reaction which we call sensation" [11, p. 39].

### **Form of the Sound Waves**

As a result of the order and regularity in music, sound and motion, it has been

studied as the generic principle of various sciences to create the harmony of nature's belongings. It's all motion and sound.

"*The Origin of Music*: After noting facts like these we naturally ask how music came into existence. It is true that external nature supplies suggestions, as in the sighing and whistling of the wind, the rippling and roar of falling water, the cries of beasts, the buzzing or calls of insects and the songs of birds ; but the influence of these on primitive song is apparently slight. Herbert Spencer argued that song is primarily a form of speech, arising from the reflex action of the vocal organs under stress of emotion (as a cry follows the sensation of pain). More likely is the hypothesis that music is derived from some attempt to work off surplus energy through bodily motions, to coordinate and decorate which rhythmic sounds, vocal or mechanical, are employed, and that what was at first only an accessory to dancing was finally differentiated from it. But these speculations are not especially fruitful" [12, p. 31].

Al-Farabi mentions the following information about the formation of sound in objects in the context of the principles of music:

"The simple man is he whose imagining of the common form of what should be chosen and avoided is sound, except that he has no experience of the practical things which should be known by experience. A man is sometimes simple in one class of things and not simple in another class. The speculative and reflective virtues\* are sometimes a cause and principle for the coming into existence of the practical virtues and practical arts" [13, pp. 47–73].

### **Harmony and disharmony in music**

The two words, music and harmony, always stated the same thing. The first accomplished by the scientific discoveries that belong to universal harmony, whilst the latter became the divine language of melody and song. The joining of the elements resembles a harmony, such as results

from an appropriate consonance of strings and a clear tone compound. The Greeks included the idea in the general principle of harmonization in the universe and in the human spirit. At first, Al-Farabi was sceptical of the theory of cosmic harmony.

"Here is what Aristotle is made to say in the *Kitab al-siyasa* on the question of the Pythagorean notion of the Harmony of the Spheres, and musical therapeutics. 'And now that I have finished describing physical remedies, I am going to mention spiritual ones. Know, that mental diseases are also amenable to treatment but their treatment is carried out by means of musical instruments which convey to the soul through the sense of hearing, the harmonious sounds which are created by the motions and contacts of the heavenly spheres in their natural motion, which affect the right perceptions. And when those harmonies are interpreted in human language they give rise to music which is pleasing to the human soul, because the harmony of the heavenly spheres is represented in man by the harmony of his own elements, which is the principle of life. Hence, when the harmony of earthly music is perfect or, in other words, approaches the nearest to the harmony of the spheres, the human soul is stirred up and becomes joyful and strong" [14, pp. 95–96].

### **Instruments and the Human Sounds**

A structure of art reflects the presence and affects the listener through intellectual acknowledgement and sound successions. By dispatching subconscious images and emotions in aural form, music can be classified as a form of human interaction and influences the mind's psychological element. As a substitute, there is an analogy between music and human speech, principally speech articulation. The intrapersonal perceptions and emotional reactions towards the external world are represented by alterations of sound and other characteristic expressive vocal harmonies. This resemblance

makes it possible to classify the nature of music according to emphasis. Al-Farabi's *'Kitab al Musiqa al Kabir'* is considered the most remarkable treatise on music theory and was the most significant work of music written up to this time as a prime encyclopedia. It is pointed in the form of introduction, composition elements, instruments and presentation. Principally is developed as a well-organized and established theoretical-scientific thesis on the philosophy and practice of music and theory. Al-Farabi formed this introduction part as the most competent treatise in his corpus *'Al Musiqa al Kabir'*.

"After observing that he has already devoted two essays to the rudiments and that he has already shown how these rudiments, as described theoretically, can be tested by the senses with the aid of an instrument constructed for the purpose, Al-Farabi tells us that he now proposes to show how these rudiments can be experienced on the musical instruments actually in use. He proposes to study each of these instruments and show which are capable of producing all of the notes and which can produce only some of them. Thus, he says, the reader will learn the application of what has been explained in the essays on the rudiments. Similarly, at the end of the second essay on the instruments, he writes that he has dealt in these two essays with the instruments that are most in use in his country, showing the notes and groups that are proper to each of them. In so doing, he has addressed not just other theorists, as is the practice of some authors, but has addressed the practical musician as well. And, indeed, the bulk of these two essays is taken up with extremely detailed accounts of a variety of instruments, most notably the lute" [15, p. 180].

We also find out, says Al-Farabi, that three interludes give a sense of perfection or completeness of all potential combinations of notes. Al-Farabi advises the aspiring musical theorist to rely, like

the metaphysician, on comparison and analogy to acquire some knowledge of the intelligible things that lie beyond the realm of sense perception in *Musiqa*. In its broadest sense, we learn that music disciplines convey through both speaking and writing covers as the interpretation of the term musical knowledge. Here, we can conjecture that it expresses the erudition acquired and identified appropriating rhythm, melody, movement. These definitions carry out through the subject of sense-perception.

"Excellence of idea is that a man should have ideas or excellent ideas, i.e. that a man should be good and virtuous in his actions, then that he should have ideas, and his words, ideas, and counsel should have been tested many times and found sound and right, bringing the man, when he employs them, to approved results" [16, p. 46].

"Now sense-perception attests to the multiplicity of natural things. This multiplicity is perceived through sense-perception in two ways. First, sense-perception apprehends a multiplicity of natural things because the [same things] are dispersed in separate places; it distinguishes them from each other by virtue of the different places they occupy. This, then, is the first kind of multiplicity; it is better known. Second, the multiplicity of natural things is apprehended through sense-perception of a single object" [17, p. 94].

The first part of Farabi's corpus is about the nature of music, considered melody the music source, both vocal and instrumental, the varieties of melody, the practical and theoretical sides of the inquiry. All this is said to be an introduction to the art-science of music. For music is an art, its instances the continued use of sound and other elements as material. As far as we conjecture, Farabi does not make it a logical point, an issue of the description of music as an art. Not only does he make it an issue for natural science, but he prefaces the point about what science has ruled out by saying that most of the primary

individuals for this science music exist by art and cannot exist by nature.

“As in other arts, a knowledge of the theory of music requires that one know the first principles. One must then know the rules or general propositions by means of which one derives all of the rudiments of the art, since a complete mastery of these rudiments, too, is essential for the theorist. Finally, these rules enable one to determine precisely in what the art does and does not consist, and they enable one to avoid error. Related to these aspects of theory are the two remaining subjects comprising the first part of the science of theoretical music, both of which are discussed in the first pair of essays in the Grand Book: the way in which man comes to discover the art of music and the character and training appropriate to the person who would investigate this art” [18, p. 177].

Here mentioned a short case at medieval Arabic music theory and its recent accomplishments by examining Al-Farabi’s viewpoints on rhythm in *Musiqā*. Contrary to the intended and accidental impacts left by contemporary scholarship, it is apparent from the previous analysis that Al-Farabi’s viewpoints concerning rhythm are harmonious, considerably definite and unambiguously formed, and surprisingly intriguing as a composition and as an alternative way of perceiving rhythm.

“That rhythm again is determined by musical notes which fit in with them in playing, the rhythm of blows of the hand corresponding to the rhythm of the syllables of speech; and that rhythm must not vary from its station (*martaba*) if the playing is not to be ruined” [19, p. 53].

### **The practical and the theoretical arts of music**

Another circumstance of attention in *Musiqā* is the detail between the theoretical and practical sides of astronomy. Al-Farabi differentiates between theory and practice and values the former more than the latter; he nevertheless indicates that

theory can gain only limited progress if it is not approved by reasonable practice and observation. Al-Farabi synthesizes the Aristotelian causal knowledge with the neo-platonic emanations scheme in theoretical philosophy.

“In his discussion of the mathematical sciences, Al-Farabi gives an account of music, dividing it into the sciences of practical and theoretical music. The appeal of this simple division to scientists like Bacon is in itself quite suggestive. Lambert preserves Al-Farabi’s distinction between practical and theoretical music, but of Al-Farabi’s five branches of theoretical music, Lambert preserves only the second, which can scarcely have meant to him anything like what it meant to Al-Farabi. Rhythm is treated in a separate context in which all music is divided into that with rhythm and that without. His general terms for discussing rhythm are *modus* and *mensura*” [20, pp. 173–186].

Without dwelling on the nature of that science extending beyond physics, Al-Farabi achieves his discussion with a concise indicating how the practical intellect, regarded with preference and choice, supports the theoretical, wherein human perfection consists. He draws attention to the knowledge that philosophy is the most basic system practice and theory in its field. In addition to influencing the audience’s feelings under the twelve maqam system, Al-Farabi also discovered a different music feature. Music performance under the twelve maqam system maintained the understanding of music as a practice that can physically change audiences, applying music’s recurring feature to change humanity’s mentality. Farabi is the philosopher who forms a legend that shows the musical talent circulated in texts about the twelve maqam system. First, Farabi played a melody for his audience and made them spontaneously laugh, followed immediately by another melody that spontaneously made them cry, followed immediately followed by

another melody that spontaneously put them to sleep so he could leave. This story expressed the one-to-one relationship between properly executed musical knowledge and the audience's emotional and physical response.

“Farabi's view of the origin of music is in marked contrast to the one held by K̄indi and the *Ikhwan*. According to these, human music originated when the Sages, and in certain passages Pythagoras is singled out, heard the celestial music and set down the rules for human music. These were then disseminated to others, and eventually music spread to all. This has all the earmarks of a myth, and we do not mean that in any negative sense. By contrast what Farabi offers, to be followed by Ibn Sina along rather similar lines, is a natural or naturalistic explanation?” [21, p. 59].

“According to Al-Farabi musical structures are artificial and not based on nature: the Pythagorean argument about the relations of planets and stars producing music is based upon a linguistic misunderstanding: namely that of using the word ‘music’ in two different meanings. Further, as early as the beginning of the Middle Ages Al-Farabi is fully aware of differences between cultures and of the fact that what are regarded as natural tones in a given culture, e. g. Arabian, are ‘natural’ only in this context. He even determines rather strict limits for the cultural sphere to which his musico-theoretical considerations about tonal relations, distinctions between structural kernel motifs and secondary ornamental motifs, can be applied” [22, pp. 307–308].

To figure out better, we can assume that Al-Farabi in the caliph's assembly is the most apparent exemplary experience that draws attention to the fact that human should be based on practical and theoretical in achieving virtue. Farabi emphasized the need for people to acquire practical and theoretical knowledge about achieving virtue. The fact that when people listened to his music, some reactions realized in their

mind. These reactions appeared without the listener's control. The caliph's assembly indicates that Farabi had professional practical and theoretical knowledge of his expertise in music. Therefore, we anticipate that this may be a prime example of practical and theoretical knowledge. It can be said that the anonymous ‘*Kitābū Keşfü'l-Hüm Kümve'l Kūrab fī Şerhi Āleti't-Tarab*' is the most comprehensive study of the science and philosophy of music in the Farabi corpus. The only copy of this work is in the third Ahmed Library Manuscript Section of the Topkapı Palace Museum. This work has still been reviewed by the British musicologist and Arabist Henry George Farmer and J. B. Hardie in 1932. The inspirational experience of the second master Al-Farabi, which led to the discovery of many different new opportunities in science, will perhaps be read for the first time in this article with the details below.

*“Such is the opinion of the people of Iraq, and as a result all the older authorities used to derive the science of music (tarab) from the science of human nature; on this basis Al-Farabi derived the science of the ‘musiqā’ and its rules by means of which he surpassed all others who wrote on this science of music. And there is a story about the reason for his making it. Al Ma'mun used to hear about Al-Farabi and the knowledge which Allah the Exalted had given him, and his understanding, so he desired to meet him, wishing to test him in some of the sciences in order to see his sagacity and his knowledge. How a strange thing had happened to Al-Farabi which brought him out of his own country against his will and secretly. So he travelled night and day until he came to the city of Baghdad which was the seat of the Caliphate, and he entered the city in disguise so that not one of the people recognized him; and he thought that he would make his way to the Caliph in order to earn his favour by means of his learning and his knowledge.*

Caliph said to Al-Farabi 'At our court you shall have the highest privilege and the greatest riches, among us you shall obtain glory, and you shall be honored above all your peers and your fellows.' Then the Caliph continued 'Produce the knowledge of which you spoke to us, and hasten with your answer that you may be given our generous gift.' He answered 'It will appear before you now.' The Caliph asked 'what things do you need to produce it for me?' Al-Farabi said 'Bring me copper and smiths and wood and carpenters.' So the Caliph sent for them; and all who were present stood silent watching him to see what he would make. And he ordered the smiths melt their copper and make it into long thin sheets, light, engraved and ornamented; and he ordered the carpenters to saw the wood and to cut it into rods, round and hollow, in two sizes thick and thin, the thick cut eight sided and short, the thin cut four sided and long. They were to stand upright their heads upward and their tails down. And between each pair of rods he fashioned a peg fixed on a crossbeam, twelve pegs above at the heads of the rods with the heads of the pegs turned downward; and twelve similar pegs at the tails of the rods also, arranged in the same way on a crossbeam, steady and fixed at the bottom so that the heads of the pegs were upward standing alone. Then he took silken strings which he stretched across the rods to right and left; and over these he rolled the sheets of copper on the outside until all of them were covered with copper and the instrument resembled. (There is an omission in the Magic Seven. at this point.) Then he fastened it up and connected the various pieces together, and stood it upright and erect like a pulpit (minbar). Some said too that it resembled a physician's ointment box (marhamdan) eight sided in size and dimensions. Others said that it was like a box turned in a lathe, rounded in the cross-section and long; and yet others said that it was square in length and breadth like a coffer. But this is generally agreed;

that it was square, its height off the ground being less than the height of a man, while the breadth of the circumference of its four sides was 12 dhira, each side being 3 dhira.

It had 4 doors each in two leaves and each opening and shutting; around each door was a small aperture (taqa: lit. window) in which was a copper pipe going in to the inside. On the outside of this pipe was fixed a wild beast's skin secured to it and folded over upon itself like a bellows with two wooden handles which were opened and closed mechanically to deliver air. It was worked by men who sat blowing with the bellows, and others who stood beating with the plectrum on the 4 sides around the 4 doors. Each door has a front, each front has an entrance, each entrance has a channel, each channel has a mouth and each mouth has an end to which the air comes and goes round. By whichever door it enters it has no exit by which to escape, so it masses and collects all together and rises to the top; but finding no loophole or exit by which to get out it sinks back to the bottom to go out where it came in. But there it meets the air which has been blown in on top of it, and the pressure becomes stronger and stronger. The blowing of the bellows prevents the air from sinking to the bottom, and the beating of the plectrum keeps it from rising to the top, so that no exit remains for it, nor any movement to escape, but it is enclosed and can find no way out. So it circles between the upright pegs and strains at all the strings but finds that they have checked all its efforts to escape and have driven it out of its place and prevented all its movements to reach its destination (i.e. outside) and made all its efforts vain by opening the doors and closing the windows. So the four blasts of air (i.e. from the 4 doors) are hindered in their way and circle round in that copper box; and the pressure grows strong and the force continues to increase and to grow and to become great until the air is confined between the four doors. Then the pressure becomes too strong for it and forces it

*back to the top; so it ascends and finds 12 windows which had been made (in the top corresponding to the 12 hours of the day and also p to the 12 Signs of the Zodiac).” [23, pp. 79–84].*

## **Conclusion**

This research’s result should lead to a partial re-evaluation of Farabi’s intellectual heritage in Islam based on music philosophy and science. Moreover, Al-Farabi’s attempt to harmonize physics, metaphysics, and astronomy in terms of methodology and doctrine and the multilayered theory of infinite causality introduced intellectual beings’ dimension. Furthermore, along with the later Arab thought, it also profoundly affected Europe. In the method of studying Farabi’s approach to cosmology and music, we applied his classification. It was primarily his work of texts in which he compared the ideas of Kindi, Pythagoras, and others. However, on the other hand, this model, and especially Al-Farabi’s idiosyncratic

theory and causal powers, was never fully adopted by later thinkers.

Especially the subject of rhythm pattern, we could say it assists as a model for future variations on the same theme, but as far as we know, these details have never been deeply analyzed. Until today, we have determined that only general studies have been done on Farabi’s life and corpus from our deep library antiquities research source. Despite the conciseness of Al-Farabi’s remarks on the method of astronomy, it is nonetheless possible to reach certain conclusions based on the previous analysis. First, it should encourage us to re-examine some aspects of Al-Farabi’s affiliation with the Aristotelian, Platonic, and Neoplatonic traditions. In his description of the astronomical method, Al-Farabi appears as a quite thorough Aristotelian. It was important to access and read Farabi’s original book, which exemplifies the rhythmic flow of emotions. It is evidence of the universal law of rhythm in nature. The philosopher points out that all motion is rhythmic or wave-like.

### **Авторлардың үлесі**

Г. Ж. Нұрышева – мақаланың тақырыбын және зерттеудің міндеттерін белгіледі; зерттеудің әдістемелік құрамын әзірлеуді ұйымдастырды.

Н. Терджан – ресурстарды зерттеу, сараптау және талдау бойынша барлық тапсырмаларды орындады; ғылыми әдебиеттерді талдау; әдеби шолуды дайындау; мәтіннің зерттеу бөлігін әзірлеуді және пысықтады.

### **Вклад авторов**

Г. Ж. Нурышева – определила тематику статьи и постановку задачи исследования; организовала разработку методологической составляющей исследования.

Н. Терджан – выполнила все задачи по исследованию, приобретению, экспертизе и анализу ресурсов; провела анализ научной литературы, подготовила литературный обзор и исследовательскую часть текста.

### Contribution of authors

G. Zh. Nurysheva – determined the subject of the article and statement of the research problem; arranged development of the methodological component of the research.

N. Tercan – carried out all resource research, acquisition, examination and analysis tasks; analysis of scientific literature; preparation of a literary review; preparation and revision of the research part of the text.

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**Гүлжиһан Нұрышева, Нурфер Терджан**

Әл-Фараби атындағы Қазақ ұлттық университеті  
(Алматы, Қазақстан)

**ӘЛ-ФАРАБИДІҢ МУЗЫКА ФИЛОСОФИЯСЫ: «МУЗЫКАНЫҢ ЗАҢДЫЛЫҒЫ»**

**Аңдатпа.** Бұл мақала әл-Фарабидің музыка философиясына деген көзқарасын зерттеуге бағытталған. Фарабидің музыкалық философиясының ұғымы – музыка тек өнер мен ойын-сауық емес дегенді білдіреді. Осыған байланысты ол дәлелдеу әдістерін қолдана отырып, ғылым мен философия тұрғысынан тақырыпты жоғары деңгейге көтерді. Авторлар ең алдымен Фарабидің еңбектерінде зерттеу әдістерінің белгілерін анықтауға тырысады. Философ және музыкант Әбу Насыр әл-Фараби идеалды қала, логика, астрономия, лингвистика, саясат, математика, геометрия, медицина, оптика, философия және музыка туралы жазды және «Екінші ұстаз» ретінде танымал болды, біріншісі Аристотель болды. Бұл зерттеу салыстыру тұрғысынан құрылым жүйесін ұсына отырып, музыка тәжірибесі мен теориясына өз үлесін қосады. Осы тұрғыдан алғанда, музыкалық жүйенің үйлесімділік деңгейі сенсорлық қабылдауға, салыстырылатын және салыстырылмалы жүйелердегі белгілі бір көрсеткіштер әдісіне сүйенеді. Бұл зерттеу корреляцияның ерекшеліктерін талдайды, олардың жалпы және жеке қасиеттерін және олардың жұмыс істеу шекараларын зерттейді. Бұл мақалада білімнің бір саласынан екіншісіне, мысалы, математикадан музыкаға немесе астрономияға немесе музыка ғылымымен байланысты психологияға дейінгі мағынаны сипаттау бағаланады. Мұндай масштабтағы музыка ғылымына көзқарас ғылымдағы музыканы егжей-тегжейлі зерттеудің қажеттілігін, сондай-ақ өлшеу критерийлерін анықтады. Оның философия мен ғылымдардың классификациясындағы ғылымдардың мәні мен тізімін сипаттайтын «Ихса» кітабы орта ғасырларда мойындалды. Алайда, «Музыка туралы үлкен трактат» Араб таңдамалы теориялық зерттеулерінің тізімінде болды және араб музыкасының кейінгі теориясына айтарлықтай зор әсерін тигізді.

**Тірек сөздер:** Әл-Фараби, музыка, музыка философиясы, әлеуметтану музыкасы, музыкалық мәдениет, музыка психологиясы, нейромузыкалогия, музыкатану, музыка теориясы.

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**Гулжихан Нурышева, Нурфер Терджан**

Казахский национальный университет имени аль-Фараби  
(Алматы, Казахстан)

**ФИЛОСОФИЯ МУЗЫКИ АЛЬ-ФАРАБИ: «ЗАКОНОМЕРНОСТИ МУЗЫКИ»**

**Аннотация.** В данной статье дается попытка изучить точку зрения аль-Фараби на философию музыки. Понятие музыкальная философия Фараби подразумевает, что музыка – это не только искусство и развлечения. В связи с этим он поднял данную тему на более высокий уровень с точки зрения науки и философии, используя методы доказательства. В первую очередь авторы нацелены выявить признаки методов исследования в работах Фараби. Философ и музыкант Абу Наср аль-Фараби писал об идеальном городе, логике, астрономии, лингвистике, политике, математике, геометрии, медицине, оптике, философии и музыке и был известен как «второй учитель», первым из которых был Аристотель. Данное исследование вносит вклад в практику и теорию музыки, предлагая систему построения с точки зрения сопоставления. С этой точки зрения, уровень согласованности музыкальной системы полагается на чувственное восприятие, на метод определенных показателей внутри сравниваемых и сопоставляемых систем. Данное изыскание анализирует особенности корреляций, исследуя их общие и частные свойства и их границы функционирования. В этой статье оценивается описание смысла от одной области познания к другой, например, от математики до музыки или астрономии, или психологии, коррелирующих с наукой о музыке. Подход к музыкальной науке в таком масштабе определил потребность в детальных исследованиях музыки в науке, а также критерии измерения. Книга аль-Фараби «Ихса», описывающая сущность и перечень наук в философии и классификации наук, получила признание в средние века. «Большой трактат о музыке» вошел в список выдающихся арабских теоретических исследований и оказал заметное влияние на более позднюю теорию арабской музыки.

**Ключевые слова:** аль-Фараби, музыка, философия музыки, социология музыки, музыкальная культура, психология музыки, нейромусыковедение, музыковедение, теория музыки.

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**Авторлар туралы мәлімет:**

**Гүлжихан Жұмабайқызы Нұрышева** – философия ғылымдарының докторы, Әл-Фараби атындағы Қазақ ұлттық университеті философия кафедрасының профессоры (Алматы, Қазақстан)

**Нурфер Терджан** – Әл-Фараби атындағы Қазақ ұлттық университеті философия кафедрасының 2 курс докторанты (Алматы, Қазақстан)

**Сведения об авторах:**

**Гулжихан Жумабаевна Нурешева** – доктор философских наук, профессор кафедры философии Казахского национального университета имени аль-Фараби (Алматы, Казахстан)

ORCID ID: 0000-0001-6640-8111  
email: gulzhikhan-nurysheva@yandex.kz

**Нурфер Терджан** – докторант 2-го курса кафедры философии Казахского национального университета имени аль-Фараби (Алматы, Казахстан)

ORCID ID: 0000-0003-3482-4182  
email: nurfer.tercan@gmail.com

**Authors' bio:**

**Gulzhikhan Zh. Nurysheva** – Doctor of Philosophical Sciences, Professor at the Department of Philosophy, Al-Farabi Kazakh National University (Almaty, Kazakhstan)

**Nurfer Tercan** – PhD candidate of the Department of Philosophy, Al-Farabi Kazakh National University (Almaty, Kazakhstan)