

## AL FARABI'S PHILOSOPHY OF MUSIC

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**Abstract.** Scientists propose to understand the effect of music on the human psyche, knowledge about the soul, science, metaphysics and spheres. At the centre of all these discussions, we assume researchers are not focusing on how music triggers emotions. In this century we live in, most writers agree that this is the most crucial issue. Today's researchers want to know why music creates strong emotional reactions in people with scientific explanations. Our study aims to find answers to today's questions between the 9th and 10th centuries, indicated as the golden age of Islamic culture. We aimed to shed light on the answers to the questions of today's researchers about the effect of music on the human soul. This article focuses on the second teacher's approach to cosmology and how the various sciences contribute to the study of the heavens. After a survey of the sources available to Al Farabi, which helps to contextualise his work in light of the Greek legacy and the Arabic intellectual climate of his day, authors define his conception of the scientific method and to show the relation between scientific practice and theory. With a multidisciplinary approach to the history of philosophy and astronomy, Al Farabi's philosophy of music contributes to physics, metaphysics and astronomy. As a result, our article contains the formulation of innovative, philosophical musical ideas. It is an effort that emerged in the formulation of Al Farabi's Ptolemaic astronomy. The guiding subject of our research provided a holistic approach to the Aristotelian and Neoplatonic theories that complement each other. Adopting this perspective allows for a broader study of music within a particular culture or situation. The article examines 'Kitab Al Musiqā' research in the light of a definition of music that embraces the diversity of music using universal methods. Music is a significant and integral dimension of human improvement.

**Key words:** Al Farabi, human, universe, scientific method, music, sound

*Introduction*

Some researchers working on evolutionary biology think of music as the initial hypothesis of language. Some claim that music and language evolved from the same common ancestor. They argue that first, there are voices expressing emotions or pointing to other elements. A music in which the sounds come together in a combinational

syntax to form sentence structures becomes a language. Studies of the relationship between the first musical sounds in human history and human-body movements also play an essential role in understanding the dimensionality of music.

The earth has a vibrational speed in the order of the universe. Life is based on sound and vibration, just like music. Sound waves are the way energy propagates. It is possible to reach all living things in the universe with the sound wave.

Al Farabi is a scholar, philosopher who lived when the mathematical and physical foundations of music were newly formed in the East and Islamic Geography. Naturally, he studied the knowledge and methods of the Greeks on these issues. Al Farabi stated in all his research that the information obtained from the Greeks was incomplete. He indicated that he was working on a scientific system and method to complete these missing parts. All Eastern scientists, thinkers, philosophers, and writers were in the same position on this matter.

“Al Farabi has based much of his philosophy and theory, including that of music, on Greek philosophers such as Aristotle, Pythagoras, Aristoxenus, and Plato. Besides, he is considered to have explained what they left unexplained, to have reconciled or to have chosen among their different ideas and to have advanced beyond their contributions. He uses the practised music of his times in the Arabic Empire as source data for determining what is “natural” or not in music. Farabi lived (870-950 A.D.) just after the Golden Age of Islamic civilisation, the early Abbasid period (750-847 A.D.). Farabi studied in Bagdad at the House of Wisdom (considered to be the first known college) particularly the many works of Greek authors which had been recently translated into Arabic” [1, p. 1].

### *Methodology*

To better understand and analyse Farabi’s philosophy of music, we organised Farabi’s thinking system as the primary method of our research. Al Farabi included the main problems of specific sciences, especially the epistemological foundations of music, in the first introductory chapter of the excellent music book. Al Farabi compares music with other sciences to strengthen his arguments. As the method of this research, we reached the sources of his comparisons with other sciences in his studies of the philosophy of music. We made examinations on works, articles and studies covering other sciences that Farabi envisaged to be systematised within the science of music.

A precise classification may not be possible in philosophy. However, the main features attributed to the philosophical way of thinking are as follows: questioning (problem-oriented), wondering, doubting, being critical, reflexive (thoughtful), cumulative progress, rational (mind-based), systematic, consistency quality, and universal. These basic features of philosophical thinking are systems and methods that can be learned from Al Farabi’s philosophy. Al Farabi established a very complex system and method in his work. For understanding the philosophy, it is necessary to focus on close thinking. In other words, it is necessary to approach issues in which mathematics and art are familiar or different as well as natural and humanities.

Our achievement is to reach his science, anthropology, cosmology, astronomy, and mathematics experience, where music is intertwined.

Specific examples explaining the categories proposed by Al Farabi do not exist under a single heading. However, it becomes clear that astronomy belongs to the third category according to Al Farabi's philosophical point of view and the subject narrative in the content of his works. When we understand Farabi's method of investigation, we can infer the meaning that some of his principles are innate to humans, some are derived from other sciences, and some are reached as a result of experience.

To understand the philosophical approach of universal music, we directed our discussions with the following questions. What are the characteristics of music, philosophy and science universally? Which of the knowledge of the characteristics of music, philosophy, and science across cultures reflect more change depending on their own culture?

### *Understanding the Structure of Music*

One aspect of Al Farabi's determination of the principles of musical art is understood in his discussion of the theory of music formation. The other is necessary for the discussion of music as a science systematically. Along with his philosophical writings on logic, ethics, politics and other sciences that are valid in every century, Al Farabi also included scientific studies of music in his works in detail. The spontaneous making of music he expresses here may be examples of singing. However, this would have a 'natural' feeling, meaning basic, instinctive or spontaneous, unlike music that is consciously composed.

According to Al Farabi, the imagination of the nature and potential value of musical knowledge is inevitably formed concerning science knowledge about the ideas in nature and relative value of other learning fields and other spiritual or artistic disciplines. The effect of music on human consciousness, perception, function of the senses, and the science of emotion change should be understood first.

"Among the numerous and varied works that were translated from Arabic into Latin in the twelfth and early thirteenth centuries is the Classification of the Sciences (Ihsa'al-Ulm) by Abu Nasr Muhammad Ibn Muhammad Ibn Tarkhan Al Farabi (d. A.D. 950), a brief treatise whose rather considerable influence extends to the writings of Vincent of Beauvais, Roger Bacon, Jerome of Moravia, Lambert, and numerous other writers on musical and non-musical subjects alike. In his discussion of the mathematical sciences, Al Farabi gives an account of music, dividing it into the sciences of practical and theoretical music" [2, p. 173].

The unique role of the mind inexperience is to form an idea of certain sensations and derive a universal meaning from these details. K. Al Burhan explains the definition of experience in Al Farabi's corpus. Experience means careful consideration of the details of something. Experience creates an idea of the universality of things more precisely as long as experience finds universality in these details. The paragraphs we identified in our research in Farabi's works explain the methods of experience. Al Farabi's experience

and induction point to the features of the philosophical method in general and the astronomical method in particular. Al Farabi's statements in the *K. Al Musiqqa* reveal the essentially inductive quality of his approach to astronomy and other sciences as music.

“To say that the Arabs ‘merely elaborated and intellectualised the knowledge derived from other races’ is instead a dubious stricture, since to have elaborated and intellectualised what the Greeks had left would, in itself, have been sufficient to give the crowning glory to the Arabs! Fortunately, we have plenty of documents that prove that we cannot afford to ignore the contributions of the Arabs to the speculative art of music. Nothing demonstrates the critical attitude of the Arab theorists better than the opening lines of the monumental ‘*Kitab al-Musiqi*’ of Al-Farabi.” Al Farabi says:

“Three axioms should determine the aim of a writer in every theoretical art: The first, complete statement of fundamental principles. The second, the ability to elucidate what follows from these principles. The third, the ability to combat errors which meet him in that science and strength to restrict the opinions of others, to discriminate between the right and the wrong, and to rectify the imperfections of those whose opinions are obscure” [3, p. 67-68].

When we examine the general analysis up to this point, we understand the importance of Al Farabi's belief in the awareness of universal and heavenly phenomena and proving arguments to prove their existence. According to the era we live in, we understand that Al Farabi adopted two paradigmatic interpretations of the origin of the material world in his corpus. The first is based on the concepts of absolute creation from nothing and the temporal finitude of the world; second, on timeless causality and the infinity of the physical universe.

“Al Farabi is a Neo-Platonist since his mystic tendencies are numerous in his *Metaphysics*, *Psychology* and *Political thought*. As a Neo-Platonist, he follows the groundwork of the Neo-Platonic doctrine made of religious *Mysticism* and *Emanatist Monism*. Thus, Al Farabi's philosophy is entirely theocentric because it holds God as the centre of the universe. God is *One*; this One is the absolute which transcends everything. From the One flows, the plurality of things gradually coming down the scale of perfection to the existence of matter. The goal of man is to return to God. This return is to be accomplished by virtue and philosophical thought. Like the Neo-Platonists, Al Farabi holds in his treatise on the *Agreement between Plato and Aristotle*. There is no essential difference between the philosophy of Plato and that of Aristotle” [4, p. 1].

Concerning Al Farabi's ‘theology’ or his views on God's existence and essence, some statements can be made clearly and positively. The first is the essence, consciousness, mere knowledge of the eternal autonomous and intellectual nature and the universe. The basic concepts of Al Farabi's theology are ‘intellect, existence, pure knowledge, cause and unity’ are, therefore.

According to Al Farabi's observations, while physics is withdrawn in motion and examines bodies in motion, mathematics studies bodies isolated from their substances. As a result, different sciences can study the same object by developing different proofs and identifying different causes. Al-Farabi's way of thinking, so there is no contradiction and discrimination between physics and astronomical methods.

“Moreover, the case [in music] when we are unable to perceive the individual entities is like the case of many of the sciences whose first principles are proven in other sciences, and the practitioner of this science takes an accepted principle which has been established in these (other) sciences. When he is asked to prove it, he refers to the specialists of these sciences. The astronomer (munajjim) does when he wants to explain the causes [asbab] of the various motions of the celestial bodies that appear through observation. He can only explain these causes, such as the eccentrics and epicycles, when it is posited that these planetary motions are in themselves regular [mustawiyah]” [5, p. 255].

Al Farabi was one of the first Islamic thinkers to emphasise observation, induction and especially astronomy, the importance of astronomy of experience in music, and applying some of Aristotle’s methodological directives to these particular sciences. He expressed the determination that metaphysics is necessary for two things: to define the true essence of celestial bodies, which can be an intangible principle such as mind, and to determine the causes of motion-defined as something external to them. The priority of metaphysics in the cosmological field directly connects with the astronomical method in concept research. His opinion on this issue; is that music cannot be studied in its field. Farabi can be reconstructed in his logic studies, especially in Burhān / precision philosophy, which is concerned with defining the interaction of all sciences within a system on a universal basis, according to the methods and rules of the scientific field.

“Like earlier philosophers, Al Farabi distinguished between theoretical and practical philosophy, the former terminating in understanding and the latter in action. As for theoretical philosophy, Al Farabi synthesises an Aristotelian metaphysics of causation with a highly developed Neoplatonic emanations scheme that incorporates the Ptolemaic planetary system. He, in turn, integrates a sophisticated theory of the intellect into this metaphysical framework, which develops the notion that the active intellect of Aristotle’s *De Anima* is a self-subsisting substance, one that plays a role not only in human cognition but also in generation and corruption in the sublunary realm. Although in practical philosophy Al Farabi treats various ethical issues, his main focus is on the ideal or virtuous state and its ruler, which on the whole is reminiscent of ideas found in Plato’s *Republic*” [6, p. 54-55].

There are two critical issues regarding Al Farabi’s interpretation of the aether theory of Aristotle and how he relates it to the infinity thesis of the universe. He analysed the Aristotelian view that the ether is a unique, indestructible element devoid of the properties of sub-elements. Farabi wrote his thoughts about the heavens and also the point of view of Aristotle’s cosmology in his works. His philosophical thought derives from the higher principles of the celestial bodies, the primary elements, and the main substance. Al Farabi emphasised the close interaction between the concepts of reason and causality in his metaphysical studies.

“The dualism of spirit and matter, infinite and finite, constitutes the cosmological problem of Metaphysics. To explain God’s action on the matter, Al Farabi placed the intellects of the Spheres between God and the world. Thus, he made the many proceed from the One by emanation. His theory is as follows: From the First Being (the One)

comes forth, the First Caused intellect. From the first intellect, thinking of the First Being flows forth a second intellect and a sphere. From the second intellect proceeds a third intellect and a sphere. The process goes on in necessary succession down to the lowest sphere, that of the moon. From the moon flows forth a pure intellect, called active intellect. Here end the separate intellects, which are, by essence, intellects and ineligible. Here is reached the lower end of the supersensible world (the world of ideas of Plato)" [4, p 30].

The diversity of all celestial movements and their speed in physical dimensions play an important role in Al Farabi's cosmology. According to Farabi, the relationship between the changing information movements between planets and spheres is the only accident that affects the celestial bodies. It makes them the first of the missing entities.

In Farabi's opinion, what is possibly intelligible have formed in matters other than the soul before the truth becomes intelligible. According to Farabi, every being, whether it is a mind, a heavenly soul, or a sphere, has no priority and depends on a higher principle except the First, which is entirely autonomous.

"Al Farabi's cosmology can be explained by the legacy of Greek science and philosophy on the one hand and the intellectual developments that characterised early Islamic civilisation on the other" [7, p. 11].

Al Farabi points to the definition of music as follows. Music is considered the melody associated with phonemes, which are notes in a particular order and style or make up words that express a thought. Music is a combination of pure mind, imagination and senses. Furthermore, music consists of natural images in the soul and performed through sound or instrument.

In Al Farabi's corpus, we realised that his experience and observation were among the methodological foundations of astronomy. Musiqā details Astronomy as an experimental science based on data accumulation. According to Al Farabi, "Melody, he then explains, may take one of two forms. The first is inner, consisting of imagining the tune intended; the second is the disposition or skill of producing that tune through the hand or the mouth. Hence, the instruments used are divisible into lutes or other percussion instruments and flutes or other wind instruments, respectively" [8, p. 124].

"Following this, Al Farabi devoted the second book of his treatise to criticism of his predecessors in the field of speculative music, including the Greeks. In this work, Al Farabi says: *Having* commented on what was obscure in their sayings, and examined the opinion of one after another of those whom we knew as holding an opinion which was set down in a book. Furthermore, we have explained the value of what each of these has attained in this science, and we have rectified the errors of those who have fallen into error!" [3, p. 68].

The thought of Al Farabi's devotion to Ptolemaic planetary models is crucial information for understanding cosmology even in our age. He explains whether Farabi's spheres are entirely geometric or concrete entities hidden in the physical cosmos. The second master makes explicit reference to Ptolemaic eccentric theories and epicycles during an argument designed to show that the astronomer must rely on physical principles to explain the reasons for the motions of the planets in *K. Al Musiqā*.

“...‘Particular sciences’, says Al Farabi, “restrict themselves to one or several departments of being. For instance, physics is the science of being as affected by physical properties. Mathematics is the science of being which deals with quantities and numbers” [4, p. 9].

The concept of Ethos has always existed in Arabic Music. Terms such as influence or state express the relationship between Ethos and music. Ethos has been described as ‘the relationship between musical and non-musical. According to Farabi’s opinion, the relationship between Ethos and melody is the same function as the connection between the world and its cosmos. Al Farabi explains the effect of Ethos on the listener with melody and instruments depending on the fundamental laws of physics.

“The doctrine of the Ethos, so highly prized in the art of antiquity, has an abiding interest, and therefore One may assume that its history may have a similar attraction. As Jules Combarieu pointed out not long since,\* the doctrine of the *Ethos* had its origin in magic, and taking the liberty to draw up, its genealogy, because, in the subject under discussion, it plays an important part” [9, p. 89].

The mind performs the function of synthesising the multiplicity together in all its processes. To understand a scene presented to our senses, what we perceive must unite as a whole composition. Perception is an action of the mind that involves synthesis. The act of imagining involves both analysis and synthesis, in the sense that nothing can be imagined without synthesising much in one.

For centuries, all philosophers have defined music as a harmony of the soul and a universal reflection. Distorted harmonies and rhythms ‘Ethos can distort the soul’.

“Al Farabi particularly stresses the importance of the modality of ‘knowing’ (savoir) in his musical theory, and presents at the same time very semiotically sounding reflections on musical structure. He compares music with poetry: as poetry consists of phonemes, accents, half-lines and lines, so in music tones constitute the primary element, forming melodies and ultimately all music. 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: 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 the fact that what is regarded as natural tones in a given culture, e. g. Arabian, are ‘natural’ only in this context” [10, p. 308].

The idea of a unified and hierarchical cosmos combined with the idea of the music of the spheres and the object of imitation as the cause of the music of this world, in which all parts are interconnected, operate according to the same mathematical proportions and principles, was brought to the ethos theory by human souls, already in early Greek thought. The basis of this theory is that earthly music can communicate, nurture, and produce ethical situations. The scientific aspect of Al Farabi is the influence of Aristotle’s works. The passage of K. Al Musiqā and the Aristotelian correlation between the simplicity of the aether and the regularity of the circular motion shows that he accepts, at least for astronomers.

“Mathematical astronomy, on the other hand, is the study of the earth and the heavenly bodies with a view to determining: a) their shapes, positions, relations to each

other and their relative distances from one another, the earth being entirely immovable; b) their motions and the number of those spherical motions, whether common to all of them or peculiar to each one of them; c) their movements and positions in the zodiac and their effects on such terrestrial phenomena as the eclipse of the sun and the moon, their rising and setting and the like; and d) the divisions of the earth into inhabited and uninhabited regions. To determine their major divisions or zones and how these zones are affected by the universal diurnal motions of the spheres and the succession of day and night” [8, p. 124].

The impression of harmony and rhythm, musically and physically, has been the case of particular concentration from philosophers. The knowledge obtained through perception is different from the mind, as is the case with intuition. Perceptions and intuited knowledge, however, may be measured eventually to a reasoning process. Furthermore, Farabi infers that knowledge achieved by either of these two forms is made cognisable through experience. In this introduction, as Farabi suggests in *Kitab al Musiqa* with the phrase of an experienced instrument tuner, experience is more than knowledge or skill acquired through repetition. Accordingly, experience is phenomenological and existential

“Side by side with this doctrine, the Arabs held extreme views on the much older objective aspect of the influence of music, as displayed in *Magical Music*, *Cosmical Music*, the *Harmony of the Spheres*, *Musical Therapeutics*, and the doctrine of the *Ethos* and I propose to deal with this under the following headings: I. *Pagan Times*; I. *The Kitab al-siyasa* (eighth century); III. *Al-Kindi* (ninth century); IV. *The Ikhwan Al Safa’* (tenth century); V. *Tenth century to seventeenth century*; VI. *Modern Survivals*” [9, p. 91].

The most striking qualities of celestial bodies from the perspective of an observer on earth are the first, their brightness, and the second, their regular and harmonious circular motion. The first admits that the sun alone emits light. According to the second, all fixed stars are bright in themselves, while other orbiting planets reflect the sun’s light. Al Farabi accepted mathematics as a valuable tool for studying the world around us. However, in his mathematical or philosophical studies, we understand that he does not consider this science a powerful tool for accessing metaphysical knowledge. As the general discussion of the philosophical field, it is not clear whether experience corresponds to theory and practice by observation or induction. According to Al Farabi, it is evident that astronomical theory depends on practice and experimental data collection.

“The *Ihsa* which contains Al Farabi’s most systematic description of the classification of the sciences, provides much information on astronomy. In this treatise, astronomy is presented as a mathematical science, together with arithmetic, geometry, music and optics. Al Farabi then divides the subject matter of mathematical astronomy into three parts. The first one deals with the exterior aspects of the heavenly bodies, such as their shapes, positions and sizes. It also includes an examination of the earth and asserts its stationary position in the world. The second part deals with celestial motion, both the general motion shared by all the celestial bodies and the particular



motions of the planets. The third part focuses on the earth and related geographical, climatological and demographical questions” [5, p. 243].

Similarly, a composition performance can be reflected as images of the total sound frequency. It is the context of the component images or some combination thereof. Analogical thinking arises from uncertainty and connotation, either poetic or symbolic. On the other hand, induction and deduction set the bases for the process of reasoning, whether universal and expressive or fundamental. As with intuition and perception, thinking presents another face of imagination.

“Farabi says that when he observed how composed melodies are in some instances concordant, in others discordant and some more so in each respect than others, he realised that heavenly bodies could not have the tones that correspond to those melodies. Equally inapplicable would be the auspicious and inauspicious character of ‘our’ melodies. Furthermore, Farabi says, it is generally agreed that the tones of a scale and (even) the signs of the Zodiac are by art not by nature, and there is absolutely no change or difference from this in nature” [11, p. 56].

Here we come across one aspect of Farabi’s argument about melody. It is controversial that information about melodies depends on celestial bodies. We know categorically in this quote above that Farabi disagrees with the connection between the sounds of celestial bodies and the formation of the musical melody. We think that the reason for Farabi’s rejection of the formation of music in this way is as follows: Farabi thinks that two objects must come into contact with each other for the formation of sound. He opposes this with the theory that there is no contact between them so much that the heavenly ones cannot produce sound.

### *The Harmony of the Spheres*

If sound and music transform language and logic, how can all support each other in something as complex as philosophy? The impression of harmony and rhythm, musically and physically, has been the case of particular concentration from philosophers. The knowledge obtained through perception is different from the mind, as is the case with intuition.

Al Farabi emphasises the multipurpose revelation of melodies and the effects of more than one melody genre at the same time. Farabi also points out that pleasant melodies simultaneously create happiness, images in the mind, and an emotional effect to detect these effects. The multidimensionality of melodies has a parallel in the visual arts. Al Farabi defines imagination as an ability to mediate between the senses and the mind.

“... ‘Closely related to the ethos doctrine is the venerable principle of the harmony of the spheres.’ This ancient and beautiful conception was, as we know, one of the key-stones of Pythagorean cosmology. But today it has begun to appear that the idea of sounding spheres originated much earlier, in Egyptian, perhaps also in Babylonian culture” [12, p. 288].

Pythagoreans referred to celestial music as the product of the movement of celestial bodies. However, even if such a movement produces sound, it should be stated that

it is not an instrument itself. Perhaps we understand that it should not be defended as instruments of celestial spheres by causing the sound to be produced.

Al Farabi rejects the idea that rotating spheres can produce sound for various reasons. The first claims that the idea that spheres produce sound goes against established principles of physics. According to Al Farabi, most musicology studies make an interesting claim that their object arose not by nature but by craft. As a result, music is essentially a human creation that exists by tradition. Therefore, even if the spheres can produce sounds, they will not relate to what we call music.

“One of the earliest works that would appear to have attracted the attention of the Arabs on this question was a Pseudo-Aristotelian production known as the *Kitab al-siyasa* (Book of Government), said to have been written by Aristotle for Alexander the Great. 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 therapeutic. The excerpts given above, show Pythagorean teaching pure and simple. Everything is number ‘said the Pythagoreans, and by this means alone could cosmic order be explained. Among the ectypes of numerical proportion was mundane music, and in the harmonious order of things this was related to the elements, the virtues, and so on” [9, p. 95].

The essential feature of human consciousness is its predisposition to music as a requirement of creation. Revealing the secret of humanity’s deep connection with music is also human behaviour shaped by music. This intriguing biological mystery: Music, universally approved and uniquely powerful in its ability to abstract emotions, especially why is it so common and important to us? Imaging considerations, the cerebral cortex finds greater activation in the right temporal lobes auditory regions when subjects focus on harmonious aspects. Al Farabi’s research covers the mysteries of the melody as ‘*Kitab al Musiqa*.’

“Those who divide in this way (into *musica mundana*, *musica humana*, and *musica instrumentalis*) either invent their opinion or they wish to obey the Pythagoreans or others more than the truth, or they are ignorant of nature and logic... Celestial bodies in movement do not make sound, although the ancients believed this. .... And one must be struck by the similarity of Al Farabi’s statement on the same subject written three centuries earlier in the *Grand Book*: The opinion of the Pythagoreans that the planets and the stars, in their courses, because sounds to be born that combine harmoniously is false. In physics, it is demonstrated that their hypothesis is impossible-that the movement of the heavenly bodies cannot produce any sound” [2, p. 187].

When Farabi observed how melodies were composed in some cases harmonious, in some incompatible, and some more in every respect than others, he made it clear in his works that he understood that celestial bodies could not have the tones corresponding to these melodies. Farabi pointed to sufficient causality to deny the ability of celestial bodies to make music. He noted that especially if the difference in nature of the two is such that the heavenly ones cannot produce sound, there must be contact between them.

“According to the Pythagoreans, the human soul is in constant motion. This motion is defined by certain numerical proportions which attend the harmonic relations of the tones. Therefore, certain tunes evoke corresponding motions of the listener’s soul. The

mathematical analogy between the ratios of the soul's motion, the vibration of strings, and finally the movements of the heavenly bodies, constitutes the basis upon which rests the principle of ethical power. The idea of the moral catharsis of the emotions, as proclaimed by Aristotle and his followers, is closely related to the older Pythagorean ideology. The connection between body and soul is improved and 'harmonised' by properly selected tunes, and this involves also the idea of music as effective medical treatment. The motions of the celestial bodies, of the macro cosmos are supposed to be paralleled by those of the soul. Thus a complicated numerical calculation in musical astrology begins to take shape" [12, p. 262].

Music, according to Al Farabi, is a product of particular instinctive inclinations. One of these sources, instinctively rooted, is poetry that has been instilled in humans. Poetry is the reflection state of sound, ever since the essence of the universe was created. Both have a universal character within each other. The universality of man is sound and word. Other instinctive sources of this kind are the natural tendency of both humans and animals to use sounds to express pleasant and unpleasant situations and experiences in life. This is the self-formation law of the universe.

"Farabi was the first major figure in Islam to follow Aristotle rather than the Pythagoreans on this point. What the Pythagoreans believe about the heavenly bodies and the stars, that by their motion they produce harmonious tunes—that is false. It has been outlined in the science of nature that what they claim is not possible, for the heavens, the spheres and stars cannot (la yumkin) produce sound by their movements" [11, p. 54].

"Al Farabi dedicated a number of treatises to the science of music. In addition to a chapter on music in his *Ihsan'al-ulum* (The Enumeration of the Sciences), he is the author of two works on musical rhythms: the *Kitab ihsa' al-iqat* at The Book on Enumeration of Rhythms), and the *Kitab fi l-iqat* at (The Book on Rhythms) However his most important work on music is his *Kitab al-musiqi l-kabir* (the Great Book of Music), no doubt one of the most fascinating medieval Arab works in the field. In it, Al Farabi lays down the principles and foundations of the science of music: from the creation of music in the faculty of the imagination, through the principles of acoustics and the mathematical division of the scale to account for the various intervals, to the groups of notes of which modes are comprised. However, al-Farabi, himself not only a theoretician but also a practising musician, also refer in great length to the musical practices of his time, which he approaches with the dual purpose of both systematic description and criticism" [13, p. 141-142].

According to the world of philosophy in Farabi's mind, the pleasure of listening to natural notes of music is a way of describing them and what defines them that way. He states the importance of this situation according to his accurate information. Farabi argues that music objects are not abstract mathematical concepts that exist independently of the musical world and only manifest in music.

"In addition to his prolific philosophical writing on logic, ethics, politics, and other sciences, Al Farabi dedicated a few important treatises to the science of music" [14, p. 159].

Understanding Al Farabi's cosmology, it is essential to describe or at least clarify the role of astronomy, astrology, and other philosophical disciplines in their approach to cosmology.

Medieval music philosophers researched and conveyed their studies with the relationship between the nature and origin of music, the nature of theoretical science that questions music and all its elements, the theoretical and practical or applied aspects of music. The important thing is the place of music in the order. They explored the body's relationship to humour and emotions and parts of the cosmos such as natural elements, numbers, celestial spheres, and seasons. They studied music as a science in the field of philosophy. Music theorists of this period were interested in the elements covered by music. These elements are as follows: tone, intervals, melody, rhythm, modes, transitions, composition, musical instruments and their use in music theory and performance.

"Al Farabi describes the sphere-souls as being in a state of constant and continuous intellection. As he writes, the sphere-souls are 'always contemplating what they contemplate', and the 'objects of their intellects are present in them from the very beginning. Al Farabi then compares the sphere-souls to human souls. Unlike the former, the latter is at first in potentiality and then later in actuality. The importance that this text had in shaping Al Farabi's methodology appears clearly when he writes that "the first principles of absolute demonstrations in every science only reach the soul through the sensation of individual and particular things, as has been shown in the Posterior Analytics" [5, p. 253].

Al Farabi's thoughts on astronomy reflect his belief that astronomy is limited to studying the external aspects and properties of celestial bodies and is not suitable for studying their essence. Al Farabi prioritises the research and provision of knowledge in science and philosophy. For him, the knowledge gained through observation and experience is the basis of a definitive and provable theory. In light of this information, our opinion is that he did not have long discussions about the inner nature of the spheres or in other studies and said nothing about the ether, the simple element of the heavens.

### *Conclusion*

According to Al Farabi, musical skill includes harmony and agents that make harmony perfect and pleasant. Musical art aims to create a connection with sounds and to explain its situation. It distinguishes musical phrases from each other through the human ear. Distinguish between good harmony and imperfect harmony, harmonious and incompatible. The number of people who cannot distinguish harmony or disharmony in melody with their musical ear is negligible. People sometimes join music in moments of joy, sometimes sadness, sometimes in religious rituals and sometimes in finished stories and speeches. Al Farabi stated that the main subject of theoretical music is natural sounds. He had a different perspective on the origin of the sound, which is the main subject of music. He did not accept the conceptions that claimed that stars and celestial bodies make musical notes as they move.

Nevertheless, Farabi also explained why this view is not possible according to the laws of physics. Farabi studied the theories of philosophers and thinkers before him and discussed them in a way comparable to his point of view in his works. He explained that notes could not form when objects and stars in the sky move.

According to Al Farabi, an example of a sound astrological quest consists of observing the effects of the heat emitted by celestial bodies on celestial beings. The great treatise expresses how to understand and realise the meanings as the most accurate method of examining the system. He proposes visual observation of everything that appears in reality, placing the object in front of the eye. Al Farabi uses the concept of 'reasoning', especially when explaining the theory of propagation. The approach of the great treatise states that music composition is a mathematical exercise. It also demonstrates that music can produce an infinite variety of musical expressions and emotions from a primary source of sound, rhythm and tempo. The combination of known facts and knowledge with imagination, assumption and inspiration produces new scientific discoveries. The Musiqa points out that both science and music relies on 'formulas' and 'theories' to solve problems and discover the intangible mysteries of life.

We aimed this examination provides an essential insight. Al Farabi's valuable philosophical perspective can offer new contributions to musicology. While contributing to the scientific aspect of music, his philosophy of music will also have a significant impact on humanity and virtuous life in general. The insights of this thinking and approach only recall the commitment of a fresh intercultural musical comparison. However, there are documents on the historical development of broad explanatory cross-cultural theories of the human sciences in many fields. Therefore, it is essential to research philosophers who left their sign on history in philosophy and science.

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**Нурьшева Г.Ж., Терджан Н.  
Философия музыки аль-Фараби**

*Аннотация.* Ученые предлагают разобраться о влиянии музыки на психику человека, на знания о душе, науке, метафизике и сферах. Мы полагаем, что в эпицентре этих дискуссиях исследователи не сосредотачиваются на том, как музыка вызывает эмоции. В веке, в котором мы живем, большинство пишущих на эту тему согласны с тем, что это самая важная проблема. Современные исследователи хотят дать научное объяснение тому, почему музыка вызывает сильные эмоциональные реакции у людей. Наше исследование направлено на поиск ответов на сегодняшние вопросы посредством обращения к IX и X векам, которые считаются золотым веком исламской культуры. Наша цель пролить свет на ответы современных исследователей на вопрос о влиянии музыки на человеческую душу. В статье основное внимание уделяется подходу Второго Учителя к космологии и тому, как различные науки способствуют изучению неба. После обзора первоисточников аль-Фараби, способствующих контекстуализировать его работу в свете греческого наследия и арабского интеллектуального климата того времени, авторы определяют его концепцию научного метода и показывают связь между научной практикой и теорией. Благодаря междисциплинарному подходу к истории философии и астрономии, философия музыки аль-Фараби вносит свой вклад в физику, метафизику и астрономию. В статье содержатся формулировки новаторских, философских музыкальных идей, обусловленных использованием аль-Фараби астрономия Птолемея. Основным предметом исследования был целостный подход к аристотелевской и неоплатонической теориям, которые дополняли друг друга. Принятие этой точки зрения позволяет более широко изучить музыку в рамках конкретной культуры или ситуации. В статье исследуется «Большая книга о музыке» в свете определения феномена музыки, которое охватывает все разнообразие музыки с использованием универсальных методов. Музыка – существенное и интегральное измерение человеческого совершенствования.

*Ключевые слова:* аль-Фараби, человек, вселенная, научный метод, музыка, звук.

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Әл-Фарабидің музыка философиясы**

*Аңдатпа.* Ғалымдар музыканың адам психикасына, жан туралы білім, ғылым, метафизика және сфераларға әсерін қарастыруды ұсынады. Біз осы мәселе жөніндегі

пікірталас орталығында зерттеушілер музыканың эмоцияны қалай тудыратынына назар аудармайды деген болжам жасаймыз. Қазіргі дәуірде осы мәселе жөнінде қалам тартушылардың көпшілігі өзекті мәселе екенімен келіседі. Қазіргі зерттеушілер музыканың адам бойында күшті эмоционалды реакциялар тудыратындығына ғылыми түсініктеме беруге тырысады. Біз зерттеу барысында 9-10 ғасырлардағы алтын ғасыр болып саналатын ислам мәдениетіне жүгіну арқылы бүгінгі сұрақтарға жауап іздейміз. Біздің мақсатымыз – музыканың адам жанына әсері туралы мәселесіне қазіргі зерттеушілердің көзқарастарына жол салу. Бұл мақалада Екінші Ұстаздың космологияға және түрлі ғылымдардың аспан денелерін зерттеу барысындағы әдісіне ерекше назар аударылады. Әл-Фарабидің түпнұсқалық еңбектерімен жұмыс сол ғасырдағы грек мұрасы мен араб интеллектуалды климаты тұрғысынан қарастыруға көмектеседі, авторлар оның ғылыми әдіс тұжырымдамаларын анықтап, ғылыми практика мен теорияның байланысын көрсетеді. Философия мен астрономия тарихына пәнаралық көзқарас арқылы әл-Фарабидің музыка философиясы физика, метафизика және астрономияға өз үлесін қосады. Мақалада әл-Фарабидің Птоломей астрономиясын қолданудан туындайтын инновациялық, философиялық музыкалық идеялардың тұжырымдамасы келтірілген. Зерттеудің негізгі тақырыбы бір-бірін толықтырып тұратын аристотельдік және неоплатондық теорияларды тұтастық тәсілі арқылы қарастыру. Осы көзқарас музыканы белгілі бір мәдениеттің немесе жағдайдың шеңберінде кеңірек зерттеуге мүмкіндік береді. Бұл мақалада «Музыканың үлкен кітабы» әмбебап әдістерді қолдана отырып музыканың барлық алуан түрлілігін қамтитын музыка құбылысының анықтамасы тұрғысынан қарастырылады. Музыка – адамның өзін-өзі жетілдірудегі маңызды және ажырамас өлшемі болып табылады.

***Түйін сөздер:*** әл-Фараби, адам, ғалам, ғылыми әдіс, музыка, дыбыс.