

IN SEARCH OF THE LIGHT

(The Secret of the Universe and Reflections of Divine Light)

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Are you ready to find your own light?

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BEGINNING

Throughout human history, light has held a central place in our efforts to make sense of the essence of our existence, both as a physical reality and a profound metaphor. In physics, light is perceived as an energy wave carried by photons; In divine texts and holy books, light is depicted as the essence of creation and existence. For human beings, light is not only a phenomenon that can be seen and measured physically, but also a door opening to the unknown, a symbol of spiritual enlightenment and the secrets of the universe.

Starting from the history of light, this book deeply examines its scientific dimensions, meanings in sacred texts and cosmic functions. It offers a wide perspective from the holographic universe theory to the world of consciousness and perception; from the thin line between existence and non-existence to the new understanding of creation opened by quantum mechanics. In addition, it re-questions the place of man in the universe by blending metaphorical analyses of ancient texts with modern science. Our book is not only a scientific and metaphysical examination; it also invites the reader to a deep journey of thought about the source of existence and the secrets of the universe. Throughout this journey, you will discover the reflections of divine light in the universe, the limits of human consciousness and perception, and the meaning of universal unity.

Are you ready to find your own light?

1- HISTORY OF LIGHT

In ancient civilizations, light had deep meanings both as a physical phenomenon and as a metaphysical concept. Ancient Greek, Egyptian and Islamic scholars developed different perspectives on the nature of light, and these understandings eventually formed the cornerstones of science and philosophy.

In ancient Greece, light was considered an important subject of natural philosophy. Thoughts on the nature of light were shaped especially by philosophers such as Pythagoras, Plato, and Aristotle. Pythagoras and his followers suggested that we perceive the world through the rays of light coming out of the eye. According to this view, the light coming out of our eyes interacts with objects and enables our ability to see. Empedocles accepted light as one of the four basic elements that exist in the universe. According to him, there was a kind of internal light source inside the eye, and this combined with the light outside provided vision. Plato used light as a symbol of truth and knowledge with his "Allegory of the Cave". He believed that light was an element that illuminated objects in the material world, as well as enlightening the soul and mind of man, enabling us to reach the truth. According to him, light was not just a physical event, but a symbol of knowledge and divine reality. Aristotle examined the nature of light on a more scientific level and suggested that vision occurred when light reflected from objects to our eyes. He argued that light did not have a material structure, but interacted with objects. In Egyptian civilization, light was of great importance both religiously and cosmologically. Light was generally seen as a power associated with divinity. The most powerful symbol of light in ancient Egypt was the Sun God Ra. Ra was worshiped as both a creative power and the source of light. The birth of the sun was seen as the daily re-creation of the universe, and this creation was realized thanks to light. In Egypt, light was a symbol of life, order, and the eternal cycle. According to Egyptian cosmology, light won a victory over darkness at the beginning of creation. While darkness symbolized chaos and the absence of order, light represented order, consciousness, and life.

In Egyptian art, light was shown as a force separating gods from humans. Pharaohs were often associated with gods and depicted surrounded by light, symbolizing their divine origins. In Islamic civilization, light has been studied in depth with its scientific, philosophical, and mystical meanings. Both the concept of NUR in the Quran and the scientific studies of Islamic scholars have addressed various aspects of light. Ibn al-Haytham (Alhazen) is one of the most important names in the Islamic world who has done scientific studies on light. His works on optics have revolutionized the scientific study of the nature of light. Ibn al-Haytham experimentally proved that light does not come from the eye, but from objects and is reflected in our eyes. In his work Kitab al-Menazir, he examined optical phenomena such as the refraction and reflection of light in depth. Ibn Sina, one of the greatest names in Islamic philosophy, examined the relationship between light and matter in depth and saw light as a bridge between the physical and metaphysical worlds. According to him, light both makes objects visible in the physical sense and provides the illumination of the truth in the spiritual sense.

The expression "Allah is the light of the heavens and the earth" in the Quran has given a deep metaphysical meaning to the concept of light in Islamic philosophy. Light has become the symbol of divine wisdom and enlightenment. In Sufi thought, light is an element that illuminates the heart of man and makes the presence of Allah felt everywhere. Here, light has been seen as a symbol of knowledge

and spiritual enlightenment. In Islamic civilization, light is a symbol that carries deep meanings, especially in the philosophy of Sufism and mystical thought. The great names of Sufism, Muhyiddin Ibn Arabi, Abdulkadir Geylani, Mevlana and other Islamic mystics, have considered light as a reflection of both spiritual enlightenment and divine truths. In this context, light has an important place in the thoughts of Islamic mystics both metaphorically and existentially.

Muhyiddin Arabi, as one of the greatest theorists of Sufism, has given a deep metaphysical meaning to the concept of light. In his understanding of "Vahdet-i Vuj" (unity of existence), light is considered a manifestation of the divine existence and the reality of everything. According to him, the essence of Allah is light (nur) and this light manifests itself in the creation of the universe and at every level of existence. Allah is the essence of everything and His light encompasses the universe. Every being created by Allah is a reflection of His light. This idea explains how the divine reality manifests itself on all beings in the works of Muhyiddin Arabi. Muhyiddin Arabi attributes a deep meaning to the Surah Nur in the Quran.

The expression "Allah is the light of the heavens and the earth" in this surah indicates that His existence in both the physical and metaphysical worlds is a reality that encompasses everything like light. According to Muhyiddin Arabi, the human soul can be illuminated by the light of Allah, and this illumination strengthens the metaphysical connection of man with Allah. This is at the center of a spiritual journey and is called "marifat" (reaching the truth). When a person is illuminated by the divine light, he can grasp true knowledge and the truth of Allah. Abdulkadir Geylani is one of the important names of Islamic Sufism, and in his teachings, light is seen as spiritual illumination and a reflection of the divine presence. Geylani describes the light of Allah as a force that illuminates hearts and souls. According to him, a person cannot reach true knowledge unless their heart is cleansed and illuminated by the light of Allah.

This process of illumination begins with a person turning to Allah with the purity and sincerity of their worldly life. According to Geylani, when the heart is filled with the light of God, all of a person's internal and external perceptions are illuminated and they reach the light of truth. Geylani says that knowing oneself, that is, understanding one's inner truth, is possible with the light of God. The true existence of a person is a reflection of the light of God, and a person illuminated by this light can grasp both God's truth and his own truth. Mevlana Celaleddin Rumi frequently used the metaphor of light in the context of love, truth, and divine wisdom. In Mevlana's works, light is seen as an element that guides a person on their spiritual journey. According to Mevlana, the light of God is the highest manifestation of love. Love acts as a light that leads a person to God. According to him, love illuminates a person's soul, and this illumination is one of the most important tools in reaching God's truth.

He frequently deals with this subject in his work "Mesnevi": "Be like the sun, illuminating everything." The expression explains how Mevlana integrated with the transcendent divine light. Mevlana explains man's inability to see the truth in the world as a curtain drawn in front of his eyes. This curtain is man's heedlessness, ambitions and ego. However, the light of Allah tears this curtain and opens man's eyes to the truth. According to Mevlana, this is the basis of spiritual awakening. Mevlana often describes the world as a shadow and the truth as light. He says that this world is temporary and misleading, and that

true enlightenment is found in the light of Allah. Unless a person is enlightened by this light, he cannot fully comprehend the world and himself. In the thought of Hacı Bektaş Veli, light is seen as a divine element that illuminates the essence of man. Enlightenment and purification are possible with the light of Allah. Suhrawardi's "Işrak Philosophy" (Philosophy of Enlightenment) is a system of thought based directly on the understanding of light. According to him, light is the basis of existence and the essence of everything is light. Light determines the degrees of beings; The purest light is the light of God, and other beings exist by sharing in this light. In Yunus Emre's poems, light is a symbol of love for God and spiritual consciousness. The light of God fills the heart of man, illuminating him and leading him to the truth.

Theories on the nature of light have tried to shed light on one of the most fundamental questions in scientific history. The answers to these questions have focused on issues such as what light is, how it moves, and how it interacts with matter. Many scientists, from Isaac Newton to James Clerk Maxwell, have made important contributions to understanding the nature of light and laid the foundations for our understanding of modern physics. Isaac Newton had a great impact on the scientific world of the period with the theories he developed on the nature of light in the 17th century. Newton suggested that light is basically composed of particles. This view is detailed in his works on optics. According to Newton, light is a flow of very small material particles, and these particles move in a linear path. Newton showed that white light can be separated into different colors with his prism experiments. These experiments were findings that were thought to support the particle structure of light. Newton attributed this dispersion of light to the refraction of particles at different speeds. Newton's particle theory was quite successful in explaining the reflection and refraction of light. According to him, when light particles hit surfaces, reflection occurs, while in some cases, particles pass the boundary between mediums and refraction occurs. Newton's theory on the particle structure of light was widely accepted and remained the dominant view in the scientific world for many years. However, this theory had difficulty fully explaining some properties of light. In particular, events such as interference and diffraction were incompatible with the particle theory.

Christiaan Huygens developed an alternative theory about the nature of light at the same time as Newton. According to this view, known as the wave theory, light moved as a wave, not a particle. Huygens proposed that every point of light could be considered a wave source and that these waves propagated in all directions. According to him, every point on a surface produced new waves and that the light wave was propagated by the combination of these waves. Huygens' wave theory successfully explained the interference and diffraction phenomena that Newton's particle theory had difficulty explaining. In particular, the diffraction pattern that emerged when light passed through thin gaps was compatible with the wave theory. However, Huygens' wave theory also had shortcomings. In particular, the idea that waves must propagate in a medium was inadequate in explaining how light moved in a vacuum. For this reason, the wave theory was not as accepted as Newton's particle theory. Towards the end of the century, Thomas Young and Augustin-Jean Fresnel made important contributions to the wave theory. Young's famous double-slit experiment in 1801 definitively confirmed the wave nature of light. Young passed a beam of light through two narrow slits and observed an interference pattern forming in the background. If light were a particle, such a pattern would not be possible. This experiment was accepted as evidence of the wave nature of light. Fresnel expanded on Young's work and developed

theories on the polarization and diffraction of light. Fresnel's work strengthened the mathematical foundations of the wave theory and suggested that light was a transverse wave. In the middle of the century, James Clerk Maxwell developed a theory that would put an end to the debates on the nature of light. Maxwell proposed that electricity and magnetism were related and that light was an electromagnetic wave. Maxwell showed that light was a fluctuation of an electromagnetic field and that these waves could propagate even in a vacuum. This solved the problem of Huygens' wave theory of propagation in a vacuum.

Light was now considered a wave that did not require a medium. Maxwell developed a set of equations that unified electricity and magnetism. These equations showed that light was an electromagnetic wave and that it traveled at a certain speed (the speed of light). Maxwell's equations explained that light was carried by both electric and magnetic fields. Maxwell's theory suggested that the speed of light was a universal constant and that this speed depended only on the electrical and magnetic constants. This showed that the speed of light was inherently constant and would not change in any medium. The theories developed on the nature of light from Newton to Maxwell played a critical role in clarifying one of the most important questions in modern physics. While Newton's particle theory viewed light as material particles, the work of Huygens and Maxwell revealed that light was a wave and associated with electromagnetic fields. These theories helped explain both the wave and particle properties of light and formed the basis of our current understanding of quantum physics. Quantum physics, a field that revolutionized the understanding of the nature of light, explains the behavior of light as both a particle and a wave. These two natures are defined by a concept called "wave-particle duality" and is one of the fundamental principles of modern physics. Wave-particle duality states that light and other quantum objects can exhibit both wave and particle properties depending on their state. This duality goes beyond the rules of classical physics and is one of the fundamental principles of quantum mechanics. Light is thought of as elementary particles called photons. Photons are massless and move as electromagnetic waves. The particle properties of light emerge in the following cases:

Photoelectric Effect: Albert Einstein discovered in 1905 that light affects matter through photons, which are packets of energy. This effect is observed when light hits a surface and releases electrons. This event is considered evidence of the particle properties of light. On the other hand; the energy of photons is related to its frequency. This relationship, expressed by Planck's formula ($E = hf$), shows that each photon has a certain energy. Here E is energy, h is Planck's constant and f is frequency. The wave properties of light are particularly evident in two important experiments: Thomas Young's 1801 experiment showed that light passing through a pair of slits produced an interference pattern. This pattern is evidence of light's behavior as a wave. Its wave nature is demonstrated by the maximum and minimum light intensities produced by the interference of the waves emerging from the slits.

In Diffraction and Polarization; when light passes through thin gaps or edges, it diffracts; this is another example of wave nature. Also, the polarization of light is a reflection of wave properties; light waves move by vibrating in a certain plane.

Quantum mechanics uses the concept of "wave function" to explain wave-particle duality. Wave function is a mathematical function that describes the state of a particle and expresses the properties of

the particle such as its position and momentum with a certain probability distribution.

In Born Rule; squaring the wave function gives the probability of a particle being in a certain position. In other words, the magnitude of the wave function expresses the probability of the particle.

When a measurement is made in quantum mechanics, the wave function collapses and takes a certain state. This leads to the particle having a definite position. This situation shows the transition between wave and particle nature.

Quantum field theory (QFT) deepens wave-particle duality even further. According to this theory, particles are considered as excitations of fields. For example, the quantum state of the electromagnetic field represents photons. This perspective helps to understand light and other elementary particles in a more comprehensive framework.

The wave-particle duality of light is one of the fundamental features of quantum physics and is a rich field from both theoretical and experimental perspectives. This duality has pushed the boundaries of modern science and deepened our understanding of the nature of light. Quantum mechanics provides the mathematical framework necessary to understand this complex situation, while experiments have revealed both particle and wave properties of light. This issue continues to be a subject of research and discussion.

The discovery of the photon is an important turning point in quantum mechanics and the nature of light. While the photon is defined as the elementary particle of light, quantum mechanics helps us to understand the wave-particle duality of light. The term photon was introduced by Albert Einstein in 1905. Einstein proposed that light can behave like a particle and that these particles can be thought of as specific energy packets (photons). Einstein proved the existence of photons with his studies on the photoelectric effect. When light hits a surface, photons with a certain energy can release electrons on the surface. This event shows that light behaves as energy packets. Einstein's concept of photons is based on the quantum theory developed by Max Planck in 1900. Planck discovered that energy levels have certain quantal values in his studies on heat radiation. Einstein developed the concept of photons by applying these findings to light. Quantum mechanics plays a critical role in understanding the nature of light. Light is studied as a quantum object that exhibits both wave and particle properties. Quantum mechanics accepts that the wave and particle properties of light complement each other. Photons behave like waves under certain conditions and like particles under other conditions.

This duality is one of the fundamental principles of quantum mechanics. In quantum mechanics, the state of light is represented by the wave function. This function gives the probability of a photon being in a certain position or state. When a measurement is made, the wave function collapses to a definite state. Quantum field theory describes photons as quantum states of the electromagnetic field. In this framework, photons are excitations of the field, and light is explained by the dynamics of this field. QFT provides a comprehensive framework for understanding the interactions of light and other elementary particles. Photons are of critical importance in many areas of quantum mechanics and modern physics: Photons play a fundamental role in quantum communication and computation. Applications such as quantum cryptography rely on the manipulation of the quantum states of photons. Photons are an

important research topic in the field of quantum optics. The quantum states of light are used in the development of new optical technologies. Photons are fundamental components that carry information from the early universe to the present day. Light plays a critical role in astronomical observations and in the study of cosmic events.

2- THE SCIENTIFIC DIMENSION OF LIGHT AND PHOTONS

Photons are fundamental particles that exhibit unique behaviors in the quantum world. Within the framework of quantum mechanics, the properties of photons such as superposition and quantum entanglement constitute the most interesting and impressive aspects of modern physics. Photons are considered quantum objects that exhibit both wave and particle properties. These properties have been observed in various experiments: Photons can behave like waves in one experiment and like particles in another. This shows that the two natures of light complement each other. Thomas Young's famous double-slit experiment clearly demonstrated the wave nature of photons. When a photon passes through two slits, it creates a pattern by the interference of the waves. However, even when photons are sent individually, they create the same pattern over time. This shows that photons interact with each other while in superposition.

Superposition refers to the ability of a quantum system to be in more than one state at the same time. Photons can have more than one possibility at the same time thanks to this feature. A photon can have the probability of being in a certain state (for example, in a certain polarization direction). However, it also has the probability of being in different polarization directions. This state indicates that the photon is in a superposition state. Measuring the superposition state of a photon causes the photon to collapse into a certain state. In other words, the photon in the superposition state chooses a certain state when the measurement is made. This process is one of the fundamental features of quantum mechanics.

Quantum entanglement refers to a state in which two or more quantum systems are interconnected and a change in the state of one instantly affects the state of the other. Photons are one of the most well-known examples of this phenomenon. When two photons interact in such a way as to create an entangled state, these photons become entangled with each other. In an entangled state, when the polarization or other property of one photon is measured, the state of the other photon is determined instantly, regardless of the independent distance. The existence of quantum entanglement has been tested by theories developed by John Bell. Bell's theorem shows that entangled systems cannot be explained by classical physics. Experiments have proven that entangled photons have a relationship beyond classical theories.

Photons are elementary particles that behave with interesting properties such as superposition and entanglement in the quantum world. These properties form the cornerstones of modern physics and technology. While quantum mechanics helps us understand these properties, the behavior of photons constitutes an important area that will guide future research and applications. The place of photons in

the quantum world deepens our physical understanding while also opening the doors to new technologies.

The electromagnetic spectrum is a wide range where electromagnetic waves with different wavelengths and frequencies come together. This spectrum extends from a wide range of radio waves, including visible light, to gamma rays. Here are the main sections of the electromagnetic spectrum:

1. Radio Waves: They have the longest wavelengths (from about 1 mm to several kilometers).

Frequency: Varies between 3 Hz and 300 GHz.

Usage Areas: Radio and television broadcasts, mobile phone communication, wireless internet and radar systems.

2. Microwaves: Wavelength: Varies between 1 mm and 1 m. Frequency: Between 300 MHz and 300 GHz.

Usage Areas: Microwave ovens, satellite communication, wireless communication and radar systems.

3. Infrared (IR) Light: Wavelength: Between 700 nm and 1 mm. Frequency: Between 300 GHz and 430 THz.

Usage Areas: Heat detection, night vision systems, remote controls and thermal imaging.

4. Visible Light: Wavelength: Between 400 nm and 700 nm. Frequency: Between 430 THz and 750 THz.

Usage Areas: Light spectrum that the human eye can perceive. Colors vary by wavelength (for example, blue light has shorter wavelengths, red light has longer wavelengths).

5. Ultraviolet (UV) Light: Wavelength: 10 nm to 400 nm. Frequency: 750 THz to 30 PHz.

Uses: Sterilization, UV lamps, sunlight, melanin production in the skin. Also, some types can cause DNA damage.

6. X-Rays: Wavelength: 0.01 nm to 10 nm. Frequency: 30 PHz to 30 EHz.

Uses: Medical imaging (x-ray), industrial inspection, and some scientific research.

7. Gamma Rays: Wavelength: Shorter than 0.001 nm. Frequency: Higher than 30 EHz.

Areas of Use: Nuclear medicine (cancer treatment), radiation therapy, space research and some scientific experiments. All electromagnetic waves travel at the speed of light in a vacuum, which is approximately 299,792 km/s. As the wavelength decreases (frequency increases), the energy of the waves increases. Gamma rays have the highest energy, while radio waves have the lowest energy. The nature of light has been studied in depth within the framework of quantum electrodynamics (QED). QED is the quantum field theory that explains electromagnetic interactions, and one of the most important contributions in this field was made by Richard Feynman. Quantum Electrodynamics (QED) is a theory that combines light and electromagnetic fields with quantum mechanics. This theory explains the interactions of photons and electrically charged particles (e.g. electrons). QED defines photons as

quantum states of the electromagnetic field. While electrons interact with photons and exert forces, the rules of these interactions are determined by QED. QED is a fundamental quantum field theory and includes concepts related to the quantum state of fields. In this context, particles are considered as excitations of the field. Photons are waves of this field. Richard Feynman made many important contributions to QED.

Feynman developed Feynman diagrams, which visually represent the interactions of particles. These diagrams are a powerful tool for understanding how interactions occur. The diagrams visualize time, energy, and the paths of particles. Feynman developed an approach in quantum field theory that allowed calculations to be done in a more systematic and understandable way. This facilitated the analysis of complex interactions. Feynman emphasized that when describing the transition of a particle from one location to another, all possible paths of this transition must be considered. This idea is a fundamental principle of quantum mechanics. QED provides a better understanding of the nature of light. To explain the relationship between the wave and particle properties of light, QED considers the situations in which light can behave as a particle and also its propagation properties as a wave. QED proposes that light exhibits both wave and particle properties. In one experiment, light may propagate as a wave, while in another experiment it may behave as a particle (photon). QED explains how electromagnetic interactions occur at the quantum level. Photons mediate the force between electrons. Electrons interact with each other by exchanging photons. QED is one of the cornerstones of modern physics and plays an important role in many applications: QED is used in areas such as laser technology and optical communication systems. Feynman diagrams are an important tool in the analysis of particle physics experiments. Fields such as quantum computers and quantum cryptography benefit from the principles of QED. Quantum electrodynamics plays a key role in understanding the nature of light, and Richard Feynman's contributions were decisive in the development of this theory.

QED explains the dynamics of electromagnetic interactions at the quantum level, providing a critical foundation for many areas of modern physics. Feynman's diagrams and methods help us better understand and analyze physical phenomena. The speed of light is one of the most fundamental concepts of the physical world and has a deep relationship with Albert Einstein's theory of relativity. The speed of light is considered to be approximately 299,792 km/s (about 300,000 km/s) in a vacuum, which is considered the highest speed in the universe. The speed of light is considered a constant speed in nature, and this speed has an important place, especially in the framework of the theory of relativity. It has been proven by various experiments (for example, the Michelson-Morley experiments) that the speed of light is constant. Einstein's theory of relativity consists of two main parts. Special Relativity (The theory of special relativity suggests that the speed of light is constant for every observer. This means that even if the observers are moving at different speeds, the speed of light will be measured as 299.792 km/s. The constant speed of light creates an understanding that time and space are interconnected, and the effects of relativity on time periods and lengths emerge. Time moves more slowly for a fast-moving observer than for a stationary observer. 'Time dilation'). General Relativity (General relativity explains that mass changes the path of light by curving space-time. This causes light to bend around massive objects. Gravity does not affect the speed of light, but it does change the trajectory of light. For example, the gravitational field of the Sun causes starlight to bend around the Sun. This phenomenon

was observed during the 1919 solar eclipse.)

The speed of light means that no information or matter in the universe can move faster than this speed. This is a result of physical laws. In the framework of special relativity, how time changes as an object approaches the speed of light opens up the concept of time travel. However, in practice, reaching these speeds is not possible with current technology. The speed of light has a deep connection with the theory of relativity, and these theories play a fundamental role in our understanding of the physical universe. The constant speed of light has redefined the relationship between time and space, gravity, and motion in the universe. These concepts have allowed for important applications and understandings in many areas of modern physics.

3- NUR AND ZIYA IN THE QUR'AN

The concepts of "Nur" and "Ziya" are two important terms related to light in Islamic thought, and both gain meaning in different contexts. These concepts have a profound impact with both their physical and metaphysical meanings. "Nur" means "light" in Arabic, but the term usually refers to an abstract light. In Islamic thought, "light" is considered a spiritual and metaphysical concept. Light is seen as a reflection of God's existence, wisdom and power. In this context, "light" is not only a physical light, but also a spiritual enlightenment and wisdom. The term "light" has an important place, especially in the "Nur Surah" (24th surah). This surah contains deep messages about both physical and spiritual enlightenment. For example, the expressions "reflecting the light of God on the earth" emphasize spiritual enlightenment and divine wisdom. Light serves as a guide, illumination and guidance to the right path. Light, as a source of light in the inner world of man, serves as a guide in terms of knowledge, wisdom and moral values. In Islamic thought, the term "light" has great importance in terms of spiritual enlightenment and access to knowledge.

"Ziya" is a term used to refer to physical light. It generally refers to the aspects of visible light related to illumination and physical existence. Ziya is a type of light that can be seen with the eye and directly experienced. Ziya is used in a less abstract context in the Quran and is usually associated with natural light sources. Ziya represents physical realities such as sunlight, moonlight or other natural light sources. In this sense, ziya is seen as a concrete experience, a fundamental element of life and existence. Ziya provides concrete illumination in human life. This refers to both the light source in the physical world and the physical reality that illuminates an object or situation. While nur is perceived as an abstract light, ziya means physical and concrete light. Nur expresses spiritual illumination and divine wisdom, while ziya represents the light source in the physical world that can be directly observed. Nur provides spiritual guidance and enlightenment, while ziya illuminates the physical environment and functions as a fundamental part of life. Nur creates a change in the inner world of a person, while ziya visually shapes the outer world. Nur enables a person to attain knowledge and wisdom; ziya helps to understand physical existence and the environment in daily life. While light speaks to the heart and soul, light speaks to the eyes and physical perception. The "Nur" Surah offers a depth of meaning by blending the

combination and differences of these two concepts. This Surah emphasizes the importance of both physical and spiritual enlightenment. How the light of Allah illuminates and guides individuals is a central theme in this Surah. Light appears as the physical expression of this enlightenment and functions as the source of light that people experience daily in their lives.

In the Quran, light is a deep and multi-layered concept in metaphysical and spiritual terms. This concept expresses both physical illumination and spiritual guidance. In the Quran, the term “nur” refers to an abstract and spiritual light, while “ziya” represents physical light. Nur is considered a reflection of Allah’s existence, wisdom and will. In this context, nur symbolizes spiritual illumination and access to knowledge. The Quran states that Allah’s light guides people to the right path. “Allah is the light of the heavens and the earth” (An-Nur, 35). This verse emphasizes that Allah is an enlightening and guiding being. Nur means illumination in the inner world of man and a spiritual journey.

The Quran is seen as a spiritual light. “This is a guide for all mankind and a guidance for the righteous” (Al-Baqarah, 2). The Quran is considered a light that shows people the right path and leads them from darkness to light. Nur is important in terms of man’s spiritual development and enlightenment. In the Quran, it is stated that the hearts of those who believe will be illuminated with light and that they will be saved from darkness thanks to this light. This is a spiritual transformation and a process of attaining knowledge. Light also symbolizes divine wisdom and wisdom. “He gives His light to whom He wills” (Al-Maidah, 15). This verse expresses that light is given by Allah as a blessing and that this divine illumination deepens human understanding. In the Quran, light is frequently used as the opposite of darkness. While darkness symbolizes ignorance, perversion and the wrong path, light represents the right path, wisdom and enlightenment. The expression “Allah brings the believers out of darkness into light” (Al-Baqarah, 257) explains the spiritual dimension of this transition. The Quran also addresses the social meaning of light. Believers are expected to shed light on their communities and enlighten others. This is the responsibility of guiding people and supporting them to walk on the right path. The name of Allah, “Nur”, is deeply related to the concept of light in Islamic thought, and this relationship gains meaning in both its metaphysical and spiritual dimensions. When Allah is defined by the name “Nur”, this expresses His enlightening, guiding and knowledge-giving quality.

Light is seen as a reflection of Allah's existence, wisdom and power. In this context, light symbolizes not only physical light but also spiritual illumination. The name “Nur” offers guidance that shows people the right path. Individuals illuminated by the light of Allah are saved from darkness and directed to the right path. This guidance plays an important role in the spiritual and moral development of the individual. Light symbolizes divine wisdom and wisdom. The light of Allah provides people with knowledge and understanding. This provides illumination in the heart and mind of man, guiding him to right thinking and right action. The expression “He gives His light to whom He wills” indicates that light is given as a blessing from Allah. This provides an opportunity to access knowledge and wisdom; When people are illuminated by this divine light, they reach a deeper understanding. Light is often referred to as the opposite of darkness. While darkness symbolizes ignorance, perversion, and spiritual emptiness, light represents salvation from this darkness and enlightenment. The light of Allah brings believers from darkness to light; this means spiritual transformation and a new life. Light is not only a physical phenomenon, but also has a spiritual meaning. Light symbolizes the process of inner enlightenment of

man and his relationship with the divine being. This is an opportunity for the individual to discover himself and reach his spiritual depths.

Believers should reflect the light of Allah in their own lives and add light to their surroundings. This is considered a social responsibility. Light functions as an element that connects people to each other and reinforces feelings of love and brotherhood. Light strengthens individuals' beliefs and shapes their moral values. In Islam, light encourages individuals to act rightly, to be just, and to establish peace and tranquility in society.

In Sufism, the concept of light has a deep and multi-layered meaning. Light represents both spiritual enlightenment and divine wisdom. In this context, the understanding of "Irfan" makes the role and importance of light in Sufi philosophy clear. In Sufism, light is seen as spiritual enlightenment and an inner discovery. Those who progress on the path of Sufism aim to reach divine light by transcending their own selves. This process enlightens the soul of the individual, enabling him to be freed from darkness. Light symbolizes the existence and characteristics of God. In Sufism, the light of God creates an illumination in the heart of man. This enables the person to experience divine love and knowledge.

What is Irfan? Irfan can be defined as wisdom, deep understanding and spiritual experience. Sufism accepts gnosis as the highest level of knowledge and enlightenment. In this context, light becomes a fundamental element of gnosis. In Sufism, light is the symbol of access to knowledge and deep understanding. Irfan is a type of spiritual knowledge and enlightenment. Through divine light, Sufi masters learn to see the world and existence from a deeper perspective. In Sufism, the nature of gnosis is based on intuitive knowledge. Light is seen as an element that illuminates this intuitive knowledge. This helps the individual develop a deep understanding by illuminating their inner world. Light is a guide on the path to transcending one's own self and reaching divine reality. This process takes place through gnosis and the individual becomes closer to Allah with inner enlightenment. A frequently encountered expression in Sufism, "the light of lights", symbolizes the highest level of expression of the divine being. This shows how the light of Allah illuminates and guides people. Sufism accepts divine love as the highest expression of light.

When the lover is illuminated by the light of God, he experiences his love for Him more deeply. Muhyiddin Arabi emphasizes the relationship between light and divine knowledge. According to him, divine knowledge is illuminated by the light of the heart, and this illumination is a fundamental element in a person's spiritual journey. Mevlana combines love and light. In his works, we see love depicted as a light that leads a person to divine light. Love is considered both an inner illumination and a path to wisdom. In physical sciences, energy cannot be created or destroyed; it can only transform from one form to another. This is also true for light energy. Light carries energy as electromagnetic waves, and this energy undergoes transformation in various processes. In quantum mechanics, photons (particles of light) carry energy, and this energy can transform into other forms of energy under certain conditions. This means that the energy of light is conserved, and it is also related to quantum fluctuations and particle interactions. In metaphysical terms, energy is seen as a fundamental component of existence. Light, as one of these forms of energy, offers a deep understanding of the nature of existence. The idea that energy is in constant change emphasizes that existence is a dynamic and continuous process. Light

is associated with wisdom, understanding, and divine reality in many cultures and philosophical systems.

Metaphysically, light is considered an expression of consciousness and a symbol of spiritual enlightenment. In this context, light energy symbolizes a transformation in the levels of consciousness.

The law of conservation of energy emphasizes the principle of transformation and change.

Metaphysically, this transformation is related to the spiritual journey of the individual and the evolution of existence. This process expresses that beings are in constant development and that everything is interconnected. In Sufism, the understanding of "Vahdet-i Vulgari" states that everything is united in a whole and that every being is connected to the divine source. Light is considered an expression of this wholeness; therefore, the energy of light also symbolizes this metaphysical unity. Although light may seem like a temporary phenomenon, it represents a continuous form of existence thanks to the law of conservation of energy. This allows us to consider both the temporal and eternal dimensions of existence. Metaphysically, the balance between these two dimensions brings a deep understanding of the nature of existence. Light symbolizes unconditional love in many mystical traditions. In this context, the conservation of energy is combined with a belief that the light of love and wisdom will never fade. This shows that spiritual enlightenment and divine love are in constant change. The concept of "NUR" is a term that carries deep meanings both in Islamic Sufism and in scientific contexts.

The divine secrets of Nur and the principle of the continuity of energy in science create an interesting intersection of the nature of existence and spiritual enlightenment. Nur symbolizes the enlightening and guiding characteristic of Allah in Sufism. Divine light is considered a force that leads people from darkness to light. In this context, Nur helps the human soul to be enlightened and to attain spiritual wisdom. Nur is seen by many Islamic thinkers as a reflection of the infinite qualities of the divine being. This is the process of delving into the depths of the soul and consciousness and gaining understanding of the essence of existence. Light helps to reveal spiritual and metaphysical secrets. Through light, individuals discover their inner reality and open the doors to divine secrets. In science, the law of conservation of energy states that energy cannot be destroyed, it will only transform from one form to another. This shows that energy is a continuous entity and that all phenomena in nature are related to this energy. In quantum mechanics, energy exists in a continuous flow through photons and other particles. This reflects the dynamic and changing nature of existence. Light can also be seen as a metaphysical energy. This energy symbolizes spiritual enlightenment and divine wisdom. The principle of continuity of energy supports that Light is a continuous entity and that spiritual experiences are continuous. Light plays an important role in the transformation processes that individuals encounter during their spiritual journeys. The transformation of energy represents a similar transformation in the individual's journey of inner enlightenment and union with the divine being.

The principle of continuity of energy is a scientific fact that overlaps with the teachings of Sufism. Both express that existence is dynamic and in constant change. This provides a valid understanding on both the physical and spiritual levels. The divine secrets of Light and the principle of continuity of energy establish a bridge between science and Sufism, providing the opportunity to delve into the depths of both fields. This provides a holistic perspective in understanding human existence and the journey of consciousness.

4-THE COSMIC DIMENSION OF LIGHT

The formation of light in the universe since the Big Bang has a profound importance in terms of cosmology and physics. Here are the main stages in this process:

The birth of the universe took place approximately 13.8 billion years ago with the Big Bang. This was an extremely dense and hot state where all space, time, matter and energy came together. In the first moments of the Big Bang, the universe was in a hot and dense plasma state. At this stage, elementary particles such as atoms, protons and neutrons began to form. However, due to the high temperature, it was not possible for atoms to come together. In the first few minutes, protons and neutrons combined to form helium and other light elements. This process is called nucleosynthesis. During the first few hundred thousand years, the temperature of the universe dropped to 3000 K. At this point, the universe became more transparent as the atoms combined. Photons began to move freely without interacting with the atoms. Formation of the Light Source: After about 400,000 years, the universe cooled sufficiently to form atoms. This provided an environment in which photons could move freely. This process is known as "Hawking radiation". During this period of the universe, light first became free and radiation known as "cosmic microwave background radiation" emerged. This is considered a remnant of the Big Bang and was the first stage of the formation of light in the universe.

After about 1 billion years, the universe cooled, allowing the formation of galaxies and stars. Gas clouds collapsed under the influence of gravity, allowing the formation of stars and galaxies. The first stars emerged from the condensation of gas clouds consisting of hydrogen and helium. These stars produced heavier elements through nucleosynthesis processes, producing more light in the universe. During the life cycles of stars, heavy elements are released into space through supernova explosions. These elements are used in the formation of new stars and planets. This process reinforces the role of light spreading and cosmic radiation in the universe. Today, different wavelengths of light are observed in various regions of the universe. Different wavelengths such as visible light, ultraviolet light, infrared light and radio waves carry the traces of physical events occurring in the universe.

The formation of light in the universe since the Big Bang is a complex process that extends from the first moments to the formation of galaxies and stars. This process is shaped by both physical laws and cosmic events, and helps us understand the dynamic nature of the universe and the importance of light. Light is a fundamental part of the history and evolutionary process of the universe and offers scientists the key to unraveling cosmic mysteries.

Black holes are known as the densest and most mysterious structures in the universe. The fact that light cannot escape from black holes is one of the basic characteristics of these celestial bodies. Black holes are usually formed as a result of the collapse of massive stars in supernova explosions at the end of their life cycles. The gravitational force of the star overcomes the internal pressure and causes the star to collapse to its center. Stephen Hawking suggested that black holes can emit radiation in the vacuum of

space. However, this radiation cannot escape the gravitational field of a black hole, so black holes are actually called "black". There is a certain boundary around a black hole, called the "event horizon". The event horizon is the point in the gravitational field of a black hole beyond which nothing, including light, can escape. Once light passes the event horizon, it is trapped by the gravitational force of the black hole. Although the speed of light is the fastest in the universe, the gravitational force of the black hole is so intense that not even light can escape its pull.

Albert Einstein's theory of general relativity is a critical foundation for explaining the existence of black holes. According to the theory, massive objects affect the surrounding space by curving spacetime. Black holes are at the extreme ends of this curve. The event horizon can be thought of as a kind of "closing" of spacetime. When an observer observes an object approaching the event horizon, they notice that time slows down, a result of light not being able to escape from the black hole. Black holes can pull in the matter around them to form disks. As this matter heats up and spins, it emits intense light. This light causes a structure that looks like a "halo" to form around the black hole. Black holes cause light to bend, distorting images of objects in the background. This phenomenon occurs when light is affected by the gravitational field of the black hole. Black holes cannot be observed directly, but the effects on their surroundings can be studied using electromagnetic radiation such as X-rays and radio waves. For example, X-ray emission from the disk of matter surrounding a black hole provides information about the existence of a black hole. In 2019, the image of the supermassive black hole at the center of the M87 galaxy was obtained with observations made by the Event Horizon Telescope. This further confirmed the existence of black holes. The relationships between dark energy, dark matter, and light are one of the most interesting and complex topics in modern cosmology.

Dark matter is a type of matter found in the universe but cannot be observed directly and does not interact with light. Its existence is assumed to understand the gravitational effects of galaxies and galaxy clusters. Dark matter is invisible because it does not interact directly with light. However, it can be observed indirectly through phenomena such as the rotation speeds of galaxies and gravitational lensing. The bending of light by dark matter helps us understand this matter indirectly. Dark energy is a type of energy proposed to explain the accelerating expansion of the universe. This energy makes up about 70% of the universe and accelerates the expansion by reversing gravitational attraction. Dark energy does not affect the path of light, but the expansion of the universe can change the wavelengths of light. This effect is known as cosmic redshift. Light from distant galaxies is stretched in wavelength due to the expansion of the universe, causing visible light to be redshifted.

Dark matter and dark energy play an important role in the dynamic balance of the universe. While dark matter enables the formation of galaxies and their large structures, dark energy accelerates the expansion of the universe. These two have complementary effects on the evolution and structure of the universe. Under certain conditions, the interactions between dark matter and dark energy are studied in simulations to understand how the structure of the universe evolves. These simulations reveal the effects of both elements on the formation of galaxies and cosmic structure.

Light is the main tool for studying the structures of matter in the universe (galaxies, galaxy clusters). Dark matter and dark energy affect these structures and determine the distribution of light in the

universe. Light indirectly provides information about dark matter and dark energy. This radiation left over from the Big Bang provides information about the early universe. Its interaction with dark matter and dark energy helps us understand the dynamics of the early universe.

5-LIGHT: THE SECRET OF THE UNIVERSE AND REFLECTIONS OF THE DIVINE LIGHT

Was light a vibration that existed at the beginning of everything or a secret placed within the universe? Light, which carries a meaning beyond physical beings, may be hidden in the essence of all existence as both a physical reality and a metaphysical truth. Light appears before us as the purest form of the Universe, both the witness of creation and the finest touch of existence. Light travels rapidly, penetrating to the heart of matter, but at the same time it also brings with it deep metaphysical questions. What is the source of the light of the universe? And is this light the reflection of a divine being?

Photons appear to be independent of time and space; they never become old and are in constant motion. At the quantum level, these particles can extend into the depths of the universe and beyond time. Light not only determines the speed limit of the universe, but also gives us clues about the nature of consciousness and time. Does the existence of light connect the past and the future? Or is this connection just an illusion? Many great scientists, from Newton to Einstein, Schrödinger to Feynman, have tried to understand this strange nature of light. But what happens when the discoveries of science are combined with the light of sacred texts and ancient knowledge?

Light in the Quran is filled with divine meaning. The Surah An-Nur reveals this truth in its most profound form: Allah is the light of the heavens and the earth. This light is not a physical light, but an abstract illumination; yet it is still directly connected to the physical universe. Ziya, on the other hand, appears before us as physical light and operates within the material order of the world. Light has two faces: one divine and abstract, the other material and visible. But these two aspects cannot be separated. What kind of a bridge is there between the physics of the universe and spiritual realities? How did scientists and Sufis build this bridge? How can light, while enlightening us on the one hand, be a door opening to divine consciousness on the other?

In the quantum world, photons behave both like particles and waves; this is a reflection of their mysterious nature. Scientists claim that photons are messengers that carry information in the universe. So, are these messages only physical? Or are photons intermediaries serving a divine plan? When we start thinking about the interaction of consciousness and light, the question of whether these photons play a role not only in the material world but also in the spiritual world comes to mind. Could the reflection of God's light on earth be like photons bringing physical light to this world? Quantum physics shows us that the universe operates in a much deeper order than what is seen. Quantum entanglement enables instant interactions from one point to another, and these interactions point to a dimension beyond light. In Sufism, "light" is the manifestation of divine consciousness. Just like quantum

entanglement, divine light transcends the boundaries of time and space and encompasses all beings. When these two understandings come together, they create a light metaphor that unites the material and spiritual dimensions of the universe. Light, the most fundamental element in the creation of the universe, is also the common language of all consciousness in the universe. Light not only carries information, but also guides consciousness to enlightenment and a journey towards Allah.

Light is not defined by just existing, but is also shaped by its contrast with darkness. Just as in the physical universe, these contrasts create a balance in the spiritual realm. Just as there are dark spaces around photons, human consciousness can sometimes remain in darkness. However, darkness serves to better understand light. The existence of the concept of “darkness” along with “Nur” in the Quran is an indication of this contrast. As in physics, darkness is a part of enlightenment in the spiritual world. Can light find its meaning without darkness?

Light was the first energy to emerge with the Big Bang. As the universe expanded, light guided matter and enabled the formation of galaxies, stars and planets. Cosmic light is the most fundamental building block of all existence. But is the nature of light hidden only in the past? What will be the future of light as the universe continues to expand? Can black holes trap light forever, or do they create new forms? How will cosmic enlightenment guide humanity’s journey to discover the mysteries beyond light? We will evaluate all of these issues and our questions in detail in the last section of our book.

6-HOLOGRAPHIC UNIVERSE AND UNIVERSAL INFORMATION

The concept of the holographic universe presents the idea that all parts of the universe are structured in a way that includes the whole. According to this model, universal information underlies everything and time is an illusion in the flow of this information. Every section of the universe is a reflection or a sectional part of universal information. In the holographic structure, everything observed actually exists as sections of an unlimited whole; just like the entire image is hidden in any part of a hologram.

Time, on the other hand, can be thought of as a single universal moment. According to this understanding, time is not actually in a linear flow. Human consciousness perceives this single universal moment as various sections and these sections give us the perception of time in a sequence. However, on a deeper level, there are different perceived sections of a single universal moment in different dimensions and levels of existence. Consciousness perceives different realities and experiences by making leaps in the transitions between these sections. Each leap of consciousness opens a new layer of knowledge by taking a share from the universal consciousness.

At this point, universally organized knowledge intersects with the idea that everything is in the knowledge of God and that knowledge exists in integrity and perfect order at every level. Knowledge is unlimited and there is a section of this unlimited structure at every point of the universe. Every living and inanimate being is a reflection of this integrity; therefore, the distinction between the living and the

inanimate is a product of our perceptions; in fact, everything in the atomic structure is alive and conscious. Our perception tools grasp this unlimited knowledge structure with their limited capacities, so the objects and events we perceive show different forms and characteristics according to the capacity of our tools. The developing consciousness and perception capacity also causes the nature of objects and the universe to change. With the expansion of our perceptions, we can see larger sections and dimensions of the unlimited structure.

Each section of this unlimited knowledge structure carries a wisdom that can be called universal universal knowledge. Reaching this information through leaps of consciousness is possible by becoming aware of the unlimited. Beyond time, there is a plane of reality where everything exists in a single cosmic moment, and our consciousness experiences these moments cross-sectionally. Here, the distinction between living and nonliving, the difference between matter and energy, and even time itself lose their meaning. As our perceptions develop, we can grasp this reality in a deeper, more comprehensive way. As a result, everything exists based on cross-sectional information received from the limitless structure, and we can access the universal knowledge that is recreated at every moment as a part of this structure. God's knowledge and universal consciousness are reflections of this deep truth that lies behind every cross-section.

7- EVERY MOMENT IS A NEW CREATION

The verse "Allah is in a new creation every moment" is found in the 29th verse of the Surah Rahman of the Holy Quran: "Every moment a new manifestation appears from Him." This verse, which means that Allah is in a creative act every moment, and that the universe and beings are in a constant process of renewal, change and transformation. We are faced with a plane of reality where creation is re-manifested every moment. We can examine in more depth how this verse connects to concepts such as the holographic universe model and leaps of consciousness.

The holographic universe model argues that each part of the universe is a section of the whole and that the information of this whole is present everywhere at every moment. If we think of the universe as a hologram, all the information can be present in each section of this hologram. This is a powerful explanation for understanding that Allah is in a new glory every moment, that is, that creation is manifested anew and in different ways every moment. Every moment, existence is reshaped by Allah's knowledge, and we experience this constantly renewed creation.

When we look at the structure of the universe in the light of this verse, seeing that Allah is in a different act of creation at every moment suggests that time is not a linear flow but rather a chain of constantly renewed moments. The holographic universe model expresses exactly this; everything exists in a moment, but this moment manifests itself in a different way at every moment. The fact that we perceive time as a constantly flowing process is a result of our being in a continuous creation with Allah's knowledge and will. Just as there is a new creation at every moment, leaps of consciousness allow us to

perceive different levels of this renewed creation.

In addition, this verse emphasizes that every section of the universe is a manifestation of Allah's infinite knowledge and power. The universe is an unlimited source of existence and information, and a new section of this unlimited structure opens up to us at every moment. Everything is in Allah's knowledge and control; therefore, creation takes on a new form and content at every moment. Consciousness leaps can also be thought of as moments that expand our capacity to witness this continuous creation of Allah. The verse, "Allah is in a new glory at every moment" also opens the door to an understanding that eliminates the distinction between living and nonliving in the universe. If everything is a part of Allah's act of creation that manifests itself at every moment, all beings, whether living or nonliving, exist as a manifestation of this continuous creation. In the holographic universe model, the distinctions between beings are only related to the limitations of our perception tools. In this infinite cycle where Allah is in a different state of creation at every moment, we only experience this creation in different ways according to the capacity of our perceptions. Therefore, the universal order, consciousness leaps, the universe being shaped by a new manifestation of creation at every moment, and the understanding that everything is based on a universal integrity are in deep harmony with this verse. Allah's constantly renewing act of creation allows us to experience the universe with a constantly renewing perception. Allah's knowledge is limitless and different aspects of this knowledge are revealed in a new way in every moment of creation.

The issue of different worlds, dimensions and times in Sufi works offers a fundamental understanding of the deep layers of human existence. According to the Sufi perspective, there are metaphysical, spiritual and divine worlds beyond the physical world. The concepts of movement, time and space do not exist among these worlds as we know them and these worlds manifest at different levels of existence. Modern quantum physics, on the other hand, offers interesting clues about the possibility of the existence of such different dimensions and worlds. Quantum physics provides a scientific basis for this mystical understanding of reality with theories such as the concept of observer-dependent reality, the superposition state of particles, the relativity of time and parallel universes.

One of the most emphasized worlds in Sufi literature is the realm of "Barzakh". Barzakh is described as a bridge between this world and the hereafter. In Muhyiddin Arabi's works, the realm of the barzakh is a dimension of reality beyond our perception. In quantum physics, the theory of parallel universes can be likened to a scientific explanation of an in-between dimension, such as the barzakh. The fact that an object can be in different places at the same time is based on the principle of superposition, and this is a proven fact in the quantum world. There is a parallel between the idea of "being in many places at the same time" that Muhyiddin Arabi talks about and the superposition state of the quantum.

Another Sufi understanding is related to the "multidimensionality of time". For example, the words "A moment can be thousands of years" in Mevlana's famous work *Masnavi* are a mystical expression regarding the relativity of time. Quantum physics and the theory of relativity also state that time is not absolute and can change depending on the observer. Quantum entanglement shows that two particles can interact instantly no matter how far apart they are, which supports the idea of a reality beyond time and space. In this sense, the idea that time moves at different speeds at different points in the universe

overlaps with both Sufi and quantum views. In the depths of Sufism, each realm may be subject to different laws of physics. For example, according to Sufis, the "World of Examples" and the "World of Spirits" are based on completely different principles from the material world. In quantum mechanics, on the other hand, multiple universes or different dimensions with different energy levels are seen as a scientific expression of these realms. Concepts such as quantum string theory suggest that the universe may have much smaller and invisible dimensions. Sufi thought also states that spiritual realms are not only beyond physical existence, but also in a deep spiritual and existential dimension.

The concept of the "moment" is also very important in Sufi literature. In particular, the story of "Khidr (peace be upon him)" symbolizes a spiritual being who can transcend time and space and be in different places at the same time. In quantum mechanics, the potential for a particle to be in two different places at the same time (superposition) and the possibility of two different events occurring at the same time can be interpreted in a similar way to Khidr's mystical existence. Another realm that exists in Sufi understanding is the divine realm defined by concepts such as "Arsh" and "Kursi". In this realm, the physical laws we understand do not apply. The realities that manifest in this realm through the names and attributes of Allah are directly related to Allah's knowledge and power. Modern physics traces this infinite power and knowledge to a point of "singularity" with the big bang theory of the beginning of the universe. While quantum physics discusses the initial uncertainty and potential of matter and energy, Sufism is the opening of this uncertainty to infinite possibilities as a reflection of the absolute will of Allah.

The dimension called "The World of Light" where divine light manifests is the highest level of existence. In this world, the light of Allah encompasses everything and this light illuminates both the visible and invisible worlds. In quantum physics, light is defined as a phenomenon that has both wave and particle properties. These scientific discoveries on the nature of light parallel the understanding of light in Sufism. In Islam, light means not only physical light, but also spiritual enlightenment and meeting with the truth. In quantum physics, the existence of light and energy in two different forms, both matter and wave, can be evaluated as a scientific counterpart to this metaphysical reality.

Sufi works provide many more examples of these different worlds and dimensions. For example, Muhyiddin Arabi's understanding of "Vahdet-i Vuj" (Unity of Being) states that all worlds and dimensions are actually different manifestations of a single truth. Quantum physics, on the other hand, suggests that the entire universe may be governed by a single quantum field. In this sense, the idea of worlds and dimensions where the laws of physics differ appears as both a mystical and scientific reality.

8-CONSCIOUSNESS AND THE PARTICIPATORY UNIVERSE

Einstein's theory of relativity and the subsequent development of quantum theory brought about a radical change in the nature of matter. Classical physics depicted the universe as a mechanical system filled with solid, unchanging and stationary objects. However, Einstein's famous formula $E=mc^2$ showed

that matter is actually a form of energy, and this understanding completely changed our perspective on the fundamental nature of matter. The formula $E=mc^2$, which Einstein put forward in his special theory of relativity, shows that mass can be converted into energy and that mass is actually energy. This formula expresses a revolutionary physical fact with a very simple mathematical relationship: The mass of an object is a type of its energy. The greater the mass of an object, the greater the energy it will have. Similarly, energy can also be converted into matter. This means that mass is not a fixed structure, but a state of concentration of energy. In other words, the physical substances we see, touch and measure are actually concentrated forms of energy in a certain way. Let's explain with an example: During the nuclear fusion process that occurs in the Sun, hydrogen atoms are transformed into helium atoms, releasing a large amount of energy.

The transformation process here is compatible with Einstein's theory; because a portion of the mass of the hydrogen atoms is transformed into energy. This energy emitted by the Sun is the fundamental energy source that sustains life on Earth. This is one of the clearest examples of the transformation of mass into energy in our daily lives. Following this new perspective brought by Einstein, the rise of quantum theory brought forth more radical ideas about the existence of matter. In quantum mechanics, it is only certain that a particle is in a certain position or at a certain speed when it is measured. In the quantum world, particles exist in a sea of possibilities until a certain observation is made. This is directly related to the famous Heisenberg Uncertainty Principle. Just as both the position and momentum (speed and mass) of particles cannot be known with certainty at the same time, a particle only enters a certain state when an observer intervenes. In other words, the observer is the factor that makes matter "exist". In quantum physics, this situation is one of the concepts most explained by the Copenhagen Interpretation. For example, in the Schrödinger's Cat experiment, a cat can be both dead and alive inside the box; this situation becomes clear as soon as the box is opened and observed.

Quantum superposition means that matter is not in a certain state, but will change to a state under the influence of the observer. In other words, while classical physics says that matter is fixed and definite, quantum physics argues that matter is in uncertainty as long as it is not observed. This new perspective shows that matter exists only depending on the observer and does not have a certain reality when there is no observer. In other words, in the quantum world, matter has ceased to be a fixed entity, and has become a structure that is constantly changing and uncertain in interaction with the observer. At the subatomic level, that is, at the quantum level, the validity of the rules of classical physics is largely lost. Although classical physics defines matter as "hard" and "independent of space", quantum physics shows that this understanding is not correct in the subatomic world. The majority of the atom consists of "empty space" according to the classical view. However, quantum physics shows that this space is actually filled with energy, meaning that nothing is truly empty. Even the "space" between atoms is constantly filled with waves of energy. According to quantum field theory, subatomic particles are constantly in a sea of energy, and this energy can instantly transform into matter.

Let's explain with an example: There are constant interactions between subatomic particles such as protons, neutrons and electrons, and these interactions are a form of energy. Protons and neutrons are made up of smaller particles called quarks, and these quarks are connected to each other by particles called gluons. These bonds are an expression of energy. In other words, the inside of a proton or

neutron is not actually "empty"; it contains particles that are shaped by a dense network of energy and are in constant motion. Quantum theory argues that every part of the universe is interconnected and that nothing is an independent entity. Quantum Entanglement is one of the most striking examples of this interconnectedness. When two particles are entangled, no matter how large the distance between them, a measurement made on one instantly affects the other. This interaction is so fast that it exceeds the speed of light. Although this situation seems impossible in terms of classical physics, it is a phenomenon that has long been proven in the quantum world. Quantum entanglement shows that everything in the universe is actually holistic and related. In other words, atoms, molecules, galaxies and even us humans are connected to this great energy network.

Another important concept is the energy known as vacuum energy or zero-point energy. According to quantum theory, even at absolute zero temperature, this energy is present everywhere in the universe and never disappears. This energy can continuously transform into matter and energy. In other words, even the most "empty" area of the universe is actually full of energy. As a result, Einstein's theory of relativity and quantum mechanics have radically changed the classical views on the nature of matter. It is now known that matter is not a fixed, solid and static structure but a form of energy, that it cannot exist without an observer and that everything in the subatomic world consists of energy. These revolutionary changes offer unique opportunities to bring together modern physics with both mystical and metaphysical understandings. In mystical thought, the emphasis that everything comes from a single divine source, that all beings are interconnected and that absolute being is unlimited and holistic is surprisingly parallel to the scientific discoveries of quantum physics. How is it that man can observe the ONE, which is actually an unlimited WHOLE, as separate parts? This is a situation that can be understood as we delve deeper into quantum theory. Quantum physics explains that at the most fundamental level of the universe, everything is a homogeneous, continuous whole, and that this wholeness is experienced by being divided into "pieces" at the moment of observation.

At the subatomic level, everything actually consists of probability waves, and that these particles do not exist physically unless they are observed. Quantum physics states that particles are uncertain unless they are observed and that they exist in probability clouds called "wave functions". In quantum theory, the observer plays an important role in the formation of reality. The Copenhagen Interpretation suggests that in the quantum world, particles become "real" only when they are observed, in other words, they gain physical existence. Before observation, a particle does not have any definite state; it only exists as wave functions of different possibilities. Observation collapses this wave function and reveals a specific state or position. Let's explain this situation with an example: Although an electron is thought of as a particle orbiting an atom, at the quantum level, this electron is defined as a wave function. This wave function contains the electron's possible positions and momentum, but unless observed, the electron's exact location is uncertain. However, when an observer attempts to measure the electron's position, the electron "collapses" into a specific location at that moment. This shows that particles are not truly independent entities, but only come into being when they interact with the observer.

At the subatomic level, particles cannot be observed in the classical sense. Particles such as electrons, protons, and quarks exist only in the form of probability waves. These probability waves contain a set of

possibilities for where or in what state the particles may be. Schrödinger's Wave Equation describes these possibilities mathematically. In other words, particles can be "anywhere" until they are observed, but when the observer makes a measurement, these waves collapse to a specific point and become a physical reality. As an example, the double-slit experiment is an experiment often used to understand the nature of quantum particles. In this experiment, particles such as an electron or a photon are passed through two slits behind a screen. But the interesting part of the experiment is this: As long as the particles are not observed, they behave as if they were waves and create an interference pattern on the screen. This means that the particle passes through both slits at the same time. However, when an observer tries to measure which slit the particle passed through, the interference pattern disappears and the particle behaves as if it has only passed through one slit. This shows how the very presence of the observer changes the behavior of the particles. Quantum theory argues that the fundamental nature of the universe is a whole and that everything exists within a single energy field. However, people observe this wholeness in separate pieces. This is because human consciousness has a specific and fragmented perception of reality rather than the boundless wholeness at the quantum level. The human brain tends to think that particles exist individually and that matter is fixed and independent. This is a legacy of classical physics. However, quantum physics shows that this perception is misleading and that in reality, particles, that is, matter, are forms of energy that emerge at a particular moment.

Man has difficulty understanding that everything is a whole at the quantum level, because in everyday life he experiences matter as solid, divided and separate objects. However, according to quantum physics, at the most fundamental level of the universe, these objects are merely waves of probability. These waves consist of constantly changing probabilities in the energy field, and the solid reality that humans perceive is a result of observation. The observer's perception of reality in parts is related to the limitations of his or her own perception and consciousness. As a result, we live in a universe where everything at the quantum level consists of waves of probability, and nothing is certain until it is observed. Particles do not have a physical existence before they are observed. These particles exist only as a collection of probabilities, and this probability collapses with observation. Instead of perceiving this limitless wholeness, humans appear to live in a fragmented reality. However, the reality revealed by quantum theory is that the universe is a whole and this wholeness is experienced only by human consciousness in a fragmented form. Quantum physics has completely questioned the concepts of "objectivity" and "distinct reality" of the classical physics world and has revealed a deeper understanding. The fact that particles come into existence as long as they are perceived by the observer is at the center of this new understanding. The properties of particles gain meaning through the intervention of the observer, and this interaction occurs in an integrated manner with the existence of the observer. In other words, it is not possible to talk about the "essential" or "real" existence of particles without the action and observation of the observer. In quantum physics, the concept of the "observer effect" has redefined the role of consciousness and the observer in the universe.

The Schrödinger's Cat experiment clearly exemplifies this situation. It becomes clear whether the cat is alive or dead only when an observer opens the box and looks at the cat. This shows that the consciousness of the observer reduces the possibilities to a single reality and creates a certain reality at that moment. When no observation is made, everything at the quantum level exists as possibilities. The

transformation of possibilities into reality is only possible through the action of the observer. In this perspective, the observer is not just a passive entity in the universe; he is an active participant who shapes the reality of the universe and gives it meaning. John Archibald Wheeler has suggested that the universe is a kind of "participatory universe". According to him, it is not possible to talk about the universe without the observer; The consciousness of the observer is one of the fundamental elements that shape the reality of the universe. According to Wheeler's "participatory universe" view, human consciousness is closely tied to the nature of the universe. In other words, everything that happens in the universe emerges as a product of the observer's consciousness. Particles gain meaning and characteristics when they are perceived by the observer. However, the relationship between the observer and the observed is a mutual interaction process; the observer not only observes the universe, but also creates and shapes the universe itself.

John Wheeler is an important physicist who tries to understand the deep nature of quantum physics and has introduced the concept of the "participatory universe". Wheeler argues that the universe cannot exist unless it is observed and that the observer plays an important role in the reality of the universe. According to him, it is meaningless to talk about the universe without the existence and consciousness of the observer. This means that the universe is "real" only when it is observed. Wheeler also tried to bridge the gap between quantum physics and large-scale cosmology. His famous "many worlds" theory suggests that the universe is full of possibilities and that a new universe is born with each observation. This idea means that each observation is a process of creating one reality by selecting it from among many other possibilities. According to Wheeler, the universe is constantly being created and shaped by the consciousness of the observer.

Jack Sarfatti is a theoretical physicist who studies the relationship between quantum physics and consciousness. Sarfatti suggests that consciousness can affect physical reality in the universe, and that consciousness itself may be a fundamental building block of the universe. In Sarfatti's view, matter and consciousness are not independent of each other. Consciousness is a fundamental element that affects the structure and dynamics of matter. This view moves away from the idea that the material world is fixed and external in classical physics, and opens the door to a universe in which consciousness plays an active role in the formation of matter. Sarfatti suggests that there is a direct connection between quantum entanglement and consciousness. Consciousness can affect the waves of probability in the universe, and the consciousness of the observer determines which probability of reality collapses. This idea reframes the relationship between consciousness and matter at the quantum level, and considers consciousness as one of the fundamental components of the universe. One of the fundamental principles discovered by quantum physics is the unique connection between the observer and the observed. The existence of the observer affects how events in the universe occur. In this case, human consciousness is a fundamental part of the universe. The universe is not a mechanism that operates independently of the observer, but a process that takes shape with the active participation of the observer. This is based on an understanding that reveals the universal values of consciousness. As a person becomes free from the conditionings of the physical world, consciousness begins to have a meaning at a universal level.

Since the quantum world is full of uncertainties and probabilities, a definite determination and a

definite intention can be decisive in turning probabilities into reality. With the elimination of doubt and a clear determination, a person can reveal his potential power in the universe. This reveals the power that quantum physics attributes to consciousness and the creative role of human consciousness in the universe. As a result, the perception of the physical world, which began with Laplace's deterministic view of the universe, has transformed into a dynamic relationship between consciousness, the observer and the universe with quantum physics. The works of theorists such as Wheeler and Sarfatti have emphasized the importance of consciousness in the formation of matter and events in the universe, and have integrated the depth of quantum physics with human consciousness. These views clearly reveal that the universe is not just a material reality, but that human consciousness is an inseparable part of this reality.

9-HOLOGRAPHIC CONSCIOUSNESS MODEL

The Holographic Consciousness Model is a theoretical approach used to understand the functioning of the universe and consciousness, and this model suggests that both physical reality and consciousness are interrelated and have a holographic structure. The holographic consciousness model is based on the idea that each part of the universe carries the information of the entire universe, and this understanding is harmonized with some principles of quantum physics. The model is a powerful metaphor and scientific approach used to explain the nature of consciousness, perception, and reality in the universe.

The origin of the holographic consciousness model is based on the concept of the hologram. A hologram is an imaging technique made by recording light waves to form a three-dimensional image. The most striking feature of the hologram is that each part contains the information of the whole. In other words, if you divide a hologram into pieces, each piece carries the image of the original whole. The holographic model of consciousness also uses this understanding to explain the nature of consciousness and the universe. David Bohm and Karl Pribram are two names that played an important role in the development of this model. As a quantum physicist, Bohm explained the nature of the universe and associated the holographic principle with quantum physics. Bohm's theory of "continuous flow" or "implicate order" suggests that the universe has a deep and unified structure and that the separations on the surface are merely an illusion. Pribram, on the other hand, claimed in his brain research that the brain processes information holographically.

According to this model, consciousness has a holographic structure. Consciousness is not only a product of the physical brain, but is connected to a universal structure. Each conscious being, just like a piece of a hologram, contains the holistic information of the universe. Human consciousness is connected to every point of the universe, and the reality we can perceive is a result of these connections. This model supports the idea that consciousness is not limited to the brain, but that every part of the universe is a reflection of this consciousness. According to Bohm's "implicate order" theory, everything in the universe is connected to each other and there is no separation in the deep structure of the universe. This means that consciousness is in constant interaction with a universal sea of consciousness. Karl

Pribram's research is related to how the brain processes information. According to Pribram, the brain works like a holographic information processing system. Information is not stored at a specific point; on the contrary, each region of the brain contains a reflection of all information. This holographic structure of the brain explains the harmony of consciousness with the universal structure. In other words, our brain is connected to the holographic structure of the universe and our consciousness perceives reality through these connections.

The holographic model of consciousness is also compatible with quantum physics. In quantum physics, it is understood that the universe is a whole at a deep level and that everything exists in the form of possibilities. Quantum entanglement shows that two particles can interact instantly even if they are far apart. This supports the idea that everything in the universe is interconnected. The idea of a holographic universe combines with these basic principles of quantum physics. Just like a hologram, each point of the universe carries the information of the entire universe, and this integrity at the quantum level is also reflected in our conscious perception. This holographic structure of the universe gains meaning in the world of uncertainty and probability of quantum physics. For example, Bell's Theorem is an important study on quantum entanglement. According to Bell's Theorem, the connections between particles in the universe allow for the exchange of information faster than the speed of light. This shows that the universe is a whole at a deep level and that separation is only an illusion on the surface.

The holographic model of consciousness provides a metaphor for understanding these holistic connections and offers an effective approach to explaining these uncertainties in quantum physics. The holographic model of consciousness also explains the perception process of consciousness. The reality we perceive is a process processed by the holographic structure of our brain. For example, our brain perceives the world around us through different senses and these perceptions merge into consciousness. This merging process is compatible with the holographic structure of the brain. In other words, the world around us is actually a reality that we perceive thanks to this holographic processing ability of our brain. According to this model, we experience only a certain part of the universe with our limited perception. Just as if we were seeing only a part of a hologram, we do not perceive the whole reality, but only a small part. However, even this small part contains the information of the entire universe. As an example, the eye's vision process can be explained with the holographic model.

When light reaches our eye, it is processed by the retina and these signals are transmitted to the brain. As the brain processes this information, visual perception is not just a product of the light the eye perceives; the brain processes this information together with previous experiences to create an image. This process is compatible with the brain's ability to process information holographically. Visual perception occurs thanks to this holographic processing ability of the brain, and consciousness plays an active role in this process. The holographic consciousness model is not only a scientific theory, but also has spiritual and metaphysical depth. Teachings such as Sufism and mysticism indicate that the universe is a single Whole and that every being is a part of this whole. The Unity of Being doctrine argues that the universe and beings are different manifestations of a single reality. The holographic model parallels this teaching. Everything in the universe is interconnected and every part is a reflection of the whole. In Sufi thought, human consciousness is connected to a universal consciousness. This universal consciousness has a structure that encompasses everything, and every individual exists as a wave of this sea of

consciousness. This understanding is quite close to the holographic consciousness model. Human consciousness is a part of the universal consciousness, and this consciousness is connected to everything in the universe.

In addition to the scientific and metaphysical dimensions of the holographic consciousness model, this model also sheds light on our daily lives. According to this model, consciousness and perception are not just individual phenomena, but a process integrated with the universe. This offers a way to understand the role of human consciousness in the universe and to live our lives with deeper awareness. For example, thanks to this model, we can understand how each individual's thoughts and perceptions can affect the rest of the universe. As quantum physics and the holographic consciousness model teach, everything is interconnected. Therefore, a person's consciousness can have a direct effect on events in the universe. This shows that individual awareness and consciousness have a universal dimension. The holographic consciousness model offers a deep approach that explains the nature of the universe and consciousness. The idea that consciousness and the universe have a holographic structure provides a revolutionary perspective in our understanding of physical and metaphysical realities.

According to this model, everything is interconnected and each part carries the information of the entire universe. The holographic model of consciousness suggests that consciousness operates like a universal sea and that our perceptions are a drop from this sea. Thus, our perception of the physical world is not just a function of our brain, but a conscious experience that is deeply integrated with the universe. This model also explains how human consciousness plays an important role in the functioning of the universe. Quantum physics has shown that the observer changes the reality he observes, in other words, what is observed is shaped according to the observer. In this case, there is a two-way interaction between the universe and human consciousness: Consciousness perceives the universe, and this perception affects the functioning of the universe. According to the holographic model of consciousness, the consciousness of each person is in constant interaction with the entire universe as part of a universal consciousness. This connection also overlaps with mystical teachings and some principles of quantum physics. In particular, Sufi thoughts emphasize that the universe is a whole and that each individual is one with this whole. Human consciousness is a reflection of a universal consciousness within this holistic structure. The holographic model, by placing these ideas on a scientific basis, argues that consciousness and the universe are two elements that cannot be separated from each other.

The holographic consciousness model also suggests that the potential of human consciousness is limitless. Because the consciousness of each individual contains the holistic knowledge of the universe. In this case, it is possible for individuals to reach deeper levels of universal consciousness by increasing their level of conscious awareness. This concept, which is also frequently encountered in Sufi thoughts, is expressed as "discovering the hidden potential within a person." The holographic consciousness model, on the other hand, argues that this potential will be revealed when the individual becomes aware of his or her connection to universal consciousness. For example, studies in the quantum field have shown that an individual can affect reality by changing his or her level of consciousness and perception. Physicists such as Dr. John Wheeler have argued that the existence of the universe may depend on the observer. The holographic model also supports this view; each consciousness is an active participant that shapes events in the universe.

Let's take a look at a few examples to connect this theory to our daily lives more concretely: According to the holographic consciousness model, each part of our brain carries all our experiences and knowledge. In the creative problem-solving process, consciousness uses this holistic information to combine previously seemingly independent parts and produce a new solution. This process is in harmony with the holographic structure of consciousness; the solution is the reorganization of the information in our minds and the creation of a new order. The holographic model also explains how complex systems work. For example, in chaotic systems in nature, each small component carries a reflection of the entire system. In complex systems such as climate change, ecosystems or social dynamics, even a small interaction can have major consequences. This also shows how the consciousness of an individual can affect universal consciousness. On the other hand; meditation practices are methods used to expand the level of consciousness and establish a deeper connection with universal consciousness. During meditation, the mind becomes calmer and more open, and the individual can begin to experience the holistic structure of the universe. According to the holographic model of consciousness, this experience is a way to access all the information of the universe. Our mind can reach deeper levels of wisdom by diving into the sea of universal consciousness.

The holographic model of consciousness is directly related to some of the fundamental principles of quantum physics. In particular, concepts such as quantum entanglement and the uncertainty principle support this model. Quantum entanglement shows that two particles can interact instantly even when they are far apart. This supports the idea that everything in the universe is interconnected. The holographic model of consciousness offers a way to understand this holistic connection. The uncertainty principle also shows how the observer can change the observed reality. At the quantum level, particles exist as a wave of probability, and only when observed does this wave collapse and become a reality. In this case, consciousness becomes a force that affects the building blocks of the universe at the quantum level. The holographic model of consciousness can be used to understand the universal dimension of this consciousness-observation relationship.

10-A METAPHORICAL ANALYSIS OF THE SURAH IHLAS ON A QUANTUM PLANE

The Surah Ikhlas is known as the surah that most concisely describes the monotheistic belief of Islam and expresses the absolute unity, eternity and uniqueness of Allah. While the four verses of the surah explain deep metaphysical concepts in a very simple language, they also point to concepts that have striking similarities in terms of the fundamental structure of the universe, quantum mechanics and modern science. In this evaluation, we will examine the monotheistic principles of the Surah Ikhlas in relation to scientific and quantum theories.

"Say: He is Allah, One (Ahad)"

In the first verse of the surah, the expression "Ahad" indicates that Allah is one and unique. However, this "oneness" is not an ordinary number or a unitary unity, but a much deeper and more abstract

wholeness. The word "Ahad" emphasizes that Allah cannot be divided into any part or component. This parallels the concept of holistic structure in quantum physics. Quantum mechanics reveals that even the smallest particles of the universe are in a holistic connection with each other and form an indivisible system. Everything exists as an energy field beneath structures that appear to be particles.

The concept of "Ahad" in this verse of Surah Ikhlas can be explained by quantum entanglement, when we consider that everything in the universe exists as a whole and that the parts of the universe are interrelated. Quantum entanglement shows that no matter how far apart two or more particles are, they are somehow connected to each other and are part of a single system. This can be a metaphor explaining the unity of Allah and the holistic nature of the universe.

"Allah is Samad (Everything is in need of Him, He is not in need of anything)"

The second verse of the Surah, "Samad", indicates that Allah is complete, independent and everything is dependent on Him. It means that Allah is the Being that encompasses everything and from whom everything originates. This can be thought of as an idea related to quantum field theory. Quantum field theory argues that there is a fundamental energy field that exists everywhere in the universe. All particles emerge as fluctuations in this quantum field and are a manifestation of this field. Just as the existence of God encompasses everything, the quantum field is the fundamental building block of the universe and everything is a part of this field.

From a scientific perspective, every being in the universe is somehow dependent on this energy field and is in a constant exchange of energy. The concept of Samed also explains that all beings in the universe need God and that His existence is not dependent on any external factor. Just as everything in the quantum world takes shape in a fundamental energy field, the dependence of beings on God also finds meaning in these quantum relationships.

"He did not give birth and was not given birth"

This verse expresses that Allah is in no way derived from anything and that nothing is derived from Him. In other words, Allah is a being that has no beginning or end and should not be included in any cause-effect chain. In quantum mechanics, the fact that a particle or energy cannot be reduced to its source can be explained by the world of uncertainty and probabilities.

In the quantum world, the origin of beings is explained not by classical physical causality principles, but by probabilities and potentials. The quantum vacuum shows that energy fluctuations can exist and transform into matter when there is "nothing" in sight. The fact that Allah "has not given birth and has not been given birth" can be compared to these probabilistic existence and causality principles in the quantum field.

"Nothing is equal to Him"

The last verse indicates that Allah is unique and nothing resembles Him. This verse expresses Allah's limitlessness, that He is a being without equal or peer. Scientifically, the fundamental laws and quantum principles in the universe show that nothing is exactly equal to another. In quantum mechanics, each

particle is in a unique state and no two particles have exactly the same properties.

This verse also provides us with a guide to understanding quantum entanglement and the unique states of particles. Each entity is a manifestation of a unique possibility in the universe. This bears a deep resemblance to the verse that describes the absolute uniqueness of Allah. This statement, which states that Allah has no equivalent, reminds us that each entity at the quantum level has a feature that is independent of the whole of the universe and is connected to the whole at the same time.

While Surah Ikhlas deeply describes the unity of Allah and the unity of the universal system, it offers a parallel narrative with quantum physics. Quantum physics shows that at the most fundamental level of the universe, particles are actually parts of a whole and that these parts gain meaning through the influence of the observer. Surah Ikhlas explains that Allah is the absolute being, that everything exists from Him and that everything will return to Him, while also emphasizing the functioning of this holistic system.

This integrity and independence in the universe is in harmony with the uncertainty and integrity observed in quantum physics. In the quantum world, everything exists as waves of probability and gains meaning when observed. Allah being "Ahad" coincides with the concept of absolute existence and integrity behind this sea of possibilities. Similarly, the concept of "Samad" strengthens the idea that everything needs Allah and that Allah is absolutely independent. Surah Ikhlas is a profound text that explains the unity and integrity of the universal system from both a metaphysical and scientific perspective. The absolute unity and limitlessness of Allah can be explained by the most fundamental principles of the quantum world. While quantum physics shows that the particles in the universe are actually parts of a whole and exist within this integrity, Surah Ikhlas tells us about this single and holistic structure of the universe through the unity of Allah. This evaluation combines the deep metaphysical meanings of Surah Ikhlas with quantum physics and modern scientific findings, providing a different and comprehensive understanding of how the universe works. The idea that Allah is the absolute being, that everything in the universe depends on Him, and that the universe gains meaning within this totality offers a perspective that is compatible with both quantum mechanics and the belief in monotheism.

11-EXISTENCE AND NON-EXISTENCE

Quantum physics and metaphysical thought are fields that progress parallel to each other and are often intertwined. In particular, inquiries into existence and reality give rise to a deep perspective that combines concepts such as quantum physics and the Islamic understanding of monotheism. In this context, the ancient metaphysical teaching of Islam, "Tawhid", or the unity of Allah, bears great similarity to the concepts of uncertainty, observer effect and integrity inherent in quantum physics. Quantum physics suggests that the smallest building blocks in the world do not have a fixed and definite existence, but instead exist in the form of waves of probability. A particle exists only when it is observed in a certain place and time. Before being observed, the particle exists in a sea of possibilities; it can be

everywhere and nowhere at the same time. This situation is related to the uncertainty principle, one of the fundamental principles of quantum mechanics. This uncertainty and probability turn the concept of "reality" that we are accustomed to in the classical sense upside down.

The world we perceive as "solid" is actually made up of energy waves, largely made up of empty space. Everything in the subatomic world is a wave of probability, and these waves take on a certain shape through the observer effect. At this point, quantum physics reveals that the world is actually an illusion, and that it only takes shape when observed. This provides a scientific basis for the metaphysical expression "this world is a dream." Reality is actually created and shaped by our perceptions. Quantum physics tells us that the world we see is not a fixed entity, but takes shape only when we observe it. The hadith, "The particle is the mirror of the whole," states that every small part reflects the whole, and that even a single particle contains the secrets of the entire universe. This is a manifestation of both Islam's understanding of monotheism and quantum mechanics.

At the quantum level, everything in the universe is entangled and connected. Any particle is part of a system that is related to every other particle in the universe. Quantum entanglement shows that even two particles that are very far apart can interact with each other instantly. This provides strong evidence that everything in the universe is part of a single whole. This reflection in the particle helps us deeply understand the limitless unity of Allah and the understanding of monotheism. This microcosm-macrocosm connection also holds an important place in Islamic metaphysics. The manifestation of Allah is seen in every particle, and each tiny particle actually reflects the creative power of Allah. Quantum physics also supports this concept: It shows that even the smallest particles of the universe reflect a larger whole, and therefore everything exists in unity. Every particle of the universe we see is actually a mirror reflecting the unity and limitless power of Allah. In modern physics and quantum theory, reality is determined by the observer. In other words, the world we see "exists" not because it physically exists, but because we accept it as existing. This is directly related to the electrical signals in our brains and our perceptions. When the boundaries of physics are exceeded, the quantum world actually presents a sea of possibilities, and this sea only becomes a certain reality when observed by consciousness. Philosophically, this situation implies that everything has an "intellectual" existence.

Our brain constructs a reality from this sea of possibilities. This thought reminds us of Descartes' words, "I think, therefore I am" (Cogito ergo sum); existence is actually thought. The world that we believe to exist physically is a wave of possibilities at the quantum level, and it becomes a reality when we give it meaning. Everything we observe is an "acceptance of existence." In quantum physics, the role of the observer is one of the fundamental elements that determine what existence is. There is a connection between the observer and the observed. In other words, what the universe is is related to how the observer looks at it. This situation is related to the understanding of monotheism in Islamic metaphysics. Existence is a single whole, and everything is a manifestation of that unity. The distinction between the seer and the seen is actually an illusion; In reality, everything is united in the unity of Allah. In Islam, one of the most important characteristics of the creation of man is that he is the "vicegerent of Allah". By his creation, man is a being who understands the order in the universe and finds meaning in it. In the quantum world, human consciousness is also considered an element that shapes, observes and gives meaning to the universe. This offers a perspective that is compatible with the understanding of

monotheism: Looking at the universe with a single consciousness and adding meaning to it allows us to deeply understand the unity of the universe and Allah.

As a result, in Islamic metaphysics and especially in the belief in monotheism, all beings in the universe are actually manifestations of a single being, namely Allah. In the true sense, only Allah exists in existence and all beings have come into existence from the existence of Allah. Quantum physics also supports this idea by suggesting that everything is actually a wave of energy and takes shape with a certain observation. Everything that exists in the quantum world is part of a single structure that is interconnected. Events and beings cannot be considered separately from a whole. "If you see two, it is because of the squint in your eyes." This profound statement expresses the Islamic understanding of existence in the most concise way. In reality, there is only one that exists. If we see two or more, this is an illusion; because only Allah is at the basis of the universe. In quantum physics, the particles in the universe take a certain shape under the influence of the observer. If there is an error in the observer's perspective, the world that is seen will also be an error. In reality, everything is one; the parts are merely the result of our perception. This sentence perfectly summarizes quantum physics and monotheism: The essence of the universe is one, reflecting the oneness of Allah. The multiplicity we see with our eyes is an illusion. "There is only ONE."

The role of the observer is of critical importance in quantum theory. The position and motion of particles cannot be determined until they are observed; in other words, reality is in an uncertain state without the observer. This situation places the observer at the center of events in the universe. In other words, "reality" at the quantum level depends on the existence of the observer. This concept offers a perspective close to the metaphysical thoughts of Islam, especially the monotheistic belief.

As in the Surah Ikhlas, when the unity and infinity of Allah are explained, it is emphasized that every part of the universe reflects the oneness of Allah. Everything has come into being from the existence of Allah, and the existence of Allah is manifested in every particle of the universe. In the quantum world, particles exist as "singularities" and form a "wholeness" when observed. This wholeness actually shows that everything in the universe is interconnected and that there is no separation. Therefore, the observer-reality relationship in quantum physics is very important in terms of understanding the role of human consciousness in the universe. If a person does not add meaning to the universe as a conscious observer, the universe cannot be described as "existing". In this sense, Islamic metaphysics also states that the creation of man is to understand and witness the order in the universe. The philosophy of Unity of Being in Islamic thought argues that all existence comes from a single source, namely Allah, and ultimately unites in a single being. Unity of Being shares a similar understanding with the principles of quantum physics such as uncertainty, entanglement and the observer effect. In the quantum world, everything is interconnected; instead of separate, independent entities, the entire universe consists of interrelated probabilities and energy fields. This situation directly coincides with the belief in Islam that "everything is a manifestation of Allah".

There is no more than one thing in existence; everything is a reflection of a single reality, namely Allah. All observed particles and beings are actually small manifestations of that single whole. Everything that exists in the idea of Unity of Being is a reflection of the existence of Allah. Quantum physics similarly

states that everything is interconnected within an energy field and that independent beings only come into being through the influence of the observer. Another quantum mechanics theory, the Holographic Universe Theory, suggests that each part of the universe reflects the entire universe. The concept of the holographic universe has a structure that also overlaps with the Islamic understanding of monotheism. The hadith, "The particle is the mirror of the whole," reflects the essence of this view: Every small particle is a reflection of the whole. In quantum physics, every particle is also connected to the entire universe. In a state of entanglement, particles can instantly interact with each other even at very distant points of the universe. This is combined with the belief in Islamic thought that God is present in everything and that everything is a reflection of Him. The fact that God's unity is seen in every particle of the universe is also compatible with the holographic model: Each particle contains the entire universe and reflects the whole. This unity is expressed in the Surah Ikhlas with God being "Ahad" and "Samad." God's indivisibility and the fact that everything is from Him are parallel to the equation of unity and energy in quantum physics.

One of the most striking findings of quantum theory is that consciousness is the most important element that shapes reality. The existence of an observed particle actually emerges when it is given meaning by the observer. Without the observer, it is unclear what the entities in the universe are. This shows that our brain is actually a power that shapes the universe. The universe finds meaning in our consciousness, and we, as conscious beings, play an active role in the creation of the universe. This idea also has a great parallelism with the understanding of creation in Islam. According to Islam, man was created as the caliph of Allah and was created to understand and witness the order in the universe. Consciousness is one of the greatest blessings that Allah has bestowed on man, and thanks to this consciousness, man shapes and gives meaning to the universe. In quantum physics, consciousness is also considered the most important factor that shapes the building blocks of the universe. The expression "The hidden power in us can be revealed" implies what kind of a creative role our consciousness plays in the universe and how this power can be used. As a result, there is a deep relationship between quantum physics and the Islamic understanding of monotheism.

While the existence and consciousness of the observer determine what existence is in the universe, the belief in monotheism in Islam argues that existence finds meaning only in Allah. In the quantum world, everything is a wave of probability and gains meaning with the existence of the observer; in Islamic metaphysics, everything arises from the unity of Allah and is a reflection of Him. The belief that the physical world is an illusion, a dream, and that the real existence is hidden in the manifestations of Allah, combines with quantum physics to deepen our duty to look at the universe with a single consciousness and add meaning to it. Every particle of the universe reflects the unity of Allah; there is only one being that exists: Allah. The expression "If you see two, it is because of the squint in your eyes" reveals this deep truth. The essence of the universe is one and reflects the unity of Allah. The multiplicity in our observations is an illusion; reality is unity and wholeness itself. The essence of the universe is an illusion, existence has a single structure.

12- QUANTUM UNITY CONSCIOUSNESS AND THE CALIPH

Another noteworthy point in the discovery journey of quantum physics and Islamic metaphysics is the creative potential of man. In the quantum world, the observer plays an active role in the formation of reality. This situation is parallel to the "caliphate" position of man in Islam. Allah gave man consciousness and made him the witness and meaning giver of the universe. The process of creation is not only a physical existence, but also a mental, conscious and spiritual journey. While quantum mechanics reveals that man's thoughts and observations affect the beings in the universe, Islam emphasizes that man's intentions and deeds shape the energy in the universe. In this respect, spiritual elements such as prayer, intention and belief can also be seen as powerful dynamics that shape the structure of the universe. Man's consciousness represents a universal creative power through which all existence gains meaning. This understanding gives us the following profound message: "The universe is shaped by man's gaze." How we perceive reality, how we give it meaning, and the energy our consciousness contributes to the universe make us both an observer on a micro level and an active participant in the universe on a macro level. Therefore, when we change our perspective on the universe, we embark on a journey of rediscovering both our own existence and universal reality. With this consciousness, life becomes not only an individual experience but also a deeper meaning as part of a divine plan.

Quantum theory questions the existence and non-existence of matter, while at the same time going beyond these concepts and bringing up "potential" states. In Sufism, this situation is related to an understanding that walks on the thin line between "non-existence" and "existence". In this context, accepting that everything is actually a "potential" field and that this field is shaped by the observer is of critical importance for both quantum physics and Sufi thought. In addition, unity consciousness is a very striking concept. In both quantum physics and Islamic Sufism, the understanding that everything is part of a whole and that they are not separate entities but manifestations of a single entity is dominant. The expression "everything is a whole" reveals an essential truth that lies deep in both of these fields.

Finally, while addressing these issues, it is important to also focus on the universality of consciousness and the power of prayer. Human consciousness is not limited to individual experiences, but has the potential to create a universal interaction. In this context, our prayers and intentions stand out as elements that shape reality on both a personal and cosmic level. With these thoughts, we can embark on a journey into the depths of universal consciousness, integrity and creativity by building bridges between both quantum mechanics and Sufi thought. Such an understanding can also provide a deep transformation in the individual's own inner journey.

In summary;

-Quantum physics points to the existence of potential areas beyond existence and non-existence. Sufi thought interprets this situation as everything is actually a "ONE" and that all beings can be seen as a manifestation of this ONE.

-The observer stands out as a being that shapes reality. In quantum mechanics, particles only come into being when perceived by the observer. This strengthens the relationship of man with the universe through consciousness and intention.

-Both quantum physics and Sufi understanding support the idea that everything is part of a whole and is in a close connection with each other. This understanding emphasizes the importance of the place that the individual has in the universe.

-Man has the power to shape the energy in the universe with his thoughts and intentions. This is a responsibility and power given to man both in the quantum field and in Sufi thought.

-In Islamic Sufism, prayer is a universal means of interaction. In the quantum world, observation and intention can be considered as elements that affect reality. Prayer and intention contain the power to reflect the changes in the individual's level of consciousness to the universe.

In conclusion, the bridges between quantum physics and Islamic Sufism are important for a deeper understanding and transformation of both the inner and outer worlds of the individual. These deep thoughts emphasize the potential of man as an observer and participant in the universe, while also providing clues on how to use this potential.

13-QUANTUM PERCEPTION

Quantum perception provides important clues about the interactions between the brain and the universe. In this context, holographic models aimed at understanding the functioning of our brain and the nature of the universe can help us explore more deeply how consciousness works and how we perceive the universe. The holographic universe model and the holographic brain theory are very effective concepts in explaining the mutual relationship between these two concepts.

The holographic universe model suggests that each part of the universe contains information that reflects the whole, and that each part stores the characteristics of the entire universe. According to this model, everything in the universe is interconnected and each unit of information reflects the entire universe. This idea is based on the idea that every event, matter and energy in the universe are included in a universal whole and are in relationship with each other. The universe is, in a sense, like a giant hologram; each part contains information about the whole. From the perspective of quantum physics, it can be said that every particle in the universe is connected to a universal information field and moves within this field. On the other hand, the holographic brain theory suggests that the brain also works like a hologram. According to the holographic brain theory, any region of the brain has the capacity to access all information. The brain perceives the world around us as a whole, not in parts, and makes sense of this wholeness by combining it with different experiences. The billions of neurons in the brain and the connections (synapses) between these neurons use this holographic structure to process information. Information spreads to different regions of the brain in a holographic manner through neurons and

synapses.

Each synapse connection can carry information about the entire brain, as if it were a part of the universe. At this point, if we look at the interaction between quantum perception and the brain and the universe, we can think of the functioning of synapses and neurons as working at a quantum level. The neural activity of the brain can be connected to universal information through quantum processes. Penrose-Hameroff's Orchestrated Objective Reduction (Orch-OR) theory is important in this sense. This theory suggests that conscious perception emerges through quantum processes and that the microtubules in our brain have the capacity to process information at a quantum level. These quantum processes serve as a bridge between the brain's ability to perceive and the universal information field. When the holographic universe model and the holographic brain theory are combined, we can suggest that we have the potential to access the unlimited information available at every point in the universe. Depending on the holographic structure of the universe, our brain can access certain sections of universal information even with limited perception tools. Thinking that the electrical and chemical processes between synapses can serve as a connection to all the information of the universe at the quantum level can be used to explain the deep connections between consciousness and the universe. With leaps of consciousness at every moment, we can access new sections of this universal information, and as our perception changes, we begin to perceive the universe in different ways. In this interaction, quantum perception shows the fine line between the reality perceived by our brain and the true nature of the universe. The holographic structure of our brain interacts with the holographic structure of the universe, and we make sense of the world through the interaction of these two systems. As a result, consciousness can reach the unlimited structure of universal information by establishing a bridge between the holographic structures of the universe and the brain. As the capacity of our perception tools changes, our perception of this universal information expands and deepens.

14-HOLOGRAM BRAIN FUNCTIONING SYSTEM

When considered together with neuroscience and quantum theories, how signals coming to the brain are analyzed and interpreted is based on a very complex and interesting process. The brain receives information from the outside world in the form of electrical and chemical signals. Everything we see with our eyes, hear with our ears or feel with our skin actually reaches the brain by transferring physical waves collected by these sensory organs to the nervous system as electrical signals.

Stimuli such as light, sound and touch coming from the outside world are converted into electrical signals by receptors. For example, our eyes receive light and convert it into electrical signals. These signals are transmitted to the brain via nerve fibers. Similarly, sound waves start as a mechanical vibration in the ear and are then converted into electrical signals by nerve cells. These electrical signals reaching the brain are transmitted between neurons via synapses. The brain analyzes and interprets the signals through these connections between neurons. According to the holographic brain theory, each neuron, each synapse connection in the brain is like a small piece of a large hologram. This means that

all information is somehow present in every region of the brain and that the information is processed in a holistic manner, not in parts. The brain tends to evaluate incoming signals as a whole, and this holographic process transforms the signals into a meaningful experience. When the brain perceives incoming signals, it compares this information with previous experiences within itself. Thanks to this comparison, the brain puts the incoming signals into a certain category and gives them meaning. For example, if our brain has previously recognized that object when we look at an object, it immediately associates the incoming signals with that object.

At this point, the question of the source of consciousness and meaning arises: Who gives meaning to the signals coming to the brain?

According to the traditional neuroscience perspective, the meaning of signals is made by the neurons and synapses of the brain. However, this explanation is only a biological process and does not fully explain "meaning". The brain processes and analyzes electrical signals, but how does this analysis turn into "meaning"? According to the holographic brain theory, the brain is not only a machine that analyzes signals, but also a structure that can access universal consciousness. According to deeper theories such as the holographic universe and quantum brain theory, what gives meaning to signals is not only the biological structure of the brain, but also consciousness. The brain is like an antenna connected to the holographic structure of the universe and reaches universal information through this antenna. According to Penrose-Hameroff's Orch-OR theory, conscious experiences are related to quantum processes. In other words, the brain receives information from the universe at a quantum level and gives meaning to this information. What gives meaning to consciousness here is not only the biological neural network, but also the universal information field shaped by quantum processes.

Who Gives Meaning? According to quantum and metaphysical approaches, it is "consciousness" that gives meaning, and this consciousness is connected to a universal consciousness rather than a limited human consciousness. The universal knowledge of the universe exists in its holographic structure, and our brains work as an interface to this consciousness. Although the biological structure of the brain processes signals, consciousness is what allows this information to gain meaning. The verse in Islam, "Allah is in a new glory at every moment" can also be meaningful at this point: It shows that the universe is in a constantly renewing creation, and that consciousness perceives and gives meaning to this creation. As a result, the waves and signals coming to the brain are processed biologically by neural networks; but what gives meaning to these signals is not only the biological structure of the brain, but also its connection to the consciousness and universal information field at the quantum level. What gives meaning is the consciousness that is connected to this universal consciousness, beyond the physical processes in the brain.

15- SOURCE OF CONSCIOUSNESS

The question of the source of consciousness is a deep and comprehensive subject from both scientific

and mystical perspectives. While science treats consciousness as a biological and neurological process, Sufism sees consciousness as a divine essence and source of existence. By examining these two approaches, we can try to understand different perspectives on the nature of consciousness.

Biological and Neurological Theories: From a scientific perspective, consciousness is mostly associated with the physical structure and neurological functions of the brain. Electrical and chemical communication between neurons form the basis of brain activity and play an important role in the emergence of consciousness. Synapses between nerve cells integrate information from different parts of the brain, creating thoughts, sensations and awareness. Scientists believe that certain parts of the brain, such as the prefrontal cortex, are critical to the formation of consciousness.

According to the Global Neuronal Workspace Theory, conscious awareness occurs as a result of the integration of information from different parts of the brain. Information in the brain is processed in a system called the "global workspace" and turns into conscious awareness. This theory suggests that consciousness emerges through the coordinated activity of a large number of neurons.

Another theory that argues that consciousness operates at a quantum level is Penrose-Hameroff's Orchestrated Objective Reduction (Orch-OR) theory. This theory suggests that consciousness arises from quantum processes occurring in cell structures called microtubules in the brain. Microtubules are cellular structures that process information within neurons and access universal information through quantum processes. This theory argues that consciousness is not just a biological phenomenon, but also a deeper process that can be explained by quantum physics. Consciousness exists as a universal quantum wave and is reflected in individual beings in different ways.

Consciousness and Subconscious: Neuroscience tries to understand exactly how consciousness works by examining the differences between consciousness and the subconscious. The subconscious is automatic processes that cover most of the brain and that we are often unaware of. Consciousness, on the other hand, is associated with awareness, attention and thought processes. This difference helps us to understand the complexity of consciousness more deeply.

Divine Consciousness: In the understanding of Sufism, consciousness is not a limited perception of man, but a divine essence based on the infinite knowledge of God. According to Sufism, consciousness is a reflection and manifestation of God. Man's consciousness is actually connected to God's knowledge, that is, his absolute knowledge. In this context, the concept of "Divine Breath" has an important place in Sufism. When God creates man, He gives him consciousness by breathing a breath of His own soul. This consciousness is the fundamental source of man's existence and establishes his connection with the divine truth.

Vahdat-i Vumu (Philosophy of Unity): In Sufism, the source of consciousness is related to the philosophy of Vahdet-i Vumu (Unity). According to the understanding of Vahdet-i Vumu, all beings are manifestations of the unity of God. Human consciousness is also a part of God's consciousness. Therefore, individual consciousness is connected to God's infinite and absolute consciousness. The conscious existence of man is a reflection of a divine order within the totality of the universe.

Sheikh-ul Akbar Muhyiddin Ibn Arabi said regarding consciousness, "Everything is within the consciousness of Allah and we are a reflection of this consciousness." In other words, every conscious being is based on the knowledge of Allah and what he experiences as a conscious being are limited reflections of the divine consciousness.

Sufism provides the way to cleanse human consciousness and reach divine truth through dhikr and spiritual practices. Man tries to reach pure consciousness, that is, the knowledge of Allah, by purifying himself from the illusions of this worldly perception. Dhikr is seen as a door that cleanses human consciousness and opens it to the light of Allah. From this perspective, consciousness can be purified in a way that it can perceive divine knowledge and establish a direct relationship with the truth of Allah.

This divine connection between consciousness and existence can also be explained by the verse in the Quran, "Allah is in a new glory at every moment" (Surah Ar-Rahman, verse 29). This verse expresses that everything in the universe is in a constant state of renewal and that Allah, with His knowledge, creates new creation and consciousness at every moment. The constant renewal of consciousness is seen as a part of this divine creation process.

Both scientific and mystical approaches show that consciousness is not an ordinary phenomenon, but has a complex and deep structure. Scientifically, consciousness is based on biological processes and emerges through the coordinated activities of neurons and synapses. However, quantum theories indicate that consciousness may have deeper and more universal dimensions. From a mystical perspective, consciousness is a reflection of an infinite essence based on the absolute knowledge of God. Human consciousness is dependent on God's knowledge and is renewed every moment in a new creation process. If we consider these two approaches from a unifying perspective, it can be said that the source of consciousness can be explained by a quantum connection at both the biological and universal levels. The divine consciousness emphasized by Sufism can overlap with the universal field of knowledge indicated by quantum theories. The source of consciousness encompasses the universe as an unlimited entity with God's knowledge, and we experience the limited reflections of this divine consciousness.

16-DECISIONS AND DESTINY APPROACH

The factors that affect the decisions a person makes and therefore his/her destiny include a complex network of interactions in both material and spiritual dimensions. These factors can be addressed from different perspectives within the framework of scientific and mystical approaches. By synthesizing both perspectives, we can summarize the basic elements that affect a person's destiny as follows:

1. **Biological and Genetic Factors:** The physiological structure, genetic heritage and biological functioning of a person play an important role in decision-making processes. Genetic characteristics can have an effect on the functioning of the brain and nervous system, which in turn shapes the individual's way of

thinking and behavior. For example, the fact that the nervous system and chemical processes in the brain affect a person's emotional reactions and cognitive capacity can directly affect decision-making.

2. Environmental Factors: A person shapes his/her decisions by being exposed to social, cultural and environmental influences. The environment in which a person grows up, the education he/she receives, the cultural values he/she is exposed to, his/her family and social environment have a great impact on his/her decisions. This can direct his/her destiny by affecting a person's worldview, moral values and the way he/she interprets events.

3. Consciousness and Mental Processes: From a scientific perspective, human conscious awareness and mental processes also play a critical role in the decision-making process. Synapses provide information transfer through electrical and chemical connections between neurons, and this process enables conscious decisions to be made with the cooperation of different regions of the brain. The way the mind works is shaped by cognitive processes such as perception, attention, and memory. In this context, how the brain processes information determines which options a person evaluates and how they make their final decision. 4. Quantum and Consciousness: According to Penrose-Hameroff's Orchestrated Objective Reduction (Orch-OR) theory, human consciousness is associated with quantum processes, and these processes include possibilities beyond the rules of classical physics. This suggests that quantum leaps that occur in the subconscious may be effective in the human decision-making process, and perhaps these uncertainties play a role in the functioning of fate. In other words, human decisions may not be completely deterministic (predetermined); uncertainties at the quantum level may create some variability in fate.

5. Divine Will and Destiny: From a Sufi perspective, man's destiny depends on God's knowledge and will. The expression "God is in a new glory at every moment" (Surah Ar-Rahman, verse 29) expresses that God is in a constant state of creation and that destiny can change and renew at every moment. Man's decisions may be part of a grand plan determined by the divine will, but man plays an active role in this plan with the will given to him. Sufism accepts man's will, but argues that this will is a reflection of God's absolute knowledge and power. 6. Man's Free Will and Choices: Both scientific and Sufi perspectives accept that free will is an important factor in man's decision-making processes. Man's free will is seen as an active element in the shaping of destiny. According to Sufism, man makes choices in his life with the limited will given to him by God, and these choices have an impact on his destiny. From a scientific perspective, the choices a person makes between their environment, biology, and conscious thoughts are a reflection of their free will. 7. Spiritual Consciousness and Dhikr: Sufism argues that by increasing their spiritual awareness, people can make more conscious and truthful decisions. Dhikr, spiritual disciplines, and worship help people make decisions that are more in line with the divine will by raising their level of consciousness. This allows people to have a more conscious effect on their destiny by developing a deep awareness in their inner world. Dhikr aligns a person's will with the will of Allah, which can positively affect their destiny.

8. The Effect of Karma and the Cause-Effect Relationship: Some Sufi approaches and ideas inspired by Eastern philosophies explain the long-term effects of decisions made by a person with a cause-effect relationship similar to karma. Every decision produces a series of results, and these results shape the

person's future destiny. Decisions made with good intentions produce positive results, while selfish or harmful decisions can create negative results. This cyclical cause-effect relationship can help us understand how destiny works.

9. Connection with Universal Consciousness: According to Sufi understanding, human consciousness is connected to universal consciousness (divine consciousness). The decisions made by a person are shaped in line with their connection to this universal consciousness. People who reach a higher level of consciousness can make decisions that are more compatible with the knowledge and wisdom of Allah. Connecting to this universal consciousness can affect a person's destiny more positively and direct them towards greater integrity.

The basic factors that affect a person's decisions and destiny cover a wide range from biological structure to free will, from environmental effects to the divine plan. Scientifically, while the brain structure, nervous system and genetics are effective in decision-making processes, from a mystical perspective, divine will, free will and spiritual awareness play an important role. Destiny is shaped both by the choices a person makes with their own will and in line with God's divine plan. The combination of these two elements makes human destiny a dynamic and constantly changing process.

17- AN EVALUATION ON CONSCIOUSNESS AND AWARENESS UNDERLYING THE FOUNDATION OF REALITY

Idealistic monism is a philosophical view that argues that the mind or consciousness lies at the basis of reality. According to this view, the material world derives from consciousness or is inseparably linked to consciousness. Although some interpretations of quantum physics present concepts that are close to the arguments of idealistic monism, it is difficult to say that there is a definitive harmony between quantum physics and idealistic monism. However, some interpretations of quantum physics seem to support the philosophical principles of idealistic monism. In particular, concepts such as the Copenhagen Interpretation of quantum mechanics and the Observer Effect open up discussions about the role that consciousness plays in the formation of reality. The Copenhagen Interpretation argues that quantum systems do not have a specific state until they are observed and that observation itself determines reality. This is a parallel way of thinking to the idealistic monism view that "consciousness creates reality." However, this interpretation suggests that reality is not only the product of consciousness, but that there is a deep interaction between observation and reality.

Other quantum interpretations, such as the Many Worlds Interpretation and Bohm's Hidden Variable Theory, distance themselves from idealistic monism by arguing that there is a reality independent of consciousness. The Many Worlds Interpretation argues that the universe splits into multiple parallel realities as a result of each measurement, which contradicts the idea that consciousness alone shapes reality. Bohm's interpretation, on the other hand, argues that quantum systems are governed by predetermined hidden variables, which explains the relationship between consciousness and reality

from a more mechanical perspective. However, theories about quantum consciousness, such as Orchestrated Objective Reduction (Orch-OR) Theory, discuss how quantum processes can affect conscious experience, and these theories may have some parallels with the idea that consciousness is the fundamental element of reality. However, these theories do not provide definitive scientific findings that confirm idealistic monism; they only open a door to philosophical interest.

In conclusion, it would not be correct to say that quantum physics directly confirms all elements of idealistic monism. Although quantum physics provides interpretations that can philosophically support some of the claims of idealistic monism, the nature of the quantum world and the role of consciousness in this nature are still controversial and widely discussed. Therefore, while quantum physics supports certain aspects of idealistic monism, it may deepen some paradoxes rather than resolve them.

18- OUR PERCEPTIONS AND IMAGINATION

Thanks to quantum theory, we learn that the matter we perceive does not have a static structure as thought, and that even a piece of stone that seems inanimate as we descend into lower dimensions exhibits the characteristics of a living being, that is, it is dynamic and in motion. Muhyiddin Arabi says the following on the subject: "According to us; even everything called inanimate or plant has its own spirit. They are equipped with perception and comprehension; only the people of discovery can perceive this... There is nothing that is not truly alive. Except for what Allah reveals, people do not understand their worship... Only the living can worship. Therefore, everything is alive..." In its simplest form; all subatomic particles are described as quantum. Today, many particles that fall into this group have been found and continue to be found. There are countless energy layers at the subatomic level that science has not yet found. Particles called quantum exist at every point in the universe, and the essence of all beings and substances that we describe as inanimate and inanimate is based on the atom, and therefore on these particles. In atomic physics, as we go down to the lower dimensions of matter and the parts become inseparable, expressions such as beyond matter, massless and abstract have begun to be used. At this level, everything is a single homogeneous whole and does not carry a meaning on its own. The reason for this is that there is no such thing as a particle at the subatomic level.

These particles gain meaning only when observed by an observer. Based on this, it has been understood that objects are a product of the reciprocal relationship between the observer and the observed. This relationship is one-to-one, and the characteristics of the object are directly shaped by the perception and comprehension of the observer. In other words, the objects created are created at the level of consciousness and awareness and are perceived as images. Concepts and objects that we can only call imaginary in essence are meaningful in terms of the meanings they contain as products of our minds. At this point, we return to Muhyiddin Arabi again. According to him; the objects we consider real and look at in our environment are actually nothing but imaginary. We call objects real to the extent of our minds and perceptions, without doubting their reality and truth. For this reason; Whatever the object the sleeper sees in his dream is, the existence in this world is also proportionate to this. According to

Muhyiddin Arabi; the so-called reality is only a dream, and it is not entirely an illusion. However, this is a special appearance of the Absolute Reality, that is, the Truth, a special form of its own manifestation, a manifestation. This is a dream based on metaphysical foundations. Muhyiddin Arabi says, "The world of existence and formation is an illusion, but in reality, this is the Truth itself." Dream, illusion and imagination are all symbols. What is called reality should not mean that it is worthless, although it is not real. What is important is to decipher and make sense of these symbols. Yes, as much as we judge our reflection in the mirror to exist and think about how much space this image occupies, we, as all creatures, are just as real and take up that much space in space.

19-METAPHORIC EXPLANATION ON GOD'S ASSUMPTION OF HIS SERVANT FROM THE PERSPECTIVE OF QUANTUM MECHANICS

The Messenger of Allah -peace be upon him- said in the sacred hadith: "I am as my servant assumes of me. When he mentions me, I am with him. If he mentions me in his own self, I mention him in mine. If he mentions me in a group, I mention him in a group better than him." This hadith explains the closeness of Allah to His servant and that a person's thoughts and belief in Allah have an effect on how Allah will treat him. The expression "I am as my servant assumes of me" means that the thought a person has about Allah will determine His mercy and grace towards that person.

The dhikr part indicates that remembering and remembering Allah will be reciprocated by Him remembering His servant. The continuation of the hadith emphasizes that dhikr performed individually or in a group will also resonate with Allah. It is stated that the person who remembers in a group will be remembered by Allah in a higher group, drawing attention to the great value of the worships performed sincerely by the person. This hadith shows that Allah's mercy and compassion are limitless and that the servant's turning to Him will bring great rewards. Establishing a relationship between the hadith in question and quantum physics will be a deep journey of thought that brings together metaphysical and scientific understandings. While this hadith states that the servant finds a response according to his thought and assumption towards Allah, we come across a similar concept of flexibility and uncertainty in quantum mechanics. The quantum uncertainty principle and the observer effect are particularly striking in this context. In quantum mechanics, the exact state of a particle cannot be determined without observation.

The particle is in a superposition of more than one possibility; but when observed, these probabilities yield a result. Similarly, the hadith explains that whatever the servant thinks about Allah, He will act accordingly. In other words, Allah's mercy and grace are shaped according to the servant's view of Him; this is similar to the principle in the quantum world where the observer affects the outcome of the system. In addition, the concept of quantum entanglement in quantum mechanics shows that there is a hidden connection between the beings in the universe. Once two particles interact, no matter how far apart they are, the state of one instantly affects the state of the other. This can be paralleled with the hadith in which the servant becomes closer to Allah when he remembers Allah. The person who makes

dhikr establishes a metaphysical bond with Allah, just as in quantum entanglement, particles can affect each other despite great distances. Finally, Allah's mentioning His servant in a better society points to Allah's limitless knowledge and power beyond the boundaries of time and space. In the quantum universe, there is a reality that operates beyond the rules of classical physics and is dominated by concepts such as uncertainty and probability. This allows us to establish a connection with Allah's infinite existence and all-encompassing knowledge in a spiritual dimension beyond the material world. These connections show that a deep metaphorical parallel can be established between Allah's power beyond everything in Islam and the uncertainty and observer-dependent operation of the quantum world.

20-TACHYON ANGELS

"Angels have been assigned power because they are light and there is none stronger than light. Because manifestation belongs to it and manifestation occurs with it. Everything needs manifestation! However, manifestation occurs only in the high and low realms through light. Allah says: 'Allah is the light of the heavens and the earth.'" In a narration, when the prophet of Allah was asked, 'Have you seen your Lord?' he said: 'He is light, how can I see him?' In another hadith, it is said, 'The manifestations of your essence would burn everything that the eye perceives.' Manifestations are lights. So, they are the things that reveal things and conceal them. Light has no shadow and the world is a shadow, while the Truth is light. Therefore, the world is erased during manifestation, because manifestation is light. Seeing the self is a shadow. The person who receives manifestation does not see himself while seeing Allah. When he draws the curtain, the shadow appears and the witness is enjoyed. There is valuable information in this section. It is not possible to convey or explain its secret. The one who knows it knows how the world appeared. 'Allah speaks the truth and guides to the right path.' (Muhyiddin ibn-i Arabi (k.s) Futuhat-i Mecca Vol. 9/Pg. 158)

Tachyons are an abstract concept at the center of scientific and philosophical thought as theoretical particles that exceed the speed of light. This concept, which pushes the boundaries of the physical universe, is a type of particle that is claimed to have negative mass and moves outside the known rules of physics. With these features, tachyons carry deep meanings not only in scientific theories but also in metaphysical and spiritual interpretations. From a mathematical perspective, the idea of negative mass has a logic similar to the concept of imaginary numbers. While imaginary numbers find a place in the abstract world of mathematics as types of numbers whose square gives a negative result, negative mass appears as a mathematical possibility rather than a physical reality. The relationship between energy and mass ($E=mc^2$) based on Einstein's theory of relativity forms the basis of the concept of tachyons. According to this equation, when a particle's speed approaches the speed of light, its mass increases and its energy requirement reaches infinity. However, the assumption of a movement exceeding the speed of light leads to the mass turning into a virtual state. Tachyons emerge as a theoretical solution at this point. Unlike the particles we know in the physical world, tachyons lose energy as they speed up and

speed up as they slow down. These reverse dynamics represent a world beyond the known laws of thermodynamics. It is also suggested that tachyons have the capacity to produce infinite energy, which raises important questions about the energy balances and expansion processes of the universe.

The existence of tachyons has not yet been experimentally proven. However, mathematics is the language of the universe, and like many theoretical entities, tachyons may one day become observable. These particles can play a role in explaining many important physical and cosmological phenomena, from the expansion rate of the universe to theories of parallel universes. For example, theories that the expansion rate of the universe is faster than light indicate that tachyons may be a factor in these processes. Addressing the metaphysical connection between tachyons and angels is an attempt to build a bridge to the depths of the universe from both a scientific and spiritual perspective. In this context, the following points come to the fore:

Theoretically, tachyons are hypothetical particles that exceed the speed of light. These particles, which accelerate as they lose energy, may have properties that can reverse the arrow of time. Tachyons are defined based on the possibility of exceeding the speed of light, which is considered a limit in Einstein's theory of special relativity. It is stated in the Quranic verses that angels move very fast and can cover a distance of 50 thousand years in one day (Maaric 70:4). This speed may seem to indicate beyond the speed of light in the physical world. These two concepts can be brought together through the speed and interdimensional movement potentials of physical and metaphysical entities. Tachyons can provide a theoretical model for understanding angels' transitions between dimensions and their speeds. Tachyons are designed as particles that can exist beyond four-dimensional space-time. Angels, on the other hand, are depicted as beings that can move in higher dimensions, outside of physical dimensions. Time can change depending on factors such as gravity and speed. The fact that angels' speeds are much higher than light suggests that they move in an environment where time is perceived or processed differently. This situation is parallel to the theory of relativity and the properties of tachyons.

In the Islamic tradition, angels are abstract beings who carry out God's commands. Their interaction with the physical world requires a model of being that can move between dimensions. Tachyons, although not yet proven, are a theoretical tool for understanding movement beyond physical boundaries. Quantum mechanics and the theory of the multiverse may make the existence of such particles possible. The phrase "50 thousand years of distance" in the Maaric Sura can be reinterpreted in the context of galactic distances and speeds. The diameter of our galaxy is approximately 50 thousand light years, and this phrase may imply that angels travel this distance at a speed exceeding the speed of light. The slowing down of time in the intense gravitational regions at the center of the galaxy indicates that escape from these regions requires high speeds. Explaining the angels' exit from these regions with the movement properties of tachyons can put the verses in a modern context. On the other hand, tachyons also represent infinite energy with the concept of negative energy. Tachyons show that all beings have a holographic structure as a kind of energy matrix. This reflects an understanding similar to the idea of "God manifesting in everything" in Sufism. The idea that angels can exist in different dimensions and move between these dimensions gains meaning through the relationship of tachyons to the multidimensional universe.

The fact that antitachyons only move forward in time is related to the angels' continuous and forward-looking existence in time. The belief that angels are created in a fixed number can be likened to the fact that antitachyons exist in pairs and maintain an order without destroying each other. The fact that souls exist in energy form, not in physical form, can be related to the abstract mass structure of tachyons. The existence of each soul as an energy matrix appropriate to its own essence is similar to the holographic structure of tachyons. The idea that souls can exist in different dimensions and in different forms gains meaning through the ability of tachyons to move independently of time and space.

Tachyons can serve as a bridge from scientific theories to metaphysical realities. The superior speed and energy that angels possess while performing their duties can be explained by the mobility of tachyons beyond the physical universe. The holographic universe theory and the idea of a multidimensional energy matrix establish a metaphysical link between tachyons and antitachyons and the creation of angels. This perspective supports our desire to explore the depths of both the scientific and spiritual worlds, while opening new doors to understanding the wisdom in God's creation.

21-THE ENCOUNTER OF HUMAN AND AZRAEL (MATERIAL AND ANTIMATTER)

Matter, as we know it, constitutes the building blocks of everything in the universe; atoms, subatomic particles (protons, neutrons, electrons) are the basic elements of material existence. Antimatter, on the other hand, consists of particles that correspond to matter but have the opposite electric charge. For example, the antimatter counterpart of the electron, the positron, has a mass like the electron, but carries the opposite charge (positive charge). Similarly, the antiproton, the counterpart of the proton, is negatively charged.

The most important feature of matter and antimatter is that they disappear when they come together. This process is called "annihilation" and when matter and antimatter meet, they annihilate each other, releasing a large amount of energy. Einstein's famous equation $E=mc^2$ is used to describe the energy released in this process; matter and antimatter are completely converted into energy.

Although antimatter is inherent in the universe, why there is no observable amount of antimatter in the universe is a major cosmological question. This problem, called baryon asymmetry, contradicts the assumption that matter and antimatter were created in equal amounts during the formation of the universe. If matter and antimatter existed in equal amounts, they would have destroyed each other, leaving only energy behind. However, the universe we observe today is largely composed of matter. The reason for this is thought to be a small imbalance between matter and antimatter in the early universe (asymmetric baryon number). In Islamic belief, Azrael takes a person's soul as the angel of death and ends life. While a person exists in worldly life as a material being, this material being ends with the intervention of Azrael, and the soul passes to another dimension. This process reflects the metaphysical dimension of the transition between existence and non-existence. Azrael's "touching" of a person, just like the encounter of matter and antimatter, can be thought of as a transformation process in which

physical existence ends. Matter and antimatter are opposites, like opposite poles. Human life is also in a balance between material existence and spiritual dimension. The arrival of Azrael disrupts this balance and ends material existence. The encounter between man and Azrael represents the moment when a transition occurs between material and spiritual opposites.

A large amount of energy is released as a result of the encounter of matter and antimatter. This process of annihilation is actually a transformation of energy. Similarly, the death of a person can be perceived as the annihilation of the material body and the transition of the soul to another dimension. Death can be considered not as an end, but as the continuation of the existence of energy or soul in another form. The annihilation process that occurs with the encounter of matter and antimatter is not only the end of existence on the physical plane, but also a transformation process. The encounter of man and Azrael is also a transformation in the sense of the end of physical life and the transition of the soul to the other realm. Azrael is a cosmic figure that provides this transition, just as the annihilation between matter and antimatter creates a kind of energy transformation within the cosmic order.

Azrael is known as the angel of death and ends the lives of living beings by taking their souls from their bodies. The strong nuclear force is the strongest force that holds the atomic nucleus together. This force forms the basic building blocks of matter by holding subatomic particles, especially protons and neutrons, together. If this force did not exist, the atomic nucleus could not stay together and matter could not exist. In the event of a weakening or deterioration of the strong nuclear force, the atomic nuclei would disintegrate, which would lead to the end of matter and life. Azrael's duty to end life is similar to the strong nuclear force's duty to ensure that matter exists at a fundamental level. While the existence of atoms and matter continues thanks to the strong nuclear force, the elimination of this force means the physical end of life. By being associated with this force, Azrael becomes more compatible with his role in ending life and existence. While matter and antimatter represent opposing forces in the physical universe, the relationship between man and Azrael expresses a metaphysical dimension. Man's life is a physical reality, but death represents the transition from this physical reality to a spiritual dimension. Azrael is the mediator of this transition, just as matter and antimatter destroy each other and release energy, death is the end of the physical body but the beginning of the soul's transition to another dimension.

A person can be identified with matter in worldly life. Throughout life, his physical body and worldly experiences are considered to be an entity that continues its existence on the material plane. Azrael can be thought of as an opposing force, like antimatter. Just as antimatter, which is opposite to matter, destroys matter when it encounters it, Azrael also ends the material existence of a person when it encounters them, but this destruction provides a kind of energy transformation; it can also be evaluated as the soul's transition to another dimension.

22- LIGHT AS THE SOURCE OF EXISTENCE

Light is a concept that carries deep meanings in various contexts as the source of existence in the universe. Light is a concept that carries meanings on various planes as the source of existence in the universe. With its physical, cosmological, metaphysical and philosophical dimensions, light is at the center of both scientific research and spiritual thoughts. This multidimensional perspective helps us to deeply understand the effect of light on existence.

From a physical perspective, light is a form of electromagnetic radiation and carries energy. Light is a result of the energy produced by stars and other celestial bodies. From this perspective, light can be considered a fundamental part of everything that exists in the universe. The particle and wave duality of light further complicates the nature of light in the context of quantum mechanics. Photons (particles of light) are one of the basic units of interactions in the universe. Therefore, it can be said that light is a fundamental element of existence in the universe.

At the beginning of the universe, light establishes a fundamental bond between energy and matter. Since the Big Bang, light has spread into space as the universe has expanded, creating more complex structures over time.

Cosmic Microwave Background Radiation provides information about the early stages of the universe. These traces of light provide an important source regarding the origin of existence.

In various cultures and belief systems, light is seen as a symbol of knowledge, enlightenment, and existence. Light is known as the opposite of darkness and is generally associated with good, truth, and wisdom. In this sense, in Sufism, light is the symbol of divine qualities and knowledge. For example, the concept of "Nur" expresses the existence and attributes of Allah. Sufi thinkers see light as a symbol of spiritual enlightenment and wisdom.

The existence of light can also be considered in terms of the philosophy of being. The question "Is light the source of everything in the universe?" triggers thoughts on the nature and meaning of existence. While some philosophers see light as one of the most fundamental elements of existence, others evaluate it in a broader context.

23- ARE PHOTONS INFORMATION CARRYING PARTICLES OR DIVINE MESSENGERS?

Photons are both particles that carry physical information and elements that carry deep meanings that can be interpreted as divine messengers in various cultural and philosophical contexts. Here are the details of these two perspectives:

Photons are the basic unit of electromagnetic waves. Light, heat and other types of electromagnetic radiation are carried by photons. From this perspective, photons carry energy and form the basis of physical processes observed in nature. Photons can transmit information by moving at the speed of light. For example, photons are used to carry data through optical fibers in telecommunication systems.

Therefore, photons function as particles that carry physical information. In many cultures and belief systems, light is associated with information, enlightenment and divine inspiration. Photons can be considered physical representatives of this light. Therefore, in some philosophical and religious perspectives, photons can be interpreted as divine messengers. Sufism treats light as a symbol of divine wisdom and love. In this context, photons can be considered as a means of spiritual enlightenment and reaching divine knowledge. Light is the opposite of darkness and a way to reach spiritual realities. Photons can be considered as one of the fundamental elements of existence. Light causes us to ask deep questions about the nature of existence. The question "Are photons just particles that carry physical information?" triggers a philosophical discussion on the meaning of existence and the transmission of information. Some philosophers and mystics try to discover the divine order within nature by seeing photons as carriers of divine messages. This perspective reflects the search for a deeper meaning beyond physical reality. Photons are multifaceted elements that can be evaluated both as particles carrying physical information and as divine messengers on a spiritual and metaphysical level. Their physical properties and scientific role, as well as their symbolic meanings in various cultural and religious contexts, position them at the center of both scientific research and spiritual thought. This multi-layered approach helps us understand the role of photons in the universe.

24- THE RELATIONSHIP BETWEEN LIGHT IN THE QURAN AND LIGHT IN SCIENCE

The concept of "light" mentioned in the Quran has deep and multi-layered relationships with both metaphysical and scientific light. In the Quran, "light" is generally used as a symbol of divine knowledge, guidance and enlightenment. Light means coming out of darkness and turning to the right path. In this context, light represents spiritual enlightenment and reaching divine truths. Light can be seen as physical light, but it is also an abstract concept. The expression "Allah is the light" in the Quran can also be interpreted as a reflection of divine existence and wisdom. From a scientific perspective, light is a form of electromagnetic waves. Photons are the basic particles of light and carry energy. Light plays an important role in many processes in nature and is one of the basic elements of life. Light is used to carry information; for example, photons are used to transmit data in optical fibers and communication technologies. This shows that light is not only a physical phenomenon, but also a critical element in the transmission of information.

While light represents knowledge and enlightenment in the Quran, scientific light also serves the function of carrying and communicating information. These two concepts can come together in the search for knowledge and enlightenment. Light can be interpreted as a carrier of information on the physical plane and as a symbol of enlightenment and divine wisdom on the metaphysical plane. Light provides visibility by illuminating darkness. Similarly, light helps us understand divine truths by illuminating spiritual darkness. In this respect, light and scientific light serve a similar function in providing understanding and comprehension. Light triggers deep questions about the nature of existence. While scientific light helps us understand physical reality, the concept of light in the Quran

allows us to explore the spiritual and ontological dimensions of existence. These two perspectives can complement each other in understanding the multidimensional nature of existence. Expressions of light in the Quran are related to universal order and divine creation. Scientific light, on the other hand, is one of the basic building blocks of energy and matter in the universe. These two perspectives can help us investigate the deep meanings underlying the complex structure of the universe. The concept of “light” mentioned in the Quran is associated with spiritual enlightenment and divine knowledge, while scientific light is a means of physical knowledge and communication. These two concepts complement each other in the search for knowledge and understanding, offering a deep and multidimensional meaning. Light appears as one of the fundamental elements of existence in the universe, both on the physical and spiritual planes.

25- LIGHT AND DARKNESS, THE BALANCE OF THE UNIVERSE

The contrast between light and darkness plays an important role in maintaining the balance of the universe. Here are some basic points that explain the balancing effects of this contrast in the universe:

Light and darkness are two fundamental elements that affect the distribution of energy. While light interacts with matter by carrying energy, darkness represents a situation where energy does not exist or is not visible. This balance regulates the flow and dynamics of energy in the universe. Light from the sun warms the surface of the Earth and provides the necessary conditions for life to continue. Darkness, on the other hand, promotes heat loss and cooling. This cycle ensures the sustainability of ecosystems.

The light and dark cycle plays a decisive role in the formation of natural rhythms (biological clocks). The day and night cycle affects the life cycles, eating habits and sleep patterns of living things. The amount of light changes with seasonal changes. This shapes the cyclicity of nature and the adaptation abilities of living things.

Light is generally associated with goodness, knowledge and enlightenment, while darkness is associated with evil, ignorance and the unknown. This contrast plays an important role in the development of moral and ethical values. Light and darkness increase the variety of spiritual experiences. Dark times prepare the ground for individuals' inner journeys and quests for enlightenment. This contrast provides the opposing experiences necessary for spiritual growth.

Light and darkness also play a balancing role in the physical structure of the universe. Concepts such as black holes, dark matter and dark energy are important elements that affect the dynamics of the universe. These elements have a critical effect on the expansion of the universe and the preservation of its structure. The contrast between light and darkness also provides balance on the cosmic plane. The existence of galaxies and stars emerges as a result of this contrast. While light is considered the source of life and existence in the universe, darkness represents the unknown.

The contrast between light and darkness serves as a multifaceted mechanism that ensures the balance

of the universe. This balance at the physical, temporal, metaphysical and cosmic levels ensures the sustainability of order, life and existence in the universe. These contrasts help us understand the complex structure of nature and enrich the human experience.

26- CONTRIBUTION OF SACRED TEXTS IN DISCOVERING THE NATURE OF LIGHT

As scientists try to discover the nature of light, understandings of light in sacred texts can contribute to this effort in various ways. Here are some important dimensions of this interaction:

Understandings of light in sacred texts pose deep questions about the nature of existence and the place of humans in the universe. Scientists can enrich their research on the nature of light by addressing such philosophical and ontological questions. Light is associated with a divine being or energy in many sacred texts. This can lead scientists to question the divine and cosmic connections in understanding the structure of the universe.

Light in sacred texts represents human experiences, enlightenment and wisdom. In this sense, scientists can benefit from these texts to understand human experiences and perceptions. Light is a symbol of spiritual enlightenment in many religious and spiritual traditions. This perspective can inspire scientists to explore the relationship between the physical properties of light and its effects on human consciousness.

Understandings of light in sacred texts can contribute to the development of new paradigms that shape scientific thought. Scientists can derive new questions and areas of research from this dialogue between faith and science. In the study of light, philosophical and religious perspectives can add a different perspective to scientific research. This multidisciplinary approach allows for a more comprehensive and in-depth understanding of the nature of light.

Some scientists may consider understandings of light in sacred texts as a source of inspiration for scientific research. This creates an opportunity to question how scientific developments can intersect with divine wisdom and human experience. In sacred texts, light is often associated with energy and life. By examining this relationship, scientists can try to understand the connections between energy and light.

Understandings of light in sacred texts can provide deep and multifaceted contributions to scientists' efforts to explore the nature of light. This interaction, ranging from philosophical questions to human experiences, from the dialogue between science and faith to the relationships between divine wisdom and scientific developments, provides a rich basis for understanding the nature of light. In this context, the dialogue between science and religion can contribute to the deepening and enrichment of both fields.

27- THE ABILITY OF LIGHT TO REACH EVERY POINT IN THE UNIVERSE AND THE UNIVERSALITY OF CONSCIOUSNESS

The ability of light to reach every point in the universe can establish many deep and symbolic connections with the universality of consciousness. Light is a phenomenon that can physically reach every point in the universe. This feature can support the idea that consciousness also has a universal dimension. Consciousness is not limited to individual experiences, but has the potential to reach universal truths and information.

Connectivity: Light provides interactions in the universe by establishing a connection between all beings. This can be seen as a metaphor that consciousness is similarly connected to all beings and creates a shared experience. Light often symbolizes enlightenment, the spread of knowledge and understanding. The universality of consciousness also includes the potential to provide enlightenment and understanding to people. This supports the idea that the experiences and wisdom of individuals contribute to universal consciousness. Light is considered a universal symbol in different cultures and belief systems. This means that people can create a common consciousness by sharing similar experiences and emotions.

Light can be thought of as a being beyond time. Similarly, consciousness can establish connections between past, present, and future without being limited by time. This is a reflection of the universal nature of consciousness.

The speed of light provides universal reach by transcending spatial boundaries. Consciousness also has the potential to develop universal understanding through thoughts, emotions, and experiences by transcending physical boundaries. Quantum Connection: The particle and wave duality of light in quantum physics raises profound questions about the nature of consciousness. Light can create interconnected states even at the particle level, which may support the idea that consciousness also contains a wholeness and connection beyond particles.

In many belief systems, light is associated with the divine and metaphysical dimensions. This allows consciousness to be accepted as part of a universal reality. Consciousness is considered not only an individual experience but also a universal entity.

The ability of light to reach every point in the universe has the potential to represent the universality of consciousness. These symbolic and metaphorical relationships between light and consciousness emphasize the importance of universal connections, enlightenment, and shared experiences. In this context, light can help us understand the depth and universality of consciousness as both a physical and metaphysical dimension.

28- EXCEEDING THE SPEED OF LIGHT, BEING ABLE TO EXCEED THIS LIMIT IN THE DIMENSION OF CONSCIOUSNESS

Whether it is possible to exceed the speed of light is a deeply debated topic in both physical and metaphysical dimensions. Physically, according to Albert Einstein's theory of relativity, the speed of light is the highest known speed in the universe. According to this theory, as an object approaches the speed of light, its mass increases and therefore requires infinite energy. This situation shows that exceeding the speed of light is practically impossible. However, some concepts in the field of theoretical physics suggest situations that may make it possible to exceed this limit. For example, some theories focus on concepts such as "warp" drives or "wormholes" that exceed the speed of light by manipulating the geometry of space-time. Such speculations have not yet been experimentally proven and have largely remained theoretical.

However, the concept of exceeding the speed of light in the dimension of consciousness offers a more abstract and metaphysical perspective. Consciousness is often thought of as an entity beyond physical boundaries. Some mystical and spiritual teachings argue that consciousness can travel beyond time and space, and therefore has the potential to exceed the speed of light. In this context, consciousness is connected within a universal field, which allows individuals' thoughts, feelings, and experiences to interact with each other instantly. For example, experiences such as telepathy or spiritual connections support the idea that consciousness can interact beyond physical boundaries. From a scientific perspective, a clear relationship between consciousness and physicality has still not been established. However, some studies suggest that conscious experiences may be linked to neurological and quantum physical processes. In this context, studies on the nature and universality of consciousness may lead us to question whether an interaction beyond the speed of light is possible. While concepts such as quantum entanglement show that particles can interact instantly, this suggests that consciousness may operate in a similar field of interaction.

As a result, there are many question marks about whether it is physically possible to exceed the speed of light. Although some speculations in the field of theoretical physics discuss this situation, there is no solution in practice yet. In the dimension of consciousness, the potential to exceed the speed of light can be considered a more abstract concept. The universality and limits of consciousness remain an area that needs to be examined in depth from both scientific and metaphysical perspectives. In this context, a reality beyond the speed of light has the potential to develop new understandings at both physical and conscious levels.

29- IS LIGHT OUTSIDE OF TIME OR IS TIME IN A FORM OF LIGHT?

The question of whether light exists outside of time or time itself is a form of light is a deeply debated topic from both physical and metaphysical perspectives. Physically, light is considered a part of time and space. According to Albert Einstein's theory of relativity, the speed of light is constant and this has a close relationship with the nature of time and space. The speed of light is considered the highest speed

in the universe, and for an object moving at this speed, time seems to stand still for the observer. This shows the relationship between time and light, and how light is intertwined with the flow of time. In other words, light exists as a part of time; it moves and interacts with the flow of time. However, thoughts on the nature of light can go beyond the scientific realm and reach deeper metaphysical dimensions. Light is considered a symbol of enlightenment, knowledge and wisdom in many spiritual and philosophical traditions. In this context, light can be thought of as an entity or consciousness beyond time. For example, some mystical teachings argue that time is an illusion and that reality has a nature based on light and energy. This can reinforce the idea that time itself is a form of light; that is, time is actually an expression of existence, linked to the process of change and transformation of light. Quantum physics also contributes to these discussions. Light acts as both a particle and a wave, and this can affect the perception of time. Phenomenon such as quantum entanglement, thanks to the ability of particles to interact instantaneously, suggests that time is not an absolute phenomenon. In this case, light and time are considered as concepts that are tightly connected and intertwined. As a result, the question of whether light exists outside of time or whether time itself is a form of light is a complex issue on both the physical and metaphysical levels. From a physical perspective, light exists as a part of time and space. However, on a metaphysical level, light can be thought of as an entity beyond time. The interaction between these two dimensions allows for a deeper understanding of the nature of light and time.

30- THE RELATIONSHIP OF DIVINE LIGHT AND QUANTUM LEVEL REALITY

While the divine “Light” is considered a symbol that illuminates the soul in many cultures and belief systems, the idea that there may be a quantum level of reality is also a subject of deep debate. In the traditional sense, “Light” is often associated with knowledge, enlightenment, and spiritual awakening. In Islamic thought in particular, Nur is considered a reflection of the existence and light of Allah. In this context, Nur is not only a physical phenomenon, but also a source of spiritual experience and wisdom. Nur is seen as a light that illuminates the inner worlds of individuals and guides them to the right path. However, beyond this symbolic meaning, thinking about the possibility of Nur being a reality at the quantum level creates an interesting bridge between modern science and mysticism. Quantum physics provides a deep understanding of the nature of light and energy. Light acts as both a particle and a wave, forming one of the fundamental building blocks of reality. Concepts such as quantum entanglement and superposition reveal that reality is essentially an interconnected structure. In this context, light and energy can be thought of as part of a dynamic system in which all beings interact with each other.

These quantum level reflections of Nur can emphasize the connection between spiritual and physical beings. If light is considered a fundamental form of energy in the universe, then Nur’s symbolic quality that illuminates the soul can also become a concept representing a universal reality. Considering that light provides a connection between beings in both the physical and metaphysical dimensions, this

suggests that Nur may not only be a symbol but also an expression of a profound reality. As a result, the divine Nur carries a valuable meaning both as a symbol that illuminates the soul and is enriched by the idea that it may be a profound part of reality at the quantum level. These two dimensions provide a powerful interaction that can help individuals understand their existential experiences and their place in the universe. Nur's reality, both symbolic and quantum, can open new horizons for people in their search for wisdom, knowledge and a profound connection.

31- QUANTUM ENTANGLEMENT IN THE DIVINE CONNECTION OF SOULS

Quantum entanglement is the instantaneous interaction of two particles in the physical world despite the distance between them. This phenomenon is what Einstein called "spooky interaction at a distance," and although it is not yet fully understood, entanglement is considered one of the most mysterious aspects of quantum mechanics. So how does this phenomenon relate to the idea that souls are connected by a divine bond? According to Sufi teachings, all beings are reflections of the unity and power of God. According to the concept of the unity of existence, everything comes from a single divine source and is essentially part of this unity. Souls are beings born of this unity and are subject to a divine order. Sufis believe that souls are connected to each other as parts of a whole by a deep spiritual bond. In Sufism, this spiritual bond is thought of as a reflection of God's all-encompassing presence beyond the boundaries of time and space. The phenomenon of quantum entanglement refers to two particles behaving as if they were a single entity despite the physical distance between them. This gives the impression of some kind of connection beyond space and time. According to an approach that thinks that souls are also connected to each other by such a divine bond, quantum entanglement can be a parallel to the idea that souls are also in a kind of "spiritual entanglement." From a Sufi perspective, this bond can be associated with the omnipresence of God's existence and the potential for souls to reach unity in his presence. This analogy between the metaphysical and quantum worlds is based on finding similarities in two different planes of reality rather than scientific evidence. The fact that quantum entanglement is an observable event in the physical world can be perceived as a spiritual symbol or metaphor that souls are also connected to a divine order in this way. Therefore, the idea that quantum entanglement can show that souls are connected to each other by a divine bond creates an area where Sufi thought and scientific theories can work in parallel.

32- FORMATION OF PHYSICAL BEINGS BY LIGHT, THE FUNDAMENTAL BUILDING BLOCK OF CREATION

Light plays a central role in understanding both physical beings and the universal order. In physics, light is a form of electromagnetic radiation and is carried by photons, which have both wave and particle properties. In Islamic and Sufi thought, light (nur) is considered a symbol of divine knowledge, existence

and creation. The intersection of these two different perspectives is that light plays an important constructive role in both the physical universe and the metaphysical world.

In the physical world, light has a great effect on how beings are shaped and appear. For example, all objects we see with the eye become visible to us by reflecting the light falling on them. Light interacts with matter as an electromagnetic wave and affects the energy levels of atoms. Electrons in the structure of matter can rise to higher energy levels by absorbing photons or return to their previous levels by releasing this energy. These basic processes determine the structure and appearance of matter in the physical world. Since light also carries energy, it plays a role as a catalyst in the formation of matter and various chemical reactions. However, on a deeper level, the question of whether light is the fundamental building block of creation has both a scientific and metaphysical dimension. According to the Big Bang theory, the universe initially emerged with a dense and hot explosion of energy, and this energy transformed into mass, that is, matter. In this process, light was one of the earliest elements to form, and with the expansion of the universe, it paved the way for the formation of beings. In terms of quantum mechanics, light (photons) is considered one of the fundamental particles that carry the electromagnetic force. From this perspective, light is one of the fundamental building blocks of the universe and provides the relationship between energy and matter.

From a metaphysical and religious perspective, light is the essence of creation. In Islam, there is a belief that "light", which is accepted as the first creation of Allah, is the source of all beings. Allah's name "Light" expresses His aspect that illuminates everything, creates everything and is the source of knowledge. In this context, light is not only a physical phenomenon, but also a symbol of divine knowledge and existence. As a reflection of creation, light enables the formation of beings on both the physical and spiritual planes. As a result, light is a fundamental energy source that determines the visibility and structure of beings in the physical universe. In the quantum world, photons shape the interactions between substances and carry the electromagnetic force. In a metaphysical sense, light is seen as a reflection of divine existence and a symbol of creation. In both respects, light can be considered one of the basic building blocks of the formation of beings and creation.

33- DIVINE ORDER AND THE CONSTANT SPEED OF LIGHT

The speed of light is one of the fundamental constants of the universe, and understanding why this speed is the same for everything is one of the most fundamental questions of physics. Light is propagated by photons, which travel as electromagnetic waves, and since these photons have no mass, they travel at their highest speed in the vacuum of space. The speed of light in a vacuum is approximately 299,792,458 meters per second (approximately 300,000 km/s). This speed is at the center of Einstein's general and special theories of relativity and is a fundamental limit for all observations and events in the universe. So why does light exceed everything in the universe at the same speed, and can this be seen as an indication of a divine order?

The fact that light travels at a constant speed is a direct result of the symmetry and order in the structure of the universe. Physical laws operate in the same way everywhere in the universe, and this symmetry ensures that the speed of light is universal. According to Einstein's theory of special relativity, no object or information can exceed the speed of light. This speed is considered a constant in the structure of the universe. The invariance of the speed of light also deeply affects our perception of time and space; moving observers may be in different time zones, but the speed of light remains the same for both. This constant speed forms the basic building blocks of the physical universe, while at the same time indicating that everything in the universe has an interconnected and consistent order. In Islamic thought, this order in the universe is interpreted as an order reflecting the divine unity and power of Allah. The universality of the constant speed of light can be a symbol of a system in which all beings and events operate according to a divine will. The Quran also emphasizes that Allah has a power that encompasses everything and that the connection between beings is possible with his knowledge and power. The fact that light moves at an unchanging speed among all beings in the universe can be seen as a reflection of this divine order in the physical world. From the perspective of Sufism, light (nur) is considered a symbol of the unity and existence of Allah. The Surah an-Nur describes Allah as a being who illuminates, organizes and encompasses everything in the universe. In Islam, light is not only a physical phenomenon, but also the essence of divine knowledge and existence. The immutability of light can be associated with the immutability of divine will and knowledge in this sense. The fact that the speed of light is constant in the universe created by Allah can be interpreted as an indication of this divine order. Just as light always spreads at the same speed, the divine order is always consistent and unchanging. As a result, while the fact that light moves at a constant speed in the universe reflects a fundamental rule in the physical world, this situation can also be interpreted as a symbol of a divine order. In Islamic thought, Allah's power that encompasses and unites everything in the universe can have a similar meaning to the immutable speed of light. The constant speed of light carries a deep meaning both scientifically and metaphysically, as an expression of an order and consistency that is valid everywhere in the universe.

34- THE MYSTERY OF LIGHT DARK MATTER AND DARK ENERGY

Dark matter and dark energy are two of the greatest mysteries of the universe, and scientists have yet to fully explain these two phenomena. Dark matter is a type of matter that is thought to exist to explain the gravitational effects in the universe, but cannot be observed directly. Dark energy, on the other hand, is a mysterious type of energy that causes the universe to expand at an accelerating rate. The question of whether these two concepts represent unknown aspects of light can be addressed from both a scientific and philosophical perspective.

In a physical sense, dark matter and dark energy cannot be directly associated with light because they do not interact with electromagnetic waves, i.e. light. Dark matter affects the gravity around galaxies and other celestial bodies, but does not emit, absorb or reflect light. That is why it is called "dark". When

it was insufficient to explain the distribution of observable matter, the concept of dark matter emerged. In other words, it does not represent unknown aspects of light, but an unseen and ununderstood form of matter.

Dark energy, on the other hand, is a type of energy that accelerates the expansion of the universe, further widening the gaps between galaxies. This phenomenon has revealed that the universe continues to expand rapidly and that this expansion is much faster than expected. Again, dark energy, although not directly related to light, symbolizes a form of energy that controls the expansion process in the universe and is difficult to understand. Instead of the unknown aspects of light, it can be interpreted as the power behind the expansion of the universe. However, beyond these scientific facts, from a metaphysical and philosophical perspective, dark matter and dark energy can represent the shadowy aspects of the symbolic meanings of light. Light is usually associated with knowledge, consciousness and enlightenment. In contrast, dark matter and dark energy may symbolize the parts of the universe that are not yet understood, with their mysterious and unknown dimensions. In Sufism, light (nur) is the symbol of divine knowledge and existence; darkness, on the other hand, has a meaning that is unknown, hidden or waiting to be revealed. In this respect, dark matter and dark energy can be considered metaphorical representatives of the unknown or yet to be discovered aspects of the universe.

Another interesting point is that light does not affect dark matter and dark energy. This shows that we are not limited to the observable light and matter in the universe, and that the unseen aspects of existence make up a much larger part of the universe. These unknowns point to deeper, mysterious dimensions of existence. As a result, dark matter and dark energy do not directly represent the unknown aspects of light, but they do express the mysterious, unexplored parts of the universe. From both a scientific and metaphysical perspective, dark matter and dark energy can be considered as the unknown aspects of the universe that remain in the dark, indicating that there is a greater reality waiting to be discovered beyond the areas illuminated by light.

35- THE LIGHT METAPHOR THAT COMBINES THE MOMENTS OF CREATION AND DESTRUCTION

Yes, light can be a powerful metaphor that unites both the moments of creation and destruction. From a physical, metaphysical and symbolic perspective, light can be seen as an element that brings together the two opposite poles of existence.

From a physical perspective, light plays a central role in both the creation of the universe and the processes of destruction. According to the Big Bang theory, the universe began with a dense and hot explosion of energy. The first thing that was emitted after this explosion was light. Therefore, light can be considered the symbol of the creation of the universe. The electromagnetic waves and photons that emerged at the moment of creation carried the energy that formed the building blocks of the universe and ensured the formation of the first substance. On the other hand, light also plays an important role in the destruction process of large structures in the universe, such as stars and galaxies. During a star's life

cycle, it emits light and energy through nuclear fusion. However, when stars run out of fuel, they can be destroyed in dramatic explosions such as supernovas, and these explosions emit intense amounts of light into the universe. Although this is an expression of destruction, it also leads to the dispersion of materials for new stars and planets. Therefore, light also plays a fundamental role in the destruction processes in the universe and may indicate that these processes pave the way for a kind of rebirth.

From the perspective of quantum physics, light also transcends the boundaries of creation and destruction. Photons play an important role in the quantum world, where matter and energy are constantly transformed and particles are created and destroyed. For example, when an electron falls from a high energy level to a lower energy level, this process results in the emission of a photon (a particle of light). Here, energy is created from nothing, but it also means a kind of transformation or destruction. These cycles of creation and destruction in the quantum world show that light can be a metaphor that unites these two opposite phenomena. From a metaphysical and religious perspective, light (nur) bridges the beginning and end of existence. In Islam, Allah's attribute "Nur" expresses His power that illuminates and creates everything. Allah created the universe with "nur" and this light became the source of all beings.

Creation, in a sense, begins with the manifestation of Allah's light. Annihilation can also be seen as the withdrawal of this light, that is, the end of existence. In Islamic thought, the command "kün" (Be!) symbolizes the beginning of creation, while the annihilation of beings can be associated with the withdrawal of this divine light. In Sufism, light points to the truth of the human soul and the universe. In the soul's journey from existence to annihilation and resurrection, light is the symbol of consciousness and truth. Symbolically, light represents the illumination of creation and the transition of annihilation into darkness. At the moment of creation, beings are revealed by light and given consciousness. Light is also the symbol of knowledge, consciousness and awareness. Annihilation, on the other hand, is associated with the extinguishing of light, that is, the closing of consciousness. However, this darkness is often seen as the beginning of a cycle. Death and annihilation can herald a new beginning, just as light is born after darkness. This cyclical nature allows light to be a metaphor that combines both creation and annihilation. As a result, light carries a powerful meaning as a metaphor in which both creation and annihilation are combined. In the physical world, it is an element that determines the beginning and end of the universe, and in the metaphysical world, it is the symbol of existence and non-existence, consciousness and darkness. Light, as much as it is a manifestation of creation, represents the mysterious bond between existence and non-existence, as a symbol of annihilation.

36- CONNECTION OF LIGHT WITH CONSCIOUSNESS AND THE SPIRITUAL WORLD

The relationship between visible light and invisible light (such as X-rays, gamma rays) can have a deep meaning not only on a physical plane, but also in metaphysical and symbolic meanings. From a scientific perspective, these types of light belong to different parts of the electromagnetic spectrum and have different energy levels. However, when these lights are considered in a broader context, they have a

deep potential to create metaphors related to consciousness and the spiritual world.

Visible light covers only a narrow range of the electromagnetic spectrum and is the only light we can perceive with our eyes. We see colors, objects and everything around us in the universe thanks to visible light. This light is a tool that shapes our reality in our daily lives and is indispensable for the perception of the material world. However, the electromagnetic spectrum is not limited to visible light. Invisible light such as X-rays, gamma rays, ultraviolet and infrared are also located in other parts of this spectrum, but the human eye cannot perceive them.

These invisible light types are scientifically high energy wavelengths and interact with matter in very different ways. For example, X-rays are used to examine the inside of the human body, while gamma rays are associated with cosmic events such as supernova explosions. Seeing that these lights reveal aspects of the physical world that our eyes cannot perceive but are real can lead us to a symbolic thought. When these scientific facts are interpreted on a metaphysical level, visible light symbolizes the means by which we perceive the material world, while invisible lights can be related to consciousness, soul and deep truths. Invisible lights can be symbols of deeper, spiritual dimensions that we cannot perceive with our physical eyes but that we know exist. This idea finds a strong echo especially in Sufism and mystical teachings. In Islamic Sufism, light is associated with the attribute of Allah as "Nur" and light is seen as the source of both the physical and spiritual worlds. Invisible lights can also be a symbolic equivalent of the depth of the soul, the subconscious or spiritual worlds. In Sufi thought, there are deep realities that we cannot perceive with our senses but grasp with spiritual intuition. Invisible lights can be symbols of such truths.

The fact that X-rays penetrate matter and reveal the inner structure can be interpreted as an intuition or divine awareness that reveals our subconscious or spiritual depths. High-energy lights such as gamma rays can represent intense energy and consciousness explosions experienced during moments of spiritual awakening or mystical experiences. Does It Address Consciousness and the Spiritual World? Scientifically, invisible lights such as X-rays and gamma rays do not have a direct relationship with consciousness. They are high-energy electromagnetic waves and are defined by interactions in the material world. However, in a symbolic and metaphysical sense, these lights can be metaphors that transcend human consciousness and represent the spiritual world. The fact that invisible lights are beyond the limits of the human eye may also indicate a deeper reality beyond the limited perception of human consciousness. In Sufism and other mystical teachings, it is believed that there are dimensions that a person cannot perceive with their limited consciousness, but can become aware of through spiritual elevation. In this context, invisible lights can be considered a metaphor for spiritual depths or beyond consciousness. While visible light represents the material world, physical existence and the reality we perceive in daily life, invisible lights (X-rays, gamma rays) can be thought of as symbols that speak to the deeper, conscious and spiritual world. Although scientifically these lights are electromagnetic waves with different energy levels, their invisible nature can be a powerful metaphor expressing intuitive and spiritual depths that go beyond human consciousness. In this way, invisible lights can symbolize spiritual awakening, beyond consciousness experiences or moments of divine awareness.

37- QUANTUM TUNNELING AND THE SUDDEN DISPLACEMENT OF LIGHT AND SPIRITUAL LEAP (MAJOR JUMP)

Quantum tunneling and the sudden transition of light from one place to another can offer a deep metaphysical connection that can be seen as parallel to a spiritual leap or maqam jump. These two phenomena symbolize a mysterious transition between the physical and spiritual worlds, and both concepts include the idea of crossing boundaries and moving from one point to another through unusual means.

Quantum tunneling is a phenomenon in the physical world that refers to a particle passing through an energy barrier that it normally cannot pass and passing to another region. Although this seems impossible according to the laws of classical physics, in the quantum world, particles can "tunnel" by passing through barriers within certain probabilities and appear somewhere else in an instant. This process symbolizes the unexpected change of location of matter by passing physical boundaries and obstacles.

In the quantum tunneling phenomenon, while the particle is present at one point, it passes through the energy barrier and suddenly passes to another position. This situation, which is impossible according to the laws of classical physics, is possible at the quantum level. The particle opening a "tunnel" and passing to another point goes beyond the usual understanding of time and space in the physical world. This is the overcoming of obstacles and the unexpectedness of a process. In Sufism and mystical thought, it is accepted that the human soul progresses between stages by making a spiritual journey, reaching a higher level of consciousness and awareness at each stage. These spiritual leaps can be defined as moments when a person reaches a deeper spiritual understanding. Each stage has a kind of spiritual energy barrier or test quality, and the crossing of this limit results in the person passing to a higher level of consciousness. This process is like a kind of internal "tunneling"; the soul reaches a higher level of spiritual awareness by passing through certain boundaries and obstacles. A spiritual leap means that the soul suddenly passes from one level of consciousness to another. This process is usually full of difficulties, internal obstacles and tests. However, just like quantum tunneling, a person can unexpectedly make a leap over these obstacles and reach a higher spiritual level in an instant. This leap symbolizes the soul's transition to a level closer to divine awareness.

There are several basic parallels between quantum tunneling and spiritual leaping: Quantum tunneling occurs by overcoming a physical barrier, while spiritual leaping means that a person passes through their inner barriers and boundaries to reach a higher level of consciousness. Both processes symbolize going beyond classical boundaries and reaching from one point to another with an extraordinary movement.

In quantum tunneling, the particle passes from one place to another suddenly, not in a certain period of time. Similarly, spiritual leaps sometimes occur suddenly, with an inner awareness or a divine realization. A person can suddenly make a leap and reach a higher level after years of spiritual effort.

Uncertainty is a fundamental principle in the quantum world. The behavior of particles is based on probability, not certainty. The spiritual journey is also full of uncertainties; The person does not know how long he/she will remain in which station or when the next leap will occur. This uncertainty is a common element in both quantum physics and the spiritual journey. Quantum tunneling challenges the classical understanding of time and space. Similarly, the spiritual leap symbolizes transcending the worldly understanding of time and space and getting closer to a divine reality. When a person has a spiritual experience, this experience can be a moment of awareness that transcends time and space. Both processes, whether physical or spiritual, can be seen as a manifestation of some kind of divine order. Quantum tunneling shows how the world of "possibilities" works in the universe and that physical boundaries can actually be flexible. Spiritual leaps, on the other hand, symbolize the progress of the human soul in the divine order and the possibility of unexpected leaps on this journey. As a result, a strong parallel can be established between quantum tunneling and the spiritual leap. The unexpected crossing of boundaries by particles in the quantum world can be likened to the soul's transition to a higher level of consciousness by overcoming obstacles on its spiritual journey. These two phenomena, albeit in different dimensions, represent man's quest to transcend both physical and spiritual boundaries and the instantaneous transformations experienced in this process.

38- QUANTUM UNCERTAINTY OF PHOTONS AND THE UNLIMITED POTENTIAL OF THE HUMAN SOUL

The quantum uncertainty of photons can be considered as a deep metaphor symbolizing the unlimited potential of the human soul. In quantum physics, photons, namely light particles, are entities subject to the uncertainty principle, acting as both waves and particles. This uncertainty indicates that a photon can contain multiple possibilities at the same time and that a result becomes clear only when a measurement is made. Similarly, the concept of the unlimited potential of the soul expresses the capacity of a person's soul to reach infinite levels of possibility and consciousness despite having a limited physical existence.

In the quantum world, due to the uncertainty principle, the positions and speeds of particles such as photons cannot be known with certainty at the same time. A photon exists as a wave of probability as long as it is not observed and can be in a different position at any moment. This shows that the existence of a photon carries multiple potentials. When you measure the position or speed of a photon, you only pull one of the possibilities into reality, and the other possibilities disappear.

This behavior of photons shows the infinity of uncertainty and possibilities in the quantum world. A photon can exist and disappear at the same time, it can both spread like a wave and exist at a point like a particle. This supports the idea that potential in the universe is unlimited and reality is multiple.

According to Sufi thought and many mystical teachings, the human soul has infinite potential. The limited physical existence in the physical world does not prevent the soul from having unlimited possibilities as a divine essence. While the human soul experiences various experiences in the limited

world, it can actually reach a deep level of consciousness and awareness and realize its potential that transcends boundaries such as time, space and body. According to this perspective, the soul can be defined as a "possible being". Just as the photon carries many possibilities within quantum uncertainty, the human soul also has a potential that has not yet emerged but has infinite possibilities. Humans have the power to realize these possibilities with their own spiritual development and awareness. The potential of the soul is shaped by the choices made throughout life and the spiritual journey. This can be thought of as a person "reaching" a certain potential on their spiritual journey, just as a photon "collapses" into a certain state when observed. The quantum uncertainty of photons shows that there are possibilities in every corner of the universe and that the truth becomes clear only when an observation is made. The human soul also has unlimited potential. Potentials that have not yet been revealed are shaped by the experiences of the soul and become a concrete reality. It is uncertain which path the photon will take, but a certain result is reached when a measurement is made.

The free will and choices of the person also determine which possibilities their soul will take shape among. The soul can be thought of as a potential "probability wave" and the choices made determine in which direction this wave will collapse. In the quantum world, the ability of the photon to pass from one place to another and to be in more than one place with its existence indicates the existence of unlimited potential in the universe. Similarly, the human soul is considered to be an unlimited entity at the universal level; it can reach an infinite level of consciousness by transcending the boundaries of space and time. In quantum physics, the fact that photons change their behavior when observed supports the idea that consciousness shapes reality. The human soul also shapes its reality with conscious awareness. As the consciousness of the soul increases, potentials are realized and the opportunity to reach higher spiritual levels arises. Quantum uncertainty shows that even the smallest building blocks of the universe are far from certainty and that possibilities prevail. This uncertainty can be interpreted as part of a divine order; the soul's unlimited potential is a symbol of the journey to reach divine awareness within this order. The uncertain nature of photons points to the soul's existence full of divine possibilities. In this process, the choices a person makes and the spiritual development in their life determine how the soul will shape this unlimited potential. As a result, the quantum uncertainty of photons offers a powerful metaphor for the unlimited potential of the human soul. The uncertainty of photons symbolizes the soul's structure, which has not yet been discovered, but is full of infinite possibilities.

39- THE DIVINE LIGHT'S ILLUMINATION AND GUIDANCE OF THE HUMAN HEART

Divine light holds an important place in Sufism and many spiritual teachings as a metaphysical and spiritual power that illuminates and guides the human heart. This light, like the physical light in the material world, does not only illuminate the objects we can see; it is also a divine light that illuminates the inner world, consciousness, heart and soul of man. This spiritual enlightenment guides man on his journey to reach the truth and comprehend the divine realities.

According to the Sufi understanding, the human heart is both a physical and spiritual center. The heart is

directly related to man's spiritual state and his capacity to be open to divine realities. Divine light guides him on the path of truth by purifying the heart from darkness. This light is considered a reflection of the light of God and manifests itself in the heart of man, purifying him, purifying him and bringing him to a deeper level of awareness. The verse "Allah is the light of the heavens and the earth" in the "Nur Surah" of the Quran expresses the illuminating and guiding role of divine light in both the material and spiritual worlds. The light of Allah is defined as a power that encompasses all beings and creates them. When the human heart meets this light, it is freed from darkness and reaches the truth and divine knowledge. As the heart is purified from worldly desires and dirt, it becomes more open to the divine light. On the path of Sufism, one of the basic ways to prepare the heart for the divine light is to detach one's soul and heart from worldly ties and reach a higher level of consciousness. A person who purifies his soul creates an environment suitable for the manifestation of the divine light. This process, in a sense, allows the divine light to penetrate into the depths of the heart, just as physical light illuminates a room. Divine light is also the source of knowledge and wisdom. As the heart is filled with this light, the person begins to comprehend the truths beyond the material world. Wisdom develops with the flowering of this light in the heart. This divine light, which unites the mind and heart of man, helps him find the right path in both worldly and spiritual life.

Divine light is the inner guide of man. This light guides the heart of the individual, enabling him to make correct and wise decisions in the face of the difficulties and questions he encounters in his life. The guidance of divine light is felt in the conscience, intuition and deep knowledge in the heart of man. This guidance guides man in his spiritual ascent and ensures that he is filled with divine love.

In Sufi philosophy, the heart is the main gate to reach God. Divine light illuminates the human heart and strengthens his connection with God. As this light fills his heart, man begins to feel more deeply the existence of God and that He is with him at all times. Divine light not only shows man the truth, but also increases his love and devotion to God. Divine light ensures that the heart awakens and is filled with love. This love means getting rid of material ties in the world and turning to divine love, in other words, complete submission and devotion to God. The filling of the heart with divine love is a symbol of spiritual enlightenment and reaching the peak of truth. At this point, the person unites with divine truths and begins to see the entire realm of existence as a reflection of divine light. Divine light guides the person through the difficulties, confusions and indecisions they encounter in their life. This light directs the person to the right path, shows the truth and saves them from the illusions brought by the soul. As the heart is illuminated by divine light, the person's perceptions expand and they gain a deeper awareness.

The divine light illuminating the heart means that the person's inner awareness increases. This awareness enables them to gain a more balanced, conscious and spiritually valued stance in their relationship with the world. The light of the heart allows the person to see events from a broader perspective. Divine light shows the right path to the person who is in darkness or has lost their way. It is considered a light that guides the person on both their spiritual and moral journey. The power of divine guidance is expressed in the Quran by saying, "He guides to His light whom He wills." This guidance enables a person to reach the truth by turning to their inner depth. Divine light takes them to the depths of truth. This light, which develops the ability to notice and understand the realities beyond the material

world, guides them in their search for truth. As the heart becomes enlightened, a person is equipped not only with external facts but also with inner wisdom. The accumulation of divine light in the heart helps a person to reach spiritual levels and experience spiritual leaps. Each moment of enlightenment takes a person to a higher level of consciousness. This process can be thought of as a sudden leap in quantum tunneling; the human soul also transitions from one level to another under the guidance of divine light. As a result, divine light illuminates a person's heart and guides them on the path of truth. This light initiates a transformation and purification process in the inner world of man, guiding him to truth, consciousness and God.

40- THE PARTICLE-WAVE DUALITY OF LIGHT IN QUANTUM PHYSICS SHEDS LIGHT ON THE UNDERSTANDING OF EXISTENCE-NOTICE IN SUFISM

The fact that light exhibits both particle and wave properties in quantum physics sheds a deep metaphorical light on the understanding of “existence and non-existence” in Sufism. These two concepts, which seem to be opposites but can exist at the same time, offer us an important perspective in understanding the paradoxes and deep truths that lie at the core of both the quantum world and Sufism.

In physics, the fact that light behaves both like a particle (photon) and a wave is a phenomenon known as “wave-particle duality”. Sometimes light behaves like a certain energy packet occupying a space, and sometimes like a wave spreading through space. This situation has puzzled scientists for a long time, because they have sought an answer to the question of how light can be both at a certain point (particle) and everywhere (wave) at the same time. Modern quantum physics has shown that this duality is related to the observer, meaning that light exhibits different behaviors depending on how it is measured. In Sufism, “existence” (wujud) and “non-existence” (adam) are deep metaphysical concepts that explain the creation of the universe in relation to the existence of Allah. While existence points to the absolute existence of Allah, the created world is considered a reflection of this existence. Non-existence, on the other hand, expresses that the created things cannot have an independent reality outside of their true nature and ultimately the existence of Allah. In other words, the world of existence is temporary and dependent on the divine existence, while non-existence is an aspect of the infinite reality behind this existence. In Sufism, this duality is resolved by the doctrine of “Tawhid”, or unity. Although existence and non-existence appear to be opposites in appearance, this opposition actually serves to comprehend the absolute unity of God and that everything is by His will. Non-existence expresses that existence does not merge into non-existence, on the contrary, everything that exists is in reality a manifestation of God.

The relationship between the simultaneous existence of light as a wave and particle in quantum physics and existence and non-existence in Sufism offers striking parallels in understanding the unity behind duality. Let's focus on the expression of Duality in Appearance, Unity in Reality. Light is sometimes observed as a wave and sometimes as a particle depending on an observer. Although existence and

non-existence seem like two opposite poles in Sufism, they are actually a whole. While the existence of God underlies everything, non-existence expresses that what exists is not independent of Him. In other words, just as waves and particles are interdependent in quantum physics, existence and non-existence in Sufism are different aspects of the same reality.

In quantum mechanics, the behavior of light changes according to the observer's perspective. This shows that instead of an absolute reality, there is a relative reality. In Sufism, the absolute truth of existence is Allah. When a person looks at the world as an observer, they perceive material beings as real, but with a deep understanding, it becomes clear that these are only a reflection, an “apparent reality”. The real truth is the eternal and everlasting existence of Allah. Where exactly a particle of light is or when the wave will collapse is explained by quantum uncertainty. In Sufism, the fine line between existence and non-existence is a secret that a person cannot understand in an absolute sense, but can only grasp with spiritual perception. This uncertainty emphasizes that everything in the realm of existence depends on the will of Allah and that the human mind cannot fully solve this.

Light manifests itself as either a wave or a particle, depending on the observer's situation. In Sufism, created existence is a manifestation of the existence of Allah. However, this existence is not an absolute existence, it is a state of existence within non-existence. Allah is the only power that continues to create at every moment and can destroy everything at any time He wishes. This situation can be spiritually associated with the “collapse of the wave function” in the quantum. Just as light takes shape through the effect of an observer, existence also emerges or disappears by the will of Allah. The particle and wave duality of light in quantum physics sheds important light on the understanding of existence and non-existence in Sufism. Both systems are aimed at understanding the unity that lies behind opposites. Just as light can be both a wave and a particle, existence and non-existence, although seemingly opposite to each other, are actually parts of a whole. The absolute existence of Allah is the infinite truth behind everything, and the realm of existence is a temporary reflection of this absolute reality. Like light, everything comes into being or disappears depending on the will of Allah, and this process offers a profound metaphor that combines the secrets of the quantum world with spiritual truths.

41- THE FIRST LIGHT THAT EMERGED IN THE BIG BANG AND THE DIVINE WILL IN THE CREATION OF THE UNIVERSE

The first light that emerged at the moment of the Big Bang carries a deep symbolism that reflects the divine will in the creation of the universe. This light represents both the formation of the universe in a physical sense and symbolizes the divine plan and will of creation in a spiritual sense. This perspective offers important inferences from both a cosmological and mystical perspective. The Big Bang represents the beginning of the universe and the emergence of time and space. The "first light," or cosmic microwave background radiation, that formed immediately after this event symbolizes the evolution of the universe from its initial state of hot and dense matter to its current state of cooling and expansion. The existence of this first light also suggests that creation took place within the framework of a divine

plan.

The first light can be seen as a manifestation of the divine will at the beginning of creation. Sufi philosophy accepts that the will of God is the most fundamental power behind everything. From this perspective, the creation of the universe occurs as a result of a divine command. With the command "Be" (kun), the world of being and therefore the first light emerges. Light represents divine knowledge, wisdom and illumination in many religions and philosophies. In Sufism, the concept of "light" is accepted as a sign of the existence and manifestation of God. The first light is a reflection of the soul and divine wisdom of the universe. This light can be considered as a symbol of the divine knowledge and wisdom inherent in the essence of creation. The fact that the first light at the moment of the Big Bang created a cosmological existence also leads to deep thoughts on the nature of consciousness and existence. This light is a starting point that will affect all beings of the universe. The first light spreads from a single source and ensures the expansion of the universe. In Sufism, this situation can be associated with the understanding of "Unity of Being"; that is, the existence of Allah, the only being behind beings. The multiplicity of the universe is actually His manifestation. In this context, the first light is a reflection of the unity and multiplicity in the creation of the divine will. The first light also symbolizes the beginning of time and space. This reinforces the role of the divine will in the process of creation. The existence of time and space is necessary for the continuity and evolution of the realm of being. This shows that the divine will plays a regulatory role.

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