

The Universal Tasbīḥ of Beings and Electromagnetic Radiation: Toward a Scientific Interpretation of Qur'an 17:44

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ABSTRACT:

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The Holy Qur'an mentions in several verses the *tasbīḥ* (glorification) of all celestial and terrestrial beings and of all objects. These verses have become the subject of considerable debate among exegetes and a focal point of divergent interpretations. Generally, exegetes have adopted two primary approaches toward the concept of the universal *tasbīḥ* of objects. One group considers *tasbīḥ* to be in the "language of disposition," viewing disbelievers as being deprived of perceiving it. Another group understands *tasbīḥ* to be in the "language of speech" from a metaphysical perspective, asserting that the general public is deprived of witnessing it. Furthermore, some thinkers have attempted a scientific interpretation of the verse, seeking a scientific instance for the concept of universal *tasbīḥ*. While critiquing previously proposed scientific instances, this paper examines the proposed claim of the correspondence between the emission of electromagnetic waves by objects and the material dimension of the universal *tasbīḥ* of beings as a physical instance of the *tasbīḥ* of all objects. According to this claim, since these waves are emitted from all material phenomena and creatures in all states, the *tasbīḥ* of beings is in the "language of speech." Its physical and material manifestation is the emission of electromagnetic waves from all objects, which non-experts cannot perceive. This interpretation can also be compatible with the metaphysical *tasbīḥ* of objects in the language of speech,

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in the sense that its material manifestation consists of the electromagnetic waves emitted from all material objects.

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1. Introduction

Scientific interpretation, as an interdisciplinary approach, is based on explaining revelatory propositions from the perspective of the definitive achievements of the natural sciences. This is done to reveal the harmony between religious truths and scientific findings and to identify new layers of meaning that have been neglected in classical interpretations (Zouelm 2025). This method of research re-reads verses in light of modern knowledge; for instance, in the study of the “Verse of Light” (Q. 24:35), divine manifestation is analyzed based on optical physics and the electromagnetic radiation characteristics of olive oil (Moradi & Gholampourmir 2025; Zouelm 2025). In addition to physics, this approach has been applied to fields such as meteorology and geology to explain phenomena such as the mechanism of hail formation and the relative movement of mountains based on verses from Surah al-Nūr and Surah al-Naml (Barati & Paymard 2022; Barati 2022). Furthermore, scientific interpretation has opened new and tangible horizons in Qur'anic studies by using biometric knowledge to analyze the miracle of fingerprints (Shenassa & Houshmand Viki 2023) and by utilizing archaeological findings to understand the background of the angels' knowledge of human corruption on earth (Morakkabi & Zerehsaz 2024). Finally, even destructive and historical phenomena such as the “Scream” (*ṣayḥah*) have been scientifically analyzed within this paradigm from the perspective of acoustic physics and shock waves (Moradi 2022).

In this paper, an attempt is made to examine the universal *tasbīḥ* of objects from the perspective of natural sciences. Some verses of the Qur'an indicate the consciousness and knowledge of all beings and speak of the *tasbīḥ* of all objects in the universe:

تُسَبِّحُ لَهُ السَّمَاوَاتُ السَّبْعُ وَالْأَرْضُ وَمَنْ فِيهِنَّ وَإِنْ مِنْ شَيْءٍ إِلَّا يُسَبِّحُ بِحَمْدِهِ وَلَكِنْ لَا تَفْقَهُونَ تَسْبِيحَهُمْ
إِنَّهُ كَانَ حَلِيمًا غَفُورًا (الإسراء / 44)

The seven heavens glorify Him, and the earth [too], and whoever is in them. There is not a thing but celebrates His praise, but you do not understand their glorification. Indeed He is all-forgiving, all-forgiving (Q. 17:44).

These verses have been discussed by Muslim scholars and exegetes (Makarem Shirazi 1995, 12:134), and various claims regarding God's intent in these verses have emerged from Qur'anic and philosophical perspectives. Some Qur'anic scholars consider the concept of the *tasbīḥ* of beings and objects to be metaphorical, believing that their *tasbīḥ* is expressed through the language of disposition. Within this group, there are two views regarding the language of disposition. The first holds that beings, through the limitations and defects in their existence, point to a perfect and complete being who is their Creator. The second maintains that every being, through its specific order and unique creation, and particularly through the perfection inherent in its existence, serves as a sign and token of the power, knowledge, and perfection of its Creator.

A second group, relying on philosophical and Qur'anic arguments, considers this *tasbīḥ* to be real and maintains that all beings possess consciousness and knowledge, which are prerequisites for real *tasbīḥ*. Some researchers have also claimed that modern science confirms this Qur'anic teaching. Drawing on scientific findings in this field, they argue that everything in existence communicates in some manner and emits various types of waves. For example, certain studies suggest that acoustic waves and frequencies are generated by certain plants (Ataei Kachooei & Mehrabi Tavana 2001). Consequently, these researchers have interpreted the verses concerning the *tasbīḥ* of beings as referring to the acoustic waves and frequencies emitted by the particles and beings of the world, arguing that everything in existence has a specific sound and thus glorifies God. They further contend that this is a reality that the Qur'an articulated more than 1,400 years ago.

The flaw in the above claim is that sound waves, which are themselves a specific type of physical wave, are not emitted by all beings in existence, whether animate or inanimate, because their propagation requires a material medium. This is inconsistent with the universality implied by the concept of a "thing" (*shay*). In this article, we propose a new claim that accords with the major achievements of physics since the late nineteenth century. According to the Stefan–Boltzmann law of radiation and established thermodynamic laws—the explanation of which will follow—there is a type of physical wave that is emitted by all beings in the universe without exception, and its emission occurs continuously. This phenomenon is more consistent with both the universality of the verse and the continuity of *tasbīḥ* among beings. In this paper, after reviewing the opinions of exegetes regarding the concept of universal *tasbīḥ*, the claim that the *tasbīḥ* of beings corresponds to the emission of these waves will be examined in terms of its compatibility with the lexical meaning of *tasbīḥ* and the interpretive

significance of the verse.

2. Exegetes' Perspectives on the *Tasbīḥ* of Beings

Some scholars consider the concept of the *tasbīḥ* of beings and objects to be metaphorical, believing that their glorification is expressed through the language of disposition. This group holds two views regarding the language of disposition: first, that beings, through the limitations and defects inherent in their existence, point toward a Perfect and Complete Being who is their Creator; and second, that every being, through its specific order and unique creation, particularly insofar as it reflects perfection within its own mode of existence, serves as a sign (*āyah*) and token of the power, knowledge, and perfection of its Creator. Others consider this *tasbīḥ* to be real and expressed through the language of speech. These two perspectives will now be examined in detail.

2.1. Language of Disposition

All beings are creatures of God, and as creatures, they possess both aspects of perfection and deficiency. Whatever deficiency they possess stems from their own essence, whereas whatever perfection they exhibit originates from their Creator. Thus, in reality, they exalt and praise their Creator through the language of disposition. Some exegetes have emphasized the aspect of deficiency in beings and explained their *tasbīḥ* on this basis: Beings, by virtue of their contingency and origination, clearly indicate the necessary existence of God Almighty, His unity, His power, and His transcendence above the attributes of contingent and originated things (al-Ālūsī 1994, 8:80).

Others have focused on the aspect of perfection in beings, linking *tasbīḥ* to it. For example, al-Rāzī (1999, 20:347-348) considers the *tasbīḥ* of accountable beings to occur through both the language of speech and the language of disposition, since their states indicate the Oneness of God Almighty. However, he regards the *tasbīḥ* of animals and inanimate objects as occurring solely through the language of disposition. In explaining his reasoning, he states: *Tasbīḥ* expressed through the language of speech is based on knowledge, understanding, perception, and utterance (*nuṭq*), and all of these are impossible in the case of inanimate objects. Therefore, the *tasbīḥ* of inanimate objects can only occur through the language of disposition. Know that if we were to attribute knowledge and speech to inanimate objects, we would no longer be able to prove these attributes for God Almighty. This would lead to disbelief (*kufr*), for it could be argued

that if the inanimate objects of the world possess knowledge of the essence and attributes of God Almighty and glorify Him despite not being alive, then the attribution of knowledge and power to a thing would not be sufficient to establish that it is alive. Consequently, we would be unable to affirm the life of God Almighty on the basis of His knowledge and power. Such a conclusion constitutes ignorance and disbelief. It is a matter of necessary knowledge that whatever is not alive cannot be knowledgeable, powerful, or speaking.

Al-Rāzī then addresses the objection raised by proponents of the language of speech, who argue that if God intended the language of disposition, this *tasbīḥ* should be comprehensible to human beings; yet the verse explicitly states, “*but you do not understand their glorification.*” He offers three responses to this objection:

1. Many wonders of creation remain concealed from human understanding, and our inability to attain a complete and profound comprehension of the marvels of creation prevents us from fully grasping the reality of the *tasbīḥ* of beings.
2. The primary addressees of the verse are the disbelievers, who remain heedless of the signs pointing to the existence of God.
3. Although ordinary believers affirm the existence of God Almighty, their limited understanding of the perfection of His power leads them to regard the Resurrection and the Gathering as improbable. Consequently, they remain heedless of many of the proofs and signs relating to divine unity, justice, prophethood, and the Resurrection (al-Rāzī 1999, 20:347–348).

Al-Zamakhsharī (1986, 2:669–670) also considers the *tasbīḥ* of beings to occur through the language of disposition, maintaining that it refers to their indication of the Creator, His power, and His wisdom, as though all beings are exalting God above the attribution of partners to Him. He proposes two responses to the aforementioned objection: first, that the verse is addressed to the polytheists; and second, that it is addressed to believers in general, with the implication that their failure to act in accordance with this knowledge prevents them from truly comprehending this *tasbīḥ*.

However, it should be noted that lack of understanding is conceptually distinct from both faith and action, a distinction emphasized in several Qur’anic verses:

- *They impugned them though they were convinced in their hearts wrongfully and defiantly... (Q. 27:14).*

- *Those whom We have given the Book recognize him just as they recognize their sons, but a part of them indeed conceal the truth while they know (Q. 2:146).*

He then raises and answers another objection. If one argues that in the verse, “*The seven heavens glorify Him, and the earth [too], and whoever is in them,*” (Q. 17:44) the verb *tusabbiḥu* (exalt) is used metaphorically for the heavens and the earth (inanimate entities) and literally for their inhabitants (jinn, humans, and angels), such an interpretation would be problematic because a single word cannot simultaneously be employed in both its literal and metaphorical senses within the same context. Al-Zamakhsharī (1986, 2:669–670) responds that metaphorical *tasbīḥ* is present in all beings, whether living or non-living, and that the verse refers universally to the language of disposition, thereby employing the metaphorical sense in both cases. Nevertheless, literal interpretation ordinarily takes precedence over metaphorical interpretation. Therefore, when it is possible to understand the *tasbīḥ* of the inhabitants of the heavens and the earth in its literal sense, recourse to a metaphorical interpretation is unwarranted.

Makarem Shirazi (1995, 12:135–137) holds a view similar to that of al-Rāzī, with the difference that he regards the *tasbīḥ* of beings in the language of disposition as a literal (real) rather than a metaphorical phenomenon, while not accepting the doctrine that all particles of the universe possess life and consciousness: Many scholars believe that this *tasbīḥ* and praise correspond to what is known as the language of disposition. It is real rather than metaphorical, but it is expressed through the language of state rather than the language of speech... At times, this language of disposition is so powerful and eloquent that it overshadows the language of speech and even contradicts it... Particularly with the advancement of human knowledge and the gradual unveiling of the secrets of this vast universe, this universal praise and *tasbīḥ* of beings has become increasingly evident... Every leaf sings the song of divine unity day and night... yet the heedless perceive nothing of it... This understanding of the universal *tasbīḥ* and praise of beings is entirely intelligible and does not require us to attribute perception and consciousness to all particles of the universe, for no conclusive proof exists for such a claim.

Mughniyah (n.d., 718) considers the language of disposition to be even more expressive and eloquent than the language of speech. He argues that all beings, whether celestial or terrestrial, are signs proclaiming “There is no god but Allah” through either the language of disposition or the language of speech. In his view, there is no doubt that all things glorify their Lord; however, the mode of *tasbīḥ* differs according to the nature of each being.

Rational beings glorify God through speech, whereas non-rational beings do so through disposition. According to Mughniyah (2003, 5:48), the language of disposition conveys meaning more effectively and forcefully than speech because speech itself requires supporting evidence, whereas the state of a thing constitutes direct evidence that leads to knowledge and certainty.

In summary, the defining feature of this first perspective is that it does not attribute consciousness to all beings. Rather, it regards the existential effects of objects, which indicate both their deficiency and the perfection of their Creator, as constituting their *tasbīḥ* through the language of disposition. Accordingly, it limits the address, “*you do not understand their glorification*,” to disbelievers. According to this view, the electromagnetic waves emitted by objects cannot be equated with their *tasbīḥ*, since these waves cannot be categorized as expressions of the language of disposition. Furthermore, owing to modern technological advances, these waves are observable even by disbelievers.

2.2. *Language of Speech with a Metaphysical Aspect*

Proponents of the language of speech in the *tasbīḥ* of beings do not claim that all entities possess a physical tongue like humans. Rather, they maintain that glorification is expressed through the unique mode of communication appropriate to each being. Relying on Qur'anic verses, they argue that all beings possess consciousness. The phrase “*but you do not understand their glorification*” (Q. 17:44) is considered the strongest evidence that *tasbīḥ* stems from awareness and speech; for if it merely referred to the language of disposition and the rational indication of a Creator, the statement that humans do not understand it would be redundant.

Additional verses are cited in support of the consciousness of matter, including God's speech to the heavens and the earth at the beginning of creation (Q. 41:11), the idols' disavowal of the polytheists (Q. 46:5), the earth speaking on the Day of Judgment (Q. 99:4), and the testimony of human limbs (Q. 41:21). In response to the objection that, if plants and minerals possessed consciousness and will, their awareness should be outwardly manifest, these scholars appeal to the concept of different levels of consciousness (Nasiri Gheydari 2022). They argue that, because beings possess varying degrees of existence, the manifestations of consciousness likewise differ. Furthermore, the precise and astonishing mechanisms observed in plants and other natural phenomena are no less sophisticated than the organized behavior exhibited by conventionally recognized living beings such as humans and animals (Tabataba'i 1996, 17:382).

Tabataba'i and other scholars also rely on philosophical arguments

concerning the ontological presence of knowledge throughout existence in order to define *tasbīḥ* as both real and vocal (Tabataba'i 1996, 17:382; Bidhendi 1998). Similarly, Motahhari (2009, 26:515) argues in favor of the language of speech on the grounds that the language of disposition is universally intelligible, which appears inconsistent with the verse's assertion that humans do not understand this *tasbīḥ*. He further notes the use of the rational plural pronoun *hum* (them) with reference to inanimate objects, arguing that such usage signifies consciousness. Qur'anic accounts of the speech of the ant and the hoopoe with Solomon likewise reinforce the view that all beings possess awareness.

In summary, this second perspective affirms the universal consciousness of beings and regards their glorification as real. It further suggests that such *tasbīḥ* may be perceptible only to those whose "inner sight and hearing" have been opened to the metaphysical realm, as was the case with Abraham (Q. 6:75). Consequently, the address "*you do not understand*" is understood to apply to the general public while excluding certain chosen servants of God. While this view acknowledges that electromagnetic emissions are physical and material phenomena and therefore cannot be identified with the metaphysical dimension of *tasbīḥ* itself, it remains silent regarding whether such waves might constitute the material and physical manifestation of that metaphysical *tasbīḥ*.

3. *Language of Speech with a Physical Aspect: The Proposed View*

This perspective proposes that electromagnetic waves constitute the physical manifestation of the metaphysical reality of the conscious *tasbīḥ* of objects. Evidence supporting this view will be presented below. The claim that there is a correspondence between the emission of electromagnetic waves by all objects and the universal *tasbīḥ* of beings may be introduced as a third perspective. Its defining feature is that it is compatible with the consciousness of objects while simultaneously defining *tasbīḥ* as a form of speech. It interprets the addressees of the phrase "*you do not understand*" on two levels: first, as non-experts who lack scientific knowledge of these phenomena; and second, as those who remain heedless of the metaphysical dimension of the world. Accepting this claim as a potential instance of the verse does not preclude other interpretations. Given that Qur'anic verses are "multi-faceted" (*dhū wujūh*) and possess "multiple layers of meaning" (*dhū buṭūn*), different instances may be identified at the literal, esoteric, or simultaneous levels of interpretation.

Some scientists believe that every biological molecule produces specific

acoustic or radio waves, the amplification of which enhances the differentiation between molecules. Although these frequencies, like radio waves, fall outside the range of human hearing, researchers have used quartz crystals in electric fields to record the vibrations generated when a virus attaches to a host cell and have converted these vibrations into electrical current (Ataei Kachooei & Mehrabi Tavana 2001). The weakness of this claim, however, is that sound waves, being a particular type of physical wave, require a material medium for propagation. Consequently, they are not emitted by all beings in existence, whether animate or inanimate, which is inconsistent with the universal scope of the term thing (*shay'*) employed in the verse.

This article presents a new claim that is consistent with the major achievements of modern physics. According to the Stefan–Boltzmann law of radiation and the laws of thermodynamics, there exists a type of physical wave that is emitted by all beings in the universe at every moment. This phenomenon corresponds more closely to both the universal scope of the noble verse and the continuous nature of *tasbīḥ* among all beings.

3.1. Introduction to Types of Waves in Physics

In physics, a wave is an oscillation accompanied by the transfer of energy that propagates through space or matter. Physical waves are divided into two principal categories: mechanical waves and electromagnetic waves. Mechanical waves propagate through material media and produce disturbances within those media; for example, sound waves propagate through the interaction and collision of air molecules. In contrast, electromagnetic waves do not require a material medium for propagation. They consist of periodic oscillations of electric and magnetic fields and can travel even through a vacuum. These waves differ in wavelength and, in descending order of wavelength, include radio waves, microwaves, infrared radiation, visible light, ultraviolet radiation, X-rays, and gamma rays (Longair 1984, 75–78).

Based on the universal application of the word *shay'* (thing) in the verse, the *tasbīḥ* of beings cannot be restricted to living organisms. Some may argue that, because living beings emit sound waves, such waves constitute the instance of *tasbīḥ* expressed through the language of speech. However, from a scientific perspective, sound waves are mechanical and longitudinal waves that necessarily require a material medium for propagation. Given that the vast spaces between celestial bodies are effectively vacuum environments, sound waves cannot propagate universally throughout the cosmos and therefore cannot reasonably be identified with the universal

tasbīḥ described in the verse.

3.2. Examination of Electromagnetic Waves as a Strong Probability for the Tasbīḥ of All Beings

The Stefan–Boltzmann law is a fundamental principle in thermodynamics and radiation physics that describes the quantitative relationship between the temperature of an object and its total radiant energy. In brief, this law states that the total power radiated per unit surface area of a black body is directly proportional to the fourth power of its thermodynamic temperature. The mathematical form of the law is as follows:

$$P = \sigma T^4$$

Where P is the radiant power per unit area, measured in watts per square meter; σ is the Stefan–Boltzmann constant; and T is the thermodynamic temperature in Kelvin (Zemansky & Dittman 1997, 96–101). The central physical implication of this law is that every object with a temperature above absolute zero necessarily emits electromagnetic radiation. Although the law was initially discovered empirically, it was subsequently derived from thermodynamic principles. Its complete theoretical explanation became possible through the work of Max Planck, whose introduction of energy quantization marked the beginning of quantum mechanics (Griffiths 2005, 8–11).

Although the Stefan–Boltzmann law predicts zero radiation at $T = 0$, attaining this temperature is physically impossible according to the Third Law of Thermodynamics. This law states that no system can reach absolute zero through a process involving a finite number of steps (Zemansky & Dittman 1997, 217–218). The fundamental explanation for this limitation lies in quantum mechanics, particularly in the Heisenberg Uncertainty Principle. According to this principle, particles at the microscopic scale cannot simultaneously possess both a perfectly defined position and a perfectly defined momentum. At absolute zero, particles would have to become completely stationary, a condition that directly contradicts the Uncertainty Principle. Even in the lowest possible energy state, a quantum system retains an irreducible quantity of energy known as zero-point energy, which prevents the system's internal energy from reaching zero. Consequently, the atoms and molecules constituting matter never cease motion entirely (Heisenberg 1930, 13–25, 133–134).

Since, according to the Third Law of Thermodynamics and the principles of quantum mechanics, no material object can attain a temperature of zero Kelvin, all matter in the universe possesses a temperature above absolute

zero. Consequently, in accordance with the Stefan–Boltzmann law, all objects continuously and inevitably emit electromagnetic radiation.

The conclusion derived from these scientific principles is that all physical bodies, regardless of their location or temperature, emit electromagnetic waves. This may be regarded as one of the most universal characteristics shared by all physical entities. Since God Almighty states in the verse Q. 17:44 that all beings perform *tasbīḥ* without exception, it may be argued that, if one seeks a natural and physical instance of the language-of-speech *tasbīḥ* of all beings, the closest candidate is the continuous emission of electromagnetic radiation from every object, for the following reasons:

- Universality: *Tasbīḥ* is universal, and electromagnetic radiation is likewise emitted by all material entities without exception.
- Continuity: The *tasbīḥ* of beings is continuous, and the emission of electromagnetic radiation is likewise continuous.
- Expression: These waves are emitted outward from beings, analogous to the outward expression involved in human verbal dhikr; in this sense, they may be viewed as an affirmation of existence.
- Comprehension: The phrase “*you do not understand their tasbīḥ*” refers to a lack of comprehension. Although these waves can be scientifically detected, their significance as a manifestation of *tasbīḥ* is not readily comprehensible to ordinary human perception.

It should be noted that the correspondence between electromagnetic wave emission and the *tasbīḥ* of all beings may be understood in two different ways. The first interpretation holds that the language-of-speech *tasbīḥ* of beings consists solely in the emission of these waves. However, this explanation appears incomplete because electromagnetic radiation, in itself, does not entail will, awareness, or consciousness. The second interpretation, which is preferred in the present study, maintains that *tasbīḥ* is fundamentally expressed through the language of speech and is rooted in the metaphysical dimension of beings. According to this view, the emission of electromagnetic waves constitutes the physical and material manifestation of that underlying metaphysical *tasbīḥ*.

3.3. Examination of the Lexical Indication of *Tasbīḥ* for Wave Emission

Language is a dynamic phenomenon that evolves over time under the influence of human culture and civilization. In the process of linguistic

development, words are generally first coined to denote tangible and perceptible objects encountered in everyday life. With the advancement of human thought and intellectual activity, non-material and abstract concepts gradually enter the lexicon. Accordingly, concrete meanings typically precede abstract meanings in the historical development of language. If a word possesses both a material meaning and several abstract meanings, the material sense is ordinarily regarded as the primary concept for which the word was originally coined. Subsequently, through perceived affinities or analogies between the material and abstract senses, the semantic range of the word expands to encompass abstract concepts.

The term *tasbīḥ*, derived from the root S-B-Ḥ, is no exception to this principle. *Tasbīḥ* is derived from *sabbaḥa*, which denotes rapid movement in water or air. It is said: (*sabaḥa sabḥan wa sibāḥatan*), meaning “he swam.” The term was later extended metaphorically to describe the movement of stars in the heavens, the galloping of a horse, and the swift pursuit of a task (al-Rāghib al-Iṣfahānī 1992, 227).

Dawud Salman al-Sa‘di interprets the *tasbīḥ* of all objects by drawing on the correspondence between the behavior of objects and the semantic components embedded in the lexical meaning of the term. He identifies characteristics such as rapid yet orderly and tranquil motion, often occurring in circular or sevenfold trajectories around oneself or another, as elements inherent in the meaning of *tasbīḥ*. He derives this interpretation through a synthesis of the concepts of *sabḥ* and *tasbīḥ* (al-Sa‘di 2011, 79). According to several Qur’anic verses, all entities in the universe possess both *sabḥ* (Q. 36:40) and *tasbīḥ* (Q. 17:44; 57:1; 24:41). Al-Sa‘di then argues that all entities, including celestial bodies, atomic particles, electromagnetic waves, and electrons, exhibit such patterns of motion, and he therefore defines their *tasbīḥ* in these terms (al-Sa‘di 2011, 208–233).

Regarding the place of human *tasbīḥ* within the broader *tasbīḥ* of all beings, he argues that, in addition to verbal and spiritual *tasbīḥ*, the entirety of the human being, including organs, tissues, cells, chromosomes, genes, and all constituent particles, glorifies the Creator. Furthermore, he interprets the use of the circular *misbahah* (prayer beads) and the sevenfold circumambulation (*tawāḥf*) of the Kaaba as symbolic reflections of the circular motions that characterize objects and the universe. Through a further line of reasoning, he seeks to establish *sabḥ*, though not necessarily *tasbīḥ*, for all beings. He argues that the terms *al-sabḥ* and *al-sibāḥah* are primarily associated with movement in water. Since seawater is continuously undulating under the influence of wind, producing waves characterized by semi-circular upward and downward motion and accompanied by sound, and since all forms of energy in the universe can be

understood in terms of waves, he concludes that all waves, and, by extension, the cosmos as a whole, may be described as *sābiḥāt* (engaged in *sabḥ*) for Allah.

Based on the foregoing discussion, the correspondence between the term *tasbīḥ* and the concept of a “wave,” as defined in the scientific discussion above, appears to be a plausible interpretive possibility.

4. Conclusion

The examination of the verses related to the universal *tasbīḥ* of beings revealed two primary interpretive approaches: *tasbīḥ* as the language of disposition and real *tasbīḥ* as the language of speech. Despite their Qur'anic, philosophical, and lexical foundations, both perspectives face challenges in reconciling the universality of these verses with the statement, “*but you do not understand their glorification*” (Q. 17:44). Consequently, the proposal of scientific instances for the *tasbīḥ* of beings may open new horizons for understanding these verses, provided that such correlations are advanced with appropriate caution and without claims of absolute certainty.

In this study, after critically examining the proposed correspondence between *tasbīḥ* and acoustic waves, it was argued that electromagnetic waves, by virtue of their universality, continuity, and emission from all material entities under all conditions, constitute the closest natural and physical instance of the material dimension of universal *tasbīḥ*. According to this proposal, the *tasbīḥ* of beings is not merely the emission of material waves devoid of consciousness; rather, it is the material manifestation of a conscious and metaphysical reality, a reality that becomes manifest in the physical world through electromagnetic radiation. In this way, a conceivable link is established between the real *tasbīḥ* of beings and its physical manifestation.

Furthermore, the etymological analysis of the root S-B-Ḥ demonstrated that the notions of motion, flow, and continuous emission are consistent with the semantic field of *tasbīḥ*, thereby lending further support to the proposed interpretation. Therefore, the claim advanced in this article merits consideration as a significant potential instance for explaining the universal *tasbīḥ* of beings.

The final conclusion is that findings from the natural sciences, particularly modern physics, can contribute to a renewed reading of the *tasbīḥ* of beings alongside traditional Qur'anic and exegetical discussions. Such a reading is consistent with the universal scope of the relevant verses and provides a promising framework for further research in the field of

scientific interpretation of the Qur'an.

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