Quantum Theory of Soul

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Abstract

The pursuit of scientific research on the soul has garnered increasing attention, yet progress has been limited. We propose that to scientifically study the soul, one must first provide it with a precise scientific definition. In this paper, we delve into the process of defining the soul scientifically and employing quantum physics to study and predict its character, qualities, and behavior.

Building upon our previous work, which presented a novel interpretation of quantum physics suggesting that everything at its core is a quantum vibrational field carrying information, energy, and matter, we put forward the concept that the soul is the content of the information carried in one's quantum vibrational field. With this definition in mind, and drawing upon the principles of quantum physics, we outline seven predictions about the soul:

1. **Soul as Essence:** The soul is posited as the essence of one's existence, determining every aspect of life.
2. **Continuity of Soul:** The soul may persist on its journey beyond the cessation of the physical body.
3. **Eternal Nature:** Despite the limitations of the physical body, the soul can be eternal and boundless.
4. **Remote Interaction:** Individuals can connect with, communicate with, and influence other souls remotely.
5. **Existence of Akashic Records:** A universal quantum vibrational field, known as the Akashic Records, contains information, energy, and matter about everything.
6. **Explanation of Spiritual Abilities:** Spiritual abilities like intuition, telepathy, and psychokinesis can be scientifically

elucidated.

7. Purpose and Meaning: The soul imbues life with purpose and meaning.

These predictions align with widespread spiritual wisdom and offer the potential for experimental verification.

Our quantum theory of soul aligns with monism, positing that the soul, spiritual heart, mind, energy, and matter are all interconnected aspects of a unified existence—the quantum vibrational field. It also supports panpsychism, suggesting that everything possesses varying degrees of soul, consciousness, and other attributes. This framework expands scientific inquiry beyond physical matter and energy to encompass soul, consciousness, and spiritual phenomena. Importantly, it bridges the gap between science and spirituality at a fundamental level, aligning with both spiritual wisdom and the discoveries of quantum physics.

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1. Introduction

In numerous religious and philosophical traditions, the soul is regarded as the spiritual essence of an individual, encompassing aspects such as identity, personality, and memories. It is considered an immaterial essence that transcends physical existence and is believed to persist beyond bodily death. This concept is central to various traditional wisdoms, including ancient Chinese wisdom, Native American Shamanism, Hawaiian Kahuna's wisdom, Hinduism, and Jainism, where the notion of the soul extends to all entities. In Buddhist and Daoist teachings, the soul carries the karmic imprints and undergoes reincarnation.

René Descartes is renowned as one of the earliest scientists to advocate for the scientific investigation of the soul. In his work "The Meditations," Descartes introduced the doctrine of Cartesian dualism, positing that the universe comprises two fundamentally distinct substances: the mind or soul, characterized by thought, and the body, composed of matter and devoid of thought [1]. According to Descartes, these two substances are separate entities capable of existing independently of each other, with humans representing a union of mind and body [2].

In "The Passions of the Soul," Descartes delved into the prevalent belief of his time that the human body housed "animal spirits" [3][4]. These animal spirits were envisioned as ethereal and mobile fluids that circulated rapidly throughout the

nervous system, traversing between the brain and muscles. It was believed that these animal spirits exerted an influence on the human soul, particularly in regard to its emotions and passions.

The rigid dichotomy between matter and mind, established by Descartes and others in the seventeenth century, has historically hindered the serious scientific investigation of the soul and consciousness [5]. Classical physics, with its deterministic and objective framework, was ill-equipped to accommodate concepts such as the soul. However, with the advent of quantum physics, there emerged a potential avenue to integrate soul and consciousness into fundamental physics. Quantum physics, characterized by its uncertain, subjective, and non-local nature, offers hope for reconciling these seemingly disparate realms.

Various approaches have been proposed to bridge the gap between soul or consciousness and quantum physics. Notably, Wigner and Stapp propose that consciousness serves as the fundamental element of the universe. They argue that quantum wave functions collapse when conscious minds select one among alternative quantum possibilities, facilitated by the quantum Zeno effect within synapses [6][7]. Penrose and Hameroff postulate the existence of quantum computing processes within the microtubules of brain neurons, which collapse the wave function [8][9]. Pribram and Bohm introduce the holonomic brain theory, suggesting that human consciousness arises from quantum effects occurring within or between brain cells [10][11][12]. Bohm further posits that observed quantum phenomena are merely "surface phenomena," representing explicate forms that have temporarily unfolded from an underlying implicate order [13][14]. In other words, the implicate order serves as the foundational ground from which reality emerges.

It is widely acknowledged that there is currently no scientific evidence supporting the existence of the soul [15][16][17][18][19]. Physicist Sean M. Carroll has presented arguments suggesting that the concept of a soul is incompatible with quantum field theory (QFT) [20]. Additionally, some physicists have pointed out that while quantum indeterminism may introduce uncertainty into physical processes, it does not provide a satisfactory explanation for how a disembodied soul could interact with the brain [21].

We believe that the lack of a scientific definition for the soul is one of the primary obstacles preventing scientists from studying it scientifically. Throughout history, major advancements in science have often begun with the establishment of a scientific definition for previously vague concepts. For instance, Isaac Newton's scientific definition of force laid the foundation for Newtonian Mechanics and sparked the scientific revolution. Similarly, the formulation of a scientific definition for energy in the nineteenth century catalyzed the industrial revolution. Claude Shannon's mathematical definition of information paved the way for information theory and the information age. To undertake a scientific study of the soul, it is imperative to begin by providing it with a scientific definition.

Another significant barrier to the scientific study of the soul is the necessity for a deeper understanding of the metaphysical implications of quantum physics. In our previous work on the quantum theory of consciousness (QTOC) [22], we introduced a novel interpretation of quantum physics. We propose that at a fundamental level, everything consists of a quantum vibrational field that carries information, energy, and matter. Quantum measurement, in this context, involves the process by which observers receive and process these vibrations, along with the information, energy, and matter they convey. This process gives rise to observed quantum phenomena and conscious experiences. We demonstrate that this

reinterpretation of quantum physics enables us to utilize quantum mechanics to scientifically investigate how the physical body can give rise to conscious experiences, thereby addressing the hard problem of consciousness.

In this paper, we put forth a scientific definition of the soul within the framework of QTOC: the soul is the quantum information carried within one's quantum vibrational field. With this definition, we aim to utilize quantum mechanics and quantum information theory to study and make predictions about the nature, characteristics, and behavior of the soul and spiritual phenomena.

In the following sections, we begin by presenting a new interpretation of quantum physics and providing a concise overview of Quantum Theory of Consciousness (QTOC). Subsequently, we outline the definition, calculation, and measurement of the soul within this framework. We then delve into the potential predictions about the soul from the perspective of quantum physics. Addressing concerns raised by Peter Clark and Sean M. Carroll regarding the compatibility of the existence of the soul with current physical laws, we propose solutions grounded in our interpretation. Furthermore, we discuss the experimental validation of the soul and the spiritual abilities predicted by this quantum theory of soul (QTOS).

In conclusion, we highlight how quantum physics portrays a world encompassing the soul, spiritual heart (as referenced in spiritual texts), mind, energy, and matter as distinct yet interconnected facets of existence. This perspective not only makes it feasible but also offers a pathway to integrate science and spirituality harmoniously.

2. A New Interpretation of Quantum Physics

Quantum physics has profoundly impacted various scientific disciplines, leading to significant advancements in technology and breakthroughs in fields such as biology, cosmology, astrophysics, particle physics, condensed matter physics, chemistry, mathematics, and information technology. Our proposed interpretation suggests that quantum physics delves into the fundamental composition of all entities [23][24][25][26][27][28]. It reveals that everything can be understood as a quantum vibrational field that carries information, energy, and matter.

The concept of wave-particle duality in quantum physics implies that even though objects possess specific characteristics like energy or mass, they also exhibit wave-like properties. These properties are typically described by parameters such as frequency (ν), wavelength (λ), and amplitude. In quantum physics, the frequency is connected with the energy (E) carried by a wave, while the wavelength is associated with the momentum (P) of the wave, as expressed by the equations:

$$E = h\nu,$$

$$P = \frac{h}{\lambda}.$$

where h represents Planck's constant. The wave function, a mathematical formula employed in quantum physics, describes the internal wave properties of an object.

In classical physics, the motion of objects is described by solving equations of motion, predicting their trajectories. Conversely, in quantum physics, the Schrödinger equation is solved, or matrix or Feynman path integrals are utilized to calculate the wave function, matrix, or Feynman path integral. These tools delineate the possible energetic and vibrational states within an object, along with the probabilities associated with these states or specific space-time coordinates.

For instance, the energetic states of a hydrogen atom can be determined through the Schrödinger equation, revealing potential energy levels represented by the equation:

$$E_n = -\frac{13.6}{n^2}\ eV$$

where n denotes integers (1, 2, 3,...) and eV signifies the energy carried by an electron in an electric field with a voltage of 1. The state of a hydrogen atom is expressed by the wave function ψ in the form:

$$\psi = \sum_{n=1}^{N} a_n \varphi_n$$

where φ_n represents the mathematical formula describing the state of the hydrogen atom in the n-th energy level, and a_n denotes the probability for the atom to occupy the n-th energy state. The summation spans from the first energetic state (n = 1) to the highest energetic state (n= N).

Similarly, a harmonic oscillator's energetic states, with an internal oscillating frequency ω, are determined through the Schrödinger equation, yielding energy levels given by:

$$E_m = (m + \frac{1}{2})\hbar\omega$$

Where m represents integers (1, 2, 3,...) and $\hbar$ is the reduced Planck constant. The state of a harmonic oscillator is described by the wave function ψ in the form:

$$\psi = \sum_{m=1}^{M} b_m \chi_m$$

where χ_m represents the mathematical formula describing the state of the harmonic oscillator in the m-th energy level, and b_m denotes the probability for the oscillator to occupy the m-th energy state. M denotes the highest energetic state achievable by the harmonic oscillator.

The probabilistic nature of objects described by wave functions, criticized by Albert Einstein as incomplete due to its inherent uncertainty, can be understood as reflecting the informational aspect of the object. To illustrate, consider a six-sided dice with different colored sides. Each throw of the dice yields equal probabilities for landing on any side, akin to encoding information using binary symbols (0 and 1). By assigning different symbols or letters to each side, one can encode and transmit information with each throw, generating a series of symbols or letters—the information. Consequently, the dice functions as both a carrier and generator of information, with each throw producing a discrete piece of information. The amount of information conveyed with each throw is quantified by information theory as $log_2 6$ [29].

Similarly, the different energetic states of a hydrogen atom or a harmonic oscillator can encode or transmit information. The quantity of information conveyed by the hydrogen atom, described by wave function (2), is:

$$S = \sum_{n=1}^{N} |a_n|^2 log_2 |a_n|^2.$$

For the harmonic oscillator (4), the information content is:

$$S = \sum_{m=1}^{M} |b_m|^2 log_2 |b_m|^2.$$

Given the wave function of a hydrogen atom or harmonic oscillator, one can ascertain the information content they carry. The information calculated in (5) and (6) is also called von Neumann entropy [30].

In conclusion, according to quantum physics, in addition to possessing energy and matter, all entities contain information. Information delineates the unpredictability or multiplicity of possibilities within an object [29][30]. Systems with information are inherently indeterminate and uncertain, with complete predictability achieved only when information is absent. Thus, the probabilistic nature of wave functions reflects their ability to capture the informational essence of objects. Classical physics, on the other hand, provides deterministic descriptions by averaging out various quantum states—the different informational states. Therefore, classical equations of motion represent systems devoid of information or provide approximate descriptions by averaging over possibilities, as elucidated by Richard Feynman [26]. This perspective underscores the profound role of information in shaping the behavior and properties of physical systems within the quantum realm.

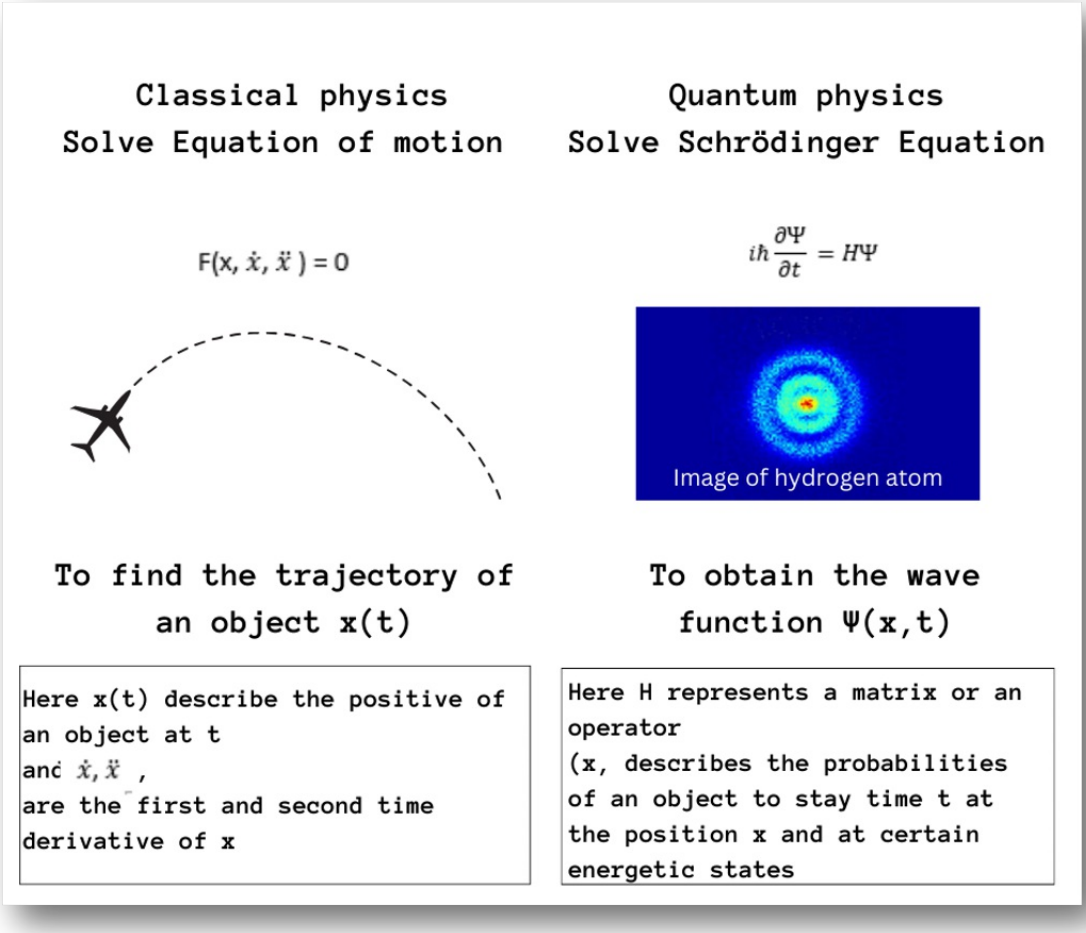

Fig. 1. The difference between classical physics and quantum physics

In addition to the inherently uncertain or probabilistic nature of quantum phenomena, they also exhibit a subjective aspect, wherein their manifestation depends on the observer. The subjective nature of quantum physics arises from the process through which observed quantum phenomena emerge from myriad possible vibrational states. Quantum physics asserts that the outcome of quantum measurements is determined by the measurement process itself. However, the mechanism underlying the collapse of the wave function during quantum measurement remains enigmatic.

We propose that quantum measurements involve the use of detectors, which play a crucial role in initiating, capturing, and exhibiting quantum phenomena [22][31][32][33]. A detector functions as an instrument capable of receiving information and energy from an object, resulting in observable changes. For instance, a camera serves as a detector, absorbing light and producing a photograph as a result. When a detector receives vibrations associated with a phenomenon or object, it processes the accompanying energy and information, leading to detectable changes in its state. These perceptible alterations represent the observed quantum phenomena. A closer examination reveals that this mechanism underpins all quantum observations. Detectors essentially "collapse the wave function" by interacting with the object's vibrations. Quantum measurement occurs through the utilization of detectors, shaping the observed phenomena. Consequently, altering the detectors employed during observation yields different quantum phenomena. The choice of detector dictates

the nature of the observation and experience, elucidating how seemingly objective physical objects give rise to subjective quantum phenomena.

Observation of quantum vibrations and their associated phenomena is contingent upon the resonance between the detectors used and the vibrations involved. For example, a conventional camera capable of capturing visible light yields a photograph displaying the image of visible light. Conversely, a camera equipped to capture infrared light produces an image representing the infrared spectrum. Thus, the detectors employed determine the observable manifestations, illustrating the subjective nature of quantum phenomena amidst ostensibly objective physical entities.

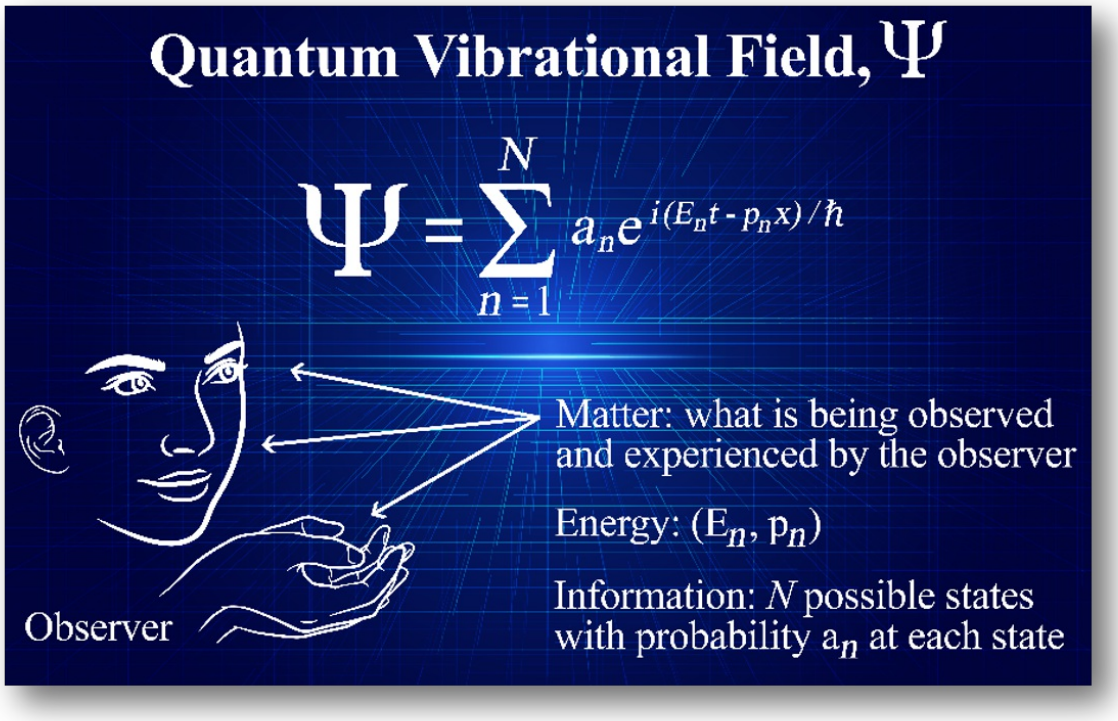

Fig. 2. Quantum measurement and quantum vibrational field

3. Relationship between Quantum Physics and Classical Physics

It is imperative to elucidate the relationship between classical and quantum physics, as misconceptions often hinder interdisciplinary applications of quantum principles in fields like biology, psychology, neuroscience, and medicine. Contrary to common belief, quantum physics isn't solely concerned with microscopic phenomena, while classical physics isn't exclusively relevant to macroscopic events. Instead, quantum physics serves as the fundamental framework applicable across all scales of the universe, elucidating phenomena ranging from subatomic particles to celestial bodies like the sun and the cosmos.

Classical physics emerges as an approximation of and can be derived from quantum principles. At its core, everything in the universe comprises quantum vibrational fields. However, an object or phenomenon may manifest as classical or

appear as a point rather than a vibrational field when observed at spatial and temporal scales significantly larger than the quantum vibrations associated with it. For instance, the observation of a plant over a minute versus a month yields vastly different data and observations. Similarly, examining the surface of a metal at nanometer, millimeter, or centimeter resolutions produces distinct images, highlighting the role of observation scale and resolution in shaping perceived phenomena.

Classical physics effectively describes quantum phenomena when the observation scale greatly exceeds the quantum vibrational scale associated with the phenomena. For instance, visible light may exhibit particle-like behavior rather than wave-like characteristics when observed at scales where its quantum nature is indiscernible due to rapid vibration frequencies and small wavelengths. However, at scales comparable to the wavelength of light, its quantum vibrational character becomes apparent, as demonstrated in experiments like the double-slit experiment.

While classical physics suffices for certain aspects of studying neural networks and brain function, it falls short in comprehensively addressing critical issues:

1. Classical physics cannot elucidate the fundamental mechanisms underlying conscious experience, as consciousness is inherently a quantum phenomenon.
2. Brainwaves, akin to radiations from atoms and molecules, encode essential information within the quantum vibrational field, necessitating quantum physics for comprehensive understanding.
3. To grasp the intricate structures and behaviors of atoms, molecules, crystals, membranes, and DNA, quantum physics is indispensable. Classical physics fails to provide adequate insights into phenomena like quantum entanglement and the formation and preservation of memory, which are pivotal in these contexts.

In essence, quantum physics serves as the foundational framework underlying all observed phenomena, emphasizing its indispensable role in understanding the complexities of the universe, from subatomic particles to biological systems and beyond.

4. Review of the Quantum Theory of Consciousness

Building upon the foundational principles of quantum physics, we derive two fundamental principles that underpin our Quantum Theory of Consciousness (QTOC), offering a novel perspective on both quantum phenomena and conscious experience.

Principle One

At the quantum level, all entities are composed of quantum vibrational fields, encapsulating matter, energy, and information. This principle elucidates that every entity can be understood as a vibrational field carrying three fundamental elements: matter, energy, and information. Here, "matter" encompasses tangible, measurable properties, while "energy" denotes the force driving change and motion. "Information" plays a crucial role in shaping the form, structure, and function

of matter and energy. For instance, information stored in a bank's database dictates an individual's account balance, while architectural blueprints determine a building's design and utility. Information can be represented as binary sequences, akin to a series of "yes" and "no" responses, facilitating precise communication and calculation.

In the realm of quantum physics, entities are described by wave functions, enabling the calculation of potential states of matter, energy, and information.

Principle Two

Objects interact with quantum vibrations through resonance, leading to the reception, processing, and subsequent observation of vibrations — encompassing information, energy, and matter — culminating in the manifestation of quantum phenomena and subjective conscious experiences. Both observed phenomena and conscious experiences are engendered by the absorption and interpretation of quantum vibrations. Conscious experiences are shaped by the nature of these vibrations, particularly the informational content received by the observer.

In QTOC, the enigmatic collapse of the wave function, postulated by prominent theorists like E. P. Wigner, H. Stapp, R. Penrose, K. Pribram, and others to explain quantum phenomena and consciousness, is rendered unnecessary. Similarly, the invocation of the elusive implicate order proposed by D. Bohm is replaced by quantum information within QTOC. By discerning the wave function of the vibrational field and employing appropriate detectors and processors during observation and conscious experience, both observed quantum phenomena and consciousness can be elucidated and computed. Our previous work has demonstrated that QTOC furnishes the foundational principles and mathematical framework to address both the "hard" and "easy" problems of consciousness. Furthermore, QTOC offers insights into large-scale phenomena, such as the synchronous brainwave activities across disparate brain regions, bodies, individuals, and even environmental elements like Schumann Resonances.

5. Quantum Theory of Soul (QTOS)

5.1. Proposal for the Scientific Definition of Soul

In light of the insights provided by the Quantum Theory of Consciousness (QTOC), we propose a scientific definition for the concept of soul, elucidating its intrinsic connection to quantum vibrational fields and information processing.

At the core of QTOC lies the recognition that everything, at its fundamental essence, comprises a quantum vibrational field carrying information, energy, and matter. Information, as a pivotal element, encompasses three interrelated aspects:

1. The content of information
2. The receiver of information
3. The processor of information

Building upon this foundational understanding, we present the following definitions:

- **Soul**: The content of information encapsulated within one's vibrational field.
- **Spiritual Heart**: The receiver or emitter of information, as referenced in spiritual texts.
- **Mind**: The processor of information within the cognitive framework.

In this delineation, the soul represents the informational essence inherent in our quantum vibrational field. The spiritual heart, akin to its portrayal in spiritual teachings, serves as the apparatus engaged in the reception and emission of quantum vibrations. It plays a pivotal role in the observation of quantum phenomena and the facilitation of conscious experiences. The mind, on the other hand, is construed as the mechanism responsible for processing information within the cognitive realm.

Neuroscience endeavors to understand how the brain functions as an information processor, elucidating the workings of the mind. With this conceptualization, any entity possessing the capacity to harbor, receive, and process information and vibrations can be deemed to possess a soul, spiritual heart, and mind. For instance, an electron, despite its microscopic nature, carries intrinsic information such as mass, spin, location, and velocity. It responds to external forces, absorbs and processes vibrations and information, thereby exhibiting characteristics akin to a soul, spiritual heart, and mind. Similarly, a hydrogen atom, with its capacity to absorb and emit light spectra, embodies the essence of a spiritual heart, resonating with quantum vibrations.

In the human context, the intricate interplay of electrons, hydrogen atoms, molecules, cells, and neurons within the body collectively engenders a multifaceted manifestation of soul, spiritual heart, and mind. Each constituent element contributes to the absorption, emission, and processing of vibrations laden with intricate information, energy, and matter. It is imperative to recognize that within the frameworks of QTOC and Quantum Theory of Soul (QTOS), the soul, spiritual heart, and mind coalesce as integral facets of one's existence, inseparable from matter and energy.

5.2. Calculation of Soul

With the definition that the soul is the quantum information in one's quantum field, it becomes possible to mathematically calculate one's soul by knowing the wave function of its quantum vibrational field. The wave function describes the potential energetic states and the probabilities associated with these states, providing a comprehensive description of the soul.

The total information contained within a soul can be quantified using the Von Neumann entropy formula:

$$S = -\sum_i \rho_i \ln \rho_i$$

Here, i represents the possible states of the object, Σ_i denotes the summation over all possible states, and ρ_i represents the probabilities of being in state i. Generally, a greater number of possible states corresponds to a larger Von Neumann entropy and thus a more extensive soul. For example, formulas (2) and (4) can calculate the information of a hydrogen atom's soul and a harmonic oscillator's soul, respectively. However, formula (2) only accounts for part of the information inside a hydrogen atom, as the nucleus and other factors also contribute.

The probabilities of occupying energetic states can be influenced by the environment. For instance, temperature and surrounding conditions can affect the likelihood of a hydrogen atom being in certain states. Therefore, an individual's soul status and the total amount of information within a soul can be impacted by the environment. Conversely, a soul can also influence and alter the environment by exchanging vibrations, information, and energy.

The influence of a soul on others through internal message exchange can be determined by the quantum entanglement [34][35] it shares with them. Quantum entanglement refers to composite states formed by objects that cannot be separated into independent parts. The entangled state can be in a specific, definite state, even if the states of the individual objects remain uncertain. Through quantum entanglement, information can be teleported remotely without physical movement, allowing a soul to influence others' states.

The amount of quantum entanglement an object possesses with others is quantified by the quantum entanglement entropy [36]. This concept is crucial in describing the quality of a soul. While further discussion on entanglement entropy is warranted, it is essential to recognize its significance in understanding the nature of the soul.

Contrary to some misconceptions, interactions with the environment do not cause the destruction or loss of quantum information. Instead, such interactions lead to increased quantum entanglement with the environment, broadening the spectrum of possible energetic states and enhancing the soul. This complexity makes objects less predictable and more challenging to control, contributing to the difficulty in developing quantum computers.

5.3. Measurement of Soul

To measure a soul, one must analyze its wavefunction, specifically focusing on the possible energetic states and their associated probabilities. Typically, this requires conducting numerous measurements. For instance, to assess the soul of a hydrogen atom, researchers can observe the vibrations emitted by the atom [36][37]. Gathering extensive data on the potential vibrations emitted allows for the derivation of information about the atom's soul. Alternatively, one can expedite the process by exposing the atom to a light beam with a wide spectrum of frequencies and wavelengths. By analyzing the light after it passes through the atom, researchers can identify which frequencies have been absorbed and in what quantities, providing insights into the atom's soul.

Quantum measurement serves as a means to gauge the essence of the soul, offering insights into its properties and dynamics. Recent studies on quantum measurement have unveiled that it triggers quantum entanglement between the measured object and the measurement apparatus. This implies that the act of measuring the soul instigates alterations within it. Furthermore, throughout the measurement process, quantum entanglement emerges among the measured soul, the measurement apparatus, and the observer. Essentially, the observer becomes an integral part of the observed system.

To assess the total information contained within a soul and its qualitative attributes, one can examine the Von Neumann entropy and quantum entanglement entropy of the system [38]. Through the exploration of these entropic measures, one is poised to unravel profound insights into the complexities of consciousness and the intricacies of the soul's manifestation

within the quantum fabric of reality.

6. Comparison with other theory and models

Physicist Sean M. Carroll has contended that the concept of a soul contradicts quantum field theory (QFT)[20], based on the assumption that the laws of physics governing everyday life are fully understood. However, this assumption is debatable, given that the foundations of quantum physics remain incompletely understood by most physicists, and a significant portion of matter and energy, such as dark energy and dark matter, elude current scientific explanations. Carroll's suggestion of "spirit particles" and "spirit forces" to explain the soul is unsubstantiated.

Quantum indeterminism has been proposed as a solution to how a disembodied soul might interact with the brain[21]. In the Eccles–Beck model [39], interaction between the self (or soul) and the brain occurs at the level of synaptic exocytosis. Neuroscientist Peter Clarke has raised concerns about the feasibility of Heisenbergian uncertainty affecting synaptic function, arguing that even if it did, thermal noise would overshadow any such effects. However, the QTOS proposed here posits that the soul already exists within current quantum physics and is described by the wave function. Soul, spiritual heart, mind, energy, and matter are all facets of the same existence—the quantum vibrational field—and do not require additional particles or forces for their existence. Furthermore, QTOS does not rely on Heisenbergian uncertainty or other forces for the interaction between soul, mind, and body. Thus, the issues raised by Carroll and Clarke do not apply to QTOS, which remains consistent with existing experiments and theories.

7. QTOS’s Predictions about Soul

With the proposed definition of the soul, the manifestation process[22][31][33] unfolds in the following sequence:

1. The soul imparts information.
2. The spiritual heart receives information from the soul.
3. The mind processes the received information from the spiritual heart and directs the flow of energy.
4. Energy mobilizes and transforms matter.
5. The transformed matter constitutes what we observe and experience.

This manifestation process indicates that the soul and spiritual heart play a more fundamental role than the mind in the process of manifestation. This insight constitutes the first prediction derived from QTOS.

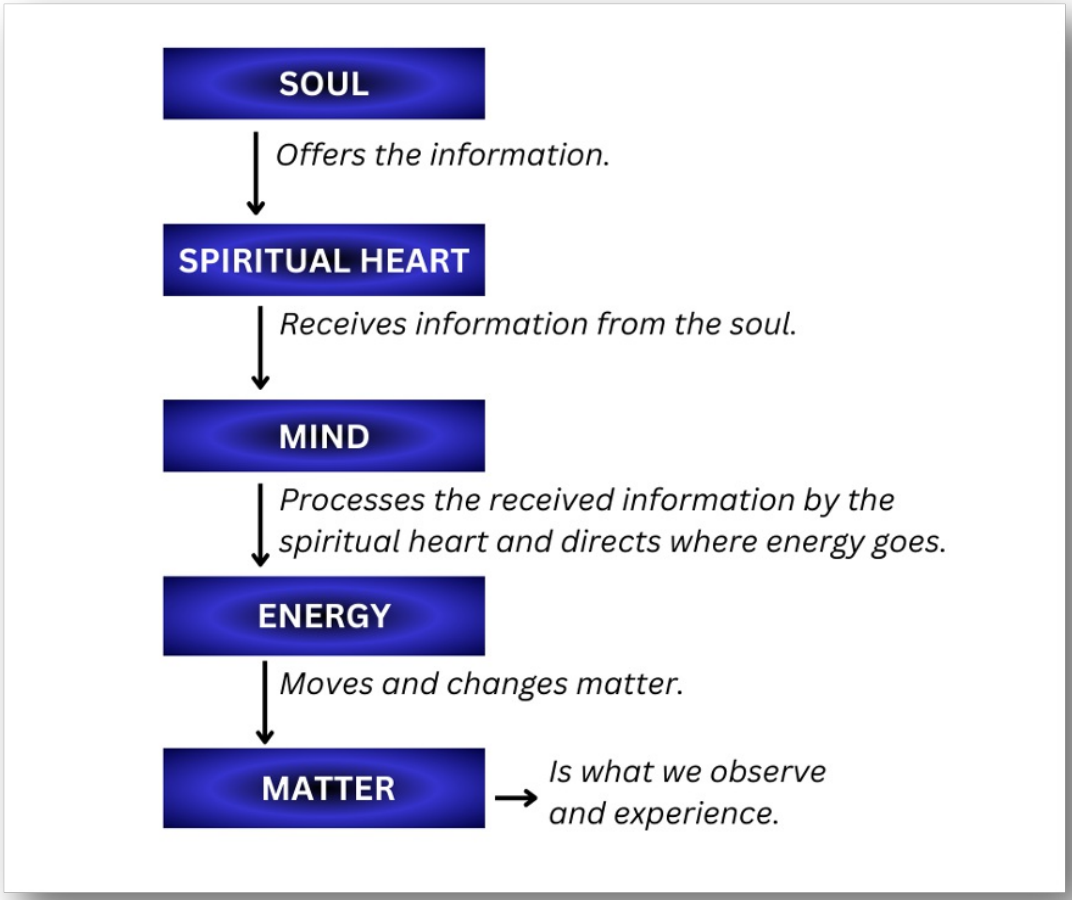

Fig. 3. Manifestation process

Prediction I: Soul Essence and the Role of the Spiritual Heart

The essence of an individual lies within their soul, as it encompasses the information carried within their vibrational field, ultimately determining the observed phenomena and conscious experiences. The spiritual heart, acting as both receiver and emitter of information and vibrations, holds pivotal importance in initiating the manifestation process. It is responsible for selecting which of the soul's potentials, representing various possible states and information, will be manifested.

Numerous spiritual texts refer to the heart, which aligns with the concept of the spiritual heart outlined here. For instance, in Buddha's teachings, it is stated that everything manifested in physical reality originates from the heart. Similar wisdom can be found in the Bible and other spiritual texts. This understanding resonates with the definition of the spiritual heart provided herein [33]. Essentially, our experiences and phenomena are shaped by the detectors we employ, which serve as the receivers of information—our spiritual hearts. Consequently, all experiences and phenomena emanate from our spiritual hearts.

Prediction II

Upon the cessation of bodily functions and the eventual death of the physical body, a portion of the quantum information contained within one's energetic field persists. This enduring quantum information enables the soul to transcend the confines of the physical form and embark on a journey beyond the material realm.

Across various spiritual wisdom traditions, it is commonly held that physical death signifies the departure of the soul from its earthly vessel, marking the commencement of a new phase of existence. In this transition, the soul transitions to a state of liberated consciousness, liberated from the limitations of the physical body, and embarks on a journey of spiritual evolution and transcendence.

Prediction III

The soul, defined as the quantum information stored within the quantum field, possesses the potential for eternal existence. Unlike the physical body, which is bound by temporal and spatial constraints, the soul transcends these limitations and can extend across space and time. In its essence, the soul is not confined by the constraints of physicality or temporality, allowing it to persist beyond the boundaries of individual lifetimes. This eternal nature of the soul suggests that it is not subject to the limitations imposed by the material world, but rather exists in a realm beyond the confines of time and space, perpetuating its existence throughout the ages.

Prediction IV

It is theoretically possible for individuals to establish remote connections, communicate with, and influence other souls. This capability arises from the expansive nature of the quantum vibrational field and the information it carries, which extends across both space and time. Through the spiritual heart, acting as a receiver and emitter of information, individuals can perceive and interpret vibrations and information emanating from other souls. Similarly, they can project their own vibrations and information to affect the consciousness of others.

However, the practical mechanisms by which the human brain or body receives and interprets specific vibrations, including thought vibrations, require further investigation and study. While the theoretical potential for such interactions exists, additional research is necessary to fully understand and harness these capabilities.

Prediction V

There exists a universal quantum vibrational field that encompasses the information, energy, and matter of all phenomena. This field, akin to the concept of the "Akashic Records," serves as a repository of knowledge about everything and everyone.

The idea of the Akashic Records originates from eastern religions and has garnered increased attention in modern times. In these belief systems, "Akasha" or "akasa" refers to the astral light or ether element, considered the fundamental fabric of reality from which all other elements emerge. Helena Blavatsky, a prominent figure in theosophy [40], introduced the term to describe an indelible recording of past and future human thought and action. She claimed to have received

insights from the akashic records through clairvoyance and psychic abilities, a practice echoed by figures like Edgar Cayce [41], known as "The Sleeping Prophet."

In various spiritual traditions such as Daoism, Buddhism, Hinduism, Shamanism, and Hawaiian spirituality, trained practitioners are believed to access information about the past, future, or remote objects through their connection to this universal field.

QTOS posits the theoretical existence of the Akashic Records as the universal quantum vibrational field containing comprehensive information about everything. These records exert influence on every aspect of existence, potentially shaping individuals' lives in profound ways. Analogous to tuning a radio receiver to access specific programs, individuals may attune themselves to receive messages and insights from the Akashic Records.

Prediction VI

Miraculous spiritual abilities, including intuition, direct knowing, telepathy, clairvoyance, and psychokinesis, can be scientifically explained and theoretically possible.

This prediction naturally follows from Prediction V, which posits the existence of a universal vibrational field accessible to all. According to this theory, individuals can potentially receive information from this field, leading to phenomena such as intuition, direct knowing, telepathy, and clairvoyance. Conversely, psychokinesis, or the ability to influence matter with the mind, may result from sending information and vibrations to the universal field to affect others.

Recent research into quantum entanglement suggests the possibility of teleportation[42][43][44], which could also be considered an extraordinary ability of the soul. It can be theorized that souls with greater quantum entanglement entropy may possess enhanced teleportation abilities. Historical accounts, such as those found in Chinese texts, describe advanced spiritual masters who could seemingly appear in multiple locations simultaneously, offering examples of teleportation.

These "supernatural abilities" can now be theoretically predicted by QTOS, providing a potential scientific framework for understanding and exploring such phenomena.

Prediction VII

The soul imbues physical life with purpose and meaning, guiding individuals towards spiritual advancement.

Explanation: According to this prediction, the soul's journey through physical life is characterized by a quest for wisdom and spiritual evolution. This journey imparts significance to existence, guiding individuals towards personal growth and fulfillment. As souls progress through life, they accumulate experiences and insights that contribute to their spiritual advancement, shaping their understanding of purpose and meaning. Ultimately, the soul serves as a guiding force, leading individuals towards greater self-awareness and enlightenment.

Predictions about Karma and Free Will

In QTOS, karma can be scientifically defined as the information record of past actions[22]. Both karma and free will play significant roles in shaping one's life. These predictions are deferred to future papers, where QTOS is expected to account for karma, cause-effect relationships, and free will, further enriching its explanatory power.

In summary, QTOS offers a framework to scientifically investigate spiritual phenomena, bridging quantum physics with spiritual wisdom.

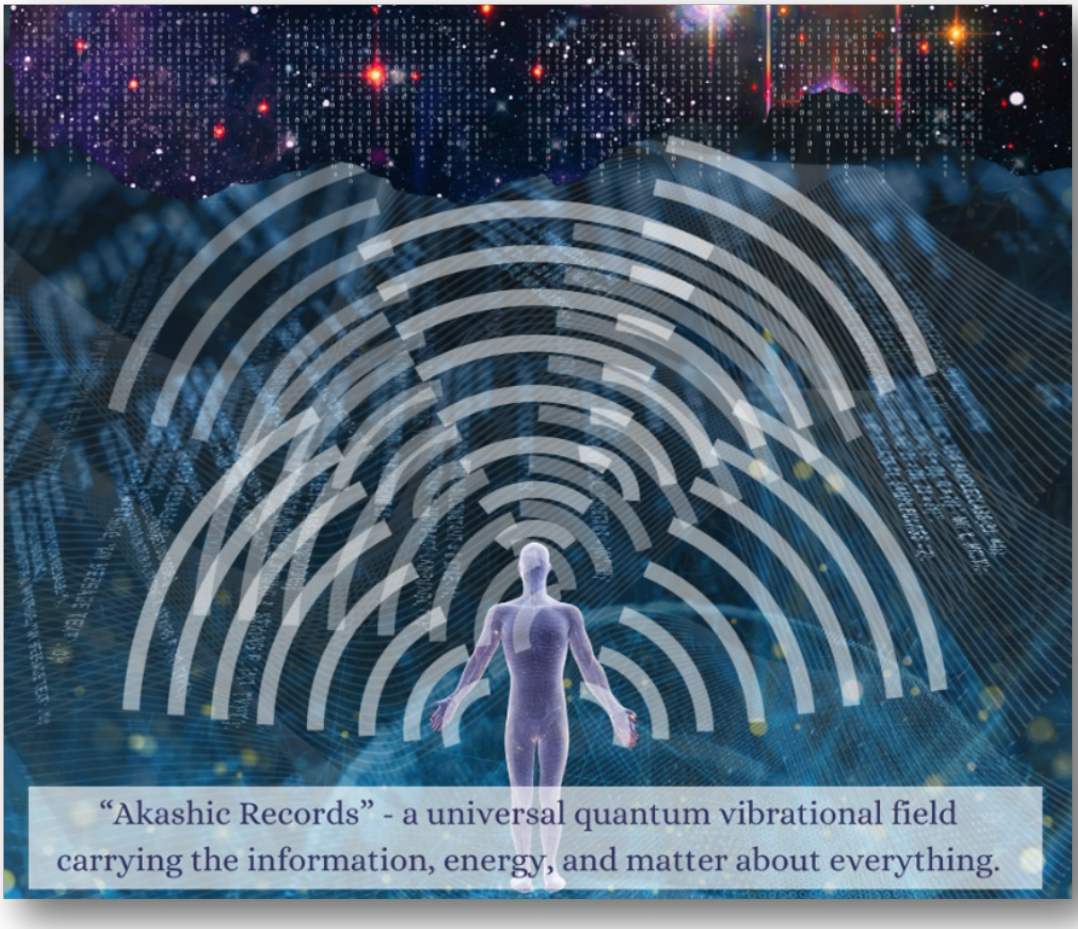

Fig. 4. Akashic record, the universal vibrational field carrying information about everything

8. Experimental Proof

In QTOS, we propose that by defining the soul as the quantum information carried in our quantum field, one can utilize quantum physics to account for the existence of the soul and its direct impact on physical existence. The experimental proof of QTOS relies on the validity of quantum physics, which has been experimentally confirmed for over a century. Quantum physics, including the wave function description of everything and quantum entanglement, has consistently demonstrated its applicability across various scales in the universe.

Remote viewing has been a subject of scientific study in investigating spiritual abilities[45]. It involves obtaining impressions about distant or unseen subjects purportedly through phenomena like direct knowing, telepathy, or intuition. While early experiments showed positive results, subsequent studies with proper controls have yielded negative outcomes [46]. As a result, the mainstream scientific community currently rejects remote viewing, considering it pseudoscience due to the lack of evidence, explanatory theories, and reliable experimental techniques [47][48].

According to QTOC and QTOS, remote viewing, along with other spiritual abilities like clairvoyance and telepathy, is theoretically possible. However, the likelihood of an ordinary human conducting remote viewing on a specific unknown remote object is close to zero. Although anyone can connect with the universal vibrational field, obtaining specific information from this vast database about an unknown remote object is nearly impossible due to the extensive range of information it contains.

In spiritual traditions such as Taoism and Buddhism, practitioners may develop extraordinary abilities like remote viewing when they reach higher spiritual states characterized by stillness of the mind. In this state, internal noise from thoughts may diminish, facilitating connection with and awareness of needed information.

From the perspective of QTOC and QTOS, remote viewing is theoretically attainable for all entities. The practical utilization of this capability relies on one's capacity to establish a connection with, become cognizant of, acquire, and disseminate relevant information from the universal vibrational field. Demonstrations of such abilities, ascribed to individuals like Edgar Cayce, offer evidence bolstering their theoretical viability and experimental validation. A double-blind placebo-controlled experiment is deemed unnecessary to substantiate the scientific plausibility of spiritual abilities in QTOS, similar to the case of black holes.

9. Conclusion

In conclusion, this paper introduces a scientific definition of the soul and illustrates how quantum physics provides a framework for investigating and forecasting spiritual abilities. These predictions resonate with established spiritual wisdom, indicating a potential convergence between scientific inquiry and spiritual understanding at a foundational level. Further research is essential to elucidate the mechanisms underlying the brain's interaction with the extensive quantum information of the soul, which facilitates conscious experience and manifestation. Moreover, this study suggests an exciting avenue for future research aimed at exploring the development of extraordinary spiritual abilities and tapping into higher human potentials.

The concept that the soul is essentially quantum information suggests a deep connection between spiritual understanding and advancements in quantum computing research. Quantum computers, by their very nature, manipulate and process information at the quantum level, harnessing the principles of quantum mechanics to perform computations far beyond the capabilities of classical computers.

If we consider the soul as a form of quantum information, intricately entwined with consciousness and the essence of being, then advancements in our understanding of the soul could indeed contribute to progress in quantum computing research. By delving into the nature of the soul, exploring its properties and dynamics, we may uncover profound insights into the fundamental principles of quantum information processing. This, in turn, could inspire novel approaches to the design and optimization of quantum computing systems, potentially leading to breakthroughs in computational capabilities and efficiency.

Conversely, the research and development of quantum computing technologies offer a unique opportunity to probe the nature of the soul and deepen our understanding of its underlying mechanisms. By studying how quantum systems manipulate and encode information, we may gain valuable insights into the nature of consciousness, intentionality, and interconnectedness—the very essence of the soul.

This reciprocal relationship between the study of the soul and quantum computing research holds great promise for advancing our understanding of both realms. As we continue to explore the mysteries of quantum mechanics and the depths of human consciousness, we may uncover profound truths about the nature of reality and our place within it.

Statements and Declarations

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