Quantum Theory of Soul

Zhigang Sha, Rulin Xiu

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Abstract

The pursuit of scientific research on the soul has been gaining more attention. However, progress has been limited. We propose that to scientifically study the soul, one needs to first give it a scientific definition. In this paper, we explore how to give the soul a scientific definition and use quantum physics to scientifically study and predict the character, qualities, and behavior of the soul. In our previous paper, we showed that a new interpretation of quantum physics indicates that everything at the deepest level is a quantum vibrational field carrying information, energy, and matter. Observed quantum phenomena and conscious experience occur when the observer absorbs and receives the vibrations, including the information, energy, and matter carried in the quantum field. In this work, we propose to define the soul as the content of the information carried in one's quantum vibrational field. With this definition and using quantum physics, one can make seven predictions about the soul: (1) The soul is the essence of one's existence, determining every aspect of life. (2) The soul may continue its journey when the physical body stops functioning. (3) The soul can be eternal and unlimited in spite of the limitation of the physical body. (4) One may connect with, communicate with, and affect other souls remotely. (5) There exists the "Akashic Records," a universal quantum vibrational field carrying the information, energy, and matter about everything. (6) Spiritual abilities, such as intuition, direct knowing, telepathy, clairvoyance, and psychokinesis, can be scientifically explained. (7) The soul gives meaning and purpose to life. These predictions agree with widespread common spiritual wisdom. The experimental verification of some of the predictions is discussed.

This quantum theory of the soul supports monism, in which the soul, spiritual heart, mind, energy, and matter are parts of and different aspects of one existence, the quantum vibrational field. It endorses panpsychism and suggests that everything has a certain level of soul, spiritual heart, mind, consciousness, energy, and matter. This work expands scientific study from only physical matter and energy to include the soul, spiritual heart, mind, conscious and spiritual phenomena. It agrees with spiritual wisdom and the scientific discoveries of quantum physics. It can help bring science and spirituality together at the fundamental level.

Dr. Zhi Gang Sha[1] and **Rulin Xiu**[1,2]

[1] *Tao Academy, 30 Wertheim Court, Unit 27D, Richmond Hill, Ontario L4B 1B9, Canada*

[2] *Hawaii Theoretical Physics Research Center, 16-266 E. Kipimana St, Keaau, HI 96749, USA*

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1. Introduction

The Merriam-Webster dictionary definition of soul includes four aspects: 1) the immaterial essence, animating principle, or actuating cause of an individual life; 2) the spiritual principle embodied in human beings, all rational and spiritual beings, or the universe; 3) a person's total self, an active or essential part; and 4) the moral and emotional nature of human beings or the quality that arouses emotion and sentiment, a spiritual or moral force. In many religious and philosophical traditions, the soul is believed to be able to survive physical death.

René Descartes is among the first scientists who believed that the soul should be subject to scientific investigation. In The *Meditations*, Descartes proposed the doctrine of Cartesian dualism: that the universe contained two radically different kinds of substances—the mind or soul defined as thinking, and the body defined as matter and unthinking [1]. According to Descartes, these two substances are distinct. Each can exist apart from the other. Humans are a union of mind and body [2]. In *The Passions of the Soul*, Descartes discussed the common contemporary belief that the human body contained animal spirits [3][4]. These animal spirits were believed to be light and roaming fluids circulating rapidly around the nervous system between the brain and the muscles. These animal spirits were believed to affect the human soul, or passions of the soul.

The sharp separation between matter and mind or soul, established by Descartes and others[5], in the seventeenth century, kept mind and soul from serious scientific pursuit until the dawn of quantum physics. Classical physics is deterministic and objective, thus it cannot corroborate the existence of the soul. Quantum physics provides the hope to include soul and consciousness into fundamental physics. There are several approaches to do this. Wigner and Stapp

suggest that consciousness is the fundamental element of the universe. He argues that quantum wave functions collapse when conscious minds select one among the alternative quantum possibilities through the quantum Zeno effect within the synapses [6][7][8]. Penrose and Hameroff postulate quantum computing in the microtubules in brain neurons which collapse the wave function [9][10]. Karl Pribram and David Bohm propose the holonomic brain theory with the idea that human consciousness is formed by quantum effects in or between brain cells [11][12][13]. David Bohm believed that observed quantum phenomena are "surface phenomena, explicate forms that have temporarily unfolded out of an underlying implicate order" [14][15]. That is, the implicate order is the ground from which reality emerges.

It is generally accepted that no scientific evidence currently supports the existence of the soul[16][17][18][19][20]. Physicist Sean M. Carroll has argued that the idea of a soul is incompatible with quantum field theory (QFT) [21]. Some physicists indicate that quantum indeterminism is not enough to address how a disembodied soul might interact with the brain [22].

We think the lack of a scientific definition for the soul is one of the main reasons preventing scientists from studying the soul. Major progress in science starts with giving a scientific definition to a previously vague concept. For example, the scientific definition of force by Isaac Newton led to Newtonian Mechanics and the scientific revolution. The scientific definition of energy in the nineteenth century resulted in the industrial revolution. Claude Shannon's mathematical definition of information has brought about information theory and the information age. To study the soul scientifically, we need to start by giving the soul a scientific definition.

In our previous work[23], we proposed a quantum theory of consciousness (QTOC) based on a new interpretation of quantum physics, which provides a physics foundation and mathematical formulation to study how the physical body can have conscious experience. In this paper, we propose a scientific definition of the soul in the context of QTOC. We will show that with this definition, one can scientifically study and make predictions about the quality, character, and behavior of the soul and spiritual phenomena.

In the following, we first give a review of QTOC. Then we propose the scientific definition of the soul and show that one can apply QTOC to study the soul and spiritual phenomena scientifically and mathematically. We discuss how to solve the concerns raised by Peter Clark and Sean M. Carroll about the incompatibility of the existence of the soul with the current laws of physics. We show the experimental validation of the soul and the predicted spiritual abilities. In the end, we point out that QTOC describes a world with the soul, spiritual heart (the heart mentioned in spiritual texts), mind, energy, and matter as different aspects of existence. This work makes it possible and provides a way to integrate science and spirituality together.

2. Review of the Quantum Theory of Consciousness

Quantum physics has led to copious advances in technology and discoveries in various fields, from biology, cosmology, astrophysics, particle physics, condensed matter physics, chemistry, mathematics, information technology, and more.

Quantum physics studies at a deep level what everything is made of[24][25][26][27][28][29]. In classical physics, one solves

the equations of motion, which describe the motion and the predictable trajectory of an object. Quantum physics shows that at the deepest level, an object cannot be described by equations of motion, but by the Schrödinger Equation. The movement of an object cannot be described by trajectories any longer but by a wave function, which describes the possibilities of an object to be at certain energetic states or located in space at a certain time. The quantum phenomena described by a wave function have an unpredictable and subjective nature.

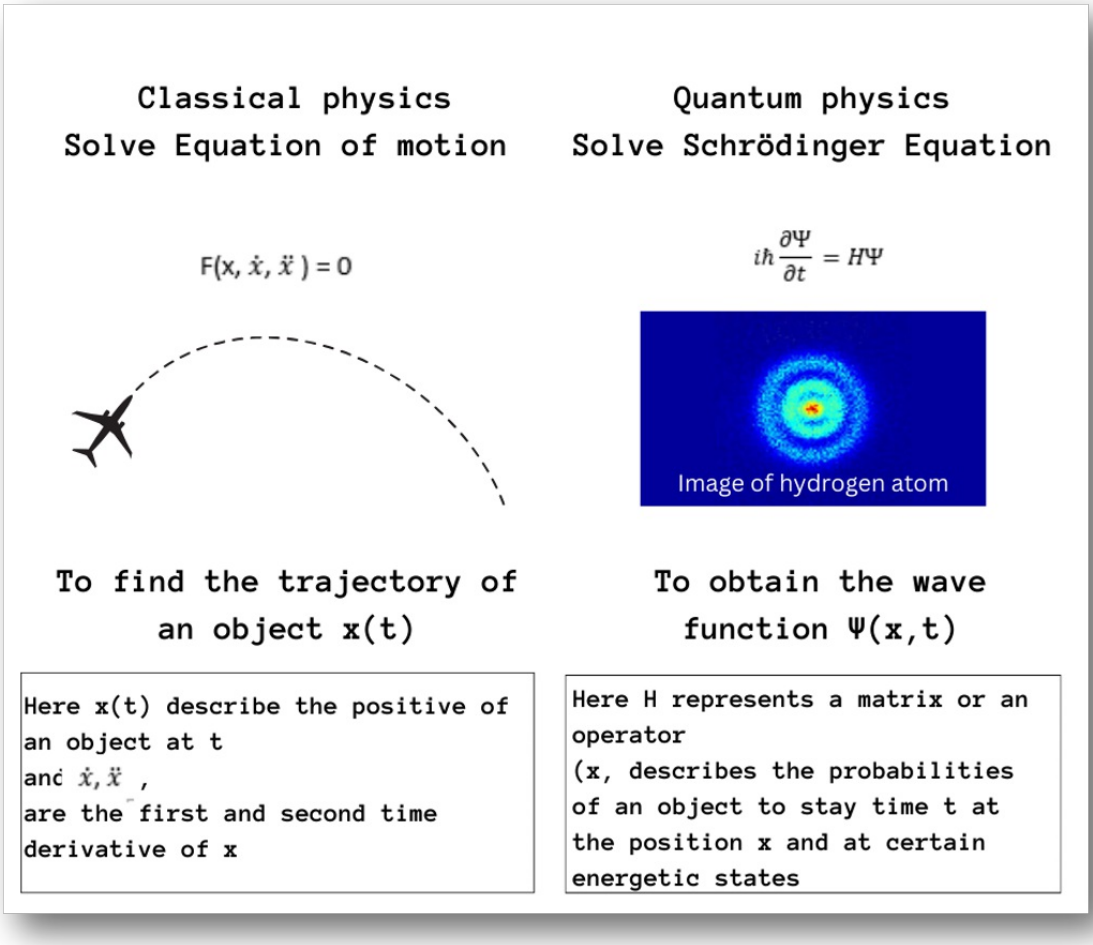

Fig. 1. The difference between classical physics and quantum physics

It is an important and great challenge to understand the metaphysical meaning of unpredictable and subjective quantum phenomena. What we find, if one examines what the Schrödinger Equation reveals to us, is that everything at the quantum level is a quantum vibrational field. This vibrational field is made of quantum vibrations. Quantum vibrations are the various periodic oscillations extending over space and time. They can be described by frequency, wavelength, velocity, and amplitude. Each quantum vibration has its specific energy and momentum. Its energy and momentum are related to its wavelength and frequency.

A quantum vibrational field is mathematically described by a wave function. Wave functions tell us what kinds of vibrations exist inside the quantum vibrational field. The Schrödinger equation is one of the ways to calculate the quantum

vibrational field for an object. Through solving the Schrödinger equation, one can obtain an object's possible energetic and vibrational states and the probabilities of these states.

In classical physics, everything has its specific trajectory and involved energetic state. Things do not have a probabilistic nature. Albert Einstein regarded quantum theory as incomplete due to this probabilistic nature because he considered the uncertainty as a shortcoming, the inability to make predictions. We propose that the probabilistic nature of a wave function describes the information aspect of an object. Just as everything contains energy and matter, things also contain information. Similar to energy and matter, information can be transmitted, transferred, transported, and downloaded. The founder of information theory, Claude Shannon, reveals that the information inside something is related to the probabilities of the possible states [30]. The total information can be calculated as the entropy from the probabilities of the possible states. Information describes the possibilities within an object and the probabilities of the object to exist at different states. The information is intrinsically indeterministic and uncertain.

One can therefore see that the probabilistic nature of a wave function is not due to its inability to make precise predictions, but due to its ability to describe the information aspect of an object. The certainty of classical physics is due to its inability to describe the information aspect of an object. As Richard Feynman has pointed out, classical equations of motion are the result of averaging out the different quantum states, the different informational states [27][28]. Information describes how unpredictable an object is. If a system has information, it is unpredictable. Only a system that has zero information is completely predictable. From this perspective, classical equations of motion describe a system without information, or they average out the different possibilities and give an average, crude, and approximate description of an object or phenomenon.

How does the subjective nature of quantum physics come about? To answer this question, we need to know how the observed quantum phenomena come into existence from the many possible vibrational states. Quantum physics tells us that the observed quantum phenomena are determined by the measurement process. What is involved in the quantum measurement process that determines the observed phenomena? The most common answer is that the quantum measurement collapses the wave function from many possibilities to a specific state. But how the wave function is collapsed remains a mystery.

We propose that in all quantum measurements, detectors are used to initiate, create, and exhibit quantum phenomena [23][31][32][33]. A detector is an instrument that can absorb vibrations and exhibit certain changes. For instance, a camera is a detector that can absorb light and create a photo. A detector receives the vibrations related to a phenomenon or an object, consequently bringing in and processing energy and information, which leads to a certain noticeable change in the detector. This noticeable change is the observed quantum phenomenon. If one examines all quantum phenomena, one can see that this is what happens in all observations. Detectors are what "collapse the wave function" through receiving vibrations from the object. Quantum measurement occurs through the detectors one uses for the observation. Quantum phenomena arise from quantum measurement, which is determined by the detectors an observer uses. If one changes the detectors, the observed quantum phenomena will be different. The type of detector one uses during the observation determines what can be observed and experienced. This is how subjective quantum

phenomena occur from seemingly objective physical objects.

One can only observe the quantum vibrations and the associated phenomena when the detectors one uses can resonate with the vibrations involved in the phenomena. For example, with a normal camera that can capture visible light, we can obtain a photo showing the image of visible light. With a camera that can capture infrared light, we obtain a photo showing the image of infrared light.

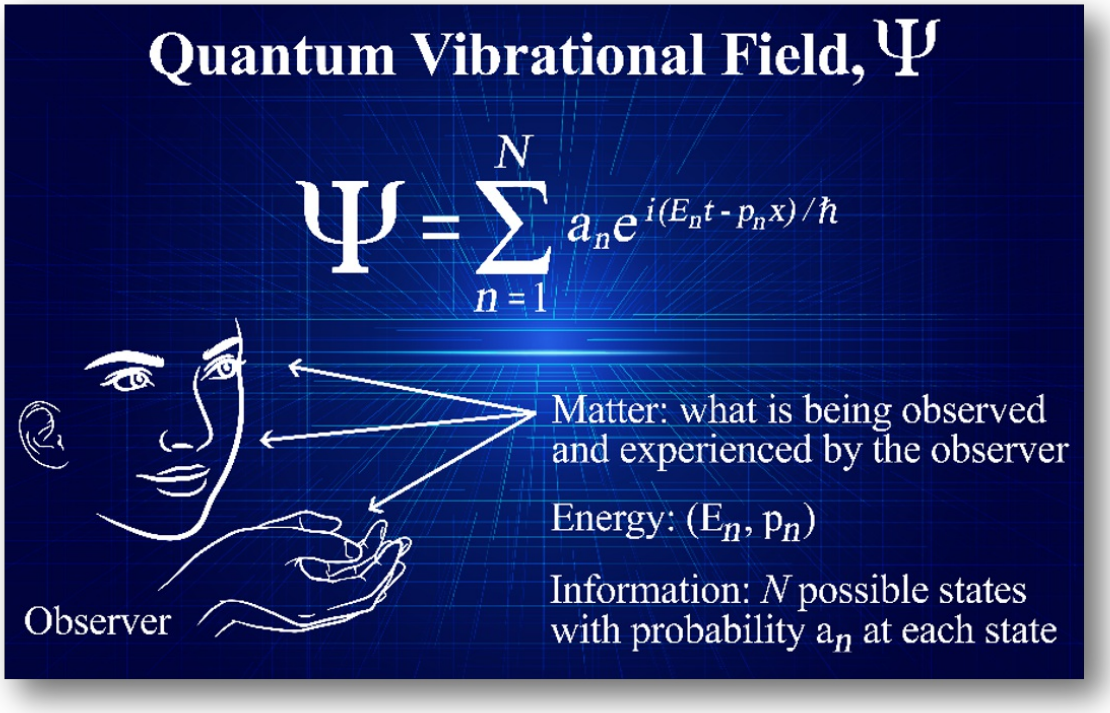

Fig. 2. Quantum measurement and the quantum vibrational field

With the above understanding of quantum physics, we obtain two principles which offer a new interpretation of quantum physics and lead to a new quantum theory of consciousness. The first principle reveals what everything is made of at the quantum level. The second principle indicates how observed quantum phenomena and conscious experience occur. Our quantum theory of consciousness (QTOC) is based on these two principles.

Principle One

The basic constituent of all things is the quantum vibrational field, which carries matter, energy, and information.

This first principle tells us that everything is a vibrational field carrying three basic elements: matter, energy, and information. Here, the term *matter* relates to anything that can be physically measured, detected, and observed, such as light, weight, and body. Energy is what moves and changes matter. Information is what informs. Information gives the form, shape, and direction to matter and energy. For example, the data for one's account in the database of a bank determines how much money one can get from the bank. The blueprint of a house, which is the information about the

house, determines the shape and functionality of the house. To inform is to answer a question. Questions can be posed so that the answer is either “yes” or “no.” Therefore, information can be represented as a sequence of “yes” and “no.” For example, one can specify information by a series of 0’s and 1’s.

In quantum physics, everything can be represented by wave functions. From the wave function, one can calculate an object’s possible states of matter, energy, and information.

Principle Two

An object absorbs quantum vibrations through resonance. The reception and processing of vibrations — including information, energy, and matter — lead to the observation of quantum phenomena and subjective conscious experience.

Observed phenomena and conscious experience are manifested by the observer through the reception of quantum vibrations. Conscious experience is determined by the vibrations, especially the information, received by the observer.

In this QTOC, one does not need the mysterious collapse of the wave function as suggested by E. P. Wigner [6], H. Stapp [7][8], R. Penrose [9][10], K. Pribram [11][12][13] and others to explain quantum phenomena and consciousness. We also don’t need to invoke the unknown implicate order suggested by D. Bohm [14][15]. The observed quantum phenomena and conscious experience can be explained and calculated by determining the wave function of the vibrational field, and what detectors and processors one uses in observation and conscious experience. In our previous paper [23], we show that this QTOC provides the fundamental principles and mathematical formulation to address both the hard and easy problems of consciousness. The QTOC can explain the large-scale, nearly instantaneous synchrony of brainwaves among different parts of the brain, body, people, and objects, such as the correlation between Schumann Resonances and some brainwaves [34][35][36].

3. Relationship between Quantum Physics and Classical Physics

Currently, most people mistakenly consider that quantum physics studies microscopic phenomena and classical physics studies macroscopic phenomena. This misunderstanding has prevented biologists, psychologists, neuroscientists, medical researchers, and many others from applying quantum physics to their disciplines to achieve breakthrough progress in these fields. Quantum physics is the fundamental physics. It applies from the smallest to the largest objects in the universe. It can explain why the sun burns and where the large structure of the universe comes from. Classical physics is the approximation of, and can be derived from, quantum physics. Quantum vibrational fields are what everything is at the deepest level. An object or phenomenon can appear to be a classical object as a point rather than a vibrational field when the spatial and temporal scales of its vibrations are much smaller than the time and space used in the observer’s observation. For instance, whether you use one minute to observe a plant or use one month to observe a plant, you will get completely different data and observations. To observe the surface of a metal at 1 nm, 1 mm, or 10 cm resolution, one gets completely different pictures of the metal. The observed phenomena depend on detectors as well as

the space and time resolution and length involved in the observation.

Classical physics provides an appropriate description of quantum phenomena when the observation scale is much greater than the space and time scale of the quantum vibrations associated with the phenomena. For instance, a beam of visible light may appear as a particle, following a straight path, rather than a wave, because it vibrates at a frequency so fast and at a wavelength so small that its quantum time and space scale are too small compared to the observation scale for its wave nature to be observed. In this case, our observation of it is the average over its possible quantum states, and the classical mechanism description is sufficient. The light's quantum vibrational character can be observed at the atomic scale or at the double-slit experiment where the observation space scale becomes comparable to the wavelength of the light. Whether it is observed or not, quantum physics, as the fundamental physics, is behind all observed phenomena.

To study the neural network and the human brain, classical physics may be adequate for studying the chemical reactions. However, classical physics becomes powerless in the following situations:

1. Classical physics cannot help us understand at the fundamental level how a body can have a conscious experience, since consciousness, as shown above, is a quantum phenomenon.
2. Classical physics cannot explain the vast vibrations or waves inside the brain. Brainwaves need to be studied with quantum physics, similar to the case of black body radiation, radiations from atoms and molecules. From the quantum physics and QTOC point of view, brainwaves encode the information of one's existence, just as radio waves contain the encoded information of a radio program from a radio station. Our brain can receive, encode, and decode the information carried in the quantum vibrational field, process it, lead to certain actions, and transform the internal or external state. This process should be studied with quantum physics.
3. To truly understand any stable structure and its behaviors, such as atoms, molecules, crystals, membranes, and DNA, one needs to use quantum physics. Classical physics cannot provide sufficient understanding about them. Quantum information theory reveals that even a short-range interaction can lead to long-range quantum entanglement, which can create new quantum phases. In our previous papers [23][31], we show that quantum information theory may lead to a greater understanding of the formation and preservation of memory.

4. A Proposal for the Scientific Definition of Soul

The key insight of QTOC is to realize that everything at the deepest level is a quantum vibrational field carrying information, energy, and matter. Information determines energy and matter. Notice that the information has three related aspects:

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

Based on this insight, we propose the following definitions[31][32][33]:

- **Soul is the content of information in one's vibrational field.**
- **The spiritual heart, the heart mentioned in spiritual texts, is the receiver or emitter of information.**
- **Mind is the processor of information.**

In this definition, the soul is the information carried in our quantum vibrational field. The spiritual heart relates to the heart mentioned in spiritual texts. It is the detector involved in the quantum measurement and observation, which can receive and emit quantum vibrations. The spiritual heart plays a critical role in the observation of quantum phenomena and conscious experience. Here, the mind is defined as the processor of information. Neuroscience studies how the brain processes information and generates human consciousness. It mainly studies the mind. In QCOT, the soul, spiritual heart, and mind, as well as energy and matter, are different aspects of one's existence. They cannot be separated.

In this definition, if an object has information and can receive and process information and vibration, it has a soul, a spiritual heart, and a mind. One can scientifically study and mathematically calculate one's soul, spiritual heart, and mind if one knows the wave function of one's quantum vibrational field. For example, an electron carries certain information such as mass, spin, velocity, and possible spacetime coordinates. It responds to the force of gravity and electromagnetic fields, receives and processes the vibrations and information, and changes its path accordingly. An electron has its soul, spiritual heart, and mind. A hydrogen atom contains information, can absorb or emit a certain spectrum of light, and change its states accordingly; it also has its own soul, spiritual heart, and mind. The spectrum of hydrogen represents the spiritual heart of a hydrogen atom. A human being's body contains billions of electrons, hydrogen atoms, molecules, cells, and neurons. Each of the elements inside of our body can absorb or emit vibrations, including matter, energy, and information, and all the elements inside the body can also work together to form new states to absorb or emit and process more vibrations carrying more complicated information, energy, and matter. The human soul, spiritual heart, and mind are much more sophisticated. The levels of spirit/soul, spiritual heart, and mind are not only determined by the amount of information they contain and can receive and process, but also are determined by the quality of the information. The quality of the information is determined by the amount of correlation and coherence existing in one's vibrational field [23].

5. Comparison with other theories and models

Physicist Sean M. Carroll has argued that the idea of a soul is incompatible with quantum field theory (QFT)[18]. He reached this conclusion based on the assumption that "the laws of physics underlying everyday life are completely understood." This assumption is questionable considering the fact that the foundations of quantum physics are not completely understood and more than 95% of matter and energy, including dark energy and dark matter, remain unaccounted for by current science. This unsubstantiated assumption led Carroll to think that "a new collection of 'spirit particles' and 'spirit forces' that interact with our regular atoms" is needed to explain the existence of the soul or spirit.

In this paper, based on new insights about the metaphysical meaning of quantum physics, we show that one does not need additional particles to explain the existence of the soul. The soul, spiritual heart, and mind co-exist with energy and matter. They are different aspects of the one existence, the quantum vibrational field. This QTOC does not violate any

existing experiments or theory, and it can also explain spiritual wisdom and phenomena scientifically.

Quantum indeterminism is invoked to address how a disembodied soul might interact with the brain. In the Eccles–Beck model [37], the interaction between the self (or soul) and the brain is proposed and occurs at the level of synaptic exocytosis. Neuroscientist Peter Clarke [22] suggests that

> *"Heisenbergian uncertainty is too small to affect synaptic function, and that amplification by chaos or by other means does not provide a solution to this problem. Even if Heisenbergian effects did modify brain functioning, the changes would be swamped by those due to thermal noise. Cells and neural circuits have powerful noise-resistance mechanisms that are adequate protection against thermal noise and must therefore be more than sufficient to buffer against Heisenbergian effects."*

In the QTOC approach, the soul, spiritual heart, mind, energy, and matter are different aspects of the same existence – the quantum vibrational field. They are not independent and separate objects. One does not need to invoke Heisenbergian uncertainty or other forces to bring about the interaction between soul, mind, and body. The issues raised by Peter Clarke do not apply here. In the QTOC, the definitions of soul, spiritual heart, and mind as different aspects of information intrinsically determine matter and energy.

6. QTOC's Predictions about Soul

With this definition, one can see that the manifestation process[23][31][33] is:

1. Soul offers the information;
2. Spiritual heart receives information from the soul;
3. Mind processes the received information by the spiritual heart and directs where energy goes;
4. Energy moves matter and changes matter;
5. The moved or transformed matter is what we observe and experience.

This manifestation process suggests that the soul and spiritual heart play an even more essential role than the mind in manifestation. This is the first prediction from QTOC.

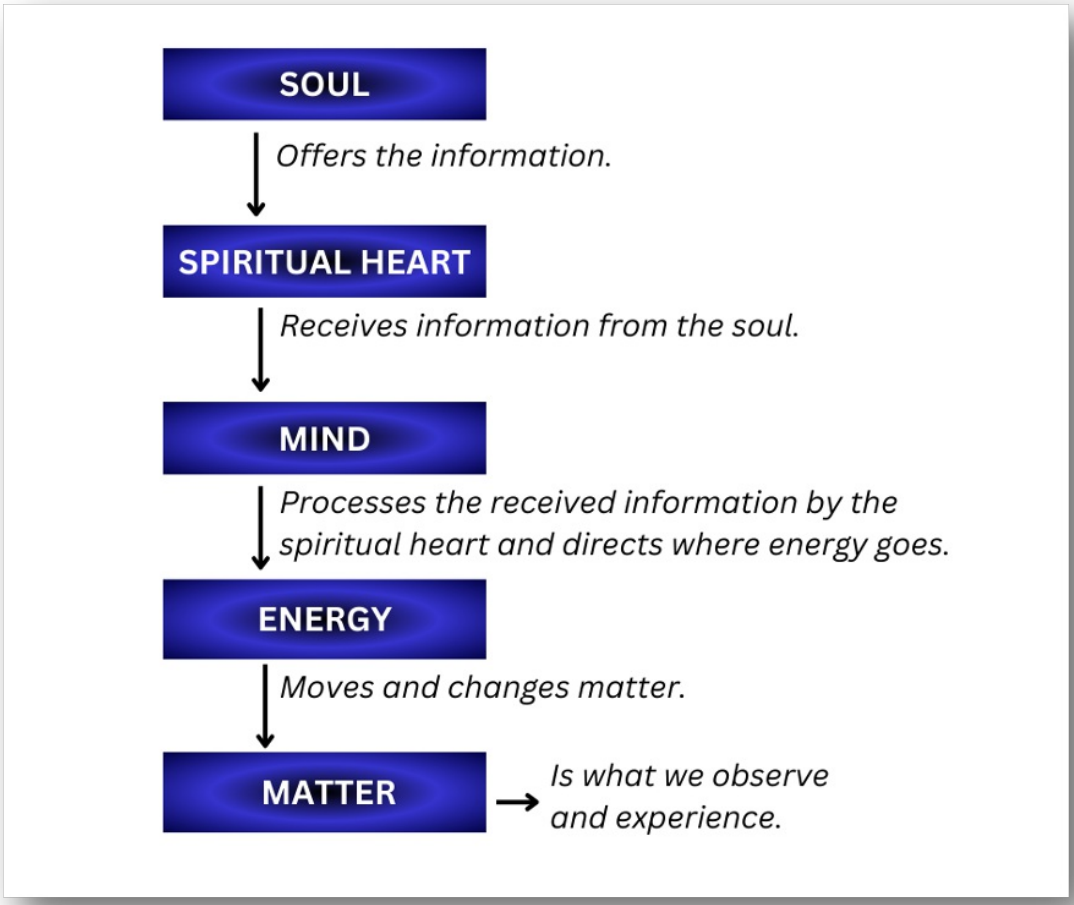

Fig 3. Manifestation process

Prediction I

The soul is one's essence because the soul, the information carried in our vibrational field, is the determining factor for the observed phenomena and conscious experience. The spiritual heart, the receiver and emitter of information and vibrations, plays the critical role in starting the manifestation process and decides which of the soul potentials, the possible states and information, is manifested.

Heart is mentioned in many spiritual texts. The heart mentioned in spiritual texts corresponds to the spiritual heart defined here. For example, according to Buddha's teaching, everything that happens in physical reality comes from the heart. The Bible and many other spiritual texts present similar wisdom. This spiritual wisdom can be explained by the definition of the spiritual heart presented here [33]. The phenomena we experience are determined by the detectors we use. The detectors are the receivers of information; i.e., they are our spiritual heart. Therefore, all experience and phenomena come from our spiritual heart.

Prediction II

When the physical body stops functioning and dies, the information in one's field still remains, and the soul can still exist and continue its journey.

In many spiritual wisdom traditions, physical death occurs when the soul leaves the physical body and starts a new journey.

Prediction III

The soul can be eternal. The physical body is limited, but the soul, as defined as the information stored in the quantum field, can extend over space and time. It does not have to be limited by space or time.

Prediction IV

One may connect with, communicate with, and affect other souls remotely.

This is due to the fact that the quantum vibrational field and the information carried by it extends over space and time. Through one's receiver and emitter of information, the spiritual heart, one can receive vibrations and information about another's soul. One can also emit and send vibrations and information to affect another's soul.

This prediction just points out that this possibility theoretically exists. It still remains to be studied how the human brain or body receives specific vibrations and the information carried by the vibrations, such as thought vibrations.

Prediction V

There exists a universal quantum vibrational field carrying the information, energy, and matter of everything. This universal quantum vibrational field is like the "Akashic Records", holding the information about everything and everyone.

Because everything's quantum vibrational field extends over space and time, the summation of everything's quantum vibrational fields makes up a universal field. This universal field holds the information, energy, and matter about everyone and everything.

The concept of Akashic Records can be found in eastern religions and has been gaining more public attention in modern times. "Akasha" or "akasa" is the Sanskrit word for astral light or the ether element in eastern belief systems, which is considered the fundamental fabric of reality from which all other elements emerge — the source of material reality [38][39][40]. The Sanskrit term *akasha* was introduced to the language of theosophy by Helena Blavatsky (1831-1891), as a sort of life force and as "indestructible tablets of the astral light" recording both the past and future of human thought and action. Helena Blavatsky claimed that "Masters of the Ancient Wisdom" in Tibet taught her clairvoyance, psychic abilities, and astral projection. She used these tools to channel information from the akashic records. Edgar Cayce (March 18, 1877 – January 3, 1945), known as "The Sleeping Prophet", attributed his clairvoyance to accessing the akashic records while in a trance-like state [39].

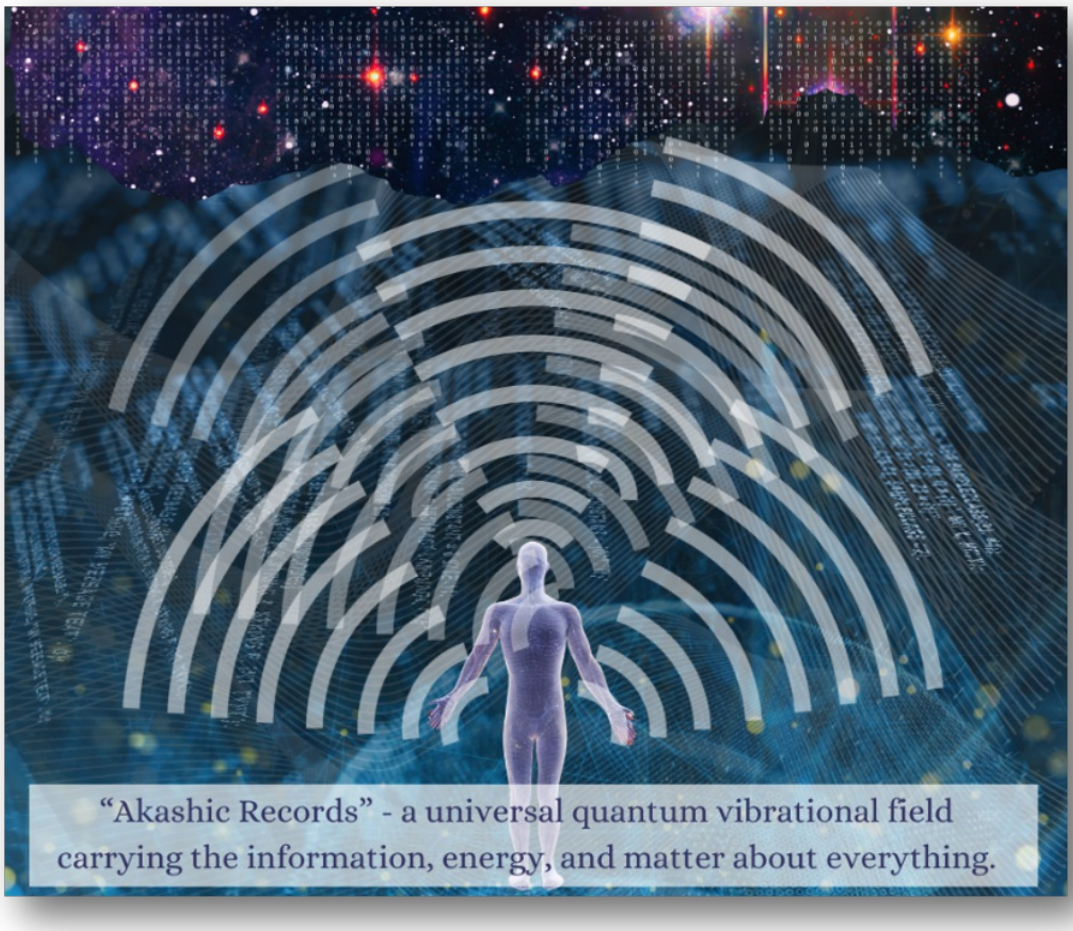

Fig. 4. Akashic record, the universal vibrational field carrying information about everything

Prediction VI

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

Prediction VI is a natural result of prediction V. If the universal vibrational field exists and is accessible to everyone, one can receive information from it. Intuition, direct knowing, telepathy, and clairvoyance are the result of receiving information from the universal vibrational field. Psychokinesis is the result of sending information and vibrations to the universal field to affect objects.

Prediction VII

The soul is what gives physical life purpose and meaning. The purpose of physical life is to advance the soul to a higher level.

Soul, as the information that directs and conducts our physical existence, is what gives purpose and meaning. Physical life can be short, but the soul's journey can be much longer, even eternal. Through physical life and experience, the soul

gains wisdom and abilities. If one's life does not serve the soul's purpose, one can feel depressed, grief, discontent, frustration, anxiety, and fear. In our future work, we will explore how to scientifically study the qualities and purpose of the soul.

Predictions about Karma and Free Will

In our book *Tao Science* [28], we show that QTOC can also describe karma, the cause-effect phenomenon, and free will. We will defer more detailed discussion of these important subjects to future papers.

The above predictions indicate that QTOC enables one to study spiritual phenomena with quantum physics and scientifically corroborate spiritual wisdom.

7. Experimental Proof

Quantum physics, including the wave function description of everything and quantum entanglement, has been proven experimentally for more than a hundred years. More experiments have been confirming its applicability in studying the smallest to the largest objects in the universe.

The most scientific study of spiritual abilities has been performed on remote viewing. Remote viewing obtains impressions about a distant or unseen subject purportedly through mind, direct knowing, telepathy, or intuition [40]. A variety of scientific studies on remote viewing have been conducted. Early experiments produced positive results [41], but they had been found to have invalidating flaws. More recent experiments have shown negative results when conducted under properly controlled conditions [42][43]. Currently, the mainstream scientific community rejects remote viewing and regards it as pseudoscience because of the absence of an evidence base, the lack of a theory which would explain remote viewing, and the shortage of experimental techniques which can provide reliably positive results.

According to QTOC, remote viewing, direct knowing, clairvoyance, and intuition are theoretically possible. However, it also indicates that the possibility is close to zero for an ordinary human being to conduct remote viewing on a specific unknown remote object. It is true that anyone can connect with the universal vibrational field. However, because it contains information about everything in the whole universe, including information about the past and current activities, it is nearly impossible to obtain specific information from this vast information database about an unknown remote object.

In Taoism, Buddhism, and other spiritual traditions, the practitioners may gain extraordinary abilities such as remote viewing, clairvoyance, and direct knowing when they reach a certain higher spiritual state. In this state, their mind is still. According to QTOC, when one's mind is still, the internal noise from one's thoughts may be less. In this state, one may connect, be aware of, and thus obtain the needed information.

From the QTOC point of view, remote viewing is theoretically possible for everyone and everything. To have the ability in practice depends on whether one can specifically connect, be aware of, obtain, and share the related information carried in the universal vibrational field. If one finds one person, animal, or something that can do this, it is a demonstration that

remote viewing is possible. One does not need to conduct double-blind, placebo-controlled experiments to prove the possibility of remote viewing. This is similar to the case of the existence of a black hole. The existence of a black hole has been theoretically predicted for a long time. The picture of a black hole was only discovered in recent years. One just needs to find one black hole to prove its existence. It is not necessary to conduct a double-blind, placebo-controlled experiment to prove its existence. Over history, there are many cases, such as Edgar Cayce and many others, demonstrating their ability of remote viewing. From this point of view, one can reasonably suggest that remote viewing is scientifically and experimentally proven. This reasoning and conclusion apply to direct knowing, telepathy, clairvoyance, intuition, and other abilities.

8. Discussion and Conclusion

In this paper, we propose a scientific definition of the soul. We show how to study and predict the quality, character, and behavior of the soul scientifically with quantum physics. This quantum theory of the soul predicts the theoretical possibilities of spiritual abilities such as direct knowing, telepathy, clairvoyance, intuition, and psychokinesis. We find that these predictions about the soul agree with a lot of known spiritual wisdom.

With this work, we demonstrate that with our new interpretation, quantum physics and QTOC describe a world with not only matter and energy, but also soul, spiritual heart, mind, and consciousness. QTOC can expand scientific study from only physical matter and energy to soul, spiritual heart, mind, spiritual, and conscious phenomena. This can help bring science and spirituality together at the fundamental level. This theory supports monism, in which the soul, spiritual heart, mind, energy, and matter are parts and different aspects of one existence, the quantum vibrational field. It endorses panpsychism and suggests that everyone and everything has a certain level of soul, spiritual heart, mind, consciousness, energy, and matter. This QTOC provides the general physics concepts, theories, and mathematical formulations to study the specific mechanisms of how the brain receives information from the soul, encodes and decodes the information, processes the information, leads to action, and causes conscious experience, physical manifestation, and transformation in life. Further application of this QTOC is needed to study the specific mechanisms of the brain and neural networks.

Statements and Declarations

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