

THE LIGHT OF CONSCIOUSNESS

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ABSTRACT

This paper provides a way forward from the greatest unanswered question in science and philosophy: 'What is consciousness?' The path forward begins with the recognition that ours is an undistinguished, temporary planet in a vaster and timeless universe. Telescope improvements since Galileo have proven the reality that this is no longer the earth-centered perspective of Ptolomy and Aristotle. Today we also have the previously unimagined perspective of Schroedinger's quantum wave mechanics which apply independently of time and place. We take the quantum-mechanical "bing" of Hammeroff and Penrose as the best present understanding of primitive consciousness, and show that the universe has both a physical and a spiritual component, both of which are independent of time and place. We postulate that the spiritual component is identical among us, and is our true selves. We conclude that our home is not the earth, but the universe.

1. INTRODUCTION

Throughout history the greatest unanswered question in science and philosophy has been '*What is consciousness?*' We know subjectively that consciousness exists, but it cannot be seen or measured objectively. Examination of the brain of a living person reveals only measurable quantities like electrical activity and heat.

The lack of physical evidence has led some philosophers even to

deny that consciousness exists (Dennett, Daniel 2020). Moreover, there is no agreed upon meaning for the term consciousness. To say that there is a chasm in our understanding of consciousness is to understate the obvious: There is no understanding at all.

This paper offers no definition of consciousness, but it does address the chasm in understanding by pointing out what consciousness is not (Darren, M. 2018, Windmind, 2013), and by presenting analogies.

Consciousness will be described here in a way that leads to a vision of our true place in the universe. Telescope improvements since Galileo have proven that we do not live on the Earth centered world of Ptolomy and Aristotle. The reality is that we live on a tiny, undistinguished planet in a vastly larger, timeless, unverse. Today we also know the mind-boggling facts of quantum mechanics, which were unimagined until 1900 when Max Plank suggested that electromagnetic energy could only be emitted in quantized form (Plank, Max 1900). These new facts imply a new vision of the way things really are, one that applies to science, philosophy and religion. We suggest that this vision is plausible and beautiful, and that it aligns with the belief that timeless and beautiful descriptions are true (Helge Kragh, 2016, Einstein, Albert 2013, Levi Durham, 2022).

Any theory of consciousness cannot be tested without relying on the testimony of a subject. Even then, a subject could be lying or

mistaken. An honest zombie who reports he is conscious must be mistaken too because by definition, zombies are not conscious. Still, the subjective evidence presented here for the truth of this theory cannot easily be cast aside (Huxley, Aldous, 1945).

2. THE LIGHT OF CONSCIOUSNESS

We agree with David Chalmers' supposition (Chalmers, David 2022,) that consciousness is a primitive. Consciousness shares its undefinability with all other primitives: We cannot 'know' what consciousness really is, just as we cannot 'know' what the light in our environment or the molecules that compose our brains really are. Although we cannot know it, our experience of everything is caused by consciousness. To distinguish this cause from other meanings of consciousness, we will call it *the Light of Consciousness*. This is what we mean by consciousness: All that we experience are brought to our raw awareness by it. It is not the conceived things themselves.

The Light of Consciousness is akin to that of Hammeroff/Penrose's primitive awareness or *Bing* (Hameroff, Stuart 2021). Bing is caused by microtubules in the brain (Penrose, Roger, 2024). Hameroff et. al. state that the evidence that these microtubules cause bing is that consciousness stops and the microtubules stop functioning when a patient is anesthetized (Hameroff, Stuart,

2022). Penrose believes that the microtubules has a size and structure that permit quantum effects to occur, and that raw awareness is produced by a collapse of a quantum wave function.

The Light of Consciousness is also akin to Schrodinger's and Sherrington's *one mind* (Schrodinger, Erwin, 1976), and Chalmers' *primitive entity* of the universe (Sherrington, Sir Charles, 1951). Chalmers has stated that we need new rules to understand how consciousness works (Chalmers, David, 2022). Instead of rules, we propose that the Light of Consciousness has the following properties.

P1) it is produced in our brains;

P2) it exists in itself; and

P3) it is identical among us independent of time and place.

The following analogy helps explain: The Light of Consciousness is produced by elementary particles and higher structures of the brain (microtubules), just as physical light can be produced by a light bulb (P1). It exists in itself, separate from its production mechanism, just as the light from a light bulb exists in itself, separate from the bulb (P2). It is identical among us, just as light per se is identical from physical source to physical source (P3).

Our physical brains have a great deal of autonomy. For example, they can manipulate objects and generate an essay like a computer. When we tie our shoelaces, our actions are generally autonomous, without consciousness. As described by Hammeroff, bing, or The Light of Consciousness, makes us aware of our actions, memories, feelings, sounds, etc. There is an analogy here to physical light which reflects off a surface and permits us to see the features of that surface.

So it is clear that the brain, and by extension the universe, has two components: one physical and the other spiritual. Figure 1 depicts the brain and its physical parts, including microtubulins. The spiritual component is depicted by the arrow, which represents bing, or the Light of Consciousness.

Continuing the analogy, the identity of light in classical physics is captured by Maxwell's Equations and the Lorenz force law (Maxwell, James Clerk, 1865). It is portrayed in quantum physics by wave function-particle duality (Schroedinger, Erwin, 1926). These equations apply identically independently of when and where in the universe one applies them. They are time- and space-invariant. In the same way, the Light of Consciousness is time- and space-invariant. Figure 2 depicts the awsome of this paper's perspective by comparing the vastness of the real universe to the earth as envisioned by Ptolomy and Aristotle.

Considering the two components of reality, it follows that when death occurs, the microtubulins that caused the Light of Consciousness stop functioning: the individual and everything that he was made of become dusts. But just as the light from a light bulb is distinct from the light bulb, so is the Light of Consciousness distinct from the physical brain components that produced it (P2). It is identical and independent of time and place (P3) and exists unchanged in other individuals.

Further understanding is offered in the following sections.

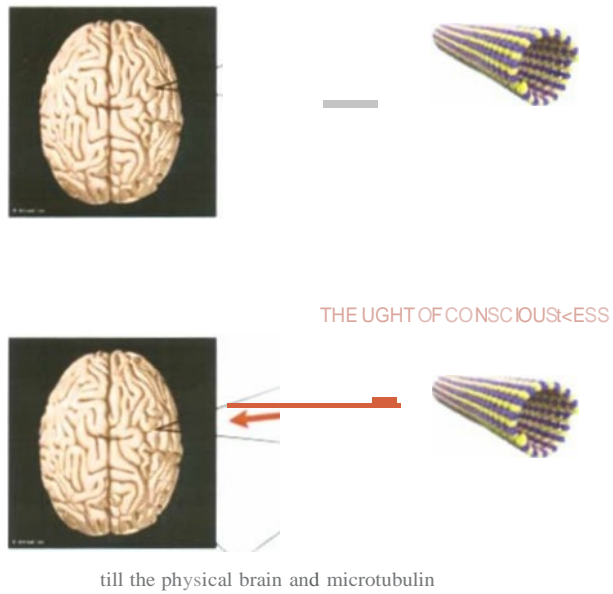


Figure I The Physical Unconscious Brain Can Manipulate Objects It Sees.
When the Light of Consciousness shines the object is EXPERIENCED

The Light of Consciousness exists independently of its source (indicated in the figure by the arrow).

Brain computational capacity:

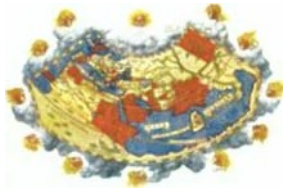
10^{11} neuron /brain. 10^3 synapses/neuron 10^2 Hz = 10^{16} operations per second per brain.

10^{11} neurons/brain, 10^9 microtubulins/neuron, 10^{16} Hz. 10^{27} operations per sec per brain.

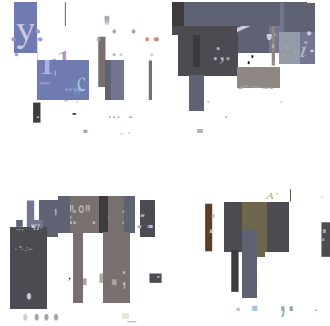
Microtubulin length: 50 micrometer

Outer diameter 23 - 27 nanometers

Inner diameter 11 to 15 nanometers



EARTH



UNNERSE

Figure 2 Aristotelian-Ptolomy conception that the Earth is the Center of the Universe (left), and the Reality (right)

On the right it is believed that consciousness exists throughout the universe, and both physical light and consciousness arise when conditions are right.

The size of the visible universe is 6.9×10^{22} that of the earth's diameter.

3. AM I NOT THAT TRAVELER?

Schrodinger imagined an ancient traveler looking at a landscape, and asked if he (Schrodinger) were not really that traveler. We can ask ourselves if the people we see about us are not really ourselves in the sense that the Light of Consciousness is identical in each of us (P3). Not our names, not our histories, not our sense data, but the Light of Consciousness along with a feeling of selfhood. We are each born and develop our individual senses of 'I'.

There is no difference among us except for name, time place, appearance, traits. Seen that way, there is no separate self that is born and dies. This may be what Schrodinger intuited.

Imagine a crowd of people, with each individual happily singing the pop song 'I've Gotta Be Me.' Each one identifies as 'me' and clings to that identity with its name, relatives, history, traits, time and place etc. But the Light of Consciousness is identical in them

all. It is like a light that glows inside each one and it is the same light. Here the words 'I', 'we', and 'Light of Consciousness' are interchangeable.

A person who clings to personal wants, memories or traits may ask the meaningless question: 'Why was I born into THIS body at this place and time?' One might as well ask 'Why is THIS star the sun

in our solar system? Why doesn't our solar system have some other star?' or, 'Why is this drop of water in this whitecap in the Atlantic ocean here right now? Why doesn't this whitecap contain some other drop?' The truth is that these individual things are produced by natural conditions. All conscious living things are similarly produced by natural conditions. They are not separate souls dropped into their bodies from some outside realm.

Look at any galaxy at any place and time. Imagine the consciousness beings as bright dots in that galaxy. select any dot at random, and you will find it like the others, having an individual body, psyche and traits that relate to its ancestors. It will have a sense of self and tend to identify with its name, surrounds, etc. But there is a transcendent, common, spirit that exists beyond the individual.

There is hard experimental evidence that consciousness is a unity in spite of the fact that it appears in different individuals in different times (Schrodinger, 1976, Sherrington, Sir Charles, 1951). Sherrington found from light flicker experiments that our two eyes act as separate consciousnesses. The rate of flickering when both eyes observe external flashing is unchanged when each eye sees it alternately. The threshold from flickering to steady is approximately 60 flashes per second in both cases. In Sherrington's words (15): 'it is much as though the left- and right-eye images were seen each by one of two observers and the minds of the two

observers were combined to a single mind. It is a though the right-eye and left-eye perception are elaborated singly and then psychically combined to one ...' Schroedinger concludes (Schrodinger, 1976) ... 'the over-all number of minds is just one. ... mind is always *now*.' See figure 3.



Figure 3 Experimental Evidence that Mind *is* a Unity.

The viewer on the left sees continuous light when that lighthouse beam flickers at 60 Hz
The viewer on the right sees continuous light when EACH EYE sees 60 flickers per second.

Here 30 flickers per second is far from sufficient to see con light even the total flicker rate is 60 Hz.

Sherrington: 'Matter and energy seem granular in structure, but not so mind' Schpedinger: 'The ever-all numbers is minds is just one ... I venture to call it indestructable....There is really no before and after for mind...There is only now'

The physical forms, including the brains, of living beings evolve, and the places where they live may come and go. Galaxies arise and fall. The Light of Consciousness arises in the physical forms that fit when conditions are right. IT, I, and WE survive time and place, including the death of galaxies.

4. TESTING THE THEORY

So far, we have pointed out what consciousness is not, and have presented analogies. We have also said that there is no objective test of consciousness. What are the subjective test results?

Testimony from subjective tests has been given worldwide and throughout the ages by mystics and great religions who claim to have witnessed the Light of Consciousness, the IT/I/WE. Those who have made such testimony bear witness to life-affirming consequences. Coming into contact with this light requires forsaking what it is not, namely the clutter, greed and passions of the mind. Huxley summarizes, ‘... The nature of this one Reality is such that it cannot be directly and immediately apprehended except by those who have chosen to fulfil certain conditions, making themselves loving, pure in heart, and poor in spirit’ (Huxley, Aldous, 1945) Shall we simply discard this testimony?

Shall we also discard the testimony of countless people who feel that there is something more than this present existence, as in to the following lyrics to the song The World is not my Home (Anonymous, date unknown)

This world is not my home, I'm just a-passing through,
My treasures are laid up somewhere beyond the blue;

The angels beckon me from heaven's open door,
And I can't feel at home in this world anymore.

Refrain:

O Lord, You know I have no friend like You,
If heaven's not my home, then, Lord, what will I do?
The angels beckon me from heaven's open door,
And I can't feel at home in this world anymore.

They're all expecting me, and that's one thing I know—
My Savior pardoned me, and now I onward go;
I know He'll take me through though I am weak and poor,
And I can't feel at home in this world anymore.
I have a loving Savior up in glory-land,
I don't expect to stop until I with Him stand;
He's waiting now for me in heaven's open door,
And I can't feel at home in this world anymore.
Just up in glory-land we'll live eternally,
The saints on every hand are shouting victory,
Their songs of sweetest praise drift back from heaven's shore,
And I can't feel at home in this world anymore.

There is also perhaps the intuition that we may feel upon the loss of someone we love. When they die, we realize that we have lost their whole history with us, including the changes we shared with them throughout their lifetimes. But we wonder if there was an essential part of them that was not their changing forms or history. We pray for their souls. We may think that it is that Light that was really them.

We have said that IT/I/WE survives the disappearance of galaxies and vast reaches of time and space. We can imagine an indirect

objective meta-test that looks at the evidence of the flourishing or failure of societies and planets that have, and have not, followed this essay's vision of the way things really are. The creatures of the universe have difficulty seeing beyond the cravings of their bodies and egos (Becker, Ernst, 1973). Some will not go beyond their cravings, or worse, they will get it wrong. For those separated from the truth, we expect confusion, despair, religious and secular conflict, wars and destruction. For those who get it right, we expect a flourishing of mathematics, science, the arts, music, love, kindness and peace because that flourishing complies with the truth of their existence.

5. CONCLUDING REMARKS

The preceding sections have contained a truly remarkable theory of consciousness, immortality, and our universe: one that states that our home is not the earth, but the universe. They have included strong arguments that support that theory. The present author is convinced that this theory is true, but he realizes that it may sound like a fantasy to many readers. For these readers, he suggests that theories that were developed since ancient times are more of a fantasy in comparison. Today we have much scientific knowledge that was undreamt of by our ancestors. He suggests that if one were to look at our conception and our ancestors conceptions afresh, through a child's eyes, one would sound as reasonable as another.

Moreover, the strength of the theory proposed here is supported by the thoughts of the worlds' top ranking intellects in a variety of fields: Aldous Huxley, Roger Penrose, Erwin Schroedinger, and Charles Sherington, among others.

Further exploration is beyond the scope of this essay, and much beyond the ability of this author. Possible lines of research could include: Jung's collective unconscious (Jung, C. G. (1964)) and his belief that archetypes provide healing; the belief of world-renowned mathematicians and physicists that there is an existing realm of mathematics and Platonic forms (Penrose, Roger, 1997); the belief of mathematicians, physicists, philosophers, theologians and poets who have used the beautiful as guidance to the truth (Helge Kragh, 2016, Einstein, Albert 2013, Levi Durham, 2022); the experimental finding of Sherington that systems of independent consciousness in the brain form a unity in the mind (Sherrington, Sir Charles, 1951); the numerical paradox of Schrodinger and his recognition that the Light of Consciousness comes from the very molecules of our brains that compose us (Schrodinger, 1976). Here, there is a unity of subject and object, of inner and outer: the mathematics and images of the molecules are beautiful and we intuit the existence of Platonic forms.

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