BREAKING THE BOUNDARIES OF THE BRAIN

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WHO IS THIS?

It was January in the year 2011. I was 17 years-old, a senior in high school, and I found myself calling friends each night to help them fall asleep using hypnosis. A few years earlier, I started vigorously studying and exploring hypnosis and non-ordinary states of consciousness, mainly out of sheer curiosity. As an effort to satiate my curiosity around the topic, I read about it as much as possible and practiced with anyone who was willing to let me try it.

One night, a close friend of mine (we will call her *Ashley*) called me asking for help via hypnosis to fall asleep. Ashely had a talent for quickly entering into a deep, dissociative trance; so, I figured we could achieve the results she wanted fairly quickly. After a few minutes of offering hypnotic suggestions for relaxation and slumber, I assumed she had successfully gone to sleep. For some unknown reason, however, I felt almost compelled to stay on the line. So, for a few minutes, I just sat there and listened to the silence.

All of the sudden, without any prompt from myself, Ashley's voice came through the phone. Her voice was soft and robotic-like. This caught me off guard because I had never experienced someone spontaneously speaking like that. What confused me more, however, were the things she was saying. I knew it was her voice, but it just didn't sound like her. I continued to listen and found that she was speaking in third-person language. She was telling me things about herself that I didn't know before and was speaking as if she was talking about someone else.

My 17-year-old-self felt increasingly alarmed and I needed some clarity to sort out what exactly was happening. After a few minutes, I finally brought myself to ask the question, *who is this?* The answer I received over the phone that evening is one that has changed my life and one that I will never forget. It continues to be the driving reason for why I do what I do.

Ashley's voice came through the phone and said, "**my name is Truth**."

INTRODUCTION

I am thrilled to present my exploration of theories supporting non-local consciousness. In my work as a researcher, I am in constant contact with phenomena that traditional or materialistic views are unable to explain. This project challenged me to consider different theories that may explain the things I see in my work and the life-altering experiences I had as a teenager (e.g., the one I just shared preceding this introduction). Through this project, I discovered that minds much more brilliant than my own have done a wonderful job thus far in theorizing how consciousness is not confined to the physical brain and body. I also discovered small ways I may be able to contribute to the field.

What follows is comprehensive, in-depth exploration of both ancient and modern theories of non-local consciousness, focusing on two key propositions: 1) that consciousness is not restricted by the brain, conventional space-time boundaries, or the traditional five senses and 2) that through focused attention and intention, consciousness may have the ability to influence the physical world beyond the immediate body. I will analyze theories that support these ideas within a variety of domains—from ancient spiritual traditions to quantum mechanics—revealing commonalities, distinctions, and potential intersections. I will classify theories based on shared elements and present graphics/diagrams for easier interpretation.

Ultimately, this review seeks to answer a series of important questions: How do these diverse theories relate to each other? What are their points of intersection, and to what extent can they be integrated into a more cohesive understanding of non-local consciousness? Which aspects of these theories are testable? Is there an innovative approach for scientific investigation? I will address these questions the best way I know how—through a video. Access to the video and transcript is provided toward the end.

Keeping in line with the expectations and parameters of this project, I will not present any sort of exhaustive catalogue of theories, but enough information will be provided about various theories to provide the reader with a basic understanding so that the overarching analyses and comparisons make sense. Through my best efforts, I will strive to present my review in a way that is understandable to the educated general public. For some of the theories, this is a significant challenge since it seems complex scientific jargon (that I, myself, do not really understand) is the only way it is described. I opted to maximize aesthetic and the user-friendliness of this monograph by deviating significantly from the style of a traditional, scientific manuscript. Throughout this work, my primary goal has been to make the information I gathered engaging and easy to understand.

NON-LOCAL CONSCIOUSNESS

Before the emergence of neuroscience and modern scientific investigation, civilizations worldwide and throughout history have assumed the belief that consciousness exists beyond the physical body. Various conjectures from early cultures emphasized the idea that everything is interconnected and that the mind, or soul, is linked with the cosmos. In some traditions, consciousness is viewed as a universal presence that extends beyond individual beings. Modern times have led to an expansion beyond spiritual practices to include scientific and philosophical perspectives of non-local consciousness.

In my life thus far, I have personally witnessed nearly all of the classic psi phenomena (e.g., precognition, telepathy, psychokinesis) and others having verified out-of-body experiences in my direct presence. Physical science cannot explain these things. In order for these events to make sense, one would first need to operate from the assumption that consciousness is not confined to physical realms such as the brain nor is it confined to space and time. My personal interest in theories of non-local consciousness is rooted in searching for answers about things I have seen or experienced that I cannot explain.

As mentioned in the introduction, I will not provide any sort of list or encyclopedia of non-local consciousness theories. Fortunately, this has already been done and the reader is directed to Robert Kuhn's 142-page publication* entitled, *A landscape of consciousness: Toward a taxonomy of explanations and implications* which is a fantastic resource that accomplishes Kuhn's purpose to "collect and categorize, not assess and adjudicate" (p. 28) the various theories. Thus, built upon Kuhn's landscape, I will attempt to do exactly what he did not by analyzing, assessing, and adjudicating a number of theories he describes (plus a few others) that support non-local consciousness.

In the sections that follow, I will discuss and compare overarching philosophical frameworks and categorize individual theories according to these frameworks. I will then analyze how the frameworks and individual theories correspond to ancient and esoteric models. After that, I will discuss six identified problems with the broader categories of theories. This will lead to a discussion of the testability of theories and empirically testable predictions. I will then discuss eight common elements I identified among the different theories and frameworks and present graphical illustrations of how different theories may overlap in what they assume. Finally, I will direct readers to view my online resource of a 35-minute video summing everything together with my own bit of innovation and ideas for future research.

*Kuhn, R. L. (2024). A landscape of consciousness: Toward a taxonomy of explanations and implications. *Progress in Biophysics and Molecular Biology*.

PHILOSOPHICAL FRAMEWORKS

Although I provide some analyses and comparisons at the level of individual theories, I find it much more useful to compare broader philosophical frameworks. Throughout this monograph, I will frequently refer to these umbrella frameworks for general comparisons. Although it is certainly the case that theories nested within a particular framework may not completely agree with each other, it is helpful to know what the foundational aspects are. There are likely many different ways these overarching categories could have been created. The following few pages highlight of some of the main categories I identified along a brief synopsis of what they propose.

The overarching frameworks I've identified and included are:

- Field-like theories
- Panpsychism theories
- Idealism theories
- Monistic theories
- Dual-aspect theories
- Interface/Perception-based theories
- Process-based theories
- Quantum-based theories

FIELD-LIKE THEORIES

Field-like theories propose that consciousness goes beyond the brain/neurons and is instead something more fundamental and extensive in nature. These theories draw parallels between consciousness and observable/measurable fields (such as the electromagnetic field). According to these theories, consciousness is a field that pervades the universe and the brain merely engages with this field similar to how an antenna can receive radio transmissions. From this perspective, the mind does not independently generate conscious awareness; rather, it connects with and influences the universal field of consciousness. Field theories state that while consciousness is everywhere, only particular mechanisms, such as the human brain, can interact with it prominently.

PANPSYCHISM THEORIES

Panpsychism theories propose the idea that consciousness is not limited to brains or living beings but exists in all things universally. They propose consciousness exists even in particles such as atoms or electrons in a fundamental manner. In essence, panpsychism addresses the inquiry of how the physical brain gives rise to perception by proposing that consciousness is fundamental—it has always been present in everything and it doesn't suddenly appear when things become complex enough. In panpsychism, human consciousness is simply a more sophisticated form of the consciousness that pervades all material things in the universe.

IDEALISM THEORIES

Theories of idealism propose that consciousness is the basis of reality rather than a byproduct of the interaction between the brain and the physical world. According to idealism theories, the physical world's existence is contingent upon our perception of it. Thus, everything in our experience including nature, space, and other individuals is fundamentally shaped by consciousness. Consciousness creates and mediates the material world, rather than the other way around. According to this perspective, our thoughts and minds hold as much substance as the tangible objects we encounter as these objects only take form when we observe them.

MONISTIC THEORIES

Monistic theories posit that only one substance of reality exists and everything, including consciousness, is derived from that single substance. They reject the idea that mind and matter are separate or of different substance. In accordance with these theories, every element in the cosmos, along with consciousness, can be ultimately linked back to a fundamental form of being.

DUAL-ASPECT THEORIES

Dual-aspect theories are frequently grouped with monistic theories as they share the idea of a single fundamental reality but they take it a step further by suggesting two distinct aspects of the fundamental reality (the mental and the physical realms). According to these theories, consciousness and physical substance are two perspectives of the same underlying essence. They propose that although there is a connection between consciousness and the brain, one does not cause the other. Instead, they represent two facets of the same truth that we can observe from an external perspective (as physical occurrences) or from an internal viewpoint (as conscious awareness).

INTERFACE/PERCEPTION-BASED

Interface- or perception-based theories propose that consciousness acts as an interface (like the display on a computer screen) that allows humans to interact with the world around them. According to these theories, what is experienced as reality is shaped by perceptions, which have evolved to help humans survive and function in the physical world. These theories explain that experiences do not provide a direct view of the world as it really is but simplify and filter information in a way that helps inform decisions and responses to the environment.

PROCESS-BASED THEORIES

Some process-based theories state that everything, even consciousness, is in a constant state evolution and change. These theories suggest that conscious experience is not something that simply "resides" in the brain, but it is something that emerges from the constant interactions between the brain, body, and environment. According to these theories, consciousness is made up of moments of experience, each building on the last, rather than static objects.

QUANTUM-BASED THEORIES

Quantum-based theories suggest a connection between consciousness and particle behavior in quantum physics—a concept where particles can be in more than one location simultaneously and their behaviors influenced by observation. Certain quantum-based viewpoints propose that consciousness arises from quantum activities within the brain while others state that consciousness is fundamental to the quantum fabric of the universe.

With that basic foundation, it's time to introduce some of the individual theories. As mentioned in the introduction, this monograph is not an encyclopedia of theories (see Kuhn's 2024 article for a work of that nature). A small number of theories will be introduced within one possible umbrella of categorization, although some could fit into multiple. These comparisons are very surface-level for a reason—I found that diving too deeply into any one theory complicated the overall comparisons/analyses and was ultimately not productive. I also wanted to follow my intent to keep this digestible for the general public and keep this work at a reasonable length. Deeper analyses will, however, be included in the video.

So, as we get into some of the finer details of individual theories, it is simply to highlight differences between theories that are of a similar type or are built from a similar philosophical foundation. What we will see later on is how similarities emerge between frameworks.

QUANTUM- & BIOLOGY-BASED

The Zero-Point Field Theory and Orchestrated Objective Reduction (OrchOR) are distinct theories that can be categorized as being quantum-based. In particular, Keppler's Zero-Point Field Theory suggests that consciousness emerges through interactions with the *zero-point field* which is an energy field that exists throughout the universe, even in a vacuum. This theory proposes that consciousness is not produced by the brain but arises from the brain's interaction with this pervasive quantum field. The concept of a universal field provides a framework for non-local consciousness, explaining how consciousness could transcend the limits of time and space.

In OrchOR, Hameroff and Penrose posit that consciousness arises when quantum superpositions within "microtubules" of the brain collapse into definite states, a process influenced by the gravitational field. Like the Zero-Point Field Theory, OrchOR emphasizes the non-local nature of quantum states, suggesting that consciousness may not be bound to specific physical locations. While both theories share a reliance on quantum mechanics, they differ significantly as Zero-Point Field Theory places consciousness in the context of the broader, universal quantum field and OrchOR is more focused on explaining consciousness as a direct result of quantum processes within the brain. This makes Keppler's theory more expansive, suggesting that consciousness could exist independently of biological systems, whereas OrchOR remains somewhat tied to brain-based processes.

In terms of testability, however, OrchOR has the advantage. Researchers can investigate the role of microtubules in neural processes and search for quantum effects that may correlate with conscious experience, although, as far as I know, it's not easy to conduct these types of experiments. In contrast, testing the Zero-Point Field Theory is more challenging because the zero-point field is very theoretical and difficult to measure directly, let alone link empirically to consciousness.

Torday's theory takes a biological approach and suggests that consciousness exists not only at the level of complex organisms like humans but also at the cellular level. According to Torday, cells possess a form of proto-consciousness, and this cellular consciousness scales up to form the basis of more complex conscious experiences like those of animals and humans. This view of consciousness as a spectrum (present even in the simplest forms of life) draws a direct connection between biological processes and the fabric of the universe.

One strength of Torday's theory is its grounding in biology, which makes it more testable than many other theories that are purely theoretical. Torday's theory partly aligns with panpsychist theories in that both suggest consciousness is present throughout the universe. Faggin's quantum panpsychism in particular focuses more on the role of quantum information as the medium for consciousness. In Faggin's model, both living organisms and inanimate objects possess some degree of consciousness because they all participate in the exchange of quantum information. Although there is some overlap with Torday's idea of cellular consciousness, it extends the notion further by suggesting that even non-living matter also contains consciousness.

I'm certainly not a physicist or biologist, but a potential integration of these theories could yield a model where consciousness is viewed as a biological, quantum phenomenon, emerging from the interaction between cells and the quantum information that permeates the universe. This hybrid model could potentially be tested by examining how quantum processes influence biological systems, such as how cells process information and whether quantum effects are involved in cellular communication.

PANPSYCHISMS

Constitutive Panpsychism suggests that everything is composed of parts that are themselves conscious. Panprotopsychism proposes that the fundamental components of reality possess proto-conscious properties, which can potentially give rise to consciousness under the right conditions. Cosmopsychism, on the other hand, scales consciousness up to a cosmic level, proposing that the universe itself is a conscious entity from which particular, localized consciousnesses (like human experiences) emerge. One interesting intersection for these panpsychisms is that panprotopsychism could serve as a bridge between the micro-consciousness entities of constitutive panpsychism and the universal consciousness proposed in cosmopsychism.

MONISMS & DUAL-ASPECT

Russellian Monism suggests that the universe is made up of a single kind of substance with both physical properties (which we can perceive) and mental properties (which are intrinsic, unable to be perceived directly). This sets a foundation that other forms of monism build on and/or alter slightly. Velman's Reflexive Monism suggests that the mental and physical are two ways of understanding the same phenomenon, shaped significantly by the observer's interaction with the world. This model highlights the role of perception in defining the boundaries between the mental and physical. Both Polkinghorne and Atmanspacher's take on dual-aspect monism explore this interaction further but through different lenses. Polkinghorne proposes a more spiritual approach with the suggestion that mental and physical realities are united in a divine order. Atmanspacher, on the other hand, proposes that these aspects relate to different states or types of information processing in the universe via quantum processes. Finally, Hart's Monism also has a spiritual flavor in its mention of the *infinite mind*, or God, and it takes a slightly different approach by borrowing elements of idealism proposing that the underlying reality is fundamentally mental, and what we perceive as the physical world is a manifestation of this.

DUALISMS

Thomistic Dualism posits that the soul is the form of the body, an immaterial principle that animates physical matter, and is the driver of intellect and will. Naturalistic Dualism argues from a more secular and philosophical viewpoint that consciousness, while arising from physical processes, has properties that are not reducible to those processes. Religious and theological views on souls generally fit in this general category as they often suggest that the soul is an immortal, spiritual essence unique to each individual, created by a divine force. The soul governs the physical body but is, in and of itself, separate and made up of a different substance. Despite their varied origins, these theories intersect in their agreement that consciousness (or the soul) and the physical body are distinct yet interact in complex ways. Thomistic Dualism and religious views often align, as they both consider the soul as an immaterial, immortal essence separate from physical matter that defines personal identity.

IDEALISMS

Kastrup's Analytic Idealism suggests that reality and the universe are experiential. It proposes that our own consciousness is like dissociated fragments of a universal consciousness. Kastrup compares this to the mental illness *dissociative identity disorder* and how there can be separate identities but one main source. The concept of a universal consciousness concept aligns with Perennial Idealism's belief in a consciousness from which all individual experiences originate. This proposes a collective nature to consciousness and subsequent construction of the physical world.

The Interface Theory of Perception suggests that our perception of reality is like a "user interface" which works to conceal underlying processes beyond our awareness. This theory corresponds with Personal Idealism which asserts that an individuals reality is molded by their mental actions and perceptions, highlighting the subjective essence of experiences. Resonance Theory and Subjective Time introduces another dimension by exploring how internal and external elements like emotions and cognitive functions can impact experiences such as time perception. This concept aligns with the Interface Theory of Perception and Personal Idealism as they both propose that our perception of reality is heavily influenced by how we analyze and make sense of information than solely by the raw data itself.

CATEGORIZAITON

As I explored the various theories individually, I was fascinated by the similarities and differences among theories a nested within the same broader framework. The figure shown on the next page represents a high-level categorization of the many theories I came across (not all will be featured here). While it was useful to compare and contrast theories sharing a framework, I wanted to see if I could dig a little deeper and find how theories could be mapped out in different ways. The next section highlights how these modern frameworks compare to more ancient and esoteric theories.


THEORIES OF NONLOCAL CONSCIOUSNESS
PANPSYCHSIM
Panprotopsychism
Cosmopsychism
Goff's Constitutive Panpsychism
Micropsychism
QUANTUM-BASED
Hameroff & Penrose's Orchestrated Object Reduction
Carr's Quantum Theory
Faggin's Quantum Information-Based Panpsychism
Neppe & Close's Triadic Dimensional Vortical Paradigm
IDEALISM
Ward's Personal Idealism
Albahari's Perennial Idealism
Kastrup's Analytic Idealism
DUALISM
Stump's Thomistic Dulaism
Composite Dualism
"Soul" in religions
COMPUTATIONAL AND INFORMATION-BASED
Campbell's Big T.O.E.
Langan's Cognitive-Theoretic Model
Duan's Platonic Computer
DUAL-ASPECT AND MONISM
Chalmers' Double Aspect Theory
Polkinghorne's Dual-Aspect Monism
Atmanspacher's Dual-Aspect Monism
Velman's Reflexive Monism
Russellian Monism
Hart's Monism
INTERFACE AND PERCEPTION-BASED
Hoffman's Interface Theory of Perception
Bohm's Implicate-Explicate Order
FIELD-BASED
Sheldrake's Morphic Fields/Resonance
Grinberg's Syntergic Theory
Meijer's Universal Knowledge Field
Keppler's Zero-Point Field Theory
PROCESS-BASED AND EVOLUTIONARY
Today's Cellular and Cosmic Consciousness
Schooler's Resonance Theory and Subjective Time
Graboi's Three-Aspect Model of Consciousness
Whitehead's Process Theory
Wilber's Integral Theory

A BRIDGE TO THE PAST

Frankly, my familiarity with ancient and esoteric models of reality was quite limited before I started this project. I was amazed, however, to find just how long some of these core ideas have been around and how they were conceptualized in ancient times. Here is a brief analysis of some ancient and esoteric models and how they relate to more contemporary theories.

HERMETICISM

OVERVIEW

Hermeticism is based on the teachings of Hermes Trismegistus and is a philosophical and spiritual tradition that emphasizes the unity between the material and spiritual realms. A central concept in Hermeticism is the *Microcosm-Macrocosm Principle*, which posits that the human being (microcosm) reflects the universe (macrocosm). Additionally, one of the seven Hermetic Principles is "mentalism" which essentially states that the universe is consciousness.

SIMILARITIES

These concepts are similar to many modern models indicating that consciousness is fundamental and universal. The microcosm-macrocosm principle, in particular, is comparable to some theories of idealism which propose human consciousness is a part of a universal consciousness.

VEDANTA

OVERVIEW

Vedanta, a school of Hindu philosophy, is centered on the nature of Brahman (ultimate reality, pure consciousness) and Atman (the individual self), emphasizing the unity between both the individual consciousness and a universal consciousness. Vedanta, especially in its Advaita (non-dual) form, teaches that there is no division between the self and the universe and, in reality, all is one. Specifically, "Maya" (illusion) suggests that the separation of individual consciousness from universal consciousness is illusory.

SIMILARITIES

Again, there is a core belief of consciousness being fundamental and universal. It integrates ideas of monism in stating that Atman and Brahman are the same. Additionally, there is an element of idealism with which also argues that reality is a projection of consciousness, and that the physical world is merely an illusion like Maya.

AKASHIC RECORDS

OVERVIEW

The Akashic Records refer to a non-physical, universal storage place of knowledge that contains all information about the past, present, and future. This esoteric concept suggests that this is a source of universal truth, and that consciousness can access this through heightened spiritual states. On a broader scale, esoteric knowledge fields refer to the idea that there is an invisible energy field that contains information and wisdom.

SIMILARITIES

These concepts suggest two things that are consistent with some modern theories. The first is that there is an unseen energy field that contains and can be accessed by consciousness. This is similarly suggested in modern field-based theories. Secondly, that there is a shared consciousness that links individuals and allows them to access collective wisdom similar to how many panpsychist and idealist theories suggest that consciousness is interconnected.

ANIMISM/PANTHEISM

OVERVIEW

The concept of "animism" is often found among indigenous cultures and suggest that everything in nature, both living and non-living, possess spiritual essence (consciousness). "Pantheism," found in both Eastern and Western traditions, is similar but states that divinity, or God, is present in throughout the universe. In essence, both beliefs propose that some type of consciousness pervades the universe and is in everything.

SIMILARITIES

These ideas are similar to some theories of panpsychism which propose that conscious is everywhere and in everything, even inanimate objects. It also contains elements of a universal consciousness.

KUNDALINI/QI/PRANA

OVERVIEW

Kundalini, Qi, and Prana are ancient concepts that describe subtle energy fields that link living beings and the cosmos. More specifically, when Kundalini energy rises to the "crown chakra," a person experiences a sense of oneness with the universe. Qi and Prana are a universal energy that is in everything and is the force that animates or sustains life.

SIMILARITIES

These concepts are also consistent with modern field-based theories and a panpsychist view that consciousness is universal. There is also reference to certain states of consciousness that might provide greater access to universal consciousness.

GNOSTICISM

OVERVIEW

Gnosticism emerged in the early centuries of the Common Era and includes spiritual beliefs influenced by early Jewish, Hellenistic, Christian, and mystical traditions. The term "Gnosis" means *knowledge* and specifically refers to spiritual knowledge that allows a person to transcend the physical world and connect with the divine. One of the core beliefs of Gnosticism is that the material world is inherently evil while the spirit realm is divine. It also suggests that physical reality is a prison or illusion.

SIMILARITIES

With Gnosticism, there is a strong overlap with dualistic theories suggesting that mind and matter are fundamentally separate or different. It also shares some idealist beliefs pointing to the illusory nature of physical reality.

NEO-PLATONISM

OVERVIEW

Neo-Platonism is a type of philosophy developed by Plotinus in the 3rd century. While its foundation is built upon Platonic ideas such as “Forms” (abstract, perfect, stable ideals that are nonphysical but real and exist in a different realm) Neo-Platonism incorporates mystical elements. A core tenet is “The One” which suggests there is an ultimate, formless source of all existence. All things come from The One and the ultimate goal is to return to it. It emphasizes the idea that human souls come from “Nous” (the divine mind) and they are interconnected.

SIMILARITIES

These ideas seem consistent with contemporary frameworks that suggest consciousness is fundamental and interconnected. There are also similarities to some idealist theories that propose there is a universal consciousness of which all individual consciousnesses are dissociated fragments.

With how strikingly similar these ancient and esoteric ideas are to modern frameworks, I was curious to explore what core problems or criticisms these theories face. What is it inherent in these concepts that make them so controversial? How is it that ancient and modern philosophers and scientists can disagree on something that claims to be so universal?

With these questions in mind, I examined some of the identified problems that have emerged in attempts to address what is famously known to be “Chalmers’ hard problem of consciousness” (or, “the hard problem” for short). The *hard problem* questions how physical or neural processes in the brain can fully account for subjective experience. The next section describes six of these problems.

SIX PROBLEMS

The Problem of Personal Identity

When considering the possibility that consciousness extends beyond the brain and is interconnected with a broader, universal consciousness, it is logical to wonder *how does one maintain a unique and consistent identity over time?* and, *how does this continuity of identity remain intact if consciousness transcends the physical person*? Our sense of self seems to endure despite the passage of time and changes in our physical and mental states. Theories suggesting universal consciousness (especially one that is highly interconnected) often lack an adequate explanation about the preservation of the sense of being an individual with private thoughts, experiences, and memories.

The Reverse Hard Problem

This is an issue that is especially relevant for idealist theories. In direct opposition to "the hard problem" mentioned earlier, this problem refers to a need for answering the question, *how do subjective experiences give rise to or influence physical processes?* For example, how can a purely mental experience, or consciousness that exists beyond the brain, affect the physical body or the external world? The way in which our intangible and subjective consciousness interacts with the material realm in an observable manner is not clearly understood yet. The discrepancy between experiences and concrete outcomes poses a significant challenge when it comes to explaining this "reverse" issue as it proves to be just as complex as the initial hard problem.

The Combination Problem

This is a concern for theories such as panpsychism that suggest consciousness exists in everything. This dilemma questions how separate units of consciousness (perhaps residing in basic particles like neurons or atoms) come together, or *combine*, to create the complex and cohesive conscious experiences typical of human beings. In essence, this problem is concerned with the question, *how do these tiny pockets of awareness come together to form the thoughts and feelings that shape an individual's conscious existence*? For instance, if each neuron possesses its individual minuscule awareness, there's a lack of awareness about how these unique conscious entities merge to produce the smooth and unified self-awareness that we associate with human experience.

The Interaction Problem

Inherent to many theories of non-local consciousness (especially of a dualist flavor) there is an issue similar to the reverse hard problem. Specifically, there is a largely unanswered question about how consciousness *interacts* with the physical brain. If, according to many theories, consciousness can function autonomously outside the body or brain, *how does the consciousness that is not bound by locality or physicality engage with systems like neurons and synapses in the body's functions and processes?* While quantum mechanics and OrchOR theory appear to give us the best sense, such testing requires laboratory conditions under extremely cold temperatures.

The Problem of Free Will

Free will is something that is emphasized among many theories but it's usually in the sense of something we inherently have (and that we own all of it). For theories that suggest consciousness is part of a larger, interconnected network, there is a question regarding how much autonomy an individual actually has in shaping their own thoughts and actions. In theories that propose a universal consciousness or fields of shared knowledge, it seems reasonable to assume that individuals' behavior and decision-making may not be *fully* independent. For these types of models, we need to answer the question, *how can we know that our choices are genuinely our own rather than being influenced or directed by overarching non-local forces?* The challenge here is to explain how individuals can maintain free will if their consciousness is enmeshed in or influenced by a larger collective system.

The Epistemic Gap

This is a problem for virtually all theories of non-local consciousness. In essence, *how can we study or measure consciousness if it exists outside the brain and outside the scope being measured by traditional scientific instruments?* Many current methods of studying consciousness are designed to measure neural activity, which limits our observation to localized processes in the brain. If consciousness is truly non-local, we currently lack the tools to observe or measure it directly. This gap in testability creates a barrier to researching and validating non-local consciousness theories empirically. In turn, this leaves us without clear methods for gaining insight about the potential non-local aspects of consciousness.

SO, WHAT CAN WE DO?

Although each of the six problems outlined here are valid and perhaps more relevant to some theories than others, the **epistemic gap** continues to be a fundamental issue for nearly all theories. It's clear that the testability (or lack thereof) is the biggest hurdle we have to overcome in order to gain a better understanding consciousness and its potentially non-local properties. Building off the idea of the epistemic gap, the next section will cover *testability* in more depth.

TESTABILITY & EMPIRICAL PREDICTIONS

With so many of the theories of non-local consciousness depending on concepts that have yet to be measurable by modern scientific methods, our overall understanding and ability to advance our understanding is limited. Some of the quantum-based theories are touted to be the most testable, but it's difficult to determine how well that will truly clarify our understanding of consciousness. I don't know much about experimenting with quantum mechanics, but I do know that it's not easy. From my perspective, even if quantum mechanics was well established and accepted by the majority of science without hesitation (like other theories in science), it seems we still have a long way to go before we are able to adequately explain how that relates to consciousness and all phenomena associated with non-local consciousness.

I had originally intended to summarize theories identified to have testable predictions with a snapshot of what those predictions are, but I ran into a few issues. The first was that reading about the predictions of complex biological or quantum theories reminded me why I became a psychologist rather than a physicist. Many of those predictions and study methods are well beyond my scope of understanding. If I couldn't fully grasp them, I wasn't sure how I could present them to the general public. Second, if there seemed to be a testable prediction I was able to understand, then I found myself often feeling underwhelmed with either a sense of *"I'm not sure how that would really inform our understanding of non-local consciousness"* or *"that's still under the assumption that consciousness can be observed in the local brain."*

I resonate with a sentiment by David Chalmers as presented in Kuhn's 2024 article: *"It is natural to hope that there will be a materialist solution to the hard problem and a reductive explanation of consciousness, just as there have been reductive explanations of many other phenomena in many other domains. But consciousness seems to resist materialist explanation in a way that other phenomena do not"* (p. 30).

Kuhn, R. L. (2024). A landscape of consciousness: Toward a taxonomy of explanations and implications. *Progress in Biophysics and Molecular Biology*.

In response to all of this, I turned to more psychological predictions. What I found there were predictions mainly related to "paranormal" or "psi" phenomena (e.g., telepathy, precognition, psychokinesis, remote viewing). I'm a fan of these types of studies and I'm familiar with many of the significant outcomes that have been observed and reported thus far (e.g., Cardeña, 2018). However, it seems the majority of science (and perhaps the general public) is unwilling to accept these types of findings even though they often reach the same standards of significance, reliability, and validity we use for so many other things that *are* widely accepted. This leads me to ask questions like, *is there even an experiment we could design that would satisfy the biggest skeptics and, if there is, what type of results would be required?*

So, if I were to proceed with my original plans, I'd be in a conundrum of having to 1) try summarizing complex predictions and methodology I don't truly understand, 2) relay information on predictions I didn't see having much impact on our overall understanding of non-local consciousness, and 3) talk about predictions and methods I personally find valid that we already have good evidence for but the rest of science chooses to ignore. Still wanting to present something useful, I decided to take a creative approach to talk about testability so that the essence of this section wasn't just "testability is hard" and "many of these theories are not even falsifiable." To accomplish this, I shared a list of a handful of theories with a short synopsis among colleagues and friends and I asked them to rate each theory on its face-value understandability and testability. From the averaged results, I created a diagram which provides a snapshot of what "outsiders" view as the state of the science.

From the diagram, we see that many of these theories suffer from poor understandability and low testability—at least from the perspective of a small sample with wide-ranging levels of scientific knowledge. From here, I'd like to shift gears to highlight important commonalities among theories which may, perhaps, lead to a better idea of how future research can be shaped to examine broader tenets across theories rather than individual theories themselves.

Cardeña, E. (2018). The experimental evidence for parapsychological phenomena: A review. *American Psychologist*, *73*(5), 663. http://dx.doi.org/10.1037/amp0000236


How Understandable is this Theory for the General Population?
How Testable is this Theory?
Does this Theory Have Clear, Testable Predictions?
Zero-Point Field Theory
Russellian Monism
Naturalistic Dualism
Triadic Dimensional Vortical Paradigm
OrchOR
Implicate-Explicate Order
Analytic Idealism
Quantum Information-Based Panpsychism
Process Theory
Personal Idealism
Reflexive Monism
Constitutive Panpsychism
Interface Theory of Perception
Perennial Idealism
Resonance Theory and Subjective Time
Integral Theory
Dual-Aspect Monism
Syntergic Theory
Double Aspect Theory
Thomistic Dualism

THE 8 COMMON ELEMENTS

Across theories and philosophical frameworks I examined for this project, it became apparent that there are some core similarities that they share. After familiarizing myself with countless individual theories, I identified "8 Common Elements" that consistently permeate the different theories. They are 1) consciousness is quantum-based, 2) consciousness is mediated by fields or energies, 3) consciousness is different from physical matter, 4) reality is a product of consciousness, 5) all reality is composed of a single substance, 6) consciousness is fundamental, 7) consciousness is universal, and 8) consciousness is interconnected.

Although the last three (consciousness is fundamental, universal, and interconnected) may seem redundant, I see them as having important differences. I found that most of the time when a theory contained one of those three elements, at least one other was also present. For consciousness to be universal or interconnected, it only makes sense that it is also fundamental. I feel it's important, however, to understand that just because a theory proposes that consciousness is fundamental (FYI, most of them do) doesn't automatically mean it suggests that consciousness is universal, and just because a theory proposes that consciousness is universal doesn't automatically mean that it assumes all of consciousness is interconnected in a meaningful way.

I will provide 1) a brief description of each element and 2) how I see that they relate to non-local consciousness.

C. IS QUANTUM-BASED

#1

Consciousness arises from or is deeply connected to quantum mechanical processes. This may include concepts such as quantum entanglement, superposition, and state reduction. The brain, or consciousness itself, operates according to the principles of quantum physics, and that quantum nature of consciousness allows for non-local phenomena.

Quantum mechanics (specifically quantum entanglement) allows for instantaneous connections between particles, regardless of distance. If consciousness is rooted in quantum processes, it could allow for non-local connections between minds or between consciousness and distant stimuli.

C. IS MEDIATED BY FIELDS OR ENERGIES

#2

Consciousness interacts with or is mediated by non-local fields or energetic structures. In this context, these fields play a direct role in connecting conscious entities and facilitating non-local interactions.

A field-based model of consciousness suggests that consciousness can spread or operate non-locally through these fields. This would indicate that consciousness connects to a larger field that can influence or be influenced.

C. IS DIFFERENT FROM PHYSICAL MATTER

#3

Consciousness is fundamentally distinct from physical matter. It does not emerge from or depend entirely on the brain or neural processes and instead operates on a different plane or dimension.

If consciousness is separate from matter, it could exist and operate independently of the constraints of physical systems like the brain.

REALITY IS A PRODUCT OF C.

#4

Reality itself is generated or structured by consciousness. Consciousness is not just an observer of reality but the constructor of the perceived world. The external physical world is a mental or perceptual construct that exists only through consciousness.

If reality is created by consciousness, the boundaries between individual consciousnesses could be more fluid, multiple minds could be creating or influencing shared experiences in a non-local way, and consciousness has the ability to directly influence the physical world at a distance.

EVERYTHING IS ONE SUBSTANCE

#5

There is a single substance from which everything in reality, including consciousness, is composed. As this substance could be physical, mental, or neutral, it forms the basis for both material objects and conscious experiences.

If reality is composed of a single unified substance, then consciousness and matter are fundamentally the same at their core. This opens the possibility that consciousness can influence distant matter as they all share the same underlying substance.

C. IS FUNDAMENTAL

#6

Consciousness is the most basic substance of the universe. The universe is built upon consciousness, and everything else arises from it.

If consciousness is fundamental, it is not limited by physical constraints like space and time. It does not require a physical brain or body in order to exist and instead extends beyond physical locations to operate non-locally.

C. IS UNIVERSAL

#7

Consciousness is not restricted to humans or biological entities but is instead a universal property present in all forms of matter everywhere. Everything has some form of consciousness or subjective experience, no matter how basic.

If consciousness is universal, it implies that all objects and entities are conscious to some degree and that consciousness extends beyond the human brain.

C. IS INTERCONNECTED

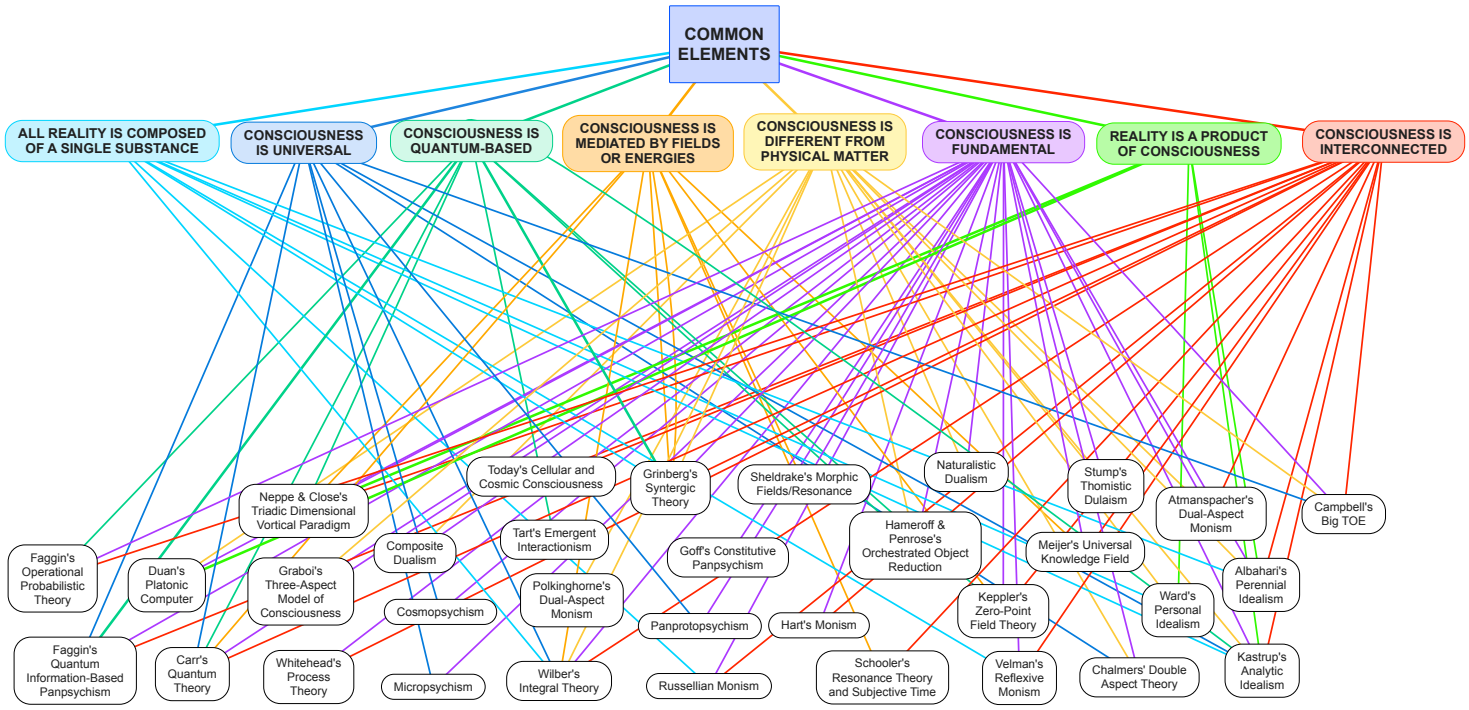
#8

All individual consciousnesses are part of a larger, interconnected whole. Individual minds share a deeper level of connection that allows them to communicate or influence each other, even at a physical distance.

If consciousness is interconnected, it must extend beyond the brain in order for that networking and connectedness to occur.

THE 8 COMMON ELEMENTS IN DIAGRAM

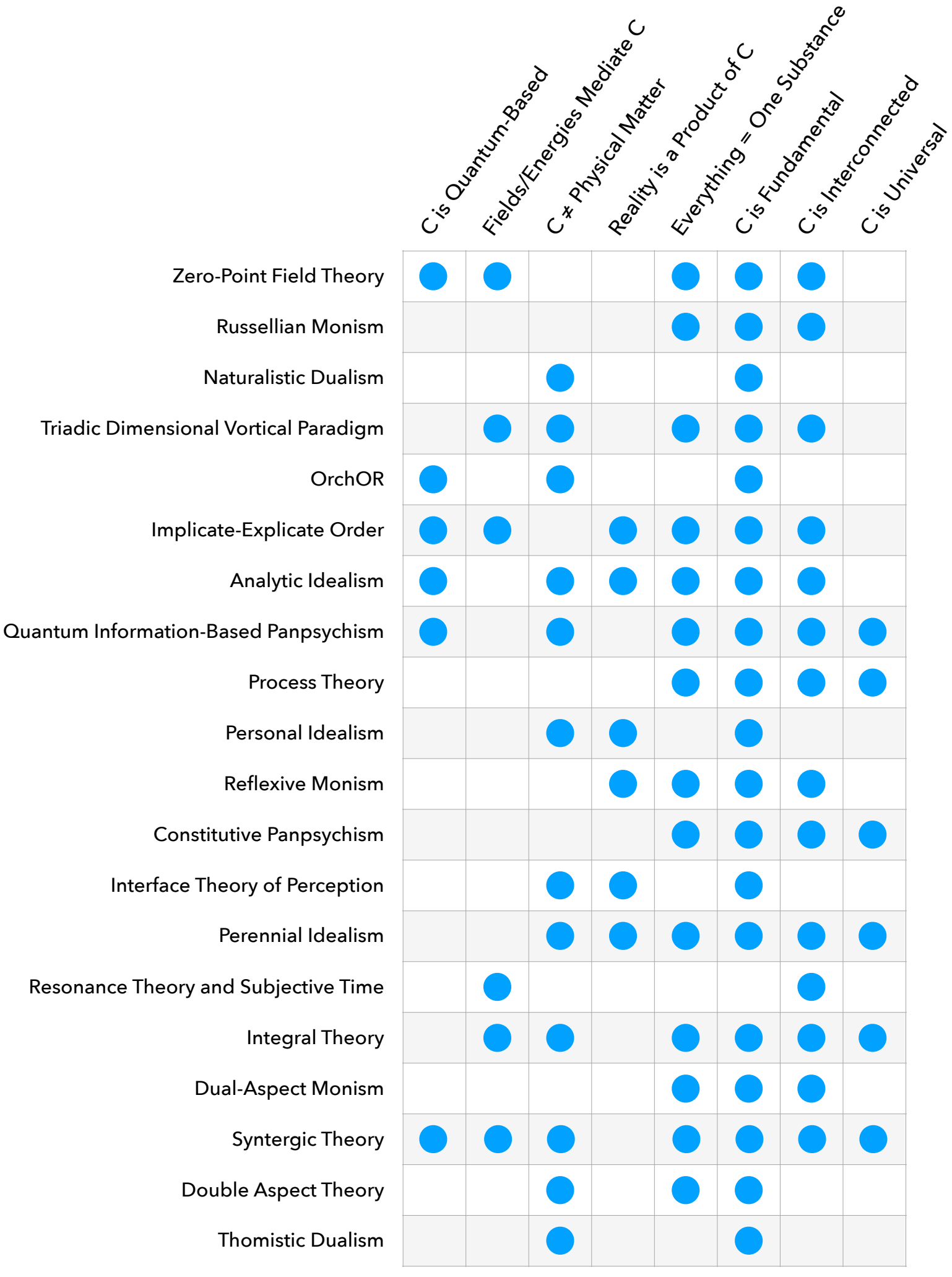
I wanted to map individual theories according to which of the 8 common elements they seem consistent with. At first, I first tried to do this in a web-style. I did, in fact, do this by hand; connecting each line individually only in the end to find it unreadable and not very helpful. It is interesting to see which elements have the most lines shooting out from them, but otherwise it's a tangled mess.



Dissatisfied by how this one turned out, I created a different type of graphic that is much easier to follow (see next page).

From this, it's observable that many theories share some similar tenets. The core belief that consciousness is fundamental is the most common among the 8 elements. This interesting to me because of just how theoretical that claim is. This idea has such strong footing in ancient models and is summarized excellently by physicist Max Planck. A direct quote of his from *The Observer* is included in Kuhn's 2024 paper and says, "I regard consciousness as fundamental. I regard matter as derivative from consciousness. We cannot get behind consciousness. Everything that we talk about, everything that we regard as existing, postulates consciousness" (p. 33).

Kuhn, R. L. (2024). A landscape of consciousness: Toward a taxonomy of explanations and implications. *Progress in Biophysics and Molecular Biology*.


C is Quantum-Based
Fields/Energies Mediate C
C ≠ Physical Matter
Reality is a Product of C
Everything = One Substance
C is Fundamental
C is Interconnected
C is Universal
Zero-Point Field Theory
Russellian Monism
Naturalistic Dualism
Triadic Dimensional Vortical Paradigm
OrchOR
Implicate-Explicate Order
Analytic Idealism
Quantum Information-Based Panpsychism
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Perennial Idealism
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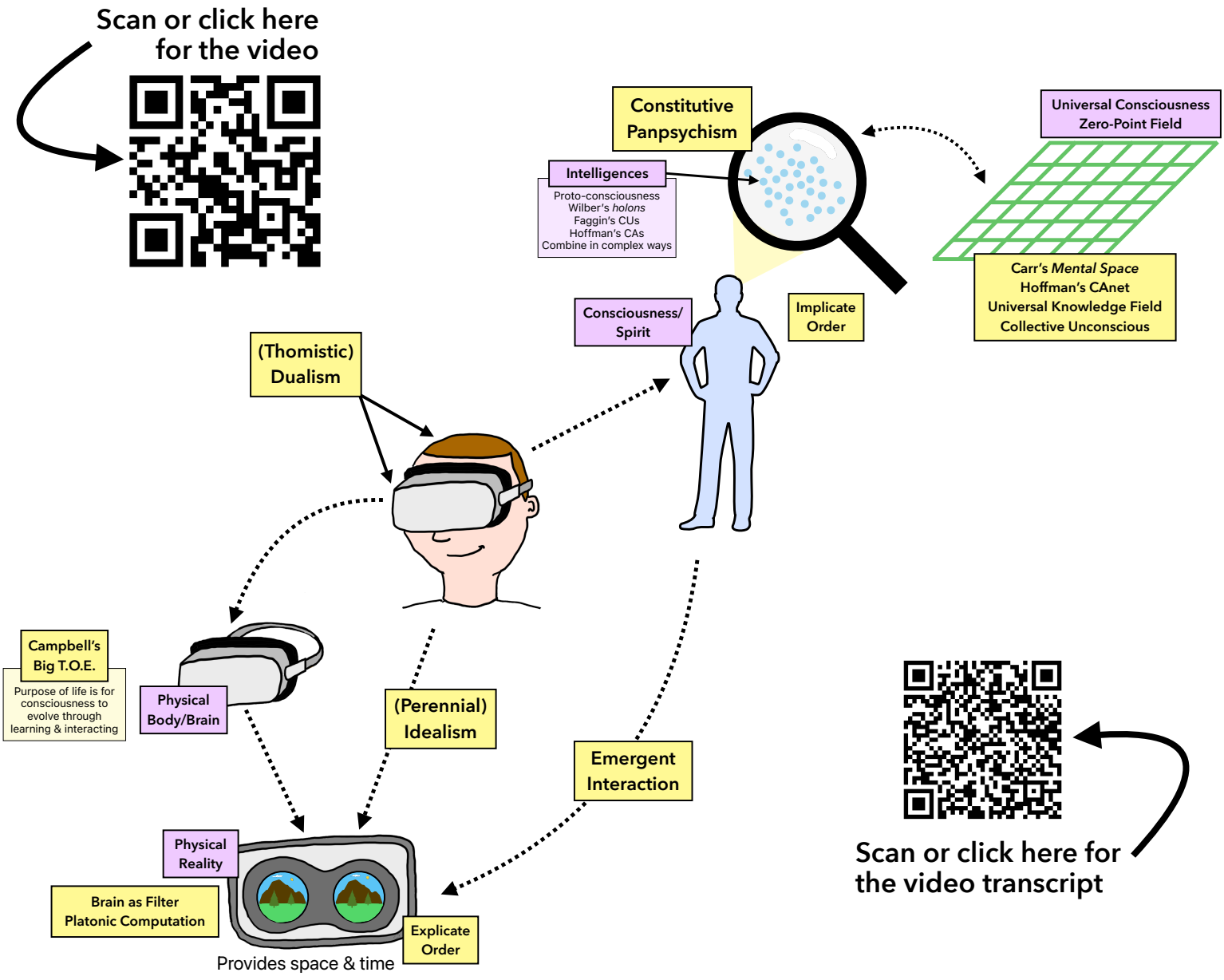
ONLINE RESOURCES

I'm excited to introduce the online resource I've created which is a 35-minute-long video. As everything thus far has been foundational, this video is where I put it all together to discuss a deeper analysis among theories to form a unique approach (illustrated by a simile of virtual reality) and ideas for future testing. My explanation will follow the figure below that I created which puts all of my ideas into one place. Although I feel it a stretch to say my conclusions are "groundbreaking," perhaps they can be thought of as "groundcracking" in some way. As a very early career professional, I am highly committed to this realm of inquiry and research. My hope is to continue to contribute to it in meaningful ways, built upon the foundation of those who have gone before me.



REFERENCES

Consistent with my aspirations for this work, it has been written and designed to maximize readability, utility, and aesthetic. While some direct quotes have been included and cited (both here and in the video), I have chosen to only include main references here and placed other references into a live document to include both references for this work and other resources in general. My hope is that this document can serve as a living repository for new references to books, web content, and articles as they emerge.

Albahari, M. (2019). Perennial idealism: A mystical solution to the mind-body problem.

Campbell, T. (n.d.). My big toe: a Trilogy unifying philosophy, physics, and metaphysics: awakening, discovery, inner workings. Lightning strike books. My big toe website. https://www.my-big-toe.com.

Cardeña, E. (2018). The experimental evidence for parapsychological phenomena: A review. *American Psychologist*, *73*(5), 663. http://dx.doi.org/10.1037/amp0000236

Chalmers, D. J. (1995). Facing up to the problem of consciousness. *Journal of consciousness studies*, *2*(3), 200-219.

Chalmers, D. J. (1996). *The conscious mind: In search of a fundamental theory*. Oxford university press.

Clark, A., & Chalmers, D. J. (1998). The extended mind. *Analysis*, *58*(1), 7-19. https://doi.org/10.1093/analys/58.1.7

Bohm, D. 1980. Wholeness and the Implicate Order. Routledge.

Bohm, D., Hiley, B., 1993. The Undivided Universe: an Ontological Interpretation of Quantum Theory. Routledge.

Duan, S. (2022). Platonic Computer— the Universal Machine That Bridges the "Inverse Explanatory Gap" in the Philosophy of Mind. *Filozofia i Nauka* 10:285-302.

Faggin, F. (2021). "Consciousness Comes First," in Consciousness unbound: Liberating mind from the tyranny of materialism, eds E. F. Kelly and P. Marshall (Lanham, MD: Rowman & Littlefield Publishers), 283–322.

Falconer, R. (2023). The Others Within Us: Internal Family Systems, Porous Mind, and Spirit Possession. Great Mystery Press.

Garcia-Romeu, A. P., & Tart, C. T. (2013). Altered states of consciousness and transpersonal psychology. *The Wiley-Blackwell Handbook of Transpersonal Psychology*, 121-140.

Goff, P. (2024). How Exactly Does Panpsychism Help Explain Consciousness?. *Journal of Consciousness Studies*, *31*(3-4), 56-82. https://doi.org/10.53765/20512201.31.3.056

Goff, P. (2017). *Consciousness and Fundamental Reality*. Oxford University Press.

Hameroff, S. (2021). 'Orch OR' is the most complete, and most easily falsifiable theory of consciousness. *Cognitive Neuroscience*, *12*(2), 74–76. https://doi.org/10.1080/17588928.2020.1839037

Hameroff, S., & Penrose, R. (1996). Orchestrated reduction of quantum coherence in brain microtubules: A model for consciousness. *Mathematics and Computers in Simulation*, *40*(3), 453–480. https://doi.org/10.1016/0378-4754(96)80476-9

Hameroff, S., & Penrose, R. (2007). Conscious Events as Orchestrated Space-Time Selections. *NeuroQuantology*, *1*(1). https://doi.org/10.14704/nq.2003.1.1.3

Hameroff, S., & Penrose, R. (2014). Consciousness in the universe: A review of the 'Orch OR' theory. *Physics of Life Reviews*, *11*(1), 39–78. https://doi.org/10.1016/j.plrev.2013.08.002

Hardy, C. H. (2017). *Nonlocal consciousness in the universe: Panpsychism, psi & mind over matter in a hyperdimensional physics*.

Hernandez, R., Davis, R., Scalpone, R., & Schild, R. (2018). A Study on Reported Contact with Non-Human Intelligence Associated with Unidentified Aerial Phenomena. *Journal of Scientific Exploration*, *32*(2), 298–348. https://doi.org/10.31275/2018.1282

Hoffman, D., Prakash, C., Chattopadhyay, S. (2023). Conscious Agents and the Subatomic World. Winner of 2023 The Linda G. O'Bryant Noetic Sciences Research Prize.

Huxley, A. (1946). The Perennial Philosophy. Fontana Books.

Richards, F. D. (1855). *Journal of Discourses.* 26 vols. Liverpool.

Kastrup, B. (2021). "Analytic idealism and psi: How a more teneable metaphysics neutralizes a physicalist taboo," in Consciousness unbound: Liberating mind from the tyranny of materialism, eds E. F. Kelly and P. Marshall (Lanham: Rowman & Littlefield Publishers), 257–283.

Keppler, J. (2018). The Role of the Brain in Conscious Processes: A New Way of Looking at the Neural Correlates of Consciousness. *Frontiers in Psychology*, *9*, 1346. https://doi.org/10.3389/fpsyg.2018.01346

Keppler J. (2018). Shedding light on the fundamental mechanism underlying hypnotic analgesia. *Annals of palliative medicine*, *7*(1), 170–176. https://doi.org/10.21037/apm.2017.04.03

Keppler, J., & Shani, I. (2020). Cosmopsychism and Consciousness Research: A Fresh View on the Causal Mechanisms Underlying Phenomenal States. *Frontiers in Psychology*, *11*, 371. https://doi.org/10.3389/fpsyg.2020.00371

Kuhn, R. L. (2024). A landscape of consciousness: Toward a taxonomy of explanations and implications. *Progress in Biophysics and Molecular Biology*, *190*, 28–169. https://doi.org/10.1016/j.pbiomolbio.2023.12.003

Schwartz, S. A. (2012). Nonlocality, Near-Death Experiences, and the Challenge of Consciousness. *EXPLORE*, *8*(6), 326–330. https://doi.org/10.1016/j.explore.2012.08.008

Schwartz, S. A. (2013). Crossing the Threshold: Nonlocal Consciousness and the Burden of Proof. *EXPLORE*, *9*(2), 77–81. https://doi.org/10.1016/j.explore.2012.12.009

Sheldrake, R. (2009). *Morphic Resonance: The Nature of Formative Causation*. Park Street Press.

Tart, C. (1975). States of Consciousness. New York: Wiley.

Wahbeh, H., Radin, D., Cannard, C., & Delorme, A. (2022). What if consciousness is not an emergent property of the brain? Observational and empirical challenges to materialistic models. *Frontiers in Psychology*, *13*, 955594. https://doi.org/10.3389/fpsyg.2022.955594

Whitehead, A. N. (1929). *Process and Reality*. Free Press.

Scan or click here to see a live document of references and additional resources →

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Artificial intelligence was used judiciously throughout the creation of this work. Specifically, AI was used in early stages of literature reviews and data extraction. It was used to assist in summarizing large sets of information and it was trained on a number of individual theories to allow me to ask it specific questions to generate my own ideas for comparisons and analyses. It was also consulted to check my writing style to ensure it stayed at an appropriate reading level for the educated general public. Lastly, AI was used for some copyediting tasks, formatting references, and to occasionally provide ideas on how to reduce or summarize my original writings to be more concise. I can confirm that this work is my own and any included direct quotes have been given proper attribution.