

QUANTUM RESONANCE WITH THE MIND: A COMPARATIVE ANALYSIS OF BUDDHISM'S EIGHTH CONSCIOUSNESS, QUANTUM HOLOGRAPHY AND JUNG'S COLLECTIVE UNCONSCIOUS.

David Leong
Charisma University

david.leong@charisma.edu.eu

September 2023

ABSTRACT

This interdisciplinary exploration discusses the intricate conceptual linkages among Buddhism's Eighth State of Consciousness, Quantum Holography, and the Jungian Collective Unconscious. Central to this study is examining the Eighth Consciousness in Buddhist thought—a realm that transcends the conventional sensory and mental states to connect with a more universal and profound awareness. Drawing parallels, Quantum Holography posits that every part of the universe retains information about the whole, much like a hologram. This notion seemingly mirrors the Jungian concept of the Collective Unconscious, which postulates a shared reservoir of memories and ideas across humanity.

The paper contends that the intricate dance of photons, oscillating between particle and wave states, mediates perception through resonance and hints at a multi-layered consciousness stratum that mirrors the vast, enigmatic quantum reality expanse. The study illuminates the intersections and divergences among these frameworks through meticulous comparative analysis, positing that an integrative understanding of quantum theories and Buddhist wisdom can unravel the human psyche's profound depths. By weaving Eastern philosophies with Western psychological and quantum theoretical tapestry, the discourse unveils a multifaceted consciousness comprehension, championing integrative approaches as invaluable tools for decoding the mind and universe's enigmatic interplay from a quantum viewpoint.

Keywords

Buddhism, Quantum theory, Jungian Collective Unconscious, Quantum Resonance, Mind

INTRODUCTION

The profound interconnections between consciousness, quantum mechanics, and metaphysical insights open pathways to a nuanced understanding of the human psyche. Amidst this complex web of interdisciplinary studies, the convergence of Buddhism's Eighth State of Consciousness and Jung's (1936) Collective Unconscious provides a rich tapestry of thought, drawing parallels between the innermost layers of human cognition and the vast expanse of universal wisdom. While empirical explorations into consciousness continue to expand, a space beyond the tangible exists—an enigmatic realm that transcends the known. Here, Buddhist thought and Jungian theory intersect, offering alternative lenses to perceive and interpret the anomalies of consciousness (Liang, 2012; Moacanin, 2003).

At the core of this discourse is the indispensable function exerted by photons in eliciting consciousness, thereby sculpting and demarcating the contours of perceived reality. Photons, as elementary particles of light, are integral to the processes underpinning human perception and consciousness, contributing significantly to our understanding and interpretation of reality. These quantized energy packets interact intricately with human sensory systems, facilitating the emergence and awareness of consciousness and, consequently, playing a crucial role in framing the individual's interpretative perception of their surrounding environment. Here, the dynamic interplay between photons and consciousness is recognized as a cardinal point of inquiry, opening avenues for deeper exploration into the nuanced mechanisms through which consciousness is invoked, sustained, and defined in our interactive engagement with reality. The role of photons, in this respect, is not merely ancillary; instead, it is central, bearing significant implications for the academic investigation into the nature of consciousness and what is apprehended as reality.

From the Buddhist perspective, reality emerges not as a fixed entity but through the continuous unfolding of consciousness, traversing from the most immediate sense perceptions to the deepest, universal layers of awareness (McWilliams, 2011). Echoing this sentiment, Jung's (1936) Collective Unconscious encapsulates shared memories and ideas, a reservoir of human experience that stretches beyond individual cognition.

In the *Yogācāra* school of *Mahayana* Buddhism, there exists a nuanced classification termed the "Eight Consciousnesses" (Sanskrit: *aṣṭa vijñānakāyāḥ*) (Shun'ei & Tagawa, 2009). This schema, illustrated in Figure 2, delineates the quintet of sensory perceptions, and three distinct forms of cognitive consciousness further complement these: the primary mental consciousness (*manovijñāna*), the tainted or distorted mental consciousness (*kliṣṭamanovijñāna*), and the foundational store-house consciousness (*ālāyavijñāna*) (Cao, 2022). Of significant note is the eighth consciousness, the *ālāyavijñāna*, which is postulated to function as the foundational bedrock for the preceding seven forms to explain the working of *karma* (Meynard, 2011). This pivotal consciousness is believed to retain the latent imprints (*vāsanāḥ*) of antecedent experiences. Such retained impressions subsequently act as seminal points (*bīja*) that influence and shape future karmic trajectories within the present existence and in successive rebirths.

The concept of *ālāyavijñāna*, often translated as ‘storehouse consciousness’, delves into the realm of subterranean mental activities that persistently transpire across an individual's lifespan and, within the Buddhist paradigm, across multiple incarnations. This concept encapsulates the essence of an individual's persistent lineage, intertwined with the accrued potential of their *karma*, thereby justifying its appellation as a ‘storehouse’. Foundational to the *Yogācāra* school of Indian Buddhism—termed ‘Practitioners of Yoga’—the doctrine of *ālāyavijñāna* stands alongside other cardinal principles such as Consciousness-Only (*viññapti-mātra*) and the Three Natures (*trisvabhāva*). Between the 3rd and 5th centuries CE, the *Yogācāra* school thrived in India, subsequently impacting subsequent Buddhist derivations, especially within Tibetan and East Asian traditions. The conceptual evolution of *ālaya-vijñāna* mirrors this historical trajectory. Historically, the origination of *ālāyavijñāna* was a resolution to a set of quandaries emerging from the *Abhidharmic* assertion of the transient nature of all cognitive processes. The primary concerns addressed included the sustainability of karmic potential, latent afflictions (*kleśa*), the phased journey towards enlightenment, and the enigma of reincarnation. As this subliminal stratum of consciousness was clarified, it offered a more profound elucidation concerning the fabricated nature of perception, encapsulated in the term *viññapti-mātra*, and the shared reality of our experiential universe (*bhājana-loka*). Significantly, since the *ālāyavijñāna* epitomizes the repository of antecedent karmic deeds, its transformation or purification becomes paramount on the pilgrimage to spiritual emancipation, subsequently morphing into the ‘stainless consciousness’ (*amala-vijñāna*). Certain canonical texts even draw parallels between it and *tathāgathagarbha*, or ‘Buddha-nature’—a linkage further expounded upon by subsequent Tibetan and Chinese Buddhist scholars, in tandem with other *Yogācāra* ideologies they assimilated. In contemporary discourse, parallels have been drawn between *ālaya-vijñāna* and the unconscious cognitive processes underscored in depth psychology and cognitive scientific theories.

In response to the burgeoning empirical corpus on phenomena affiliated with consciousness and informed by Buddhist postulations from the 3rd to 5th centuries, this study seeks to elucidate the confluences between quantum resonance, consciousness, and *ālayavijñāna*. Such a confluence necessitates an expansive intellectual foray that synergistically melds the Buddhist concept of the Eighth State of Consciousness with Jung's Collective Unconscious. This paper's central proposition asserts that the emergence of reality constitutes a dynamic and fluid evolution, significantly mediated by the agency of photons, which inherently carry informational content. This unfolding process of reality is intricately tethered to the delicate interplay between consciousness and its multifaceted interfaces, which extend from immediate, tangible elements to elusive, ethereal dimensions. In their dualistic nature, the photons oscillate between discrete, quantifiable particles and waves of latent potentialities (Mandal, 2021). As particles, photons bear specific information units, contributing to concrete and observable reality.

In contrast, their wave-like aspect unveils a spectrum of possibilities, subtly influencing the perceptual field and interpretation of reality in alignment with the act of observation. Consequently, the

perception and understanding of reality are conceived as dynamic and perpetually evolving phenomena, intricately underpinned by the nuanced interaction of consciousness with photons' informational and dual aspects. This discourse necessitates a deeper academic exploration into these complex interactions, as they offer pivotal insights into the nuanced, continuous emergence and transformation of reality, with photons serving as integral informational and mediational agents in this information extraction process.

Diving deeper into the concept of *ālayavijñāna*, it is characterized as a subliminal reservoir of consciousness that perpetually accumulates experiential imprints across an individual's lifespan and, within the Buddhist doctrine, over successive lifecycles (Hershock, 2023). Jung's Collective Unconscious articulated similar notions as an aggregate for immediate sensory perceptions and deeper, latent predispositions—a realm abundant with archetypes and shared human experiences that transcend individual consciousness.

Furthermore, introducing the dimension of quantum resonance bridges the empirical and the metaphysical. Quantum holography postulates that every part of the universe contains information about the whole, echoing the Buddhist principle of interdependence and non-duality. Thus, integrating these concepts implies that individual consciousness, as epitomized by *ālayavijñāna*, is not just a passive receptacle but an active participant in shaping and defining reality.

Juxtaposing this with Jung's Collective Unconscious reinforces that shared, universal symbols and narratives play an integral role in this process. The intersections between these varied domains underscore a foundational tenet: that the genesis and interpretation of reality are an emergent product of the multidimensional interactions of consciousness, transcending linear confines and extending into the realm of the collective and the quantum.

Through this melding of Eastern philosophical insights and Western psychoanalytic theory, this paper explores the multifaceted dimensions of consciousness and its pivotal role in shaping our perception of reality. In navigating the crossroads of *ālayavijñāna*, quantum holography, and Jung's Collective Unconscious, this investigation seeks to transcend the traditional boundaries that often bifurcate spiritual, psychological, and scientific realms. The confluence of these domains fosters a more holistic understanding of consciousness and emboldens interdisciplinary approaches, positioning them as indispensable in unravelling the complexities of experiential reality.

Theoretically, this synthesis offers an enriched framework that challenges and refines extant paradigms in psychology, spirituality, and quantum mechanics. By recognizing the intersections and overlaps, scholars can embark on more nuanced and integrated inquiries, bridging divides that have traditionally fragmented these disciplines.

On a practical plane, the insights gleaned hold profound implications. For practitioners, the enhanced understanding of consciousness can inform interventions, tapping into the deep reservoirs of the collective and the personal, while in quantum research, the integration with consciousness can open new avenues for exploration, challenging the boundaries of what is known and understood. Studies of

consciousness and the mind focus on an evolving and “nonstationary world in which new organismic states are continually being synthesized to form a better adaptive relationship with the environment. These new states can thereupon be maintained in a stable fashion to form a substrate for synthesis of yet more complex states in a continuing evolutionary progression” (Grossberg, 2012, p. xiii). This paper heralds a clarion call for a more holistic, integrated, and interdisciplinary approach to the mysteries of consciousness and reality.

LITERATURE REVIEW

Brain studies play a central role in this pursuit for more than the ego-centric reason that brains are the crucibles of all human experience. The brain is a universal measurement device acting on the quantum level. Data from all of our senses, - even a few light quanta!- are synthesized by our minds into a common dynamical coin that support a unitary experience, rather than a series of dislocated experiential fragments (Grossberg, 2012, p. xiv).

History and Evolution of the Eight Consciousness States and *ālayavijñāna*: An In-depth Analysis

The construct of the eight consciousnesses represents a sophisticated taxonomy in Buddhist thought that seeks to unravel the multifaceted layers of human cognition and perception. Historically rooted in the traditions of the *Yogācāra* school of *Mahayana* Buddhism, this classification captures the nuances of human consciousness from sensory perceptions to deeper cognitive processes. The sensory consciousnesses refer to (Keng, 2019):

Sight-consciousness: Pertains to visual cognition and the interpretation of visual stimuli.

Hearing-consciousness: Concerned with auditory perception and the processing of sounds.

Smell-consciousness: Relates to olfactory perceptions and deciphering of various odours.

Taste-consciousness: Engages with gustatory sensations, differentiating between sweet, salty, bitter, etc.

Touch-consciousness: Centres on tactile sensations, recognizing textures, temperatures, and sensations on the skin.

Each sensory consciousness offers a unique vantage point on the external world, channelling specific kinds of sensory information into the cognitive matrix.

In consciousness studies, mind-consciousness is the sixth state, pivotal as an integrator of sensory experiences (Somaratne, 2021). This state is tasked with receiving, processing, and interpreting the information gleaned from the five senses. By doing so, it crafts a synthesized, cohesive representation of one’s sensory experiences. Seen as a nexus within the consciousness framework, the mind-consciousness adeptly bridges external sensory data with internal cognitive frameworks. Its profound significance lies in its ability to assimilate sensory inputs and its adeptness at intertwining these with the individual’s pre-existing cognitive structures, such as memories, aspirations, disinclinations, and creative ideations. Thus, the mind-consciousness offers a harmonized interface between the unprocessed stimuli from the external environment and an individual’s internal cognitive landscape.

This dynamic interplay ensures that individuals perceive their environment not as disjointed sensory fragments but as a unified, meaningful continuum. This pivotal role underscores its importance in shaping one's experiential reality.

Within the schema of consciousness delineation, *mano*-consciousness is the seventh state, representing a more intricate layer of cognitive engagement (Shun'ei & Tagawa, 2009). Deriving its foundational principles from *Yogācāra* philosophy, this dimension of consciousness extends beyond the immediate sensory realm, venturing into the abstract, conceptual, and even metaphysical terrains of thought.

While the previously discussed mind-consciousness acts as a platform for weaving together immediate sensory experiences and their corresponding interpretations, *mano*-consciousness operates on a profound scale. Its purview encompasses the synthesis of abstract contemplations, ethical reflections, discerning judgments, and intricate decision-making paradigms. Within this cognitive expanse, individuals wrestle with the more significant questions of existence, navigate the complexities of ethical conundrums, and undertake self-reflective odysseys. Positioning itself as the epicentre of meta-cognition, the *mano*-consciousness transcends mere sensory integration. It prompts individuals to turn their analytical gaze inwards, prompting self-scrutiny of one's cognitive mechanisms, foundational beliefs, and intrinsic thought architectures. Such a layered and deep-seated form of cognition plays a pivotal role in the human quest for meaning, self-understanding, and philosophical exploration.

The *ālaya*-consciousness emerges as the eighth state and is a distinct paradigm profoundly differentiated from other states of consciousness. Termed as the 'storehouse consciousness', it serves as an archival system, safeguarding the latent traces of past experiences and, crucially, storing the foundational 'seeds' that have the potential to germinate into future actions and consequences. Delving into its profound implications, the *ālaya*-consciousness becomes a pivotal determinant in shaping karmic trajectories and the perpetuating cycles of life, death, and reincarnation. Upon tracing the evolutionary lineage of these consciousness states, a noteworthy transition becomes evident: the transition from the immediacy of tangible realities, as epitomized by sensory consciousnesses, to the expansive, intangible, and temporally unconstrained realm of *ālayavijñāna* (Shun'ei & Tagawa, 2009). The *ālaya*-consciousness is not merely a passive receptacle but a dynamic matrix that captures the essence of one's existence, transcending the confines of a single lifetime and influencing subsequent actions and reactions.

With its profound reach and depth, this unique consciousness traces its origin to the seminal doctrines and philosophical discourses of the *Yogācāra* school. It is not merely a transient cognitive state fixated on the present but a temporal continuum, amalgamating the vestiges of the past, the immediacy of the present, and the myriad possibilities of the future.

It enshrines within its depths the latent dynamics of *karma*, elucidating the intricate web where past actions and decisions cast their shadow on present circumstances and inherent predispositions. It

functions as a metaphysical ledger, meticulously chronicling every thought, action, and intention, poised for manifestation under conducive conditions in subsequent actions, situations, or incarnations. Furthermore, the *ālaya*-consciousness underpins the Buddhist conceptualization of *samsara*, the relentless cycle of existence. The intricate patterns etched within this consciousness drive the ceaseless cycle of birth, demise, and rebirth. This cycle perseveres until enlightenment illuminates the path, enabling an escape from this karmic whirlpool.

The eight consciousness states present a panoramic view of human consciousness, blending the immediate sensory perceptions with the vast continuum of existence. The intricate interplay between these states provides a framework to understand human cognition, behaviour, and spiritual evolution in the Buddhist paradigm. The deep-rootedness of *ālayavijñāna* offers insights into the transformative power of past experiences, emphasizing the importance of mindful living and conscious actions. The triad of mind-consciousness, *mano*-consciousness, and *ālaya*-consciousness provides a gradient of cognitive depth, each state delving progressively deeper into the intricacies of human cognition and existence. Rooted in the rich philosophical tapestry, these states provide a framework to understand the multifaceted nature of consciousness, guiding seekers on their journey towards enlightenment and ultimate truth.

Quantum Mechanics and Holography: Linkage to Consciousness Studies

In the expansive field of quantum physics, several theories have emerged that profoundly question and reshape the traditional viewpoints on reality, space, and time (Hawking & Penrose, 2010; Plotnitsky, 2022). Particularly noteworthy are the theories of Bohm's (2002) 'holomovement' and Di Biase's (2016) 'holoinformational flux'. Despite echoing the theme of universal interconnectedness and holism, both theories delineate this phenomenon through different yet equally riveting perspectives.

The inception of a hologram, a phenomenon bearing significant relevance to these theories, is initiated when an object is illuminated by a laser beam, thereby giving rise to a sophisticated array of wave patterns. This interference of wave patterns encapsulates exhaustive information concerning the object's dimensions and form. When this wave pattern is subsequently projected, it gives birth to a three-dimensional representation of the object in space, embodying a complex mesh of interconnected informational nodes. This paradigm of holography exhibits a phenomenal characteristic: the encapsulation and reflection of the holistic information within each section. This characteristic is not merely an abstract concept but has been validated mathematically and empirically, highlighting that every fragment of a holographic system embodies information about the entire structure. This perspective not only paves the way for groundbreaking advancements in information storage and retrieval mechanisms but also fosters a potential transformation in the approach to consciousness studies. In this context, it could potentially cultivate a fertile ground for exploring the non-local dimensions of consciousness, a domain where information is perceived as interwoven, transcending the boundaries of individual, isolated entities.

The exploration and implementation of these principles are positioned to instigate a seismic shift in our conceptual frameworks and engagements with both technological and natural ecosystems. This evolution promises to facilitate a more profound comprehension of reality's complex and interconnected fabric, thus nurturing an environment where technological advancements and natural systems are perceived and engaged through a lens of intricate interconnectedness and interdependency.

Bohm (2002) introduced a theoretical framework that features reality's interconnected and holistic nature. His theory, rooted in the quantum realm, postulates that an underlying, more primary layer of reality lies beneath our observable universe. Bohm (2002) referred to this as the 'implicate order', contrasting it with the 'explicate order', representing the tangible and observable phenomena of our everyday experience. Bohm (2002) advanced a comprehensive framework to understand the quantum universe. His theory was anchored around two contrasting orders: the explicate and the implicate. The explicate order represents the manifest, observable realm, the reality with which our senses engage daily. In contrast, the implicate order delves into the unmanifest, enfolded dimension where everything is intertwined in an unbroken wholeness.

In Bohm's (2002) conception, the universe operates like a hologram, where every segment contains information about the entire system. This concept aligns with the characteristics of holography, as detailed earlier, where the information about the whole system is distributed and replicated within its segments. In the implicate order, everything is interconnected through Bohm and Peat's (2010) 'holomovement' (Bohm & Peat, 2010).

At the heart of the holomovement is the intricate dance between two primary orders of reality: the implicate (or enfolded) order and the explicate (or unfolded) order. The former represents a deeper, underlying dimension of reality where everything is interconnected in an unmanifested form, while the latter pertains to the observable, tangible manifestations that we recognize in our everyday experiences. The holomovement is characterized by a perpetual and dynamic process of unfolding and enfolding. In this paradigm, the tangible, observable phenomena of the explicate order are seen as emergent properties that unfold from the deeper, interconnected web of the implicate order. However, this emergence is not a one-way process. The entities and phenomena of the explicate order continuously fold back or 'enfold' into the implicate, maintaining a fluid and cyclical relationship between the two orders. Bohm and Peat's (2010) conceptualization challenges the traditionally linear and fragmented understanding of the universe. Instead of viewing entities and phenomena as isolated occurrences, the holomovement underscores the inherent interconnectedness and interdependence that pervades reality. Every observable phenomenon, from the minutest particle to vast cosmic structures, is seen as a manifestation emerging from the holistic backdrop of the implicate order. This continuous flux between manifestation and unmanifest potentiality is what gives rise to the term 'holomovement'.

Beyond its scientific implications, the concept of holomovement also holds profound philosophical and existential connotations. It posits a universe where individual entities are not merely isolated constructs but are deeply intertwined facets of a singular, coherent, and dynamic whole. Such a

Preprint. All rights reserved. david.leong@canberra.edu.au

viewpoint has significant implications for various disciplines, from physics and cosmology to consciousness studies and social sciences. Bohm and Peat's (2010) holomovement offers a transformative lens through which to perceive and engage with the universe. It champions a fluid, interconnected reality perpetually in motion, emphasizing the deep-rooted relationships between the manifest and the unmanifest, the observable and the potential.

Di Biase's (2016) work introduces another dimension to understanding the universe's interconnected fabric. His concept of 'holoinformational flux'¹ is reminiscent of Bohm's holomovement yet distinct in its emphasis on information as the essence of this flow. In Di Biase's (2016) conceptualization, the universe is not just a dynamic dance of energy and matter but is fundamentally rooted in information. This 'information' is not just in the conventional sense but in a deeply quantum and holistic manner. The holoinformational flux, therefore, posits that there exists a constant flow of quantum information, connecting every part of the universe in a holistic and non-local manner.

While Bohm's and Di Biase's (2016) theories advocate for an interconnected universe, their focal points differ. Bohm's holomovement speaks to reality's dynamic, fluid nature, underpinned by a continuous process of unfolding and enfolding between the explicate and implicate orders. Di Biase (2016), on the other hand, leans into the informational matrix of the universe, positing that, at its core, reality is bound by an intricate web of quantum information. Despite their distinct emphases, the two theories can be perceived as complementary. While Bohm illuminates the dynamic nature of existence, Di Biase (2016) accentuates the informational underpinnings of this dynamism. Together, they paint a picture of a universe where everything is connected and part of a grand informational symphony, harmonizing in the dance of the holomovement. This holoinformational flux essentially represents a ceaseless flow of information and energy, underscoring the non-local nature of quantum phenomena. Non-locality, as proposed in quantum mechanics, suggests that events happening at one location can instantaneously influence events at another distant location, without any exchange of force or energy in the intervening space. Bohm's theory elevates this notion, proposing that this non-local connectedness is not just a quirky property of quantum particles but a fundamental feature of the universe.

In theoretical physics and consciousness studies, conceptualising the universe through Bohm's (1990, 2002, 2004) perspective opens doors to a deeper, almost mystic level of interconnectedness, elucidating a dimension where the boundaries between the self and the universe blur. This is vividly illustrated in the process of hologram creation, a phenomenon where the interference patterns generated by lasers encapsulate comprehensive information about the entire system, dispersed evenly throughout its components. This occurrence illuminates a pervasive interconnectedness intrinsic to the universe

¹ The term 'holoinformation flux' pertains to a self-regulating flow that arises from the holographic processing of neuronal information. In essence, it can be described as the dynamic stream of data in the brain, processed in a manner reminiscent of holography. This flow can be enhanced or optimized when an individual enters altered states of consciousness, which are associated with increased synchronicity or coherence of brain wave activity (Di Biase, 2009, 2016).

when scrutinized through Bohm's (2002) theoretical lens. In this reality, each fragment mirrors the whole and is intimately intertwined, orchestrated by a non-local, holoinformational flux embedded within the implicate order (Bohm & Peat, 2010).

An analysis of this perspective unveils substantial repercussions for consciousness studies, particularly in examining human perception and cognition. The elevated consciousness transcends the boundaries of individuality, morphing into an integral component of an interconnected matrix that pervades the universe. This suggests a paradigm shift in understanding human cognition and experiences, positing that thoughts, perceptions, and experiences are not isolated or confined to an individual entity but are part of a vast, interconnected network that resonates with the cosmic dance of the implicate and explicate orders.

As we delve deeper, it becomes apparent that conventional means of perceiving reality, predominantly through the five senses, yield a version of reality that starkly contrasts with the consciousness that operates at an elevated plane. Herein lies the potential for a transformative experience of reality, which gravitates towards a state of oneness or what Bohm termed 'indivisible wholeness' (Bohm & Peat, 2010). This proposition unveils the intriguing possibility that our thoughts and experiences are not merely individualistic occurrences but could potentially be resonances emanating from the deeper, unseen layers of the implicate order. These resonances, in turn, ripple into the observable, tangible realm of the explicate order, shaping our perceived reality.

Further contemplation on this theory underscores the dynamism and fluidity of perception and reality construction. The interactions between objects or the phenomena perceived are not static; they imprint upon the experiences, creating a dynamic flux that moulds our understanding and interpretation of reality. The depth of this interaction is such that, depending on the level of consciousness attained, individuals might construct different realities, each echoing their respective levels of understanding and comprehension. This nuances the theory of reality, hinting at a universe that is not fixed but ever-changing, moulded continuously by the oscillations of consciousness navigating various planes of understanding. The contemplation of the universe through Bohm's (2002) lens offers a transformative approach to understanding reality and consciousness. It nudges us towards realising a universe that is not segmented but fluid, where individual entities are not isolated but fragments of a larger, interconnected whole, deeply rooted in the cosmic fabric of the implicate order. This approach, thus, beckons a profound shift in the study and understanding of consciousness, fostering a pathway towards realizing the interconnected essence of existence.

In conclusion, Di Biase's (2016) theory of a nonlocal holoinformational flux emphasizes the profound interconnectedness of the universe, a concept which harmonizes with the principles of holography. This view challenges our conventional understandings of space, time, and individuality and suggests that, at a fundamental level, everything — from quantum particles to conscious beings — is deeply interconnected in a holistic tapestry of information and meaning. The propositions of Bohm's (2002) holomovement and Di Biase's (2016) holoinformational flux invite scholars and thinkers to

Preprint. All rights reserved. david.leong@canberra.edu.au

reconceptualize the universe's fabric. By suggesting a dynamic and intrinsically informational reality, they beckon us towards a richer, more interconnected understanding of existence.

Understanding Consciousness through Jung's Collective Unconscious

In Jung's (1936) seminal work, he distinguished the personal and collective unconscious, as outlined, hinges notably on the origins and attributes of the contents housed within each. The personal unconscious is characterized as a repository for elements that were once within individual consciousness but have receded from this plane due to forgetfulness or repression. This reservoir houses experiences and elements once actively engaged by the individual but have since been relegated to the margins of their conscious awareness, awaiting potential retrieval or resurgence. Jung (1936) described this reservoir as the

second psychic system of a collective, universal, and impersonal nature which is identical in all individuals. This collective unconscious does not develop individually but is inherited. It consists of pre-existent forms, the archetypes, which can only become conscious secondarily and which give definite form to certain psychic contents (Jung, 1936, p. 99).

Collective Unconscious

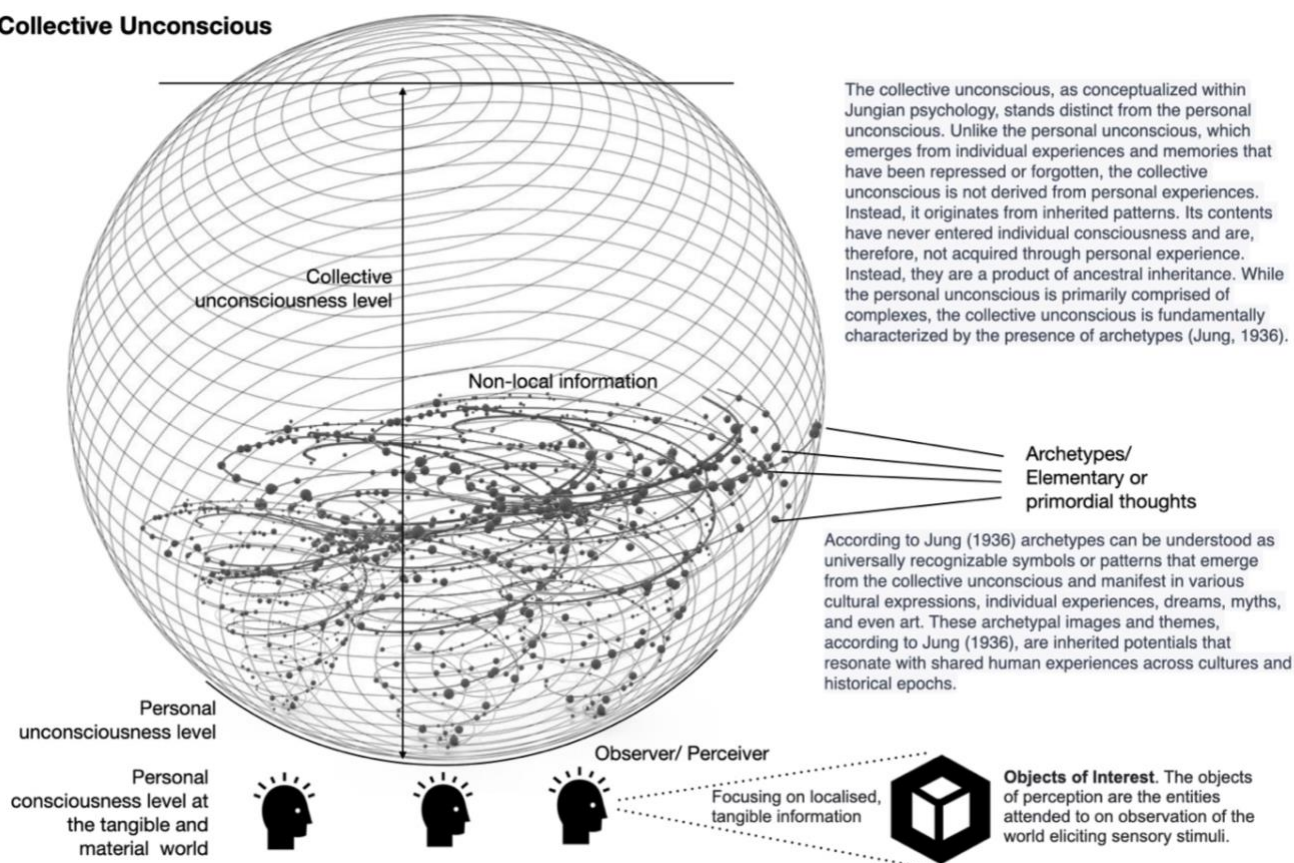


Figure 1 visualizing the layers of Jung's (1936) Collective Unconscious

Conversely, the collective unconscious represents a dimension of the psyche that harbours contents fundamentally distinct in their genesis and nature. Unlike the personal unconscious, the constituents of the collective unconscious have never traversed the territory of individual consciousness. These components are not the result of personal experiences or acquired knowledge but are rather innate,

bequeathed through the channels of heredity. This sphere (in Figure 1) harbours archetypes, universal symbols and themes shared across humanity, transcending individual experiences and timelines. These archetypes are considered a legacy of human evolution, imprints of shared human experiences that have accrued over generations, residing deep within the collective psyche of the human race.

In this vein, the collective unconscious is a testament to a shared heritage of psychological elements and experiences, a reservoir of the collective wisdom and narratives woven into the fabric of human existence with time. It hints at a deeper connectivity within the human species, a tapestry of shared experiences and understandings that bind individuals in a complex web of collective memory and inherited psychological landscapes (Castleman, 2004). Figure 1 delineates a horizontal comprehension of the three distinct levels of mental organization: the conscious personal level, the unconscious personal level, and the collective unconscious level. These layers represent an architecture of the mind where each stratum plays a pivotal role in cognitive processing and psychological experience. At the foundation, the collective unconscious level epitomizes vortical, holistic insights. This term ‘vortical’ refers to a dynamic, spiralling movement of awareness that engages with the entire spectrum of consciousness in a non-linear, integrative manner. It signifies an immersive, encompassing understanding that extends beyond the fragmented, compartmentalized knowledge represented at the personal consciousness and unconscious levels.

Within the collective unconscious level, an aggregation of shared memories, archetypes, and experiences transcend individual psychology and are emblematic of the human condition at large. It is a reservoir of universal symbols and themes that underpin and influence the personal layers of consciousness, providing a rich tapestry of meaning and understanding that is accessible, albeit not always readily, to all individuals (Jon Mills, 2019). The holistic insight at this level encompasses a deep, intuitive apprehension of these shared psychological elements and their intricate interplay with personal experiences and cognitions, thereby offering a comprehensive framework for interpreting and navigating the multifaceted landscape of the human psyche.

Furthermore, this vortical, holistic insight within the collective unconscious level constitutes a crucial mechanism for the individuation process, serving as a guide for personal development and self-realization by fostering a dynamic dialogue between the personal and collective dimensions of consciousness. Through engaging with and integrating these insights, individuals can achieve a more balanced, harmonious alignment between their unique psychological constitution and the universal attributes of the human mind, thereby facilitating a deeper understanding of self and others within the broader context of the shared human experience.

Further exploration into these concepts might illuminate the rich and intricate interplay between the individual and the collective, offering nuanced perspectives on the dimensions of human consciousness and the complex networks that define and shape the human experience at both personal and collective levels.

Consciousness and Realities

The topic of consciousness and its interrelation with varying realities remains a focal point in contemporary scholarly dialogues. Drawing upon the current corpus of extant literature, it is possible to delineate a rich and diverse landscape of theories and hypotheses that attempt to elucidate this complex interplay. This discourse encapsulates the current scholarly perspectives on the nuances of consciousness and the manifold realities it interacts with.

In recent years, neuroscience has made significant strides in decoding the intricate workings of the brain, facilitating deeper insights into the nature of consciousness (Seymour, 2023). Mediano et al. (2022) extensively explored the neurobiological substrates of conscious experience, proposing theories like the Integrated Information Theory, which posits that consciousness is integrally linked to the organization and integration of information in the brain. Meanwhile, in philosophy, scholars have been engaging with questions of subjective experience and the potential limitations of human cognition in apprehending reality in its entirety (Coseru, 2022).

Moreover, quantum physics has introduced fascinating and revolutionary perspectives on the potential interconnectedness of consciousness and the physical world. As elucidated by Stapp (2007), the quantum theory presents the concept of a participatory universe where the conscious observer plays a vital role in manifesting physical realities (Froese, 2022). These theories resonate with Bohm's concept of 'holomovement', which proposes a holographic framework of reality, pointing to an unbroken and dynamic flow of connections that permeate the universe (Di Biase, 2016; Storoy, 2014).

Furthermore, transpersonal psychology brings forth theories that transcend the boundaries of the individual, suggesting the existence of collective or universal levels of consciousness. These perspectives often converge with spiritual and mystical traditions, which propose the existence of higher planes of reality accessible through altered states of consciousness (Canova, 2023).

Exploring alternative realities has also been a topic of interest in virtual and augmented reality technologies (Morimoto et al., 2022). In this context, scholars argue that these technologies can create complex, immersive realities, extending the boundaries of human experience and potentially altering our perceptions of reality (Kim, 2023).

Drawing upon this rich tapestry of perspectives, it is evident that the discourse on consciousness and realities is multifaceted and deeply interdisciplinary. The current scholarly trajectory seems to be moving towards a more integrated approach, seeking to weave together insights from neuroscience, philosophy, physics, and transpersonal psychology to construct a more comprehensive understanding of the complex interplay between consciousness and the diverse realities it navigates (Mills & Goodwyn, 2023).

In conclusion, diverse approaches and perspectives mark the academic discourse surrounding consciousness and realities. As research continues to evolve in this domain, future scholarly endeavours are anticipated to expand our understanding of the complex and nuanced relationship between consciousness and the manifold realities it interacts with.

DISCUSSION

This paper's proposition illuminates a crucial, insufficiently examined dimension within consciousness studies. This exploration beckons scholars to venture into the relatively untrodden domains of human perception and consciousness. This signalled a demand for a more nuanced, integrative interrogation into the conceivable amalgamation of consciousness and non-local resonance. This endeavour promises to instigate a seminal shift in apprehending human cognitive processes and their latent potentials. This theory suggests that resonance is pivotal for the human perceptual system to discern and make sense of the sensory stimuli to which it is exposed. Yet, intriguingly, even amidst the profound role of resonance in shaping perception, most individuals do not routinely access or consciously acknowledge non-local information in their day-to-day experiences.

Often such intuitive foreknowledge involves perception of implicit information about non-local objects and/or events by the body's psychophysiological systems. Recent experiments have shown that intuitive perception of a future event is related to the degree of emotional significance of that event, and a new study shows that both the brain and the heart are involved in processing a pre-stimulus emotional response to the future event (Bradley, 2006, p. 1).

Such an observation suggests that human cognitive structures, which have evolved primarily to navigate and thrive in a tangible world, might inherently sideline or overlook non-local information, thereby prioritizing immediate and contextually relevant perceptions.

One can argue that this phenomenon is rooted in the evolutionary development of human cognition. The intricacies of navigating the three-dimensional world necessitate focusing on localized, tangible information, which serves as the primary data for sustaining human life and facilitating interactions with the immediate environment. However, it is noteworthy that the existing frameworks of cognition might not fully encapsulate the capacity to perceive non-local information consciously, a concept that potentially expands the dimensions of human perception beyond the conventional boundaries established by empirical sciences. In addition, scholars have ventured into the realm of quantum physics to elucidate the enigmatic nature of consciousness, postulating that there might be underlying quantum processes that facilitate the engagement with non-local phenomena. These theoretical perspectives propose a paradigm shift, urging a move from a materialistic interpretation of consciousness to a more encompassing view, which acknowledges the potential for resonance with non-local information (Lohrey & Boreham, 2022).

Furthermore, this claim invites a deeper exploration into the potential realms of consciousness that remain largely uncharted. Integrating non-local information within conscious awareness arguably presents a rich avenue for future research, potentially unveiling new layers of understanding about human cognition and its connection with the broader universe. This could redefine the boundaries of human knowledge, offering innovative perspectives on the interconnectedness of all phenomena and the nature of reality itself.

This paper asserts that the photon's pivotal role emerges as an increasingly salient point of discussion, warranting rigorous academic exploration. Photons operate as crucial mediators in the

perceptual process, essentially moulding the fabric of an individual's subjective reality. The postulated hypothesis in this context underscores that individual perceptions are inevitably rooted in a resonance mechanism between the observer and the observed object. This resonance, intriguingly, is not a mere passive reflection of external reality but involves dynamic interactions with non-local information, predominantly mediated through the agency of photons. The mechanics of this process are both intricate and profound. Photons interact with an object, are reflected, and converge onto the observer's retina (Hébert, 2022). This interception of photons, carrying a myriad of information, instigates a cascade of physiological and cognitive processes, ultimately culminating in what the observer perceives as their subjective reality. However, this reality is not an absolute construct but is, instead, a personal interpretation distilled through the observer's cognitive filters and past experiences (Vuong, 2023).

To further complicate this dynamic, the observer is not simply engaging with a static reflection of the external world. Instead, they are interfacing with a torrent of information that could be conceptualized as part of the 'holomovement'—a term borrowed from quantum mechanics, referring to an undivided and unbroken movement of information. When envisioned within the context of quantum holography, this 'holomovement' alludes to an information continuum wherein every part is intricately connected to the whole in a non-local manner. However, with its inherent limitations, the human cognitive apparatus cannot possibly assimilate the entirety of this vast informational reservoir. As a result, the photons' interactions with the observer become a selective process, eliciting specific perceptions that align with the observer's cognitive capacities and prior conditioning. This selectivity is both a boon and a limitation. On one hand, it allows for a manageable interpretation of the world, tailored to the observer's unique cognitive framework. On the other hand, it inherently limits the spectrum of reality to which the observer has access.

Drawing parallels with Eastern philosophical thought, particularly the Buddhist notion of the Eighth State of Consciousness, one might argue that such photon-mediated perceptions only provide access to a fraction of a more profound, interconnected universal awareness. This aligns with the premise that the human experience, as mediated by photons and their interaction with our sensory apparatus, only offers a sliver of the vast expanse of reality—much like the tip of an iceberg that belies its massive structure beneath the water's surface. In summation, while photons play an indispensable role in shaping our perceptual experiences, the very nature of this interaction is delimited by our cognitive boundaries. This discussion underscores the necessity for interdisciplinary approaches, amalgamating insights from quantum physics, consciousness studies, and Eastern philosophies to provide a more holistic understanding of perception and its relation to the broader universe. Such integrative endeavours promise to enrich our understanding of human cognition and bridge the apparent chasm between subjective experience and the expansive realm of quantum reality.

Examining the correlation between photon interactions and the Eighth State of Consciousness requires venturing beyond Western science's empirical confines and the metaphysical terrain of Eastern philosophies. Photons, despite their microscopic scale, function as carriers of vast information.

Nevertheless, these carriers are bound by the limits of our sensory and cognitive systems, providing a selective, narrowed experience of the external environment. The delivered information through photons, thus, represents a fractional component of a far-reaching, interconnected matrix of universal awareness and consciousness symbolized by the *ālayavijñāna*.

The *ālayavijñāna* encapsulates a dimension of consciousness that transcends the dichotomy of subject and object inherent in sensory perception, engendering a non-dual awareness that harmonizes the individual consciousness with universal principles. Photons may be considered the facilitators or translators of this profound, non-dual awareness into the language of dualistic sensory experience. These quantum entities bridge the chasm between the absolute and the relative, the universal and the particular, fostering a dialogue between the immanent and the transcendent dimensions of consciousness.

In synthesizing these perspectives, one might posit that photons act as messengers, conveying information from the vast reservoir of the Eighth State of Consciousness or Jung's collective unconscious to our limited cognitive faculties. They channel universal insights, albeit in fragmented and coded forms, requiring adept decoding and interpretation by the observer's consciousness. Within this dynamic interface, the dance between the absolute and relative, the infinite and finite, the universal and individual, contributes to the rich tapestry of human perception and experience.

Consequently, the academic examination and integrative approach of perception, where photons serve as mediators with the Eighth State of Consciousness (alternatively, Jung's collective unconscious or storehouse consciousness), yields a fertile ground for interdisciplinary scholarly inquiry and reflection. This paper asserts that photons are pivotal in eliciting specific recollections from the storehouse consciousness, manifested as quantum holography. Within the depths of the collective unconscious is a cumulative assembly of shared memories, archetypal symbols, and collective experiences; these elements encapsulate and reflect the entirety of information inherent in each memory, archetype, and experience. The interdisciplinary endeavour of amalgamating principles and insights from quantum physics, consciousness studies, and Eastern philosophical thought possesses the potential to instigate a significant paradigmatic shift in the comprehension of consciousness and perception. Such a convergence promises to unravel the enigmatic intricacies of human consciousness and the mind and unlock the profound mysteries of the cosmic expanse. This synthesis of diverse academic disciplines promises to yield nuanced insights, thereby facilitating a holistic understanding of consciousness that seamlessly integrates empirical research methodologies with metaphysical explorations, offering a harmonious and comprehensive framework for understanding the complex phenomena of consciousness and perception.

The Photonic Interaction Hypothesis: A Theoretical Foundation

The primary assertion of this discourse suggests that perception inherently engages a resonance process between the observer and the observed object. Within this framework, the resonance with non-local

Preprint. All rights reserved. david.leong@canberra.edu.au

information is ostensibly mediated by photonic interactions. These photons, interacting with the scrutinized object, are subsequently reflected, converging upon the observer's retina (sight consciousness). It is posited that this intricate dance of photons facilitates and induces our sense of reality, serving as the foundational bedrock upon which our perceptual experiences are constructed.

This postulation prompts a significant theoretical inquiry. The assumption that photons play a cardinal role in mediating reality perception necessitates an exhaustive analysis, for this proposition, if validated, may offer profound insights into our understanding of reality construction and perception mechanics. It is imperative, therefore, to meticulously unpack the theoretical and empirical dimensions of this hypothesis, exploring its epistemological and ontological underpinnings.

Perception as Resonance: Towards a New Paradigm

Exploring perception as a form of resonance instigates a transformative conceptual framework within consciousness studies. Perception, within this paradigm, is not a passive reception of external stimuli but an active, resonant interaction with the environment. In this schema, photons are not mere carriers of light but active participants in the perceptual process, facilitating a dynamic interaction between the observer and the external world.

This perspective subtly shifts our perception understanding from a one-way, deterministic process to a two-way, resonant interaction. The observer is not merely a recipient of external stimuli but actively engages with these stimuli, entering into a resonant relationship mediated by photonic interactions. This resonance with non-local information through photons offers a plausible explanation for the richness and depth of our perceptual experiences, providing a theoretical framework for understanding the immediacy and vibrancy of the perceived reality.

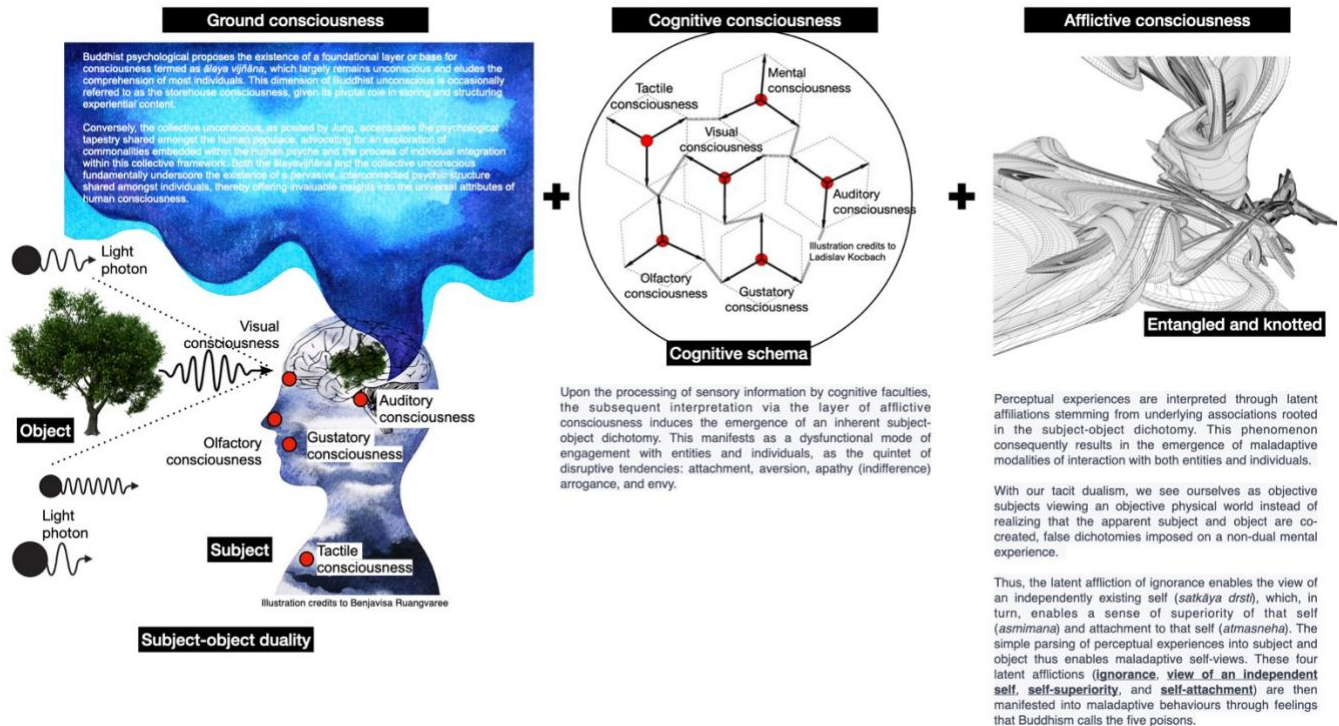


Figure 2 illustrates the resonance between the observer and the object, facilitated by photons, forms the foundation of perception.

Resonance pertains to the harmonic alignment or attunement between an observer and an object in the context of consciousness and perception. At its core, this alignment is facilitated by photons, the quantum entities that underpin the vast majority of our sensory engagement with the external world. Photons act as information carriers, intermediaries bridging the expanse between the external world and our internal cognitive realm (Figure 2). Their dual role—as particles and waves—plays a pivotal function in establishing this resonance and underscores the multifaceted nature of perception and consciousness.

1. Photons as Carriers: When we perceive an object, photons, which have interacted with that object, enter our eyes and are absorbed by the photoreceptor cells in the retina. This interaction catalyses a chain reaction of electrochemical processes, translating these captured photons into neural signals. These signals then travel to the brain, where they are processed, decoded, and subsequently construed as visual perceptions. In this sense, photons act as messengers, ferrying information from the object to the observer.

2. Dual Nature of Photons: The quantum mechanics underpinning photons elucidate their dual nature as discrete particles and continuous waves. When considering photons as particles, they can be visualized as discrete packets of energy that relay specific information about the properties of an object, such as its colour or luminosity. This particle perspective offers a granular, detailed insight into the object's attributes. On the other hand, the wave nature of photons introduces a broader framework, encapsulating a spectrum of possibilities and probabilities. Rather than pinpointing a definitive state or

attribute, the wave perspective embodies a range of potentialities. This wave aspect emphasizes interconnectedness, continuity, and potential interactions between the observer and the object.

3. The Importance of Resonance: The resonance between the observer and the object, facilitated by photons, forms the foundation of perception. Without this harmonic interaction, the process of perception would be disjointed or non-existent. Resonance, in essence, ensures a coherent transfer of information, allowing the observer to derive meaning and understanding from their interaction with the object.

The role of photons in establishing this resonance is twofold. As particles, photons provide tangible, specific data about the object, grounding the perception in empirical reality. Conversely, as waves, they encompass a more expansive, probabilistic view, integrating many potential interpretations and connections. This duality ensures that perception is grounded in reality and open to interpretation, fostering a dynamic, evolving understanding of the external world. Photons, with their dual nature, play a crucial role in the intricate dance of perception. They bridge the gap between the observer and the object, ensuring a harmonious resonance for meaningful engagement with the world. Their particle aspect offers specificity and detail, while their wave nature introduces breadth, interconnectedness, and possibility. This dual role underscores the complexity and depth of human perception, weaving together the tangible and the abstract into a cohesive tapestry of understanding.

Theorizing Photonic Interactions: Implications and Challenges

However, while promising, the photonic interaction hypothesis also presents theoretical and empirical challenges that must be addressed. Firstly, the exact mechanism through which photons mediate perception and facilitate resonance with non-local information requires further elucidation. While photons undoubtedly play a role in vision, extending this role to mediating perception and reality construction necessitates a more thorough theoretical and empirical substantiation.

Furthermore, resonance with non-local information through photons must be clearly defined and operationalized. Non-locality, within the context of quantum mechanics, refers to the phenomenon where particles separated by large distances instantaneously affect each other's states. Applying this concept to perception and consciousness introduces a set of complex theoretical postulates that require careful examination and validation. The nature, characteristics, and implications of this non-local resonance in perception must be scrutinized to establish the validity and applicability of this theoretical framework.

Towards an Integrative Understanding of Perception

Considering the aforementioned considerations, this paper encourages an integrative, multidisciplinary approach towards understanding perception. The theoretical framework proposed, involving the resonance between the observer and the observed mediated by photonic interactions, offers a promising

avenue for research. However, this avenue must be navigated with careful consideration of its theoretical assumptions and empirical validations.

An interdisciplinary collaboration between physicists, cognitive scientists, and consciousness researchers may provide the necessary breadth and depth of understanding to explore this theoretical framework effectively. By combining insights from quantum mechanics, cognitive science, and consciousness studies, scholars can develop a more nuanced, comprehensive understanding of perception, reality construction, and consciousness. This endeavour promises to shed light on the enigmatic processes underpinning perception and holds the potential to revolutionize our understanding of consciousness and reality. Scholars can open new vistas of understanding by exploring the intricate dance of photonic interactions and their role in mediating perception, offering unprecedented insights into the nature of existence and consciousness.

In conclusion, while the assertion presented herein requires further theoretical and empirical scrutiny, it offers a tantalizing glimpse into a potentially transformative paradigm within consciousness studies. Exploring photonic interactions and their role in perception and reality construction presents a fertile ground for academic inquiry. It promises to shed light on the perennial questions of consciousness, perception, and reality that have intrigued and perplexed scholars for centuries.

Intersections and Divergences

While these three constructs—Buddhist consciousness, quantum holography, and the collective unconscious—stem from distinctly different traditions and disciplines, they converge in their emphasis on the interconnected nature of existence. Each proposes that individual entities, whether humans or subatomic particles are intrinsically linked to larger wholes and that these connections run deeper than conventional wisdom might suggest.

However, it is crucial to recognize the divergences as well. While the Eighth Consciousness and the Collective Unconscious delve into profound, interconnected realms of awareness, their methods and implications differ. Buddhism offers a spiritual path to enlightenment, emphasizing the dissolution of the self and the realization of universal truths. In contrast, Jung's framework is rooted in understanding and integrating the self within the broader context of shared human experiences.

Implications and Contributions

This paper's endeavour to bridge Eastern philosophical tenets with Western psychological and quantum theories reflects the growing recognition of the potential of interdisciplinary approaches. Such a melding of perspectives provides a richer, multidimensional understanding of consciousness, underscoring the idea that the truths of existence might be pieced together from multiple directions.

The *ālayavijñāna* and Jung's collective unconscious concept in analytical psychology delve into deep layers of consciousness that transcend individual experiences. They both suggest a universal dimension of consciousness and underline the inherent patterns or forms within the human psyche.

However, while the *ālayavijñāna* is seen as a repository of latent tendencies from past karmic actions influencing present behaviour and future rebirths, Jung's collective unconscious comprises archetypes representing shared human experiences across cultures. Unlike the dynamic seeds in *ālayavijñāna*, these archetypes reflect shared human experiences and evolutionary imperatives. While both concepts allude to the interconnected fabric of human consciousness (or holomovement), their origins, implications, and nuances are rooted in different cultural and philosophical traditions (Figure 3). The Buddhist concept emphasizes a path toward spiritual enlightenment, while Jung focuses on psychological integration and wholeness.

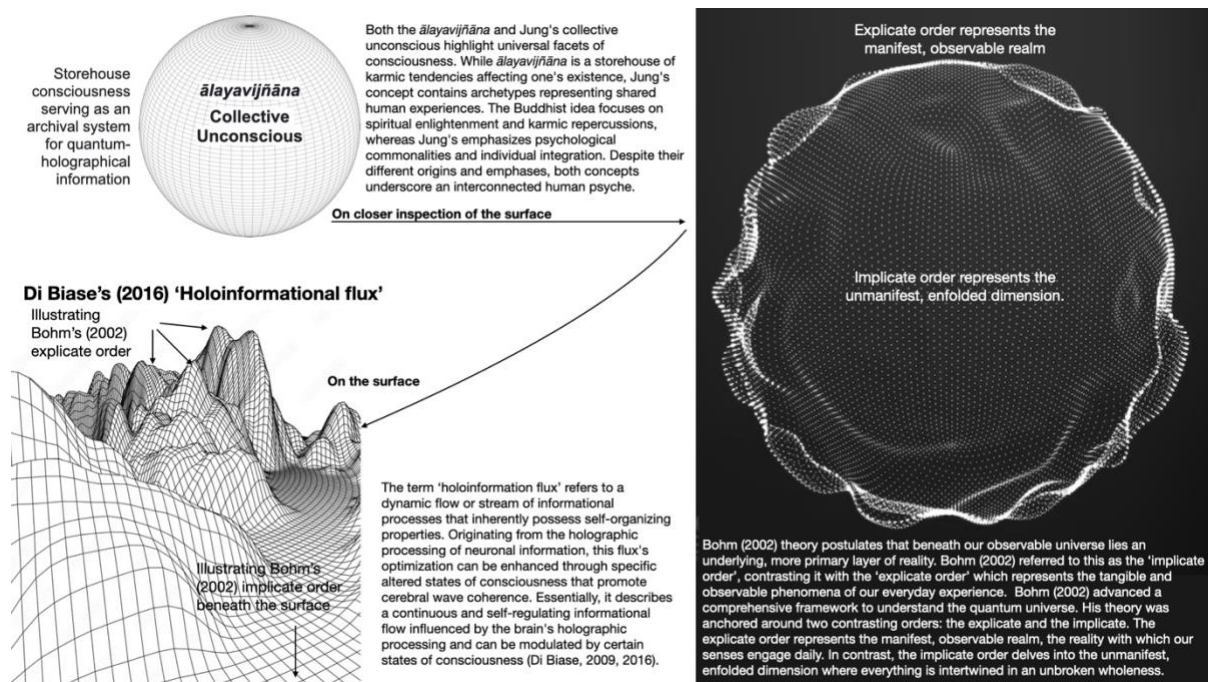


Figure 3 illustrates the interconnected fabric of human consciousness (or holomovement)

CONCLUSION

In light of the foregoing discussion, it is palpable that photons, through their dual nature, act as pivotal conduits facilitating the intricate processes of resonance and perception. They bridge the observer and the observed, functioning as carriers of information, and weave a tapestry that is both minutely detailed (via their particle nature) and expansively interconnected (via their wave nature). This simultaneous embodiment of specificity and potentiality within photons is foundational in shaping human consciousness and our engagement with external reality.

The concept of resonance, underlined by photon interactions, echoes prominently within the theoretical constructs of Quantum Holography, the Eighth Consciousness in Buddhist philosophy, and Jung's Collective Unconscious. Although stemming from disparate intellectual traditions, each of these frameworks converges on the notion of an underlying, unifying field or matrix that is holistic, interconnected, and foundational to consciousness and perception. In synthesizing these perspectives,

it becomes apparent that the resonance facilitated by photons is not merely a physical or biological process but has profound implications for understanding consciousness at both individual and collective levels. The dynamic interaction of photons, as particles and waves, mirrors the multi-dimensional nature of consciousness – which is at once particular, universal, empirical, and transcendent.

Thus, drawing parallels among Quantum Holography, the Eighth Consciousness, and the Collective Unconscious provides a rich, multifaceted framework for interpreting and understanding the enigmatic phenomena of consciousness and perception. This integrative viewpoint bridges physical, psychological, and spiritual dimensions. It opens avenues for a more holistic, interdisciplinary exploration of consciousness, promising deeper insights into the mysteries of the mind and the cosmos. The convergence of these theories invites scholars and practitioners to adopt a more encompassing view of consciousness, encouraging a dialogue that transcends disciplinary boundaries and fosters a deeper understanding of human existence within the vast expanse of the universe.

REFERENCES

- Biase, Francisco Di. (2016). THE HOLOINFORMATIONAL HOLOINFORMATION FOUNDATIONS OF CONSCIOUSNESS. In *Biophysics of Consciousness* (pp. 231–250). WORLD SCIENTIFIC. https://doi.org/10.1142/9789814644266_0007
- Bohm, D. (2002). Wholeness and the implicate order. In *Psychology Press*. (Vol. 31, Issue 10). Psychology Press. <https://doi.org/10.1088/0031-9112/31/10/042>
- Bohm, D. (2004). *Causality and chance in modern physics*. Routledge.
- Bohm, D., & Peat, F. D. (2010). *Science, order and creativity*. Routledge.
- Bohm, David. (1990). A new theory of the relationship of mind and matter. *Philosophical Psychology*, 3(2–3), 271–286. <https://doi.org/10.1080/09515089008573004>
- Bradley, R. T. (2006). The psychophysiology of entrepreneurial intuition: a quantum-holographic theory. *Proceedings of the Third AGSE International Entrepreneurship Research Exchange*, 8–10.
- Canova, P. (2023). *Quantum Spirituality: Science, Gnostic Mysticism, and Connecting with Source Consciousness*. Simon and Schuster.
- Cao, Y. (2022). Naming the Seventh Consciousness in Yogācāra. *Journal of Indian Philosophy*, 50(2), 201–222. <https://doi.org/10.1007/s10781-021-09487-w>
- Castleman, T. (2004). *Threads, knots, tapestries: how a tribal connection is revealed through dreams and synchronicities*. Daimon.
- Coseru, C. (2022). Consciousness, content, and cognitive attenuation: A neurophenomenological perspective. In *Routledge Handbook on the Philosophy of Meditation* (pp. 354–368).
- Di Biase, F. (2009). Quantum-holographic informational consciousness. *NeuroQuantology*, 7(4), 657–664.
- Di Biase, F. (2016). The unified field of consciousness. In *UNIFIED FIELD MECHANICS: Natural Science Beyond the Veil of Spacetime* (pp. 230–239).
- Froese, T. (2022). Scientific Observation Is Socio-Materially Augmented Perception: Toward a Participatory Realism. *Philosophies*, 7(2), 37. <https://doi.org/10.3390/philosophies7020037>
- Grossberg, S. T. (2012). *Studies of mind and brain: Neural principles of learning, perception, development, cognition, and motor control* ((Vol. 70)). Springer Science & Business Media.
- Hawking, S., & Penrose, R. (2010). *The nature of space and time* (Vol. 3). Princeton University Press.
- Hébert, M. (2022). *Optical models for material appearance*. EDP Sciences.
- Hershock, P. D. (2023). *Consciousness Mattering: A Buddhist Synthesis*. Bloomsbury Publishing.
- Jung, C. G. (1936). The concept of the collective unconscious. *Collected Works*, 9(1), 42.
- Keng, C. (2019). What is Svabhāva-vikalpa and with Which Consciousness(es) is it Associated? *Journal of Indian Philosophy*, 47(1), 73–93. <https://doi.org/10.1007/s10781-018-09377-8>
- Kim, M. (2023). Virtual Craft: Experiences and Aesthetics of Immersive Making Culture. *Humanities*, 12(5), 100. <https://doi.org/10.3390/h12050100>
- Liang, H. (2012). Jung and Chinese Religions: Buddhism and Taoism. *Pastoral Psychology*, 61(5–6), 747–758. <https://doi.org/10.1007/s11089-012-0442-3>

- Lohrey, A., & Boreham, B. (2022). Omni-local consciousness. *Communicative & Integrative Biology*, 15(1), 193–208. <https://doi.org/10.1080/19420889.2022.2107726>
- Mandal, J. (2021). Emergence of Quantum Mechanics, Human Mind, and Happiness. In *Psychology in Modern India* (pp. 405–414). Springer Singapore. https://doi.org/10.1007/978-981-16-4705-5_22
- McWilliams, S. A. (2011). Contemplating a Contemporary Constructivist Buddhist Psychology. *Journal of Constructivist Psychology*, 24(3), 268–276. <https://doi.org/10.1080/10720537.2011.571566>
- Mediano, P. A. M., Rosas, F. E., Bor, D., Seth, A. K., & Barrett, A. B. (2022). The strength of weak integrated information theory. *Trends in Cognitive Sciences*, 26(8), 646–655. <https://doi.org/10.1016/j.tics.2022.04.008>
- Meynard, T. (2011). Buddhist Practice And Yogācāra Epistemology. In *The Religious Philosophy of Liang Shuming* (pp. 81–103). BRILL. <https://doi.org/10.1163/ej.9789004171510.i-226.39>
- Mills, J., & Goodwyn, E. (2023). *Archetypal Ontology: New Directions in Analytical Psychology*. Taylor & Francis.
- Mills, Jon. (2019). The myth of the collective unconscious. *Journal of the History of the Behavioral Sciences*, 55(1), 40–53. <https://doi.org/10.1002/jhbs.21945>
- Moacanin, R. (2003). *The essence of Jung's psychology and Tibetan Buddhism: Western and Eastern paths to the heart*. Simon and Schuster.
- Morimoto, T., Kobayashi, T., Hirata, H., Otani, K., Sugimoto, M., Tsukamoto, M., Yoshihara, T., Ueno, M., & Mawatari, M. (2022). XR (Extended Reality: Virtual Reality, Augmented Reality, Mixed Reality) Technology in Spine Medicine: Status Quo and Quo Vadis. *Journal of Clinical Medicine*, 11(2), 470. <https://doi.org/10.3390/jcm11020470>
- Plotnitsky, A. (2022). *Reality without realism: Matter, thought, and technology in quantum physics*. Springer Nature.
- Seymour, K. (2023). Consciousness, Evolution, and the Self-Organizing Brain. *Journal of Conscious Evolution*, 19(19), 5.
- Shun'ei, T., & Tagawa, S. (2009). *Living Yogacara: an introduction to consciousness-only Buddhism*. Simon and Schuster.
- Somaratne, G. A. (2021). Sensory Experience. In *The Buddha's Teaching* (pp. 141–166). Springer Singapore. https://doi.org/10.1007/978-981-16-2410-0_6
- Storoy, D. (2014). David Bohm, Implicate Order and Holomovement. *Science and Nonduality*, 1–10.
- Vuong, Q. H. (2023). *Mindsponge theory*. De Gruyter.

