

Beyond the Quantum Mind

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Traditionally, the study of consciousness was the monopoly of philosophers, but in the modern age neuroscientists have entered into this challenging arena and allegedly explained it away. The majority of contemporary philosophers appear to oscillate ineffectually within the reductionist convolutions of cognitive sciences. An exception is Braude, who has adopted a survivalist approach and posited that some form of Cartesian dualism may be required to accommodate discarnate existence.¹ Radin elucidates our bodies metaphorically, explaining them as tapestries constructed from countless variations of the fabric of reality; our subjective experiences are quilts constructed from tapestries that are stitched together in a delightful assemblage of myriad ways.² After evaluating forty aspects of consciousness, Vimal (2009) concludes that the prospects of securing anything resembling a generalised integral theory or independent definition of consciousness appear almost out of human reach.³

Brain-imaging technologies have enabled the identification of neurological locations that appear to correlate with consciousness, but there is no certainty that these are indeed responsible for sensibility. It is undeniable that there is a plethora of structures within neurons, tempting particle physicists and neuroscientists alike to formulate a physical theory of consciousness. Mystical experiences tell us more about the founding principles of reality than these technologies. Many contemporary scientists take the view that mystical experiences are subjective illusions or mirages. Mystical experiences may leave their 'footprints' in the quantum mind, but that does not imply that they generate those marks. Mysticism offers a means of indicating the metaphysical underpinnings required to expand quantum physics into a more complete description of reality that will enable a better understanding of consciousness.

The emerging reductionist biophysicist model of consciousness fails to accommodate mysticism. Creativity is also underestimated, being regarded as a product of psychopathology, but Kelly *et al.* (2007) contend that the inspirational element of creativity is akin to mysticism.⁴ A multipart model of mind and consciousness based on mystical experiences, particle physics and neurosciences offers a more accurate schema than one excluding mystical experiences.

Introduction

Instead of describing mind, Descartes attempted to define mind. He recognised only the existence of the 'thinking thing' and disregarded the 'loving thing' – which many feel is the fundamental principle of the universe. W.H.Myers's statement is illuminating: 'that which lies at the root of each of us lies at the root of the cosmos too'.⁵ Myers proposed a subliminal self and an ultimate self, while Kant suggested a

transcendental ego. These ideas are related to the spiritual self – the individualising principle of the faith traditions. The reality of mystical experience compels us to extend our concept of consciousness beyond the quantum model. Mysticism supports the primacy of an eternal consciousness, but not necessarily the pre-eminence of human consciousness. A determined investigator of consciousness cannot separate science from mysticism. Mystical experiences in fact offer us more enlightenment about the foundations of reality than the discrete science of particle physics. It assigns to consciousness an essential and overarching reality that has its own order.⁴ Neurochemical, neuroelectrical and neurometabolic reactions may be intrinsic to mystical experiences, but that does not constitute evidence that the brain generates them.⁶

The ontology, epistemology and phenomenology of mysticism have yet to be correlated in a systematic way. One of the arguments on which the case for the validity of mysticism is based is that human beings are not merely creatures in time but also citizens of a timeless world, meant to be potential sharers in the divine life.⁷ Mysticism imparts a sense of the beyond. Mystical states may be defined as states of ecstasy, rapture and trance. Those who vouchsafe them find themselves emotionally and cognitively immersed in feelings of universality, claiming to be in direct intuitive or spiritual union with the universe or a superior being. Visual, auditory, olfactory and other sensations are often intrinsic to the experience and the mystical state may bypass ordinary perceptions and logical understanding. To use an analogy from astrophysics, mystics serve like Hubble telescopes but scanning the inner dimensions. Markers of mystical experiences are identified as ineffability; immediate, noetic quality; transiency and passivity.⁸

Kelly *et al.* (2007) argue that computational theories and biophysicist theories of mind and consciousness cannot explain the introversive mystical experiences of a pure, unitary, undifferentiated and self-reflective consciousness.⁴ Both introversive and extroversive mysticism offer insight into the foundations of reality. The former culminates in the subjective of nothingness or the absolute void while the latter tends to expand a person's awareness to unlimited, universal insight and circumvents the barriers of space and time.⁹

Mystics achieve rapprochement with the fundamentals of reality in innovative ways. The manifestations experienced by St Teresa of Avila (1515–82) are archetypical examples. St Teresa's inimitable experiences, narrated in relatively ingenuous but theologically rich language, are prime instances of the introversive type. They provide evidence for the thesis that mystics achieve rapprochement with the fundamentals of reality in innovative ways. Quintessentially, mysticism has many faces. The poet Richard Crashaw (1612–49), translating from Latin a poem about the miracle that Christ performed at the wedding feast at Cana, wrote, 'The modest water saw its God and blushed' (a poem is commonly misattributed to John Dryden and to Lord Byron). Crashaw crafted a mystical and poetic explanation of the event rather than a rational, scientific one.

Russell's scepticism

One of the most prominent sceptics regarding mysticism was Bertrand Russell (1872–1970), who stated:¹⁰

From a scientific point of view, we can make no distinction between the man who eats little and sees heaven and the man who drinks much and sees snakes. Each is in an abnormal physical condition, and therefore has abnormal perceptions. Normal perceptions, since they have to be useful in the struggle for life, must have some correspondence with fact; but in abnormal perceptions there is no reason to expect such correspondence with fact, and their testimony, therefore, cannot outweigh that of normal perception.

Modern investigators of mysticism argue that Russell was mistaken in postulating that mystical perception is abnormal, and that it might be compared with someone who is suffering from delirium tremens. He was certainly misguided if he considered that from an analytical perspective there is no difference between the manifestations common to mystical experiences (see Table 1) and those experienced by an alcoholic with Delirium Tremens. Alcoholic visions involve the provocation of terror and tend to feature such alarming but commonplace creatures as rats, spiders and snakes. On the other hand, mystical perceptions and cognitions relate to what is essentially ineffable, pertaining to the nature of existence rather than being limited to familiar objects that are intrinsic to everyday experience (see Table 2). The hallucinating alcoholic is functioning at the level of impaired consciousness, while the mystic is operating at a higher level of consciousness. Mystics have full awareness of their altered state of consciousness and they are also in a position to switch back to their ordinary mode of perception, unlike a hallucinating patient. Mysticism would be alien to those who hold the belief that universe evolved as a result of random collision of particles over a period and consciousness is the product of nature.

Table 1. Hallucinatory and apparitional experiences

True visual hallucination	Pseudo-visual hallucination	Pseudo-apparitional experience due to psychometry, living agents, etc.	True visual apparition at the physical site
Hallucinatory figure in objective space.	Pseudo-hallucinatory figure in subjective space	Pseudo-apparitional figure in objective space	Apparitional figure in objective space
No recurrent spontaneous psychokinetic activity (RSPK)	No RSPK activity (pseudo hallucination may occur as a secondary elaboration of RSPK)	No RSPK activity	May be associated with RSPK activity

No extra-sensory perception (ESP) involvement	No ESP involvement	ESP involvement present	May be associated with ESP
Underlying psychopathology	Not always psychopathology	No psychopathology	No psychopathology
Responds to treatment, deteriorates without treatment Can be distracted	May respond to treatment, may improve automatically Can be distracted	No change with treatment, fades with time Cannot be distracted	Persistent; no change with therapy Cannot be distracted
Dreamlike, not emanating its own light, not luminous, not solid	Dreamlike, not emanating its own light, not luminous, ambiguous and blurry	Possibly ethereal origin, not emanating its own light, not luminous.	Ethereal or astral origin, luminous and self-emanating light observed, unambiguous and solid
Brain chemistry or psychogenic factors responsible	May be due to psychogenic factors	May be atmospheric apparitional experience, telepathic hallucination or out-of-body figure	Discarnate agent is responsible
Identity may be unclear but within the limits of imagination and of ordinary objects	Variable identity, may be clear or unclear within the limits of imagination	Identity may be clear or unclear Telepathic apparitions involve mythical or demoniacal figures	Identity may be clearly revealed
Lack of insight	Insightful	Insightful	Insightful
Most often occurs at a reading distance	Distance is not relevant	May occur within and beyond the reading distance	Distance is variable
Not under voluntary control	Not under voluntary control, but imagery is under voluntary control	Not necessarily under voluntary control	Not under voluntary control
No new information received	No new information received	No new information received	New information received
Not interactive	Not interactive	Not interactive	Interactive

Cannot be photographed, will not reflect on the mirror	Cannot be photographed, will not reflect on the mirror	Cannot be photographed, will not reflect on the mirror	May be photographed, and may reflect on the mirror?
No special intent	No special intent	No special intent	Special intent present
No independent intelligence or consciousness involved	No independent intelligence or consciousness involved	No independent intelligence or consciousness involved	Independent intelligence and consciousness involved
No sensory disconnection	No sensory disconnection	No sensory disconnection	Partial sensory disconnection
Not confined to a single sensory modality	Visual modality is most common	Visual modality is most common	Not confined to a single sensory modality
May be vivid and clear, but lacks the substance of perception, may mimic perception	Vivid and clear, but lacks the substance of perception, does not mimic perception	Vivid and clear, but lacks the substance of perception, may mimic perception	3 - dimensional, vivid and clear, has the substance of perception, mimics perception
Movement of the figure restricted	Movement of the figure restricted	Movement of the figure restricted	Movement of the figure not restricted
Repetitive and stereotyped	Complex scenes of the past or fragments of action relevant to the emotional past of the individual	Complex scenes of the past or fragments of action not relevant to the emotional past of the individual	Figure may be known or unknown to the individual, like a drop-in communicator, and may be variable
Clouding of consciousness may occur	Full consciousness	Full consciousness	Full consciousness
Form has more clinical value than content	Form has more significance than content	Form has more significance than content	Content has more research value

No bonding between percipient and hallucinatory figure	No bonding between percipient and hallucinatory figure	No bonding between percipient and hallucinatory figure	Bonding may develop between percipient and apparition
Solo experience	Solo experience	Solo experience	Solo or collective experience
Cannot be touched The image may be unclear to begin with, passes through different phases and transformations	Cannot be touched The image may be unclear to begin with, passes through different phases and transformations	Cannot be touched The image may be unclear to begin with, passes through different phases and transformations	Can sometimes be touched The image is fully formed from the beginning.
Fear evoked	Neutral or fearful experience	Neutral or fearful experience	When associated with mysticism, may be life changing

Table 2. Attributes of the mystical experience

1. Ineffability – defies expression, incapable of being described in words
2. Noetic quality – states of knowledge, new insights into depths of truth unplumbed by discursive intellect, new illumination and revelation
3. Transience – not sustainable for long periods
4. Passivity – mystics feel as if their own will is in abeyance, and sometimes have a sense of being grasped and held by a superior power
5. Feelings of blessedness, joy, peace, happiness, etc.
6. Sense of objectivity or reality
7. Feeling that what is comprehended is alarmed or concerned
8. Paradoxically, accurate descriptions and rational interpretations of the experience tend to be logically contradictory when analysed

9. Transcendence of time and space

10. Self-sustaining

11. Modifies the inner life of the percipient, has positive and lasting effect in attitudes to life and behaviour

Marian mysticism

Marian apparitional experiences are unique manifestations of a vision at a physical site.¹¹ They share certain aspects of introversive and extroversive mysticism. They also open a new horizon in consciousness studies. Even though the manifestations at Fatima in Portugal in 1917 were not scientifically investigated, they have been well documented, are part of the corpus of experience available for parapsychologists' scrutiny and are within the realm of physicists' imagination. The apparitional occurrences at Medjugorje in Bosnia that have taken place from 1981 to the present day constitute a live paranormal-cum-mystical phenomenon that has been scientifically investigated.¹² They take place in public, and include a promise of a permanent visible sign of their reality. The apparitional occurrences at Garabandal in Spain (1962–65) have also been subjected to scientific investigation.¹³

Manifestations of Mary may be regarded as representing an interface between science and religion. It is not until recently that scientists have made tentative inroads into this hitherto neglected area of research and have begun to scrutinise individual occurrences from a scientific perspective. Reports of Marian apparitions pre-dating the twentieth century have a devotional emphasis that precludes the scientific evaluation of events. Subconsciously initiated, telepathically-endowed idea patterns may explain epidemic appearances of saints in a variety of cultures. The apparitions of the twentieth century – there have been several hundred – received a different form of attention, of which rigorous scientific analysis is a notable feature. In the second half of the century alone there were claims that Mary had been seen in almost all continents. There is evidence that most of the events took the form of intense psychological or *psi* activity on the part of individuals. These eventuated in spatial or temporal clusters when a critical amount of emotional energy was available, and they involved various intrapsychic processes. Such events may be centred on a few focal agents who are capable of unconsciously generating certain unusual effects through their own psychokinesis; *psi* sensitive believers add their own psychic energy to the situation, which is interpreted in accordance with the religious tradition prevailing.¹⁴ A full examination of the more credible events of this type would provide a theoretical framework for analysing visionary experiences, and would help the scientific community to differentiate between authentic mystical phenomena and pseudo apparitional experiences.

The Medjugorje apparitional events are highly relevant to the present discussion. In summer 1981 a group of young people from Medjugorje, a small town in the heart of the mountainous western region of the former Yugoslavia (now Bosnia) reportedly encountered an apparition near the top of a rocky hill. The present author has been

following up the events from the beginning. The town itself is not far from the world-famous city of Mostar. The first apparition took place in the late afternoon on 24th June 1981. Two local girls, Mirjana Dragicevic and Ivanka Ivankovic, were out for a walk when Ivanka happened to look towards a hill known as Podbrdo and saw the silhouette of the alleged apparition. She wanted to bring the attention of her friend to it, but Mirjana did not take it seriously and paid little attention. Ivanka herself was not entirely certain that she had seen anything unusual and continued to walk with Mirjana back to their homes. They stopped in front of the house of one of their friends, named Milka Pavlovic, who had a sister called Marija. Milka asked them to go with her to bring home her family's sheep. The others agreed, and together they walked back to the fields where two of them had been earlier. There, on looking towards the hill, they saw an apparition with a child in her arms. They were reported later to have continued to stare at it for some time in a perplexed state.

In the meantime another girl, Vicka Ivankovic, arrived at the scene. Vicka had seen Mirjana and Ivanka earlier and had been terrified when they had told her what they had experienced. When she reached the others, Vicka was overcome by panic and turned round and started to run away, but at this point they were joined by some neighbouring family members, Ivan Dragicevic and Ivan Ivankovic. It was then Ivan Dragicevic's turn to run away in fear, jumping over a stone wall in his haste. The apparitional experience of these six young people lasted for approximately 30 minutes.

On the next day they went again to the spot. Ivanka was the first to see the apparition and then Vicka and Mirjana shared in it. This time the figure held no child and the experience was preceded by an effulgence of bright light. Vicka had invited two others, Jackov Colo and Milka's sister Marija Pavlovic, to join them. When they were all gathered together, the apparition motioned them with her hand to move towards her. They ran through some thorn bushes to follow her instructions. Jackov was apparently moved by the beauty of the apparition and was heard saying to Vicka that the figure was as pretty as an actress.

After that, percipients had an apparitional experience on a daily basis. It was a collective experience involving six regular visionaries: Ivan, Ivanka, Jackov, Marija, Mirjana and Vicka. The visionaries have said that their experiences will continue until they have been given ten special messages each. Mirjana, Ivanka and Jackov have already received theirs and no longer see daily apparitions.

The events at Medjugorje have been extensively reported and commented on.^{15,16,17,18.}

Beloff's strategies

John Beloff (2001) postulated four strategies to challenge the scepticism of mainstream scientists regarding paranormal phenomena.¹⁹ One of these is a public demonstration of a blatantly paranormal phenomenon that could be recorded in a permanent form, enabling others to share in the experience. Another is the production of a permanent paranormal object that would transfer the onus of

explanation to the physicalist. The apparitional experiences at Medjugorje and Garabandal have been recorded on video and are therefore publically demonstrated, fulfilling the first of Beloff's requirements. The recordings are available internationally as videos and on YouTube.

As for the second strategy, the spring that arose at Lourdes, exposed by St Bernadette in 1858, and the image of Mary that appeared on the cloak of Juan Diego, the seer at Guadalupe in Mexico in 1531, are permanent objects arising out of Marian apparitional experiences. We shall examine first the latter of these two examples. According to oral tradition and historical documentation, in 1531 the Virgin Mary appeared to Juan Diego, an Aztec Indian, in Mexico. During a second visit an image of the Virgin appeared on his cape. In modern times entomology, biophysics, ophthalmology and computer engineering technology have all contributed to scientific study of the image, supporting its mystical origin. The fabric, made of ayate fibres used by the Indians, generally deteriorates after 20 years, but the image and the fabric on which the image of Mary is imprinted have lasted for about 480 years, in spite of exposure to infrared and ultraviolet radiation from the tens of thousands of candles near it and the humid, salty environment of Mexico City, where it is kept. It has been found that the image is not made from naturally occurring pigments of animal or mineral origin, though there were no synthetic colourings in the sixteenth century. Infrared analysis has demonstrated that there is no under-drawing and no brush strokes, and that the fabric has not been subjected to any known technique. The eyes of the Virgin have the quality of reflecting some viewers in the pupils. The image also demonstrates iridescence: the image changes in colour slightly according to the angle from which it is viewed, a quality which is not achievable by painters. All these findings point to the conclusion that the image on the cloak is more like that of an instant photograph (which appeared 300 years before photography was invented) than a man-made painted picture.²⁰

The events that led to the emergence of the spring at Lourdes on 25 February 1858 are well documented. The absence of unusual ESP powers on the part of Bernadette Soubirous, the percipient, and her reluctance to drink the muddy water emanating from the new spring and eat the grass – though asked to do so by the apparition – rule out an alternate paranormal explanation. That might otherwise be postulated, and would have involved the percipient's own clairvoyant detection of the spring. Moreover, all of the following point to a true Marian apparition at Lourdes: strong motivation on the part of the apparition, quasi-physical features of the apparition, integration of the apparition with the natural environment, utmost loyalty and obedience by the percipient to the image she saw, and controlled psychokinetic type manifestations. The visible signs support the argument that mysticism informs us of the fundamental principles of reality.

A manifestation of promised visible signs is awaited on the rocky hills of Medjugorje and among the pines of Garabandal. In years to come such events are expected to generate a paradigmatic shift in scientific attitudes towards paranormal and mystical events. The essential purpose of Mary's appearances at all the places examined is to promote unconditional love and to strengthen belief in life after death and the existence of God. All these suggest a spiritual consciousness.

Survivalist views

Unfortunately for survival research, there are many phenomena that have multiple alternative explanations, and these augment the complexity of this immensely significant area of scientific enquiry. Instead of illuminating the survival hypothesis, some kinds of alleged evidence have compounded academic confusion. Proving the existence of a non-physical component that is in some kind of symbiosis with the brain may offer indirect proof of discarnate existence. If we were able to identify an organ that empowered someone to fly, that would indicate that the organism in which it manifested was capable of some extent of self-induced transportation by air, even though no observation of the organism in flight had occurred. A non-biological component analogous to the hypothetical organ of flying may be an indirect indication of survival after physical extinction. All the types of evidence postulated to be in favour of discarnate survival are simultaneously a form of evidence of a non-biological component that operates in association with the brain, and vice versa. In other words, proving post-mortem existence is another route towards the empirical establishment of humans having a higher consciousness that survives physical extinction. Survival research is another area for future exploration in the area of consciousness studies.

After summing up the current evidence supporting the survival hypothesis, Braude (2003) states, 'with little assurance but with some justification that the evidence provides a reasonable basis for believing in personal post-mortem survival ... at best it justifies the belief that some individuals survive for a limited time'.¹ Most investigators and observers of survival research would concur with Braude's contention. However, that would mean a situation of survival of the fittest; currently available scientific evidence of post-mortem existence offers no general optimism. Furthermore, parapsychology is mind-centred and mysticism is essentially God-centred. Parapsychology's research results are bound to be restricted with regard to survival. We need guidance from the mystic for a fuller appreciation of life after death. The likelihood that Marian apparitional experiences are authentic has been demonstrated by scientific investigation. If we supplement the categories of evidence itemised by survival researchers with the evidence of Marian apparitions in recent centuries, we have a corpus of compelling reasons to support those who are proponents of a belief in universal and eternal discarnate survival. It is my contention that Marian apparitional occurrences are the strongest modern proof for the existence of a mystical realm and that they prompt us to revise our physicalist model of mind. The ephemeral nature of quantum consciousness cannot accommodate long-term post-mortem existence or the concept of immortality. It could be argued that quantum consciousness simply survives after physical extinction and exists for a period. It would then be comparable to a butterfly emerging from the pupa stage and soon thereafter disappearing into oblivion. Instances of reincarnation that span the centuries, higher reincarnations and Marian apparitions are disparate forms of substantiation for the continued existence of consciousness and of higher consciousness, in addition to that of the quantum consciousness.

Human experiences

Negative emotions may have survival value, but humans are endowed with pro-social, positive emotions. These encompass subjective human attributes such as ethics, morality, respect for others, self-dignity, trust, faith, tolerance, sense of beauty, strong sense of control of one's own actions, poetic sense, storytelling, mystical experiences, creativity of a higher order, insight into one's mental state, goal-oriented behaviour, happiness, intuition, imagination, understanding, intent, knowing, spiritual longings, sense of mystery, sense of humour, sense of insecurity, feelings of loneliness, awareness of death, fear of nothingness, longing for continuance, unconditional love, empathy, forgiveness, compassion, sense of responsibility, subjective time flow, will and decision making. None of these can be attributed to the brain or rational consciousness in isolation, even though brain and quantum consciousness admittedly collaborate in such experiences. Humans are also capable of experiencing the opposite of some of these qualities, and all of them are uniquely human experiences. They cannot be satisfactorily explained by a biophysical or quantum model of consciousness in spite of the fact that evolutionary biologists have been struggling to bring them into their field of investigation. Some of the attributes mentioned above may be operational at a lower level in the animal kingdom than in humans. Not all subjective experiences are by products of quantum entanglements and some may be fundamental human experiences.

The ultimate consciousness

Haisch's assertion that human consciousness is an extension of an eternal consciousness is a statement that is close to the oriental concept that consciousness is a spark of the divine fire.²¹ Such a metaphor may be misleading because a spark is potentially capable of evolving into fire and becoming greater than its original form. Human consciousness may carry an impression of its creator, but that impression is discrete – to express this in simplistic terms, it has similarities to an image created by using a rubber stamp. If so, the eternal consciousness is the template of human consciousness. Is it not more reasonable to conjecture that a spiritual Big Bang took place before or after the astrophysical Big Bang, and that evolution took place in a biological and spiritual stream? Haisch cautions against the multiverse hypothesis and suggests that a belief in an infinite number of parallel universes (or one followed by 500 zeroes) is more an act of faith than of science.²² It is more comfortable to believe in spiritual dimensions than in an indefinite number of multiverses – at least it should be conjectured that at some point the latter converge with the spiritual dimensions.

Haisch's proposed consciousness may be a type of ultimate consciousness that evolved in a higher dimensional realm and was effectively downloaded into the quantum computer that is shaped from proto-consciousness. Charles Tart's conjecture of a possible non-objective centre of personal identity and consciousness may match with the ultimate consciousness.²³ The fact that in our modern age humans have the capacity to destroy the planet six times over reveals the fallen and ungodly nature of human consciousness. Haisch's postulation²¹ that human consciousness is an extension of the divine consciousness does not tally with our fallen nature or with the age-old search for a lost consciousness, undertaken by

some through mind-altering drugs and by others through meditative techniques. That would be equivalent to misconstruing that chimpanzees evolved from humans. Haisch's scientific views regarding human consciousness and eternal consciousness are congruent with metaphysical monism, as opposed to metaphysical dualism.

Shin

Stokes (2009) has termed multiple spheres of consciousness within each person 'mini-Shins'. He has constructed an adaptation of the term 'Shin', originally devised to refer to the soul.²⁴ According to Stokes, each mini-Shin co-existing with the brain may receive input from a widespread area of the brain and may have its own information-processing capacity. Mini-Shins may have only limited executive powers. Stokes's model is distantly similar to Daniel Dennett's multiple drafts model of consciousness without a 'Cartesian theatre' and excluding the intractable problems.²⁵ But it may be postulated that in supervision of mini-Shins there may be a vestige of potential consciousness – an over-Shin or super-Shin which may be the substratum of a higher consciousness. Then consensual and dream realities are generated by more or less identical mechanisms and may be simply two aspects of one phenomenon.²³ Therefore the proposed higher consciousness may have its foundation in a space beyond the space in which dreams occur. Belief in the reality of dreams is based on inter subjective agreement rather than on full scientific evidence. Likewise, the existence of a greater mind or spiritual consciousness is based on inter subjective agreement because humans know intuitively that they are autonomous beings and have their own first-hand human experiences. The mini-Shin model in isolation fails to explain subjective human experiences. It would perhaps be desirable to stick with an established and time-honoured word 'spiritual', no matter how inappropriate it may be in scientific terms, rather than creating more complexity in this already overburdened subject by introducing more jargon than is necessary.

Creativity

Studies of creativity signify the irreducibility of mind and may show the way beyond the quantum consciousness, unravelling its near-paranormal nature. The human mind should be presumed to include a highly sophisticated receiver and a similar transmitter of messages. Creativity may be proved to have a paranormal component, and recently parapsychologists have sent out exploratory pseudopods into this challenging field of research. This may unravel part of the mystery of creativity. Creativity's products are often confused with its process, and this has contributed to confusion. The presumed link between generativity and mental disorder will be clarified only when we know more about the creative process. The parasciences have a useful participative role in this difficult task. The contemporary scene for both parapsychology and psychopathology is imbued with controversy. Even though human beings have existed on this planet for millions of years, technological advancements have taken place only in the last few centuries and they have occurred without any noticeable changes in the development of the human brain. Parapsychology may eventually be able to explain the burst of creativity that has

occurred in the arts as well as technology over the last three hundred years or so. Creativity is considered to be the product of the inspirational imagination in combination with meticulous, disciplined tenacity. The Edisonian perception of invention as 1% inspiration and 99% perspiration may be explained in terms of the hypothesis of interactive creativity, assuming that the inspirational part has a paranormal component.

Ervin Laszlo has presented a thesis of interactive creativity.²⁶ He supports his thesis with a number of types of evidence: observation of cultural creativity, which includes the collective advance of entire populations through the creative activity of their members; the achievements of distant populations; and documented developments in modern science, within which different investigators have presented new scientific insights simultaneously without any known contact between them. There are many examples of creative coincidence. Early cultures developed tools that have close resemblance; calculus was simultaneously and independently discovered by Newton and Leibnitz; biological evolution was postulated by Darwin and Wallace. Similarly Graham Bell and Elisha Grey applied for patents for the telephone on the same day. Rubic's cube was simultaneously conceived and designed by Rubic and a Japanese inventor. Jung's researches into the phenomenon of creative synchronicity helped him to formulate the concept of collective unconscious.²⁷

A striking similarity has been observed between the ostensible paranormal observations of subatomic particles by Annie Besant (1847–1933) and Charles Leadbeater (1847–1934), and the basic ideas of superstring theories discovered at a later date (Philips, 1995). One of the implications of this correlation is that it makes a link between ESP and scientific creativity because it may be hypothesised that both the psychics and the scientist had a common paranormal source of contact. At least some creative scientists may be regarded as subliminal psychics with a high sense of objectivity and superior intelligence. It is possible that there may be what we may term a psychical internet from which creative people derive new ideas. Spontaneous brain-to-brain interactions may underlie acts of unusual creativity. Polanyi opined that scientific discovery is informed by imagination and integrated by intuition or vice versa.²⁸ This view is very close to the Edisonian perception of creativity. If imagination is a property of the brain, intuition occurs in the unconscious realm. Laszlo's views on the subject are not definitive, yet they supplement existing knowledge about creativity.

According to Dr Ian Stevenson, the idea of reincarnation explains several features of the human personality and of biology that currently accepted theories do not adequately clarify.²⁹ Specifically, the idea of reincarnation has been used to explain the abilities of some child prodigies, suggesting that they may have learnt their unusual knowledge and skills in a previous life. The idea of reincarnation may help to explain the special aptitudes and strong motivations of a few outstandingly creative children. Is there truth in Plato's reincarnationistic views of creativity?³⁰

Parapsychologically oriented investigators believe that creativity is akin to mediumship and have postulated a spiritistic component (Klimo, 1991).³¹ Psi faculties are thought to be mobilised as the last defence mechanism prior to a major

psychotic breakdown.^{32,33} This would probably result in the transference of creative ideas already stored in the unconscious mind into the conscious mind for scrutiny. Heightened *psi* sensitivity is observed among recovered patients, and this may facilitate their paranormal search for new ideas. Artists readily recognise a creative impulse which pervades the objects they create, and therefore have an enhanced appreciation of the paranormal component of their creative experiences. Rhine noticed that conditions favourable to the occurrence of *psi* and of original creative works in arts are similar.³⁴ It is difficult for those holding a strict biological model of mind to comprehend the near-paranormal nature of creativity and appreciate that some of the original ideas may be blooming in another dimension to be transferred to the minds of the creative individual. It is a curious fact is that many gifted people have a very ordinary family background which has no history of creativity. For example, Newton came from an undistinguished family – an observation that favours non-genetic factors for creativity.

Some geneticists conduct research into the biological origins of creativity, and some believe that mind may be reducible to chemistry, just as molecular biology has interpreted the gene as a chemical entity that may be isolated in a test tube. The jury is waiting for the future event of human cloning to inform the final verdict. Intelligence may be a trait that can be cloned, but creativity cannot be tagged and may be more complex than the duplication of some genes. Advances in genetics and parascience could unmask some of the mysteries and clarify the existing confusion surrounding creativity. In future the study of the kinetic mechanism responsible for spontaneous communication among spatiotemporally distant human beings will probably uncover part of the truth of creativity. That would result in a shift of thinking so that the faculty of genius is ascribed to paranormality rather than to genes. The prevailing neurobiological model of mind is incapable of encompassing creativity of a higher order.

For studies of consciousness to progress, we need a working hypothesis of mind and consciousness that would accommodate all the evidence in favour of mysticism, the paranormality of creativity and post-mortem existence, allowing continued investigation and leaving the door open to further knowledge. Fenwick³⁵ has stated:

In my view, a satisfactory explanation of consciousness must include a detailed role for brain mechanisms, an explanation for the action of mind both inside and outside the brain, and an explanation of consciousness held in common, or the way we seem to be linked together. It should also give an explanation of wide mental states, including transcendent experiences in which the experience claims to see through into the structure of the universe.

Concluding remarks

An analogy with computers is inadequate to explain consciousness, and merely demeans consciousness to the cacophony of the sound of a hundred billion neurons interacting. The quantum computer model fills part of the explanatory vacuum inherent to the neuro-computer model of consciousness. The suggestion that the

zero point field is the substrate for consciousness is hotly debated.³⁶ In quantum theories of consciousness, there is no room for *tertium quid* – which is, in this context, free will. If consciousness may be compared to the production of music, it would require a fine musical instrument and a skilled musician. It appears that while Penrose and Hameroff have described the musical instrument partially and vaguely,³⁷ they have not yet established the ‘musician invisible’.

The concept of a unique and individual consciousness may be appreciated better by accepting the hypothesis that it pre-exists in another dimension. In accommodating the idea of discarnate survival, the concept of the pre-existence of a non-biological component is attractive, lending powerful support to the notion that human beings are essentially spiritual beings having earthly experiences. Incarnation may be compared with ideas finding a physical existence through linguistic expression; the alphabet itself does not create ideas but is the means of promulgating them. In the grand economy of nature, the idea that an unphysical body (a quantum body) grows along with the physical body, and that later a non-biological body (higher consciousness) that has been evolved in another dimension, incarnates into it, is plausible. Such a belief tallies with the view of Beloff, who argues that if strong dualism (Table 3) is the truth, we may also have to accept the existence of a cosmic pool from which each of our individual minds stems and to which each ultimately returns.³⁸ This coeval, according to the percipients of Marian visions, may consist of a richer reality, even a negative one.³⁹

Mystical experiences suggest the possibility of a dimension that has its own order and objectivity, existing beyond the higher dimensional structure. The origin of non-biological/ spiritual bodies would remain a mystery. Just like the massive hypothetical Higgs bosons thought to exist soon after the Big Bang, spiritual bodily forms could have been created by a spiritual Big Bang in an eternal spiritual dimension – a hyperspace beyond the brane-space (a brane is an object that may have any number of dimensions). The terms ‘non-biological’ and ‘non-physical’ become meaningful only if the spiritual body is perceived to have evolved in a higher dimension beyond the quantum spaces. Before the celestial body is drawn towards the human embryo or foetal body, it may exist in a cosmic womb.⁴⁰

Table 3. The mind–body problem

<p>Monism</p> <ul style="list-style-type: none">a. Only one ultimate reality exists, and mind and body are essentially reducible to itb. Physicalism: there is only body or matterc. Reductionism: assumes that nothing can be greater than the sum of its parts. In the reductionist view mind is an epiphenomenon caused by physical phenomena and is incapable of causing anythingd. Functionalism: defines mental states and properties in terms of causes and effects as seen in behaviour

- e. Idealism: mind and matter are only a manifestation of mind
- f. Mind–brain identity theory: mental states are literally identical to brain states
- g. Behaviourism: mental states are reducible to statements of behaviour

Dualism

Two ontologically distinct entities, mind and body.

- a. Property dualism: same substance with distinct functions.
- b. Substance dualism: mind and body are composed of distinct substances.

Plasma physicist, Jay Alfred hypothesises that a human being consists of a physical biomolecular body closely associated with higher-energy and lower-energy ethereal bodies, higher-energy and lower-energy astral bodies and higher-energy and lower-energy causal bodies.⁴¹ The ethereal double may support the tissues and biochemical activities in the biomolecular body and gives it structural integrity. Astral bodies inhabit the astral universe, which has a space-time signature of four spatial dimensions and one time dimension. Causal bodies inhabit the causal universe, having a space-time signature of five spatial dimensions and one time dimension. The causal bodies may be regarded as equivalent to the spiritual body of the faith traditions. Robert Crookall has also argued in favour of a unique spiritual body.⁴²

I am suggesting that just as a safety match is ignited when it is rubbed on the side of its box, consciousness is activated when the spiritual body incarnates to the physical body. The purpose of incarnation is to develop this higher consciousness and nurture it through terrestrial life. The universe may consist of three fundamental entities, space-time, matter and consciousness, but the fundamental consciousness may be only a passer-by in the brane-world. Mystical consciousness reveals that such a consciousness may emanate from a spiritual reality beyond the quantum consciousness – the ultimate self or the transcendental ego. The non-biological body is not specialised in the same way as the conventional body, but adapted to enable it to function in the environment appropriate to it. It is the subtlest and the most pervasive of all the psychic components and a non-physical continuum is maintained between them by the all-pervasive spiritual component. Considerably more work would have to be done along these lines before any of these conjectures can be defined convincingly, but we may attempt to describe them.

In addition to the physical reality of space-time relativity and speed of light as the limiting factor of information transfer, LeShan (2009) has proposed a 'clairvoyant reality' where psi faculties operate.⁴³ My contention is that such a view is but a concession to the concept of quantum world, weaved out of statistical probabilities, where brain is serving as a form of quantum detector that determines the collapse of the state vector into the qualia of conscious experiencing. Quantum theory has

become a scientifically respectable haven for all the discarded materialistic views of the mind, but psychophysics can be a potential threat to the human sense of identity. We ought to blend scientific rationalism and the wisdom of faith traditions harmoniously to achieve a better understanding of human consciousness. Particle physicists have elevated Homo sapiens to a status of quantum being from the Darwinian status of 'electrical animals', but the study of mystical experiences would give humans their true identity as spiritual personalities.

Humans are always more than they are able to comprehend and are forever transcending themselves.⁴⁴ Our cognitive and intellectual limitations in attempting to probe the mystery of consciousness is somewhat similar to the situation of the huge elephant that is physically designed with small eyes, and therefore unable to comprehend its own enormous size. The reason for this may be that consciousness has evolved independently of the brain and has been grafted on to it later. From a functional point of view, mind and consciousness may constitute a single unit. Without attempting to settle mind-body or mind-consciousness problems, it may be argued that mind is a system of intercommunicating psychic computers that include neuro-computers and quantum computers, but that consciousness will continue to be an enigma. It may be more satisfactory to hypothesise that consciousness also involves neuro-computers and quantum computers incorporated within a higher hierarchical system. Deepak Chopra conceives that quantum consciousness is an interface between spirituality and brain.⁴⁵ Theology and particle physics are two major corpuses of knowledge that cannot but overlap when we attempt to develop a deeper understanding of consciousness.

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