

Article

Death, Consciousness and the Quantum Paradigm

Ronald Peter Glasberg^{*}

“For in that sleep of death, what dreams may come...?”

Shakespeare, *Hamlet* (III.1.66)

“Life, what is it but a dream?”

Lewis Carroll, *Through The Looking Glass* (1871/2016)

1. Introduction

The question of death as either the extinction or continuation of consciousness is intimately connected with the question of the nature of consciousness, which is itself connected to the question of how consciousness is connected to the material world as understood by physics in general and quantum theory in particular. To the extent that the prevailing paradigm of contemporary culture appears to be resolutely reductionist, it is generally assumed that consciousness is but a way of discussing phenomena pertaining to the experience of human awareness – phenomena that will cease to exist when the body-brain complex ceases to function in the context of death (Carroll, 2016). In other words, consciousness or mind simply blinks out in a manner that at least mimics the experience of having a general anaesthetic.

During my own experience of being anaesthetized, I was shocked at how the interval of the medical procedure had been reduced to absolutely nothing. A moment of drowsiness and a yawn were immediately followed by a sudden awakening and the sense of utter amazement that several hours had passed. What if I had died during that procedure? Of course, I did wake up, but I was left wondering if my timeless *non-experience* was a vindication of the reductionist paradigm with respect to the nature of consciousness and ultimately of death itself.

^{*} Correspondence: Ronald Peter Glasberg, University of Calgary, Calgary, Alberta, Canada. Email: rglasber@ucalgary.ca
Note: This article was first published in JCER 7(11) pp. 1064-1077 which is a Focus Issue edited by Gregory M. Nixon, PhD.

The purpose of the present study – my anaesthetic experience notwithstanding – is to challenge the prevailing paradigm with respect to consciousness and death by way of a three-pronged approach. (1) Since the reductionist paradigm is based on the materialist foundation of quantum theory, I propose to look at that dimension of being, not as an occasion for explaining consciousness by way of something that is inherently non-conscious, but as a set of phenomena that provocatively parallels a corresponding set in that dimension of being called consciousness. (2) Demonstrating how that pregnant parallel can give birth to a new theory of consciousness, I will put forward three postulates that follow from my exposition of certain quantum principles. (3) On the basis of these postulates I will then return to the death question, not with a view to reviewing what appears to me the ample evidence for post-mortem survival of consciousness (see, e.g., Kelly, Crabtree, & Marshall, 2015; Carter, 2012), but to put that evidence into a framework that connects it to or makes it consistent with the quantum behavior I outline in the first part of this essay.

While I am challenging a reductionist outlook, the reader should be aware that I am not denying that physical processes can explain consciousness. However, because these physical processes at the quantum level appear *weird*, I am also exploring the possibility of *de-weirding* the physical dimension by making reference to the functioning of consciousness as introspectively understood, albeit in a somewhat novel way. Does that mean I am suggesting that the external or non-conscious realm can be reduced to the internal or conscious realm? I believe the relationship between these two spheres is subtler than that of mutual reduction. It might better be thought of as a kind of reflective symmetry where the internal is the way it is because the external is the way it is and *vice versa*. Symmetry is, of course, a principle of physics, but it clearly plays a role in other areas of knowing (e.g., art, which might be thought of as a form of knowing the world through acts of aesthetic creativity). With respect to the survival of consciousness after death, there is certainly an implied reference to symmetry, which, according to Lederman and Hill (2007) may be understood as a tendency for something to remain invariant under transformation

or change. Thus, if death is a transformation from a physical state to a non-physical state, the survival of consciousness in the form of an individual personality would be an impressive manifestation of the principle of symmetry.

My way of proceeding then is to have the three following sections explore each of the foregoing prongs of my position: (1) the nature of the quantum world; (2) outlining a theory of consciousness that reduces the weirdness factor of that world; and (3) utilizing the insights of the first two sections to place life after death in a more constructive context – one that opens us to the evidence by placing it in a framework that is connected to both quantum principles and those of consciousness understood in a manner that demystifies some of those principles.

2. *Hiatus*: From h to H – The Quantum Paradigm

The core of the quantum paradigm is connected to the idea of rupture, fissure, break, discontinuity or, the term I will be using most, hiatus. This is with reference to letter h , called Planck's constant, an irreducible chunk of energy that figures so prominently in a multitude of quantum phenomena (e.g., quantum *leaping* in electron orbits and Heisenberg's uncertainty principle with respect to simultaneous measurement of position and momentum of sub-atomic particles). I will be discussing how this physical constant emerged and how it functions before considering, in the subsequent section, how quantum behavior parallels that of consciousness. The symbol H will be used with respect to shedding light on analogous phenomena that seem to exhibit a comparably 'hiatic' quality in the sphere of human consciousness.

What then are some examples of H ? One does not have far to look: mind-body, dreaming-waking, and, of course, life and after-life. What the foregoing have in common is the idea of a problematic disconnect between each these pairs. For example, while mind and body appear to be linked, the nature of that link is anything but clear to the extent that mind and body seem to be radically different substances – the former being non-spatial while the latter is spatial (cf. Cottingham, 1992). Likewise, when we awaken from a dream state, the waking world seems to

exist at a different level of consciousness from the dream world. In a similar vein, the post-life world of the dead (if it exists at all) seems so disconnected from the world of the living that only a few gifted psychics can connect the two realms, and even then their efforts are often met with skeptical derision.

The original hiatus of quantum theory introduces discontinuity into the wave-like world of frequency, where instead of a continuous range of frequencies existing they are quantized by a small and irreducible chunk of energy called h . This physical constant came out of the late 19th-century struggle to understand the black-body radiation curve. What I propose calling the consciousness constant (i.e., an embodiment of ' H '), which will be shown to play a role in understanding the hiatus of mind-body as well that of life-death, may also be understood as a response to a different issue: namely the issue of integrating paranormal and spiritual phenomena into the usually hostile world of mainstream academic discourse. To avoid turning this essay into a long-winded discussion of thermodynamics, I will keep to a very basic level with respect to the black-body radiation problem that beset physics toward the end of the 19th Century and how that problem gave birth to h as a universal hiatus phenomenon at the physical level.

The term *black body* refers to an ideal absorber and emitter of thermal radiation. When heated in the form of an enclosed space or cavity, the range of radiated frequencies emitted by a black body can be carefully measured by way of an opening in the cavity. Within the framework of pre-quantum theory what should have been observed was a preponderance of high frequency or short wave-length radiation for certain high temperatures. This is because more high frequency (short wave-length) waves would fit into the cavity space than low frequency (longer wave-length) ones. In other words, when more heat energy is pumped into the cavity, high frequency radiation should increase to the point where an *ultra-violet catastrophe* ensues. That somewhat dramatic term is a poetic way of describing a physical as well as a theoretical crisis in the prevailing theory of thermodynamics – namely, that, according to an obviously incorrect theory, an infinite amount of energy should be generated by heating a black body because ever higher

frequencies (with ever shorter and more energetic wave-lengths) should predominate over the lower frequency emitters. Ultra-violet refers to those highly energetic frequencies beyond the visible frequency of the color violet.

To remedy this theoretical impasse, Planck introduced the constant h in the formula $E = hf$, where E is energy, h is a very small unit of energy (i.e., small in comparison with our macro-world experience), and f stands for frequency. Because a high frequency is now *quantized* by h and the heat energy pumped into the cavity has to be equally distributed among all of the differing frequency generating *oscillators* in the wall of the cavity, the result is that the high frequency contribution to the overall shape of the radiation curve is suppressed (rather than enhanced) because of its shorter wave-length. As Manjit Kumar (2008) puts it: “It is not possible for oscillators to absorb or emit energy continuously like water from a tap. Instead they can only gain and lose energy discontinuously in small, indivisible units” (p. 26).

In short, energy seemed to have a *hiatic* nature associated with h that affected every frequency emitter in a way that kept them differentiated or separate from each other. Thus, when energy is introduced into a system of vibrating oscillators, it can only be distributed in such a way that there is little left over to activate quantized high-frequency oscillators, and their minimal presence in a black-body radiation distribution is accordingly explained. The hiatus aspect may also be understood as an absence of fractional units of energy. As Fred Alan Wolf (1989) points out, “Since the quantity, hf , of energy was a certain *whole* amount of energy – not $\frac{1}{2} hf$ nor $\frac{1}{4} hf$ nor any other fraction – the energy in any given light wave could only be a multiple of the basic “chunk” of energy” (pp. 65-66). It is because energy has this granular quality that I associate h with a physical hiatus. Grains, after all, have spaces between them and are not continuous or they would not be grains. More importantly this granular quality is not something that can or should be explained away – Planck’s own reluctance with respect to his innovative idea notwithstanding. It actually allows for energy to be controlled rather than *running away* with itself in some kind of catastrophic activation of ever increasing frequencies that would make any kind of order

physically impossible and intellectually unthinkable.

3. Implications of the Quantum Paradigm: Three Postulates on Consciousness

With this *black-body* background in mind, we can now shift our focus to the functioning of consciousness. However, before undertaking that description, I need to clarify what I mean by that notoriously elusive term. In this regard I would like to put forward three heuristic postulates – ‘heuristic’ in the sense that their value will be revealed by noting how well certain phenomena can be explained by them; ‘postulates’ in the sense that they are meant to operate as underlying principles for a wide range of phenomena. The key difference characterizing these postulates with respect to other views of consciousness is their *activist* nature, that is, they are to be understood as a power to make things rather than being a passive reflector of them. Moreover, this activist quality allows for the association of consciousness with energy, that is, the capacity to do work in the physical sense:

- Postulate #1: Consciousness is a *world-creative* force.
- Postulate #2: World-creation takes place via communicative interchange.
- Postulate #3: Consciousness is *quantized* via self-identity (one of the primary manifestations of *H*).

As might be noted by the attentive reader, the three postulates (to be clarified in due course) parallel the three elements of Planck’s equation ($E = hf$), and this in itself suggests that physical reality as described in the equation might be a kind of shadow of a non-physical foundation.

The first postulate (i.e., consciousness being a world-creative force) connects consciousness to the physical reality of energy, which, by the power of various forces, makes the physical world – i.e., the world that seems external to the internal realm of consciousness. The world-creative power of consciousness can be seen in dreams, which are not just things of which we are passively aware but real events that are personal (i.e., not shared as in *joint dreams*)

creations of the unconscious as we sleep. The *world* quality may be associated with the sense that the creation is so all encompassing and complete that, until we awaken, we do not normally know that we have been dreaming. Kahn (2002) notes that Freud, along with other dream interpreters, takes no notice of this all-encompassing quality and focuses instead on the mechanisms and motives of the creations known as dreams. In any case, how far this world-creative energy is operative in the inter-personal waking world is yet to be seen.

The second postulate (pertaining to communicative interchange as a means of creation) seems odd, but may be seen in the *Genesis* creation myth when God (the creator) speaks the world into existence with the words, “Let there be light, and there was light” (1:3). To whom is God speaking, i.e., communicating? Is not God speaking to the readers (or hearers) of the text who are themselves created in God’s image? If God is a creator, the ‘image’ might be that aspect of the divine that is *world-creative*, and in that sense the readers-hearers, the descendants of the original pair of humans, are also divinely creative although not to the same degree as the God who created them. The myth then touches on a basic principle of world-creating, which is that of conversation, communication, dialectic, or discourse, where one position is put forward and considered by another party to the conversation. The latter may put forward a response, which is then considered by the original speaker. In short, a back-and-forth movement or communicative chain is generated and a kind of co-created world or joint creation ensues. Moreover, just as physical energy may be seen as a kind of parallel to the world-creative power of consciousness, physical frequency, with its back-and-forth peak-trough structure, may be seen as a kind of parallel to the back-and-forth agreement-disagreement quality of inter-communication.

The third postulate touches on consciousness being not just world-creative, but creative in the context of individualized or granular units called selves. They are (in this plane at least) the loci of consciousness, through which humans approach the world and make their respective contributions via communicative interchange. In dreams, where the world created by the dreamer is personalized (sometimes with respect to his/her repressed wishes), the *integer* of creative action

is one particular self. But in the waking world, the integer functions in the context of *multiples* depending on the number of individuals (selves) communicating and thereby co-creating a common world – a world that (like the dream) appears to be all-encompassing as well as expressing the perspectives of all who have participated and are currently participating in the conversation.

To sum up, while the physical world connects energy to a quantized frequency as in Planck's equation $E = hf$, the world of consciousness seems to display an interesting parallel where world creation is linked to individualized inter-communication. If one were to express this in the form of an equation, one could write $WCP = sd$, where WCP stands for 'world creative power' while s represents the self as a kind of quantized unit of consciousness and d represents discourse or communicative interchange between selves. At this point I do not wish to jump to some kind of premature and reductive identification of the first equation with the second. What is of interest in the parallelism or isomorphic analogy is the possibility that a deeper level of reality might underlie both spheres.

4. The After-Life In The Context Of Quantum Paradigm and The Three Postulates

If death is not to be taken as a termination, but as a hiatic breakpoint between consciousness with a body and consciousness without a body and if consciousness is a world-creative force, how might the quantum paradigm bring these two ideas together in a theoretical framework for an after-life? Several points can be made, but the most crucial one centers on an implicit sense of purpose that seems to be inherent in the quantum paradigm in the context of world-creation – that purpose being the disciplining of the creative impulse.

First, just as the physical quantum suppresses the ultra-violent catastrophe in a way that appears to facilitate the possibility of some kind of order in the natural world, the third postulate (i.e., the self as a granular or singular locus of consciousness) can be said to function in an analogous manner. How so? To answer this one must consider how a world-creative

consciousness could get out of hand. Creation in the vein of consciousness has its explosive side in the sphere of unbridled imagination. We can see this in the often fantastical nature of dreams, but also in the delusions of those we deem mad. The practical results of this may not be so dangerous in dreams, but Don Quixote's famous delusion that windmills were giants led to him enduring painful injuries.

If world-creative energy is quantized over a wide range of discourse participants, the vast majority or middle range will inadvertently suppress the imaginative tendencies that remain relatively untamed in dream states. Also and more importantly suppressed would be the power of those discourse participants who, by virtue of their intellects and/or rhetorical skills, could seriously de-stabilize the field of cultural discourse if all world-creative energies were concentrated within their purview. But that does not happen. Thus, while *discursive frequency* in those individuals (like mystics) who appear able to communicate with deeper and wider aspects of reality is high, the vast majority, who communicate at lower frequency levels (i.e., where interchange with the world is more circumscribed), absorb in a stabilizing and quantized fashion the energy of world-creative consciousness. In this context one might venture to speculate that major world religions start out with mystics, who seem to be able to channel forms of consciousness that are highly integrative in nature (i.e., compelling world visions that entail a sense of human destiny). This is followed by disciples, acolytes, interpreters, etc. who mediate and water-down the message even further so that it can spread itself among the vast majority of discourse participants constituting, if not helping to create and/or transform, a significant cultural unit. For example, if Jesus is taken as mystical mediator of a higher consciousness (i.e., the Father in heaven), then a set of disciples and later the seminal figure of Paul are required to keep the message from causing the culture to be non-viable for this plane of existence. The principle that a greater intimacy with the Father is possible only after death (if the self has lived a certain way) indicates that this higher consciousness is *hiatically* separate from life on the earthly plane.

As a subsidiary addendum to this first point of comparison between quantization at the

material and conscious levels, I would suggest that the energy of world-creative consciousness is engendered by the challenges of life that must of necessity inspire discourse. In other words, individuals are set to talking when they confront obstacles of different kinds and these have to be dealt with in a context of communicative interchange.

My second point is but a theoretical extrapolation of the first with respect to the situation of a post-physical existence, that is, an after-life. Here, on the one hand, the creative imagination might be more fluid, as in dreams, because the restraints of having a physical body are absent. (see Williams & Williams, 2006) On the other hand, consciousness is disciplined in its creative aspect by the experience of reflecting on and discussing the experience of the life just ended or of those lives that the self may have gone through in other incarnations (Carter, 2012). What that suggests, with respect to the self as a quantizing constant, is that is that this locus of consciousness would have a different value than was the case during life on the physical plane. To be specific, the value of H in the after-life plane would be smaller than it was on the physical plane because the boundaries of the self are more fluid and porous. Communication takes place, but it is more telepathic in nature given the absence of a physical or material environment as understood from the pre-death plane. Moreover, as might be expected in a situation of porous boundaries, the possibilities of communicative interchange would be enhanced and the back-and-forth rhythm of discourse would be more intense and thus at a higher frequency than appears to be the case at a physical level.

The third point combines the notion of a *constant* (physical or *metaphysical*) with the ideas of planes of existence and the ultimate trajectory of world creative consciousness. In this regard one of the *weird* qualities of the quantum paradigm is the very ideas that something as flow-like as energy should be quantized. What is not usually considered in this context is that h has a specific or constant value that is omnipresent and unchanging in the plane of existence we call physical reality – the very thing studied by physicists. That constancy quality seems to suggest that if h were to somehow change its value, the phenomena associated with that shift

would occupy another plane of existence. Obviously we as living humans, who exist on the physical plane and are to some extent an expression of it, cannot change that value. But, if we could, might we not alter the fabric of our existence or perhaps have access to another plane where that value would be different?

The reason for this *thought experiment* is a quality that seems to pertain to the after-life – that is, the existence of planes of consciousness, according to Deepak Chopra (2006). Higher planes seem to be characterized by higher frequencies or levels of discursive interchange and those on lower levels cannot normally engage in communicative inter-change with beings whose level of consciousness would be characterized by a different *H* value. While the physical plane would be different in character depending on the numerical value of Planck's constant, the after-life plane would also be different as the locus of consciousness shifted in value; but the shift here would not be quantitative so much as it would be qualitative, where the main quality would, for want of a better word, be porousness. Thus, a more porous or open locus of consciousness would be capable of more communicative interchange because its *defenses* against its environment (mainly the existence of comparable loci of consciousness) would be significantly attenuated. Would not a higher consciousness be a more open one – open to discourse to which a more defensive consciousness would be closed? The higher ones could, of course, attempt to communicate with lower ones and sometimes even get through via those who purport to channel or mediate this higher frequency locus of consciousness; but given that the message must successfully distribute its world-creative energy among those who must quantize such energy at a lower (less porous) level of consciousness, that level will maintain its integrity and an ultra-volatile creativity will be avoided.

To normalize this process (of limited communicative interchange between planes) even more, consider how animals are not open to understanding the plane of communicative interchange occupied by humans (e.g., Strieber & Kripal, 2016). Could there be mediators among the animals? Some dogs do seem to mediate human messages and function as our assistants when it

comes to herding other animals or helping the handicapped (e.g., seeing-eye dogs). The point is the hiatic phenomena are more common than one might think and deserve more study in a comparative context.

If planes are characterized by ever increasing porosity in terms of communicative interchange, we can engage in a final extrapolation with respect to the ultimate trajectory of consciousness, which in an after-life context is sometimes described as movement toward self-perfection (Williams & Williams, 2006). But what could that mean? A tentative answer might come from considering what a final plane might be like – a plane where consciousness would have no boundary or locus. By analogy with the Planck equation ($E = hf$), as H tends to zero, frequency would become infinite (at least if world-creative consciousness is somehow conserved in a manner analogous to energy conservation on the physical plane). However, instead of an ultra-volatile creativity, the ongoing disciplinary process that seems to characterize the after-life planes would have reached a level of extreme concentration or convergence as is characterized by mathematics and myth where complex meanings are tightly integrated. What might emerge is an *ultra-visionary creation* — that is, a creation that goes beyond the mathematical and mythic vision of consciousness and brings forth a complete and all-encompassing universe. Perhaps it is a kind of dream, but it is *a big dream*. Perhaps the big dream began as the Big Bang. Perhaps it is both at the same time and the Big Bang is still occurring.

5. Conclusion

I have in this discussion tried to normalize the idea of an after-life (with its apparently quantized planes of consciousness) by placing it in a theoretical framework informed by the hiatic behavior of the quantum paradigm. I have also tried to *de-weird* the paradigm by placing it in the somewhat more accessible framework of world-creative consciousness, a common example of which is the phenomenon of *dreaming up* a complete and all-encompassing world. To put it another way, the external world behaves the way it does because it appears to be infused with an

internal or consciousness-like aspect, which behaves as it does because it is composed of a hierarchy of levels or planes. One of these levels is the physical plane, wherein the quantum foundations of reality were discovered. Moreover, the hostility of physicists to the idea of a non-physical plane associated with an after-life or mind somehow independent of matter makes sense in the theoretical framework I am attempting to put forward.

How so? The core of my position is the idea that world-creative consciousness is engaged in a process of self-disciplining, of taming its effusive imaginative potentials, which are also the source of its power. If physicists had not banished the wild card of an underlying world-creative consciousness from their deck of assumptions, they might never have discovered the highly disciplined mathematical foundations of *material* or non-conscious reality.

By the same token, if that underlying world-creative consciousness were channeled by inspired mystics and ultimately manifested itself in the form of major world religions, there would also be the need to *translate* the messages in a manner that allowed the integrity of the culture receiving the messages to be maintained – that is, avoid the possibility of some analogue to the ultra-violet catastrophe. The result of this translation process would be a separation of the new religion from those higher planes of consciousness where a process of mathematical and mythic integration might be taking place with a view to some future generation of a new universe.

Separation? Perhaps that is too strong a term for what might be taken as a unified holographic process – one where each religion, like each Jewel in Indra's Crown, is a fragmentary reflection of an indescribable whole that is nonetheless open to human experience. It may be described as a place where the whole and the holy commune.

Works Cited

Carroll, Lewis. *Through the Looking Glass*. CreateSpace, 2016. Originally published 1871.

Carroll, Sean. *The Big Picture: On The Origins Of Life, Meaning, And The Universe Itself*. New York: Dutton, 2016.

- Carter, Chris. *Science and the Afterlife Experience*. Rochester, VT: Inner Traditions, 2012.
- Chopra, Deepak. *Life After Death: The Burden of Proof*. New York: Harmony, 2006.
- Cottingham, John. "Cartesian dualism: theology, metaphysics, and science," in J. Cottingham, ed., *The Cambridge Companion to Descartes (236-257)*. Cambridge: Cambridge University Press, 1992.
- Glasberg, Ronald. "Mathematics and Spiritual Interpretation: A Bridge to Genuine Interdisciplinarity," *Zygon – Journal of Science & Religion* 38 (2), June 2003: 277-294.
- Kelly, Edward F., Adam Crabtree, & Paul Marshall. *Beyond Physicalism: Toward Reconciliation Of Science And Spirituality*. Lanham, MD: Rowman & Littlefield, 2015.
- Kahn, Michael. *Basic Freud: Psychoanalytic Thought for the Twenty First Century*. New York: Basic Books, 2002.
- Kumar, Manjit. *Quantum: Einstein, Bohr, And The Great Debate About The Nature Of Reality*. Cambridge: Icon, 2008.
- Lederman, Leon M., & Christopher T. Hill. *Symmetry and the Beautiful Universe*. Prometheus Books, 2004.
- Strieber, Whitley, & Jeffrey J. Kripal, *The Super Natural: A New Vision of the Unexplained*. New York: Jeremy P. Tarcher, 2016.
- Williams, Bill, & Muriel Williams. *Life in the Spirit World: The Mind Does Not Die*. Victoria, BC: Trafford, 2006.
- Wolf, Fred Alan. *Taking the Quantum Leap: The New Physics for Nonscientists*. New York: Perennial Library, 1989.