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Beyond the Circle of Life

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Beyond the Circle of Life;
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Idealist View of Consciousness After Death;
Science & Postmortem Survival;
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Guest Editorial

Beyond the Circle of Life

Gregory M. Nixon*

Abstract

It seems certain to me that *I* will die and stay dead. By "I", I mean me, Greg Nixon, this person, this self-identity. I am so intertwined with the chiasmus of lives, bodies, ecosystems, symbolic intersubjectivity, and life on this particular planet that I cannot imagine this identity continuing alone without them. However, one may survive one's life by believing in universal awareness, perfection, and the peace that passes all understanding. Perhaps, we bring this back with us to the Source from which we began, changing it, enriching it. Once we have lived – if we don't choose the eternal silence of oblivion by life denial, vanity, indifference, or simple weariness – the Source learns and we awaken within it. Awareness, consciousness, is universal – it comes with the territory – so maybe you will be one of the few prepared to become unexpectedly enlightened after the loss of body and self. You may discover your own apotheosis – something you always were, but after a lifetime of primate experience, now *much more*. Since you are of the Source and since you have changed from life experience and yet retained the dream of ultimate awakening, plus you have brought those chaotic emotions and memories back to the Source with you (though no longer *yours*), your life & memories will have mattered. Those who awaken beyond the death of self will have changed Reality.

Keywords: Consciousness, Source, life, death, circle of life, awakening, experience, memory.

> *To be immortal is commonplace; except for man, all creatures are immortal, for they are ignorant of death; what is divine, terrible, incomprehensible, is to know that one is immortal*. (Jorge Luis Borges, *The Immortal*, 1943.)

The *circle of life*, made famous in Disney's "The Lion King", is the circle of time: from life comes death and death helps bring forth new life. The simple point is that that all of Nature (except for a rare group of scientists who actually think the universe will expand in one-way entropic time until all the lights go out) unquestioningly accepts: death is as much a part of life as the dark side of the moon is a part of the moon. In fact, you cannot have one without the other. Life on Earth would have suffocated and run out of food sources with the endless identical replication of amoebae in the same way mitosis would never have allowed evolution to begin. It took meiosis and death, not to mention sexual reproduction, for the evolutionary process to set forth. Life lives off life, and death and sex are necessary for that to happen. To begin the process of unimaginable differentiation that came to flourish across this planet (and possibly others)

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required the old or weak make room for the new and that sexual breeding from different gene pools allow for slow evolutionary mixing and unexpected mutations. In short, the first point I wish to make is that *death is good*, or at least a necessary part of life. It's especially good if we accept the recent philosophizing of Thomas Nagel (2012) that evolution has a *natural teleology* (undirected by deity), a purpose that is discovered by creating it. Evolution is basically competition, cooperation, symbiosis, death, sex, and birth. Yet it leads by way of extraordinarily unlikely coincidences to us, which might be considered the *anthropic principle* (though a naked mole rat, if it could write, would might see the naked mole rat principle).

I want to make a few observations on consciousness and death, as I have often in my writings. The viewpoints vary widely, but I wish to express my own and add some wild guesses. I won't be writing a grand essay but may reference where I have examined these ideas before. There are three points I wish to make, which seem true to me.

1. Death is good

It is not the opposite of life but the necessary polarity of life: it is part of the life cycle and most entities in Nature simply live their cycles until those cycles cease to repeat. Nature does not question and Nature does not regret. Life goes on.

Of course, none of this is to deny the trauma of losing a loved one or the horror of mass death caused by war, genocide, or natural disaster. Even the tragedy of accidental or early death leaving a life unlived strikes us as metaphysically unfair. Death can be cruel and cause great anguish. This is especially true for the living, but certainly the dying can experience such things too. Once death occurs, however, and biological functions cease, we must assume such physical pain ends.

Perhaps this is why our hints of submission to death are often sweet, especially for non-humans or early in life before we learn to fear the loss of self-control or the fearful *waste of time*. Our stories, poems, and songs often celebrate the pleasure of a long rest earned, pleasant intoxication, even the pleasure of just letting the time go by, and some even associate the shudder of orgasm with the sense of dying in bliss (see *la petit mort*). Edmund Spenser (1552-1599) expressed this rest from struggle in his oft-cited words:

> *Sleep after toil, port after stormy seas,*
> *ease after war, death after life*
> *doth greatly please.*

The old moonshiner in the traditional song sometimes known as "Rye Whiskey" expressed the same peaceful acceptance of the end of things in this version (one of many):

> *I'll eat when I'm hungry,*
> *I'll drink when I'm dry,*
> *And when I'm tired of living,*
> *I'll roll up and die.*

Laura Nyro's (1966) song "When I Die" (made famous by Blood, Sweat & Tears in 1969) was bold enough to praise the loss of embodiment and the presumable peace it will bring, as well as implying the circle of life as eternal return, as new beings are born and the world spins on.

> *I'm not scared of dying and I don't really care.*
> *If it's peace you find in dying, well, then let the time be near. …*
>
> *And when I die and when I'm dead, dead and gone,*
> *there'll be one child born and a world to carry on, to carry on.*

These references indicate that amidst our struggles and daily sufferings, deep inside we know that someday our troubles will end, as in the lines of the old spiritual originating in a Bahamian lullaby:

> *All my trials, Lord, soon be over.*

This can be a soothing thought. I'll even admit it. On occasion, the mindless peace of deep, dreamless sleep sounds most inviting indeed.[1] Sometimes when the bills arrive or I watch the ridiculous content of TV, final escape into oblivion seems desirable indeed.

But of course this is just talk, for we humans *know* of the finality of death. In spite of all the recycling we now engage in, we ourselves do not expect to return from the dissolution of death. We have learned through complex symbolism and the magic conjurations of language that we are individual selves that exist in time for a lifespan and that someday that time will end. Oh, other beasts know instinctively when the great tiredness comes and relax into it without bitterness or desperate prayers to get into heaven or out of hell (not to mention being strapped to a table to endure tubes in veins or jolts of electricity to our hearts or brains to keep us "alive"). We, however, are the only animals that know *conceptually* of our inevitable demise, yet despite our mortal knowledge we have devised brilliant or insane means of avoiding the truth – from religious denial to power hungry conquest, to human sacrifice (see, e.g., Becker, 1973; Brown, 1959; Burkert, 2002).

Yet, it is this knowledge of our own limits, of our mortality, that may drive us to seek beyond those limits, to produce wondrous works of art and fantastic civilizations, to dream vast, and imagine impossible things that may yet bring them into being. It is the dream imperishable perfection, always out of reach, that keeps us desiring for impossible perfection. Perhaps that is the meaning of the famous lines of Wallace Stevens in "Sunday Morning" (1923). Limitations in life drive us to strive for the perfection we feel we once knew and will always approach:

> *Death is the mother of beauty; hence from her,*
> *Alone, shall come fulfilment to our dreams*

[1] I acknowledge that "deep, dreamless sleep" is the third deepest stage of mystical awareness amongst experienced meditators, implying timeless, contentless awareness is not extinguished, though it may remain unconscious from the perspective of the self, as though for individuals it wasn't there (See, e.g., Thompson, 2015).

And our desires.

In any case, it seems very likely that somewhere or somewhen we humans underwent an existential crisis when they realized that death was inescapable – for their despotic *Dear Leader*, for our loved ones, and for ourselves. At the moment of potential despair, humans must have had a breakthrough in consciousness: to realize one must die is also to realize *one is now alive*.[2] Now is the time of our lives: *live now, for tomorrow we may die*. We are unlike any another animal in this respect. In some ways, it has drawn us together; however, in many others it seems to have driven us quite mad.

It was this sort of thinking that got me onto this project. All this talk about consciousness, brains, neuroscience, intersubjectivity, and even self-transcendent awareness getting more intense all the time but nobody asking what to me is the obvious question: *What does it all matter*? If consciousness (or selfhood or awareness-in-itself) simply ends at death, why we're back where we started: nowhere. Consciousness means nothing if "mind" is a bubble that pops into nothing in the sea of the universal mind, or if it's a brain byproduct, or if *my mind* just evaporates, disappears (either into oblivion or oneness), and just blinks out at death? Surely there is some implied relationship between the inner light of awareness and the end of physical life (even if they both go out together).

Since then, as all the world knows, science and, yes, New Age thinking have challenged organized religion for dealing with mortal knowledge and the resistance of the self to disintegration, and each of them have revealed an equal propensity for magical if not outright bizarre thinking. These extremes are evident in some of the essays that follow, but so is some very clear and open-minded thinking based in *disorganized* religion, or the further reaches of science, philosophy of mind, or New Age spirituality.

For materialists, we each are our brain and we die with it. Interestingly, I sent out invitations to all sorts of authors and online groups whom I thought might be interested, but the one group of thinkers who disdained to take me seriously were those generally known as ontological materialists (aka reductive materialists, mechanist materialists, material physicalists, etc.), that is, those who believe matter evolved randomly yet somehow produced life that randomly produced complex bodies that randomly evolved brains that, probably accidentally, produced the side effect of consciousness. Most, of course, simply refused to answer because it was *obvious* that when the brain died, the self died, and the since the self (and self-consciousness) is all there is to being aware, that was the end of it. Well, that at least makes sense (if you think within a box).

What did irk me to no end was to face the madness that a few extreme materialists have chosen, and none of them submitted a paper either. There are two kinds of materialism; one is the materialism that sees the biological brain as identical with consciousness. When the brain dies, the self dies, so what's a rich egotist to do if s/he wants to continue living? The only answer,

[2] For well-researched conjectures and excruciating detail on the symbolic awakening of humanity to self-consciousness through language, see Nixon, 2010a. For the prehistoric background how awakening to mortal knowledge brought upon the sense of the sacred and human consciousness, see e.g., Nixon, 2010b; Noble & Davidson, 1996; Pfeiffer, 1982; and Tattersall, 2002. It was mortal knowledge and self-consciousness that led us to believe in linear time, and linear time, of course, comes to a dead end. Nature knows only cycles.

apparently, is to instantaneously freeze-dry the entire fresh corpse of the living for future awakening when medical science will have advanced far enough to carry out such operations, i.e., the merchandising known as *cryonics*. But, really, that's a lot of trouble and expense when who knows when that future will be and one will still be stuck with a really old or decrepit body anyway. So there are some macabre institutions that – for a significant fee – will remove only the head or even just the brain and instantaneously freeze-dry it for a future awakening; and the best part of this ghoulish scheme is that the head can then be transplanted onto a new youthful body. (Please don't ask where those new youthful bodies will come from.)

I don't find the other, now more popular choice much more palatable. It's for the materialists who believe the brain is like a wetware computer that runs the "mind-program" through its neural circuits, like software. They are called by several names, including Ray Kurzweil's *Singularity* group, the *transhumanists* (or on Facebook *Rational Transhumanists*, *Tranhumanist-Posthumanists*, or even the *Vegan Transhumanists United*). Despite my politest invitation, none of these people wanted to explain to us in a short paper how the "mind-program" in a human brain, which is part of a human body, which is embedded in a natural environment, and which is part of a symbolically interactive community could possibly be transferred to a computer or computer network and still be basically the same person. Yet I was the one accused of science fiction for even suggesting that an unobserved cosmos of dead material parts interacting randomly without purpose was not even imaginable (except by choosing an observational perspective *and imagining it*)! To be is to be experienced. The non-experienced is unimaginable.

> If consciousness *were* simply brain processes, it would not be able so to distance itself from brain processes to discover, or imagine that it has discovered, that it is brain processes (Tallis, 2012, p. 338).

As has been said many times, our brains, bodies, environments, and symbolic cultures shape our minds and help determine our experience. But it is a complex interdependence in which, in mutual creation, our relationships, minds and experience shape and determine our symbolic cultures, our natural environments, our bodies, and even alter our brains through plasticity and, occasionally – through epigenetics – in one lifetime![4]

2. Obviously, hard science cannot account for awareness (or explain *why* life would evolve)

It has revealed many wonders and made incredible technologies possible, but it cannot prove its own assumptions upon which the whole materialist edifice is built. *Who can tell us what an unobserved universe looks like or even acts like* (except after the fact when we observe and probably change its telltale residues)? An unobserved, unexperienced, pre-life universe would have no form, no time, no substance, no … anything since time is relative to observers, form relative to the sensory organs that view it, and the same thing applies to everything else we assume to be ultimately real like density, texture, sounds, distances, etc. And please don't say machines can measure all this for us, for such mechanical motions have to be built by human

[4] See Jablonka & Lamb, 2012.

minds and have no *meaning* until they are read and interpreted by a mind. It's no used pleading we can extrapolate backwards from readings in the present for who is doing such readings? We are – in the present! What mind is extrapolating backwards to imagine what it would be like *if it were there*? Sorry, but an unobserved universe cannot exist, much less one that inexplicably produces life and various forms of awareness.

Galilean science (reductive materialism) has been the most successful worldview ever put into action in terms of production and technology. But what have we done to our world and life experience as a result? What sort of consciousness believes torturing other primates and mammals is necessary in laboratories throughout the world to help protect human beings from possibly dangerous ingredients in cosmetics? What sort of psychopathic paranoia drives a species to built such a stockpile of nuclear weapons and deadly viruses that it could it destroy all civilization and possibly all life many times over?

There is no doubt in my mind that the chasm of perspective between objectivity and phenomenology (between experience and material) still stands firm. In the 90s, it was called the *hard problem* (Chalmers), before that, the *explanatory gap* (Levine), and way before that it was known as the *unthinkable passage* (Tyndall). Nothing can explain that first shudder of experience, which is simply not material but the embers of subjectivity. Science occupied with measuring the minutiae or cosmic grandeur of the external world cannot explain the inner light of consciousness in itself, though neuroscience has certainly demonstrated fascinating connections between the brain and mind. Obviously, without a brain, we could not be conscious in the way we currently are, but then all we know is our own consciousness. Still, as Tyndall wrote in 1879:

> The passage from the physics of the brain to the corresponding facts of consciousness is unthinkable. Granted that a definite thought and a definite molecular action in the brain occur simultaneously; we do not possess the intellectual organ, nor apparently any rudiment of the organ, which would enable us to pass, by a process of reasoning, from one to the other.

Some of the more visionary scientists, like Freeman Dyson (1988), saw that consciousness or awareness or experience cannot simply be explained away but must accepted as original, if not eternal, as in pre-spacetime. (Many, many more such provocative quotations could be cited):

> It seems more reasonable to think that mind was a primary part of nature from the beginning and we are simply manifestations of it at the present stage of history. It's not so much that mind has a life of its own but that mind is inherent in the way the universe is built. (p. 72)

Of course, for those who do not begin with the externalized scientific point of view, none of this was ever a problem or gap. The world is here because some form of deity or primal consciousness brought it forth. Those who begin with the reality of experience instead of matter assume (creative) awareness is primary, though it manifests in various forms according to the place, time, context, and powers of the vessel:

> Consciousness is not tied down by the physical body. For the subtle body, things can move faster than the speed of light. There are two kinds of time: physical time and inner

> time. ... There are infinite universes and infinite time scales. (attributed to H.H. the Dalai Lama)

Matter is a manifestation of consciousness but not a product of it. As several papers in this issue indicate, the physical and the "mental" (for lack of a better term) are inextricably intermingled, perhaps in some form of what we poor wordsmiths call *dual-aspect monism*.

3. How you live consciously is how you die consciously

This is my second speculation, which I regard as almost a revelation. It seems to me that that both "life after death" *and* "oblivion after death" are true, or can be true. I am hardly the first to suggest it, but it bears repeating in this era when science sees us all dying the same, disappearing into oblivion. It is also suggested that *most* of those who experience NDEs find them delightful and look forward to losing themselves in the light (though there are exceptions). And, finally, there are all those cheery New Agers who embrace only the bright part of spirituality and believe we will rejoin the blissful source from which we began, forgetting our lives, which will have mattered not at all when we were just light illusions all along. This hardly seems fair when, really, there are so many wicked, stupid, twisted, hateful persons living out their lives. This may not be a matter of ethics, as such, but a matter of quality of consciousness.

It seems certain to me that ***I*** will die and stay dead. By "I", I mean me, Greg Nixon, this person, this identity. I am so intertwined with the chiasmus of lives, bodies, ecosystems, symbolic intersubjectivity, and life on this particular planet that I cannot imagine this identity continuing alone without them. Literary critic, Joseph Crapanzao (2004), has suggested it is not the loss of the self we fear, but the world of others, those *others* who originally drew my self-concept (ego) forth from embodied experience:

> [Can we say that] the terror of death is a substitute for the terror of world-ending? Is it less our own dissolution than that of the world — our intimate and perduring connection with it — that terrifies us? The most frightening of nightmares is to be absolutely alone — deprived of all context, human or material. (p. 202)

However, I can imagine, and often do, that there is a core consciousness, an infinite inner light, a soul if you wish, that has always been with me, that lies as deeply within my being as the farthest star without. Perhaps this inner *essence* can continue on as light energy or some such thing without my personal identity – but not necessarily without any of my memories.[6] With the death of ego, of self, a new unimaginable awakening may occur, as Theodore Roethke expressed it so well and so raw in these lines of his poem "In a Dark Time" (1964):

> *Death of the self in a long, tearless night,*
> *All natural shapes blazing unnatural light.*

[6] See Nixon (2010a) for details on how lived, yet impersonal, clouds of memories could enrich the Source of Being – or just read toward the end of T. S. Eliot's extraordinary poem "Little Gidding" his *Four Quartets* (p. 59) on the next page.

(The self dies, but some "blazing unnatural light" is born: my own interpretation of course.)

Surely if you have hated your own life or even that of all others because you see the ugliness of all things, wouldn't it make sense to have your dreams come true when you died? This may not mean a hell of punishment, but simply oblivion, lights out. If you have been selfish all your life and only pretending to be interested in others only insofar as they may benefit you, surely you could not bear to let your dearly-beloved ego-self go. Since you called it into existence in life (ask any social constructivist) you will surely disappear with it when you die. On the other hand, If you have been curious, compassionate, open to new experience, and, most of all, courageous in life, you will probably be ready to face the most astonishing metamorphosis of conscious awareness than you have ever dared dream, a cosmic awakening or journey that begins *in the twinkle of an eye*, as the Bible said, that is, in momentous flash.

Paul Ricoeur (1998) in one his last interviews put it as eloquently as anyone could have:

> Afterlife is a representation that remains prisoner to empirical time, as an "after" belonging to the same time as life. This intratemporal "after" can concern only the survivors. … Here I come back to...the hope, at the moment of death, of tearing away the veils that conceal the essential buried under historical revelations. I, therefore, project not an after-death but a death that would be an ultimate affirmation of life. My own experience of the end of life is nourished by this deeper wish to make the act of dying an act of life. This wish I extend to mortality itself as a dying that remains immanent to life. (p. 156)

He added significantly: "I consider life, almost eschatologically, as an unveiling in the face of dying" (p. 160).

One survives one's life by believing in universal awareness, perfection, and the peace that passes all understanding. Perhaps we bring this life experience as artifacts of memory back with us to the Source from which we began, changing it, enriching it – which may be the implied meaning of T. S. Eliot's (1944) oft-quoted words (which I beg permission to cite just once more):

> *And the end of all our exploring*
> *Will be to arrive where we started*
> *And know the place for the first time.*

We know it for the first time for *it* and *we* have transformed and united again. Once we have lived – if we don't choose the eternal silence of oblivion by life denial, vanity, indifference, or simple weariness – the Source learns and we awaken within it. Awareness, consciousness, is universal – it comes with the territory (in fact, *it must be the territory*, though it could be nothing like the reduced animal-symbolic consciousness as we humans practice it) – so maybe you will be one of the few prepared to become unexpectedly enlightened after the loss of self. You may discover your own apotheosis – something you always were, but after a lifetime of primate experience, now ecstatically *much more*. Since you are *of* The Source and since you have changed from life experience and yet retained the dream of ultimate awakening, plus you have brought those chaotic emotions and memories back to the Source with you (though the

experiences are no longer *yours*), your life & memories will have mattered. Those who awaken beyond the death of self will have changed Reality. (As I see it anyway.)

Unfortunately, or perhaps not, mainly because of the weariness, stress, and frustration of life, I would wager the vast majority of individuals who die succumb gratefully to loss of self, that is, peaceful oblivion, and perhaps the dreams that come after shuffling off the mortal coil are made of swirling clouds of memories, as Hamlet surmised. They may not even be your memories alone. The Big Sleep beckons, and one must rest. Cosmic consciousness continues, but for the sleepers, it won't matter.

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Article

Death, Consciousness, and Phenomenology

Steven Bindeman*

Abstract

The gist of this paper will be my exploration of the kinds of issues that emerge when existentially-grounded phenomenologists confront the issue of death. After briefly examining the materialist perspective on consciousness, we will concentrate our attention on how the recognition of different levels of consciousness can show us how we can relate to death in different ways. We will proceed from examining the impossibility of the death of the self, to the possibility of transcendence through experiencing the death of the other. We will turn to Merleau-Ponty's concept of bodily knowledge for help with the matter of how consciousness constitutes the world around itself and enables the possibility of transcendence. We will also examine passages from Nietzsche's philosophy (with guidance from Heidegger and Blanchot) that cover the transition from viewing time as linear to viewing time as circular, and the transition from understanding our place in the universe in a passive, accepting way which leads inexorably to nihilism, to the possibility of making a decision to relate to our situation in a more dynamic and creative way, by directing our will to the ecstatic experience of the eternal return.

Keywords: Death, consciousness, phenomenology, materialist, transcendence, nihilism.

Introduction

In philosophy, the way a problem is framed has a lot to do with what questions are asked about it and how these questions are resolved. The study of the mental framing of the way things exist in the world, the questioning of the nature of their being, is called ontology. The ontology of consciousness, therefore, is the examination of the "being" of consciousness, the way it exists in the world. In this paper I will examine how contrasting ontologies of consciousness determine in significantly different ways how the human relationship with death is to be addressed. Thus, when the materialist view of consciousness is compared with the phenomenological perspective, we will find ourselves comparing a predominantly medical model which essentially views the human body in terms of its consisting of replaceable or fixable parts, with an experiential model which emphasizes the experiential quality of human life over its objective quantifiable aspects.

The gist of this paper will be my exploration of the kinds of issues that emerge when existentially-grounded phenomenologists confront the issue of death. After briefly examining the materialist perspective on consciousness, we will concentrate our attention on how the recognition of different levels of consciousness can show us how we can relate to death in

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different ways. We will proceed from examining the impossibility of the death of the self, to the possibility of transcendence through experiencing the death of the other. We will turn to Merleau-Ponty's concept of bodily knowledge for help with the matter of how consciousness constitutes the world around itself and enables the possibility of transcendence. We will also examine passages from Nietzsche's philosophy (with guidance from Heidegger and Blanchot) that cover the transition from viewing time as linear to viewing time as circular, and the transition from understanding our place in the universe in a passive, accepting way which leads inexorably to nihilism, to the possibility of making a decision to relate to our situation in a more dynamic and creative way, by directing our will to the ecstatic experience of the eternal return.

The materialist perspective on consciousness

For an example of the materialist perspective on consciousness, we discover how David Chalmers (1995) frames his examination of the ontology of consciousness in terms of what he calls the easy and the hard problems of consciousness. The comparatively easy problems concerning consciousness, he says, are those that represent some ability of consciousness, like its performance of some function or behavior. They include, among other things, "the ability to discriminate, categorize, or react to environmental stimuli, the integration of information by a cognitive system, the ability of this system to access its internal states and to focus its attention, etc." (p. 200). While it is obvious even from the materialist point of view that some organisms (like human beings for example) are subjects of experience and not mere objects, the question of how they come to be this way remains unresolved. If experience arises from a physical basis, why and how should physical processing give rise to such a rich inner life at all? "The really hard problem of consciousness, then," says Chalmers, "is the problem of experience" (p. 201). But how can we get from "the whir of information processing" (p. 201) to the actuality of rich, subjective, conscious experience? Chalmers's way of framing the ontology of human consciousness, then, presents an *explanatory gap*, similar to Levine's (1983) use of the term to refer to the separation between materialism and qualia. Thus, if we begin with the materialist assumption that what is primary is the empirically measurable external world of scientific investigation, then the existence of the internal world of conscious awareness becomes problematic.

The materialist view of Chalmers and his associates also leads to the ongoing and extensive examination of the possibility of human immortality. However, while life extension might be an achievable goal in the near future from improvements in medical knowledge about the mechanisms of various diseases, ultimately the problem of aging would still need to resolved as well. Alternatively, advances in AI research could lead to the possibility of mind uploading, in which the transference of brain states from a human brain to another medium would occur, providing immortality to the computational processing of the original brain. Such is the belief of the futurist Ray Kurzweil (2005), who names *the singularity* as the moment in the future when artificial brains reach full consciousness.

Technological advances in a broad variety of fields, like nanotechnology, genetics, biological engineering, regenerative medicine and microbiology could easily provide the basis for extending the span of human lives, which are already longer than ever before due to better nutrition, greater availability of health care, higher standards of living throughout the world, and advances in bio-medical research. An important aspect of current scientific thinking about immortality is that some combination of human cloning, cryonics or nanotechnology will play an essential role in its realization as well. Some scientists believe that gene-therapies and nanotechnology will eventually make the human body effectively self-sustaining. This supports the theory that we will be able to continually create biological or synthetic replacement parts to replace damaged or dying ones. From this point of view, we are merely biological machines in need only of periodic maintenance. Future advances in nano-medicine could also give rise to life extension through the repair of the many processes believed to be responsible for aging. For humans to be able to survive death completely its three main causes – namely aging, disease, and physical trauma – would all have to be resolved. Even then, the environment would have to continue to provide nourishment, for without this we would still die. (See "Immortality," Wikipedia.) Nevertheless, whether all consciousness dies along with the body remains an open question.

The constellation of these issues revolves around what has been called the medical model for scientific research. First identified by the humanist psychologist R. D. Laing (1972), the medical model focuses on the physical and biological aspects of specific diseases and conditions. The human body is characterized as a kind of sophisticated living machine whose symptoms can be traced back to biophysical causes that in turn can be repaired with replaceable parts, surgery, or biochemical procedures. This is the materialist view of the human body and human disease that dominates the medical establishment today, especially but not exclusively in the developed world. In large part, though, the subjective experience of the individual patient is marginalized throughout this orientation.

The phenomenological approach to consciousness

Conversely, Husserl with his phenomenological approach to experiential reality argued that empirical science simply isn't rigorous enough to account for such a phenomenon as consciousness. Empirical science in his view misses the central defining essence of consciousness because the physical model of the world cannot provide a direct description of lived experience. However, the dualist model that is behind empirical science has dominated our thinking for over 400 years. Positivist philosophers have put forth a rigorous physicalist point of view, which, as a form of materialist monism, views the mind as a mere side effect (see, e.g., Neurath, 1931; Carnap, 1933). By practicing Husserl's phenomenological epoché, though, a procedure which requires that we bracket out all such knowledge and limit ourselves to investigating the world only in terms of how it is given to us through our direct experience of it, we can stop putting into play these preconceived ideas about the nature of reality, and this will provide a result which he calls the phenomenological reduction, whereby the basic phenomena of consciousness are identified.

Heidegger (1982) described Husserl's phenomenological reduction as

> the method of leading phenomenological vision from the natural attitude of the human being whose life is involved in the world of things and persons back to the transcendental life of consciousness and its noetic-noematic experiences, in which objects are constituted as correlates of consciousness. (p. 21)

Furthermore, according to Husserl our direct experience of the world is a temporal process, involving the ongoing correlation between the passive acquisition of noematic experience (the object as such, as it appears to consciousness) along with the active interpretation of this information through the noesis (conscious acts directed at the unfolding meaning of the object, as it undergoes changes over time). Consciousness for Husserl (e.g., 1982, pp. 59-62) is an ongoing relationship between individuals and the world they inhabit. Thus, even though the phenomenal objects of consciousness are named, they avoid being mere objects because they are situated within the temporal framework of the intentional consciousness.

The existentialist approach to death

The phenomenological perspective on the nature of human consciousness has created a more existentialist approach toward the human experience and its place in medical practice than has the materialist approach. *Existentialism* was made famous through Jean-Paul Sartre's (e.g., 1956) use of the term to mean that, in the case of human experience, "Existence precedes essence." He had encountered this theme through his reading of Martin Heidegger's work *Being and Time* (1962), in which Heidegger coined the term "thrownness" in order to refer to the idea that Dasein (by which he meant human situatedness) is "thrown" into a world. Dasein, then, is not a mere object but a state of mind; Dasein is also always in a "mood," and a central theme of this orientation is that Dasein's life-long project is to discover which of its moods are the most authentic, and then learn how to *attune* itself to them. However, an important part of our everyday situatedness, or what Heidegger calls our "being-in-the world," is our constant state of anxiety. The source of this anxiety, he asserts, is our having allowed our "they-self" (society, the crowd, the medical establishment) to define who we are, and what we should strive to be. It is this "they-self" that introduces the *enframing* implications of the materialist worldview, with which Heidegger refers to the mindset of the human drive for a precise, controllable knowledge of the natural world, where things exist and come into existence only insofar as they can be measured. We feel anxious, in Heidegger's view, due to the inauthenticity of this self-orientation. We also feel anxious due to our feeling connected to the world, because we care about things. Our situatedness, which exists in consequence of our having been rooted in a past and placed into a present that faces a future, comes to the center of our being. We discover this feeling of connectedness when we are led to confront the necessity of our own death, a state of mind that Heidegger calls "being-unto-death." In contrast, the medical model's approach to death and dying can be shown to lead to feelings of increased anxiety for its patients, in part due to its comparative negligence of these psychological and philosophical components.

From this existentialist perspective, how we come to view the ultimate meaning of our own death becomes of central importance. When we turn in this direction, the more quantifiable and measurable aspects of our physical condition, such as the possibility of the extension of our consciousness into the indefinite future, fade into the background. We turn then to the existentialist viewpoint on the ultimate meaning of death, in order to discover how existential narratives regarding the meaning of death exhibit the potential to contribute to the mental stability of individuals in ways that are in stark contrast to the kinds of solutions introduced by the medical model. The question we want to keep in mind with regards to any of these narratives concerning the meaning of human death is not, "Is it true?" but, "What does it reveal about ourselves?" In this way, the meaning of our death ceases to be a mere incontrovertible fact, and becomes instead a matter of existential choice.

Accordingly we discover how Kierkegaard (1992, 2009) placed emphasis on personal faith over the various options for certainty with which he was aware. In response to the typical 19th century Danish Christian's quest for personal immortality or for an assurance of survival of the self after death, Kierkegaard responded that there is no absolute proof but only the consequences of the option we choose to accept. Death in itself explains nothing, Kierkegaard insisted, since on a physical level everything, including individuals as well as the human race as a whole, passes away. Kierkegaard pointed to the example of Socrates as someone, like himself, who refused to dabble in speculation about life after death but still kept the question open. Through such learned, ironic ignorance — Socrates claimed ignorance of many things, but because he knew this about himself he was widely known as the wisest of all Athenians — Socrates philosophized in the direction of truth. In so doing, he turned away from the values sanctioned by the State, which claimed to guarantee happiness in this life if only one acted obediently and in accordance with the demands of civic morality. Socrates, though, by making his individualist subjectivity a universal starting point for philosophy, freed himself from the demands of such civic dictates (see Kierkegaard, 1992, p. 49).

When Kierkegaard (2009) identified three stages in life (the aesthetic, the ethical, and the religious), he discovered that a confrontation with nothingness forces the individual to take a stand and make a choice, between the despair that leads actively to suicide or passively to madness, or to a leap of faith. These leaps were either out of the aesthetic way of life into the ethical sphere, or out of the ethical way of life into the religious. Both ways of life for Kierkegaard lead inexorably to suffering, and both require an irrational choice in order to overcome it. Since both the aesthetic and the ethical ways of life lead to despair and suffering, it would seem for Kierkegaard that the common human condition is relegated to negativity, since only the courageous few, the single *ones*, have the will to overcome and throw off their former selves. In a sense, only they will have learned how to confront their own death — and then learn how to overcome it.

The death of the self and the death of the other

There is also the possibility that death is "totally other" — a mystery that cannot be solved by rejecting or accepting it or by hating or desiring it. As the Franco-Russian philosopher Vladimir Jankélévitch says in *La Mort* (1977), in death there are no elements to affirm or negate anything, rational or irrational, spiritualistic or materialistic, immanent or transcendent. Death drives us to a condition of complete theoretical uncertainty, a constant oscillation that cannot fix on a determinate thesis, since nobody has returned from the *other shore* to explain how it is. We do justice to death only if we recognize this fundamental inability of ours to discover its essential nature. Neither sense (scientism, spiritualism), nor non-sense (nihilism, absurdism) can lighten such a darkness. We face death correctly only when we realize that death is truly enigmatic and impenetrable (cf. Cestari, 2016).

Since Jankélévitch's thought is strongly dependent on the perspective of the first person speaking subject, its temporal dimension too is analyzed from the standpoint of the *I*. For Jankélévitch, then, the three temporal dimensions of death are equally unknowable. Future death is the non-sense of sense or the non-being of being; the mortal instant is an "outside-category" since the moment only exists outside of the flow of time; and past death is absolutely nothing to me since once I am dead I will no longer remember anything. Subjectively the *I* can only experience defeat in the face of death (Jankélévitch 1977; Cestari, 2016). Even though Jankélévitch grounds his argument concerning the unknowability of death from the particular perspective of the experiencing subject, this experience is severely limited since the subject experiences death only as a true impossibility, due to its realization that death and consciousness are radically incompatible. This is so because knowledge is possible only when the subject clearly knows the object of cognition.

Even outside the point of view of the experiencing subject, though, there are insurmountable problems with regards to understanding the nature of death since my knowledge of another person's experience of anything must remain hypothetical, so that person's death must be unknowable as well. Thus death in itself cannot be known by anyone. Death in the first person remains a paradoxical object of thought whose sense is completely impossible to find, since I am and always will be completely ignorant about it. Nothing can be said about my death, since my death points to the unspeakable silence of the complete nothing, the total lack of any relations. Here, sense is completely obstructed and affirming or negating it is impossible (Jankélévitch, pp. 67-91; Cestari, p. 24). Death in the first person remains an objective limit to my efforts to understand it. Death in the third person is equally problematic, though, since it is little more than an abstract concept, a kind of indeterminate category, and it is meaningful only in a very generic sense since it explains death according to rational, scientific, religious, mythical, or social explanations, and only these kinds of answers can derive from such an impersonal framing of death.

If death is knowable only as an empty concept, and my death cannot be known in any case, perhaps there exists an intermediate death that can be experienced. This is *your* death, the death of people whom we personally know and love, death in the second person. "Between the

anonymity of the third person and the tragic subjectivity of the first person […], between the death of the other, which is far away and indifferent, and one's own death, that touches our own being, there is the nearness of the near" (Jankélévitch as cited in Cestari, 2016, p. 20). While your death may seem almost as painful as my death, it is not my death. Still, its effects on my world are deep and durable and underline the essentially social and relational character of death. And yet, my death and your death are equally unknowable, if for different reasons: the first because my very end coincides with the missed object of knowledge; the second because I cannot become you. Still, such an approach is grounded on the assumption that real knowledge can only be clear and distinct if it originates from the subject. This knowledge would be human and finite, and thus *far* from being absolute. But this would be the only manner by which human beings could perceive death. Your death is my first real experience of death. I realize that what happened to you also can happen to me, even if my death is destined to remain an undetermined state for me. Your death remains the only limited possibility I can have to come to grips with my death. Your death therefore lies at the foundation concerning how I approach my own death. In fact, the possibility of thoroughly realizing that I will die is generally impossible until I come to experience your death in some way (Jankélévitch as referenced in Cestari, 2016, pp. 20-21).

This confrontation of the self with the death of the significant other (or with *your* death, as Jankélévitch puts it) is further explored by Emmanuel Levinas (2000) in an essay entitled "Death of the Other and My Own" (pp. 16-21). From the death of the other, he says, pure knowledge (which is for him the same as lived experience) retains only the external appearances of a process of immobilization whereby someone whom you have known comes to an end. Any emotional rapport we might have with death, he continues, is due to its being an exception, and this is what confers on death its depth. We recognize this depth in the form of a disquietude within the unknown. But beyond our compassion for and solidarity with the other, we discover a responsibility for him even within the unknown. Levinas, echoing Heidegger, goes on to suggest "that our affectivity [the fact that we *care*] is awakened only in a being persevering in its being"; he adds, "intentionality is the secret of the psyche" (p. 18). From this perspective time emerges not as the limitation of being but in terms of its relationship with infinity, and the meaning of death is now uncovered not as annihilation but as an open question produced by this relationship.

When one speaks of *my* death, Levinas continues, this cannot be a matter of knowledge or experience. He quotes Epicurus in this context: "If you are there, then death is not there; if it is there, you are not there" (p. 19). He adds, "My relationship with my death is a nonknowledge on dying itself, a nonknowledge that is nevertheless not an absence of relationship" (p. 19). The nature of this relationship stems back to the death of the other, an eventuality that is transferred back to oneself. This transference, though, is not merely a mechanical one, but rather "comes to cut the thread of my own duration" (p. 19). This transference also belongs to what Levinas calls "the intrigue of the I" (p. 20), which for him is a matter of recognizing the uniqueness and the singularity of one's identity and refers to the possibility of someone being able to escape from his concept. He would accomplish this by making a nonsense of his own death: "This is," says Levinas, "a nonknowledge that translates into experience through my ignorance of the day of my death, an ignorance by virtue of which the 'me' writes checks on an empty account, as if he had eternity before him" (p. 21). For Levinas (1969), then, it is precisely the contingency of one's

own death, its nonknowability, its "not yet" that is the source of one's freedom to pursue "the intrigue of the I" (p. 224)

What Levinas referred to as "the intrigue of the I" bears a striking resemblance to Karl Jaspers's (1955) notion of Existenz philosophy, concerning which he speaks of individuals' journey towards transcendence in terms of their ability to continue overcoming their limitations in order to transform themselves into an "authentic" person. He thus identified three levels of being: Dasein, by which he means objective being, or being-in-the-world; Existenz, or subjective, nonobjectifiable being-as-such; and the Encompassing of Transcendence, or the unattainable limit of all being and thought. The human person as Existenz claims her or his own uniqueness as a human being through the quality of the choices s/he takes. Jaspers believes that in the course of one's life one encounters certain limiting situations, which push a person toward transcendence and authenticity. These limiting situations consist of the experiences of death, suffering, struggle and guilt. When one is confronted with any one of them, one is forced to confront one's own existence, and one can no longer remain in a complacent state. For example, when a person is confronted by the reality of death, either through the death of someone with whom they were very close or even with their own approaching death, its reality cannot be ignored. In other words, when death becomes a reality and not just a concept, the person is forced to face their present situation. The same is true with the other limiting situations: one's guilt brings the person to their present, as no one can totally escape guilt once it has stricken them; while suffering and struggle similarly bring the person to an undeniable yet uncomfortable present. These realities impose the present situation onto the affected individual, and as limiting situations bring the person to their Existenz. Thus, no one can continue to simply drift away when death is approaching, since its approach will force the person to ask vital questions about the sense of their life and the meaning of their existence. Either these limiting situations bring the person to their Existenz or the person becomes Existenz. Either way, the person has become aware of their potential for spiritual growth as Existenz through the encompassing power of transcendence (cf. Jaspers, 1969, pp. 76-89).

It is also in this context that Peter Sloterdijk (1989) announces that the unknowability of one's death has unnerving social and political implications: "The inability of any modern, post-metaphysical, scientized thinking to conceive of any death as one's *own* leads to two obviously ubiquitous attitudes" (p. 346): either death does not belong to life even though we cannot avoid confronting it, or our thinking clings to the only death that remains objectively thinkable, the death of the other. The primacy of self-preservation becomes the consequence of such thinking. Furthermore, if the subject is the one thing that cannot die, the world becomes the domain in which the struggle for survival takes place, and the other emerges as my enemy. In order to avoid this death of self, the technical-logical nature of instrumental reason is allowed to dominate everything that is not the ego. Then, it's just a matter of either them or us; or as in the mindset of the James Bond films, *live and let die* (p. 346). Thus, "the incapacity to die subjects the world, in its visible and invisible areas, to a radical transformation" (p. 347). But this does not solve the problem; the need for transcendence remains. Sloterdijk clearly believes that if we are to be able to survive modernity, we will have to disidentify from everything that *arms itself* (p. xxiii). In fact, Sloterdijk presents the intriguing idea that "the concept of substitute transcendence could ground a phenomenology of modernity" (p. 348).

The dynamic approach to creating new levels of consciousness

Merleau-Ponty is yet another important phenomenologist who believed that materialist thinking cannot do justice to the discontinuous aspects of human experience, since it is unable to encapsulate the contingent and nonconceptual character of our ongoing relationship with the world and with other conscious beings. This is why he advocated "a new idea of reason, which does not forget the experience of unreason" (as cited in Spiegelberg, 1971, p. 525). He also did not wish to lose sight of the ambiguity that he believed was as central to understanding the human condition as was clarity. In fact, our understanding of death might well fit into this conception of the need to accommodate the experiences of unreason and ambiguity. Death may just be the "great unknown" for phenomenology, even if Merleau-Ponty's related notions of *wild nature*, the *flesh of the world* and the *intertwining* indicate a dynamic relationship between the earth and its conscious inhabitants. Nevertheless, the "impossible" creative dynamism of the *chiasm* – "[W]e are the world that thinks itself, or the world is at the heart of our flesh" (Merleau-Ponty, 1968, p.136) – is present before the particularity of embodied experience, as well as during it, and after it, too — since even before the birth as well as after the death of the individual self, the earth continues its dialogue with the others that remain.

For Merleau-Ponty (1964), the conscious ego and its situatedness in the world are recognized and defined only in terms of their relationship with one another. "The world is not an object such that I have within my possession the law of its making," he writes. "…Truth does not 'inhabit' only the 'inner man,' or more accurately, there is no 'inner man.' Man is in the world, and only in the world does he know himself" (p. xi). But who does this knowing? Or is it the world coming to know itself through us? In contrast to the standard understanding of transcendence as passage from self to other, perceptual transcendence for Merleau-Ponty does not stop at the exteriority of the outside world but loops back. This is the case for his notion of the chiasm, which moves from self to world and from world to self via the mediating elemental flesh of the world.

Similarly, Stéphane Lupasco, a Franco-Rumanian philosopher who is a proponent of a quantum-type logic (as cited in Brenner, 2008), believes that consciousness results from the antagonistic relativization between biological matter and physical matter. He argues that this relativization engenders a matter of a third kind and he calls it *psychic matter* or *quantic matter* (Lupasco, 1951). This position concerning the origin of consciousness links nicely with the dynamic views of creative consciousness developed by both Merleau-Ponty (see above) and Nietzsche (see below).

Finally, there is the perspective on the constitution of a new level of consciousness introduced by Nietzsche and analyzed in detail by Heidegger (1968). In Heidegger's view, there is a necessary contradiction between Nietzsche's central concepts of *will to power* and *eternal return*. They move in different directions and want different things. When we confront the will to power with the embrace of the eternal return, he argues, we confront a will to control with a will to destroy. This is also the confrontation between the linear view of time of the will to power, and the

circular view of time of the embrace of the eternal return. Can these seeming contradictions be resolved?

In order to resolve these contradictions, the subject has to *will non-willing*. This is a creative act of the will. The will has to say "yes" to the "it was" of time. It has to say "yes, this is how I will it" — again and again throughout the eternal return of the same event. Here, the will to power acts as a *synthesis of forces*. Since the eternal return implies that time is circular and not linear, when the subject gets back to the same place, it discovers that its consciousness has changed — each time. And once the will learns to will backward — this is the highest expression of the will to power. "That everything recurs is the closest approximation of a world of becoming to a world of being — high point of meditation" (Nietzsche,1967, p. 617).

The will also wants something further. As Nietzsche (1967) puts it: "The will to destruction (is) the will of a still deeper instinct, the instinct of self-destruction, the will for nothingness" (p. 55). When nihilism, the will for nothingness, is confronted with the eternal return, it is itself negated. When the subject actively affirms its own reactive forces, these forces become neutralized and disappear. With its discovery of the eternal return, the human subject redeems itself from its past and frees up its future — through *amor fati*. By an act of the creative will, it breaks the chain of causality that determines the everyday world of becoming, and through its artistry creates a meaningful world for itself to live in. We recall from Nietzsche's first book, *The Birth of Tragedy* (1968), that for him the creative will has two aspects, the Apollonian and the Dionysian, the restraint of form working against the excess of content. In the case of the experience of the eternal return, the Apollonian force provides the structural form of the circle, while the Dionysian force provides the joyous exuberance of repetition.

With his conceptualization and experience of the eternal return, Nietzsche introduces the possibility that the limitations of linear time can be overcome through an act of the creative will. This creative act, in turn, with its capacity to break the chain of causality that determines the nature of the human self, initiates a liberating force on the self.

Others add to this perspective. In the view of the Japanese philosopher Keiji Nishitani (1990), "The so-called 'I,' what we normally take as the self, is merely a frame of interpretation added to this life process after the fact. The true self is the source of the life process itself, the true body of the will to power" (p. 97). According to Stambaugh (1999), this true self involves "an ultimate self-awakening that is beyond ordinary consciousness and self-consciousness" (p. 101). On the other hand, it is precisely the so-called "I", inhabited by ordinary consciousness and self-consciousness, that discovers the threat of nihilism. If consciousness turns away from this threat, however, it will become mired in its pursuit of worldly, everyday things. "What consciousness ultimately must do is to *become* that nihility, and in so doing, break through the field of consciousness and self-consciousness" (p. 101). This confrontation with nothingness was also familiar to the Christian mystic Meister Eckhart. As Nishitani (1982) explains: "The subjectivity of the uncreated *I am* appears in Eckhart only after passing through the complete negation of — or detachment from — the subjectivity of egoity" (p. 65). This negation, in turn, leads to a moment of ecstasy, where the self takes a stand outside of itself. Nishitani explains: "Ecstasy represents an orientation from self to the *ground* of self, from God to the *ground* of God — from

being to nothingness. Negation-*sive*-affirmation represents an orientation from nothingness to being" (p. 68). This experience leads to a shift, a conversion, from the traditional self, as person, to the self-revelation or transcendence of the "true self" through its manifestation of absolute nothingness — or as what the Buddhist seer Nagarjuna referred to as its realization of "emptiness" (Nagarjuna, 2016).

There can be little doubt that Nietzsche's experience of the eternal return was an extraordinary event for him — in fact, his was an experience inaccessible to an ordinary state of consciousness. He even coined a term for any individual who underwent this experience: the *overman*. It was a gift brought by Zarathustra to man, whom, he feared, wasn't ready for it yet. In Blanchot's (1993) view:

> [T]he overman is the being who has overcome the void (created by the death of God and the decline of values), because he has known how to find in this void the power of overcoming. …The overman is he in whom nothingness makes itself will and who, free for death, maintains this pure essence of will in willing nothingness. This would be nihilism itself. (pp.147-148).

Nietzsche explains this further: "Let us think this thought in its most terrible form: existence, as it is, without meaning or aim, yet recurring inevitably without any finale of nothingness: the eternal recurrence … the most extreme form of nihilism" (as cited in Blanchot, 1993, p. 149). This is a bit confusing, though, since we might initially have thought that nihilism was tied only to a belief in the pervasiveness of nothingness; now we are being told that nihilism is also connected to being. Blanchot provides an answer: "Nihilism is the impossibility of being done with it and of finding a way out. … Nothing ends, everything begins again; the other is still the same" (p. 149). Blanchot (1982) also links the phenomenon of personal death to Nietzsche's experience of the eternal return:

> One dies: he who dies is anonymous, and anonymity is the guise in which the ungraspable, the unlimited, the unsituated is most dangerously affirmed near us. Whoever experiences this suffers an anonymous, impersonal force, the force of an event which, being the dissolution of every event, is starting over not only now, but was in its very beginning a beginning again. And in its domain, everything that happens happens again. From the instant "one dies," the instant is revoked. (p. 241).

The American post-phenomenologist Mark Taylor (1987) elaborates on this point: "Since it is never present, death as such cannot be thought. Death, in other words, is unthinkable" (p. 242). But we seem to still need a way to think past or think through this impossible event, even if it is unthinkable.

Conclusion

So, then, how do we break out of nihilism's vicious circle? If nihilism is inseparable even from being and not just from nothingness, are we necessarily condemned to living in an absurd universe for all of eternity? The only authentic answer to this would seem to be self-annihilation, or suicide. But Nietzsche rejects this. Instead, the secret is found in forgetting. Blanchot again explains:

> [W]elcome to the future that does not come, that neither begins nor ends and whose uncertainty breaks history. But how do we think this rupture? Through forgetting. Forgetting frees the future from time itself. … This desire to be ignorant by which ignorance becomes desire is the waiting welcomed by forgetting… (p. 280).

Our only viable choice, then, is to learn how to live within the timelessness of the present moment. For, as Nietzsche (1980) says, "Without forgetting it is quite impossible to live at all" (p. 10).

As long as we are caught up within the limiting framework of linear time, we are forced to confront the singular inevitability of our own impending death. This bare fact has the power to paralyze us, since it forces us to contemplate the essential nihilism of all conscious life: that all living things inevitably die. Even if we turn to the liberating framework of circular time, to the expanding ecstatic moment of the realization of the eternal return, we find that we still cannot escape from the suffocating nausea of our very being. There is no way out of the circle of the passage from becoming to being, with each inextricably following the other throughout eternity. The answer is again found in the will. We will ourselves to forget, to forget our knowledge of the past and the future, and to forget that everything returns. We choose instead to live within the endless moment, in a willful ignorance which awakens our desire — we *will non-willing*, and thus choose life.

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Article

Consciousness, a Cosmic Phenomenon - A Hypothesis

Eva Déli*

Abstract

A new physical worldview is introduced, which shows that mental operations are analogous to the physical world, and that just like photons, emotions carry energy. Photons are the fundamental interactions of fermions, and in the brain, sensory stimulus triggers energy imbalances, called emotions, the forces of mental interaction. Therefore, emotions motivate thoughts and actions that recover the energy-neutral state of the brain. Material interaction generates a temporal evolution that culminates in the emergence of the intelligent mind. The entropy of both elementary constituents (material and mental particles) of the universe continuously changes between the poles. Throughout life the mind maintains a low-entropy state due to constant interaction with the outside world via the sensory organs. The death of the body permits the entropy of the mind to increase. Depending on the mind's energy state, the mental entropy will either accumulate information or energy, while maintaining a constant alignment with the temporal field in its time-travel, ending at one of the poles. The energy-rich mind converges towards expanding white holes, whereas an information-saturated mind becomes part of the black hole horizon. In the expanding white hole, space is infinite, yet everything feels neighborly and the infinite feels like a moment. In black holes the moment feels like eternity, yet it imposes a two-dimensional tightness, where everything is far and beyond reach. Matter and mind are the prime building blocks of the universe, which also displays elementary particle characteristics. The three interconnected, interdependent building blocks formulate the organizational unity and fractal structure of the universe. Intelligent life is a microcosm of the universe, and the mind is an active participant in cosmic evolution.

Keywords: Consciousness, evolution, emotion regulation, string theory, self-regulation, free will.

Introduction

Numerous unexplained phenomena in physics as well as experimental contradictions with accepted theories indicate that the current physical view needs updating or reformulated anew. A new physical view is expected to form a seamlessly interconnected system that incorporates consciousness, yet it is based on the smallest unit of energy, the elementary particle. The foundation of the present physical understanding is the Standard Model. In this, elementary particles are classified and fitted into a regular and well-characterized grid. Fermions, called matter, form space. Bosons are the go-between fermions by executing the changes and rhythms of the universe. In other words fermions are subjects, whereas bosons can be considered the

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verbs of the physical world. In the material world, decoherence (i.e., the collapse of the wave function of elementary particles) produces measurable changes in physical qualities, such as speed or position, and in the brain stimulus changes neuronal activation pattern and leads to cognitive, behavioral changes. Evolution has increased neural complexity and produced the mind-blowing intricacy of the human brain, which regulates itself and organizes the whole body into a seamless orchestra. Immense energy consumption of the brain cannot be accounted for simply by the maintenance of the electric potential of neuronal cells and management of their synaptic activity. For over a century the electromagnetic activity of the brain has been measured by placing electrodes over the scalp, and more recently science has learned that external magnetic and electric fields can change brain activity. Complex electromagnetic flows and oscillating rhythms conspire to make the mind much more than simply the cortex, the amygdala, and the other structures that constitute the brain. Sensory stimulus increases oscillation frequencies, a syntactic coding for projecting information about the environment to the cortex and back.

The non-intuitive and multifarious nature of mental operation has been discussed by philosophers and sages over the millennia of human civilization, whereas neuroscience and psychiatry studies the brain. Scientific considerations of the brain's operation regarding conscious experience are often based on the electromagnetic activity of neuron assemblies. The global workplace theory proposes that a central global workspace, constituted by long-range cortico-cortical connections, assimilates mental processes according to their salience (Baars, 1988). According to multiple drafts theory, distributed neural/cognitive models manifest the greatest impact from highly diverse, parallel content (Dennett, 1991). Tononi's (2004) information integration theory (IIT) considers consciousness as the capacity of a system to integrate information. Other notable approaches attempt to relate sensory, motor, and cognitive functions to the appearance of an inner mental world based on neurological or electromagnetic patterns of the brain. However, an accepted theory on consciousness is missing. In the absence of accepted scientific consensus on the mind the question of consciousness after death has remained the subject of religious beliefs, speculation and superstition, without any scientific validity. Here I propose a novel and unitary approach to consciousness that allows a surprisingly meaningful investigation of the mind concerning both life and death.

1. The foundation of the hypothesis

1.1 The deep structure of space

String theory proposes that microdimensional energy vibrations makeup particles. The particle wave function is insulated from gravity, making it orthogonal to the macrodimensions of space. As a result, the particle wave function is formulated independent of its spatial coordinates and modification of the energy function spreads instantly between entangled sister-particles. Changes in spatial curvature force interaction that equalizes the energy-information state between micro and macrodimensions via the collapse of wave function. Thus the wave function develops by the Schrödinger equation, whereas decoherence is an energy jump that coevolves the particle wave function and the field. Because the energy cost of interaction stabilizes the structure of the universe, the formation of microdimensions can be considered the birth of the cosmos.

According to general relativity the universe is a fluid spatial net that has exact, well-defined geometry or curvature at every point of space. According to the principle of static time, proposed by Page and Wootter in 1982, the global picture of the universe remains static, lacking outward change. The unchanging nature of cosmos was proven recently by Moreva and colleagues (2013). For the global state to remain constant, every curvature change must be balanced by an opposite yet equal transformation. Therefore entanglement is like a see-saw, in which opposite, equal transformations result in zero sums. This way entanglement begets time, which is measurable and relevant for internal participants only. The field's increasing curvature differences constitute a temporal evolution, where the edges of the field degenerate into poles, such as the unapproachable (two-dimensional) horizons of black hole singularities (Almheiri et al., 2012). The principle of static time requires that black hole horizons must be balanced by a four-dimensional pole, called a white hole, which was predicted by Einstein's field equations (Figure 1).

The negative field curvature white holes expand space, whereas the galactic environments gradually absorb spatial volume (indicated by white arrows) by building manifold area (Figure 2). Black holes form the edge of space; their great field strength stabilizes the universe and prevents runaway expansion. Almheiri's work, which demonstrates that black hole horizons are impenetrable firewalls, gives strong supports to this conclusion. The AdS/CFT correspondence, which recognizes a mirror symmetry between the field and its lesser dimensional horizon (Maldacena, 1997), also opens the possibility to dimensionality differences in cosmic topology. Due to the dimensional anisotropy between the black and white holes the degrees of freedom increase in white holes and decrease in black holes. The existence of gravitational waves and analysis of many years of sky surveys confirm the universe's topological simplicity and organizational predictability. Because the Schrödinger equation applies for both individual particles and the universe, the cosmos shows a fractal structure. Amazingly, consciousness forms an organic part of this highly congruent and interconnected cosmos.

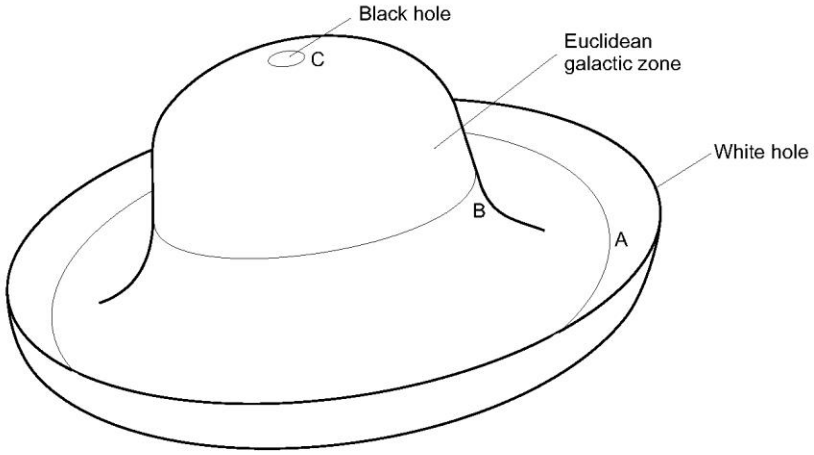

Figure 1. The topology of the universe. The breton hat shows the spatial anisotropy of the universe between its poles: positive field curvature black holes (shown at top) and negative field curvature white holes (brim of the hat). The positive field curvature of the black holes lose dimensionality, but expands time to infinity. In white holes space expands into the fourth dimension by forming hyperbolic geometry. White holes are devoid of information , which

corresponds to zero time. Euclidean field is three dimensional and highly unstable. The microdimensions, indicated by concentric circles, form minimal surface latitudes of specific field curvature (and corresponding particle energy level). Large latitude (i.e., curvature) jumps, such as great acceleration, is energetically expensive and prohibitive.

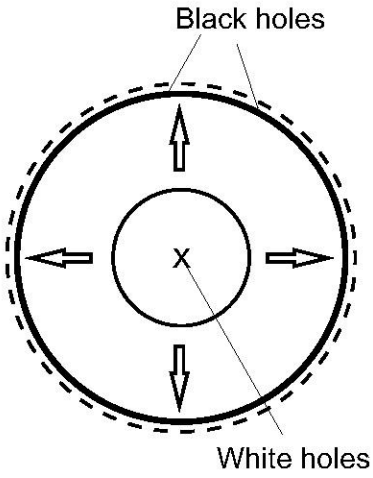

Figure 2. The structure of cosmos with white holes and black holes. The microdimensions of the cosmos (indicated by thin circle) can be visualized as concentric circles, which form closed minimal surface. White holes (in the center) expand space, which pushes against the black holes (indicated by dotted line), and generates a pressure of excess gravity (thick line). The galactic environments (region of white arrows) gradually absorb the expanding volume by building manifold area. The great field strength of black hole horizons forms the outer boundary of space and slows expansion.

1.2 The unity and elementary character of the mind

Elementary particles, the smallest units of energy, cannot be subdivided and appear stable and constant from the outside. Unity also being an essential feature of the mind has been recognized in philosophy by Descartes, Kant, and others. The mind is a cacophonous sensory kaleidoscope, peppered with transient ideas and possibilities that distill into a single decision or understanding. The sensory forest coalescences a single, unified experience. Fractured perception is inhibited: ambiguity forces a non-deterministic, quantum-like fluctuation between two possibilities (images, ideas, or concepts). Indeed, although we can contemplate many possibilities, once we decide on a problem all other options cease to exist. Ideas and thoughts form a highly fluid, malleable, constantly changing, complex and elaborate mental background, over which interaction with the outside world becomes possible. The mental world can only be accessed from the inside; for outside observers it is a holographic projection, which however appears strangely constant from childhood to old age, even if dramatic changes affect the body or the brain. Festinger's cognitive dissonance theory (1957) shows that even core beliefs might be sacrificed in order to maintain mental congruency.

According to string theory, particle vibrations are motions of loops within a Calabi-Yau manifold, where field curvature changes are recorded by a holographic organization. In the brain the appropriate temporal order of the cortical neuronal activation pattern forms a "temporal horizon" of memories or experience. Since the constantly changing cortical projection can be replayed repeatedly, past experiences inform present behavior and lead to far superior responses (Carillo-Reid et al., 2016). However, of the billions of photons hitting the retina and the millions projected to the optic nerve, less than a few thousand bits of information produce the conscious

perception of the moment. Therefore, consciousness forms on a highly subjective (holographic) mental landscape: the momentary projection of the temporal manifold (subconscious) depends on both the viewer and the self.

In animals, bodily functions and interaction with the environment are centrally regulated from the brain, which uses electromagnetic means to achieve an intricate regulation of the body based on sensory information, nutrient needs and survival interest of the individual or the species. Animals with limbic brains respond to environmental stimuli in a linear fashion; their behavior is regulated exclusively by genetically choreographed program and basic bodily needs. The evolution of the cerebrum introduces a nonlinear regulation. In birds the cerebrum is modular, whereas in mammals the neocortex has a laminar structure. The evolution of the cortex dramatically changes the dynamics of the brain and forms an advanced homeostatic regulation, which always recovers an energy-neutral resting state, known as the default mode network (DMN), which turns it into a self-regulating system. There is a strong correlation between intellectual abilities and the complexity, convolution, and overall size of the neocortex (Deaner et al., 2007; Deli, 2015, Chap 2). Since old associations can be reconnected in a novel way, experience can accumulate in the immensely complex neuronal connections of the cortex. Hence, large mammals with convoluted cortices display emotional stability, compassion and kinship, and form close-knit, stable social groups. The neuronal activation pattern of the brain gives rise to thought processes, the manifestations of consciousness. A ball rolling down the hillside is following a determined path depending on its speed, the slope of the hill and the characteristics of the ball itself. Likewise, energy balances of the brain change according to physical laws, the principle of least action, and dictate animal behavior. Hence, free will might be an illusion.

The mathematical formalism of quantum mechanics describes the non-intuitive behavior of elementary particles. In contrast to classical systems, where measurement merely observes a preexisting quality, quantum measurement entails decoherence, which actively changes some property of the system being measured. Probabilistic assessment is often strongly context and order dependent, and individual states can form entangled, composite systems. Remarkably, the same principles – that measurement (i.e., interaction) corresponds to a cognitive change (i.e., decoherence) – appear to apply to the mind as well. Mental operation is contextual and the context of measurement influences the outcome, which includes almost all cognitive processes, such as decision making, memory, perception, and judgments. Quantum theory became a mainstream, accepted scientific idea for modeling mental phenomena (Khrennikov, 2015) and the mind's quantum-like behavior is exploited in fields as diverse as search-engine optimization, psychology, economy, and sociology – in some cases for nearly a century. Quantum probability can successfully model not only elementary particle behavior, but the organizational intricacy of the brain as well (Brembs, 2011; Pothos & Busemeyer, 2009).

The mind displays entanglement and hysteresis-like behavior and the context of judgments and decisions form in analogue to quantum interference of elementary matter particles, because the presumed context of the first judgment or decision interferes with subsequent judgments or decisions. These and other similar findings arise from the brain's structure and characterize the elementary particle-like behavior of the mind. As successive regulatory layers in the brain unbalance due to stimulus, emotions, the energy states of the brain form. In turn, emotions trigger actions that restore the energy-neutral state, while changing the neural landscape (such as

the strength of neuronal connections). This way, mental operation is reflected in the ebb and flow of our emotions, as the brain changes and adapts to its constantly changing environment. Therefore, the brain processes information on a temporal language, and the laws that govern the physical world, such as the Newton's Laws or the Laws of thermodynamics, dictate temporal relationships over the mental world (Deli, 2015, chap 3).

According to general relativity, material interactions and physical processes are governed by the spatial field curvature and here I will show that the temporal field, which is organized orthogonally to space, is structurally identical to the field of gravity. As the spatial field controls matter, the temporal field governs social interactions. Currently the understanding of time is highly insufficient and the special importance of the temporal field in biological processes and evolution has been overlooked. Rather than energetic changes occurring in ecosystem or society, the temporal field manifests as momentary differences in the comfort and wellbeing of the organisms. While matter takes shape in space, life is a function of time due to biological dependence on air, water, rest, and food. The temporal field underlies society and its unique flavor is felt as soon as one steps out of the airport of any country. The temporal field forms our beliefs and our uncertainties, which give rise to the cultural habits, customs, and the palpable social fabric of society.

Just as gravity is the most important force in the material world, emotional (temporal) gravity permeates society and the individual's place in it. Gravity is the ever-present force of the physical world that holds onto matter, and temporal gravity is the strength of relationships. People who are enclosed within greater curvature are *squeezed for time*; this temporal pressure leads to rigidity and turbulent, chaotic emotional life. Lack of time, which is appropriately called stress, forces a constant struggle for everyday needs and even survival. A lesser curvature temporal field is often associated by financial means, as it provides the luxury of time, allowing greater freedom and flexibility. Social evolution is the evolution of the temporal field, manifested as a decreasing social distance (decreasing temporal field curvature differences of society). Hence, the temporal field produces revolutions, social or economic changes and spurs individual social mobility.

The increasing complexity throughout evolution is a perplexing and undeniable fact, and it is especially difficult to explain the high organizational complexity of the human brain. However, brain organization evolved via increasingly precise responses to stimuli, turning the brain into a better and better organizational reflection of the material environment, even operating by the same governing principles. The holographic principle recognizes the importance of the horizon as the information record of interaction. In the brain, experiences and memories form as a holographic record in the neuronal connections of the cortex. As microdimensional toroidal energy resonances manifest as fundamental particle behavior in physical (macro) space, emotional particles form an orthogonal, folded manifold in the temporal space of emotional functioning. In material fermions information accumulation parallels a loss of dimensionality of space, whereas information accumulation in the mind robs time. Stimuli unbalance successive regulatory layers in the brain and generate an electromagnetic potential that forces changes that recover the neutral state. Energy neutrality means discrete energy processing that also leads to the quantum character of material fermions. In the 21st century the time has come to consider the mind as a physical entity. The possibility that matter fermions and the mind have identical

structures and identical operation could open the book of insight into human motivation and behavior.

2. Energy neutrality through self-regulation

2.1 The mind as a temporal (emotional) fermion

According to string theory, energy vibrations take shape as matter, but the material brain projects stimulus as oscillations that form a fluid, inner world based on energy. Environmental changes constantly modulate brain frequencies via the sensory organs. The importance of brain oscillations in consciousness is unequivocal. In the brain the direction of information (energy) transfer in the limbic structures is highly dependent on frequency, neocortical-limbic transfer occurs during slow theta waves (4–10 Hz), and data transfer reverses during gamma frequencies (30–130 Hz), as reported by Buzsaki (2011). The frequency dependence of energy flow means that low brain frequencies intuitively increase the degrees of freedom; whereas high brain frequencies are more deterministic and therefore allow fewer degrees of freedom (Buzsaki et al., 2013).

Since low- and high-frequency bands determine opposing energy-information flow, they can be considered as opposite energetic poles of the brain's operation. Highly structured frequencies reveal nonlinear complexity due to dimensionality differences between neural modules. Rhythmic neuronal activation extinguishes the energy of stimulus, but generates an electromagnetic potential difference between the limbic brain and the cortex, which, although being relatively small, cannot escape into the environment, but initiates a flow reversal that recovers the DMN (Figure 3). The automatic recovery of energy neutrality due to such energetic insulation forms standing waves, the basis of the brain's self-regulation. Based on the frequency of oscillations, only positive (characterized by low frequencies) and negative emotional states (characterized by high frequencies) are possible. The connection of smaller oscillations with positive emotions and enhanced brain frequencies with negative mental states has been corroborated in numerous studies (Bethell et al., 2012; Seo et al., 2008).

Elementary particles interact by fundamental forces. The elementary forces of the mind are energy imbalances, called emotions, which are inextricable phenomena of life and whose intensity can only change through interaction. Just as for matter, life hinges on interactions, which sections our mental life into a progression of discrete *states of feelings and beliefs* and which give life an irreversible directionality. Thus interaction reformulates standing waves by increasing or decreasing mental energy. As the photon's energy reflects the energy of its source, the intensity of negative emotions corresponds to some past temporal field strength (i.e., specific negative events). Despite matter and mental fermions having identical energetic structures, several important differences separate them. Perhaps the most important difference between matter and emotional fermions is their size, which effectively determines their energy level. The diminutive matter fermions give rise to enormous frequencies, which produce an impressive punch. The much larger mind forms far lower frequencies and energy levels that are many orders of magnitude smaller. The wave function of material fermions vibrates over space, whereas mental quantum waves exist unlimited in time (the past and the future). The temporal freedom of mental energy function endows emotions with a sense of permanence. Pain or joy feels as if it

would exist forever, but when emotions depart, their experience evaporates, as if they never existed. This fact is all-important in motivation. By feeling permanent, emotions propel actions, but their fleeting nature allows us to find new strength even after immense pain and suffering. While decoherence gives matter volume, the mental scope, expanse, and understanding are temporal. The difference between the manifestations of matter (space) and mind (time) effectively has hidden the symmetry between the two systems.

2.2 The anatomy of decoherence

The mind forms energy-neutral standing waves over time. Thus, brain oscillations can be viewed as a spring that moves energy (and information) in the form of electric current between the limbic brain and the cortex, always restoring an equilibrium position, called the DMN, which is structured as a four dimensional quaternion (Peters et al., 2016). The innate drive toward energy neutrality leads to a subtle regulation by the continuous and pervasive electromagnetic flows of the intact brain, giving rise to inexplicable, mysterious and highly involuntary mental processes. Beyond sensory and motoric operation, the mind is primarily a temporal compass, which has an uncanny ability to automatically (independent of consciousness) reorient itself against disturbances imposed on it by the environment. The mechanism of decoherence in the mind is detailed below:

(1) The low brain frequencies of positive stimulus flows information away from the cortex (but flows energy toward the cortex) toward the limbic areas and the environment (Figure 3). Energy imbalance is unstable; it leads to joy, laughing, kindness, relaxing, playing, embracing, and generosity, which projects emotional energy into the environment to recover the DMN and form up-spin decoherence in the mind. Outward energy flow turns positive emotional states transient. The temporal spaciousness of lesser temporal field curvature enhances mental energy (i.e., g factor suggested by Spearman, as cited in Deary, 2010), which corresponds to confidence, trust, mental flexibility, congruence and clear conscience. The degree of confidence, emotional stability, and belief increase the degrees of freedom through long-term depression of synaptic strength (Dudek & Bear, 1992), for example. Therefore learning, which requires energy, is dependent on erasure of hippocampal memory (Madroñal et al., 2016).

(2) Sensory information is energetically expensive. The brain *pays* for sensory stimuli through greater energy requirement of high brain frequencies. The limbic system channels incoming stimuli (information), as fast oscillations, to the sensory cortex, where they spread as electric currents that accentuate or subdue each other through field effects. The brain's highly fluid neural organization allows fast, although not instantaneous, rebalancing of electromagnetic gradients based on charge conservation. From the sensory cortical surface the oscillations further propagate toward the frontal associative regions. As the energy requirement of neuronal activation gradually extinguishes the information flow, an electric potential difference, such as readiness or Bereitschaftspotential, forms between the limbic and cortical areas, which reverse the energy flow via slow oscillations as shown in Figure 3 (Kornhuber & Deecke, 1965). The information flow from the frontal toward occipital direction, and back toward the limbic region recovers the DMN. The sensory transmission toward the sensory cortex by fast oscillations and response by slow oscillations was confirmed in humans (Buzsaki et al., 2013), but should be typical in all mammals. The

existence of potential build up by sensory stimulation has been tested in the laboratory in the resting brain. Liu and colleagues (2015) have found that high frequency (40-100 Hz) stimulation of rat central thalamus relay neurons drives widespread forebrain activation in vivo, but low frequency oscillations (in the absence of sensory flow to the cortex) generate a jerking strain, potentially leading to convolution. The down spin decoherence of enhanced brain frequencies decreases degrees of freedom, through long-term potentiation for example (Bliss & Lomo, 1973). Negative emotions dictate actions that over time recover the energy neutral state. Therefore, down spin accumulates information in the mind.

According to general relativity, elementary fermions form the spatial field curvature, but quantum mechanics dictates that some quality of the particle must change as well. This is also true for temporal fermions: the mental energy and the environment (i.e., field curvature) are intertwined and mutually determine each other. When the mind and the field are incompatible, emotional reaction is triggered. As the mental energy changes and adapts to the field, emotional reaction ceases. Repeated activation of the same neuronal connections requires less energy, resulting in less and less emotional involvement, forming automatic activation expressed by Hebb's law (Hebb, 1949), and hedonic adaptation (Schultz, 2007). Both examples clearly demonstrate the effect of the changing temporal field curvature on the mind. These processes give the cortical mind an immense advantage to adapt to environmental changes, to learn, and to form intellectual abilities. By changing its mental energy, the mind (brain) remains congruent with the constantly changing environment. Manipulating the energy balances of the brain (by electrode stimulation or magnetic means) verification of the hypothesis will be possible.

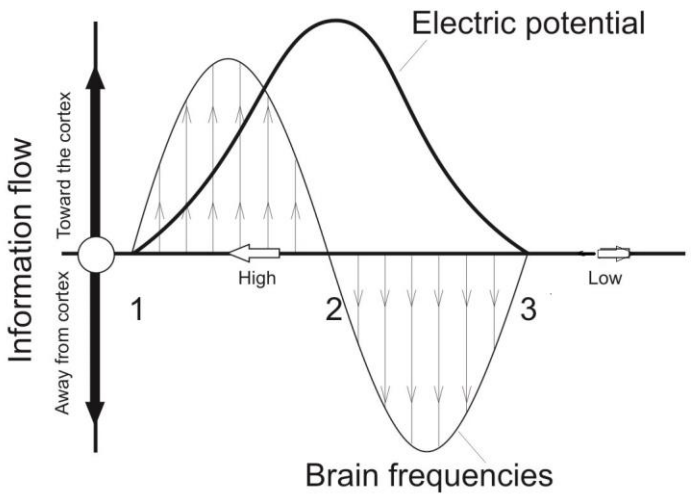

Figure 3. The brain's changing energy balance due to stimulus over time (between 1, 2 and 3). The brain frequencies change from high, on the left (#1), to low, toward the right (#3) and determine the direction of information flow in the brain (shown by thin line). The potential difference between the cortex and the limbic brain is indicated by thick line. The brain is energy neutral before stimulus (#1) and after a response (#3), but stimulus induces a potential difference between the cortex and the limbic brain (indicated by 2). The high energy need of enhanced brain frequencies curtails the volume of vibrating brain tissue, limiting information transmission capacity (indicated by 1), whereas the energy transmission capacity disappears during the lowest frequencies (indicated by 3).

Cortical activation extinguishes the energy of the stimulus (#2), but it generates a potential difference, which initiates a flow reversal that recovers the DMN (#3).

2.3 Temporal elementary particles

A gyrocompass is a compass based on a gyroscope. As the planet turns, misalignment causes tilting to minimize the potential energy, which orients the gyrocompass toward true north. Likewise, the mind shows a cunning ability to restore the stability of the inner world of consciousness against varying temporal curvature, manifested as relentless bombardment by outside stimuli. By changing the mental energy balance (the connections of the neuronal landscape) the mind accumulates energy or information and forms standing waves that are true to the local field. *In this way the mind changes constantly and gradually with its environment.*

The outermost layer of the temporal gyrocompass is the brainstem, which has essential function in the regulation of body and survival as it integrates the mind into the environment. Neurotransmitters interact to generate rhythmic firings across neurons, giving it an important gatekeeper role in influencing higher brain functions based on biological regulatory needs. Information transfer toward the cortex is regulated in the limbic brain, which, through sensory and motor regulation forms the middle layer. Cortical activation forms the third, innermost layer.

This is the transient, unknowable, and magical inner world of consciousness, which, through sensory processing, identifies itself with the body and becomes the source of self-awareness and the ego (Guterstam, 2015). Via its temporal orientation the mind interprets stimulus as a binary code, either past or the future. The mental states also form either positive or negative attitude (i.e., spin direction). Their combination form complex, nonlinear regulation, so response of cerebral animals cannot be easily predicted: depending on expectation or attitude, the same stimulus can produce diametrically opposing results, the hallmark of spinor operation. Evolutionary progression of the organism's ability to respond to stimulus permits temporal fermions to be classified into families, which represent increasing neural complexity:

EMOTIONAL NEUTRINO: Simple organisms with linear neural regulation form emotional neutrinos. Evolution increases the organization of the limbic brain, making responses to stimulus more congruent, and precise. Behavior has a genetic origin and learning remains rudimentary. Emotionless behavior makes it difficult to relate to these animals.

EMOTIONAL ELECTRONS: Animals with well-formed cerebrums (mammals and birds) that populate most regions of Earth are emotional electrons. Cortical insulation gives rise to the self, or ego, the source of cognition and self-awareness. Emotional electromagnetism (i.e., attraction and avoidance) aids the formation of complex social, often hierarchical structures. The dominant, emotionally supported motivation is the preservation of the ego. Emotions are the tools of survival; with them dangers can be avoided or overcome, and opportunities can be found. Animals with more sophisticated emotions appear later in evolution, and these animals exhibit great evolutionary advantages. The discrete energy changes lead to the Heisenberg uncertainty principle, and the Pauli exclusion principle that drives territorial needs and competition. Emotions dramatically improve homeostatic regulation, such as the ability to maintain constant temperature. Emotional electrons form a trusting state, allowing the feeling of oneness in mating as well as birth and care of their offspring.

3. Predictions and consequences of the hypothesis

The mark of a serious hypothesis is its predictive ability. Shockingly, provided appropriate considerations and adjustments are made (the most important adjustment is that the mind operates over temporal coordinates), every quality of elementary fermions can be recognized in mental behavior. Material fermions exhibit classical behavior, which involves temperature and pressure. Likewise, individual quantum uncertainty gives way to societies, where conflicts and interactions are manifested as emotional temperature and pressure.

3.1 Understanding and classification of emotions

The peak of cosmologic evolution is the cortical brain, which forms a self-regulating, insulated system, called the mind. Cortical insulation leads to consciousness (i.e., awareness of being separate from the environment), which is the exclusive privilege of emotional animals. Therefore emotions are energy states that are part of the general neural architecture of the brain (Touroutoglou et al., 2015). Such sophisticated homeostatic regulation allows mammals and birds to be warm blooded, form the mysterious inner world of consciousness, display impressive learning ability and develop complex social life (McNally et al., 2012). Through emotions we recognize ourselves in others (and emotion forming animals), which lends all minds a particle-like uniformity and indistinguishability. The above understanding allows true categorization of emotions as the fundamental interactions of the mind; the myriad specific mental phenomena can be intuited as the emotional equivalents of gravity, electromagnetism, and the strong and weak nuclear forces.

Because it is impossible to shield against it, gravity, the most pervasive fundamental force holds together the large scale structure of space and determines time's arrow. Gravity forms the curvature of space, and emotional gravity forms the socioeconomic layers of society. As entanglement pushes away from the equilibrium point, it increases field curvature differences (i.e., inequality) and lead to a bell-curve distribution in economies and societies (Koonin, 2011). The layers of temporal gravity are felt as differences in financial means, education, location, position, sex, race, and even age. People constantly and carefully monitor others' and their own social position and status, indicating its ubiquitous importance in any economic structure (Oveis et al, 2016; Smith & Magee, 2015). For this reason, individuals guard and actively promote their social position (field curvature) and react defensively to status threats, such as shame, criticism or any form of disrespect (Anderson, et al., 2015).

Due to the Pauli exclusion principle, the minimal-energy configuration of temporal fermions within temporal proximity is to have opposing spin. Entanglement ensures energy conservation between interacting particles by oppositely changing their mental energy. As the temporal gyrocompass strives to reorient itself to the temporal field, it recovers the DMN by either sacrificing or gaining mental energy, which actually changes the mind. In this way, the mind adapts to the curvature of the local field. The curvature differences of the temporal field reveal differences in trust and emotional sophistication (financial, social, cultural distinction) even in democratic societies. The innermost curvature layers of society are occupied more by mental-energy-poor, insecure, 'older' minds, than are the regions having smaller field strength. Since

attachments are proportional to the temporal field strength, conflicts are more vicious in poverty and encounters remain more civil among members of the upper classes. However, it is a great oversimplification to associate temporal curvature with financial means!

3.2 Emotional temperature and emotional pressure

The inverse relationship between pressure and temperature in gases was recognized in the nineteenth century and led to the universal gas law. Surprisingly, the same relationship regulates emotional behavior. Because particle collisions create pressure, emotional confrontations create temporal confinement and lead to emotional pressure. In gases temperature is proportional to internal energy, whereas interpersonal and societal tension corresponds to the thermodynamic energy of the mind. The temporal excess of positive emotions, faith, love, courage, and awe bubble up with the enthusiasm of the instant; by eliminating details they fuel enthusiasm, generosity, trust, the energy for happiness and joy. The increasing confidence and trust lower emotional temperature and pressure. Because elevated brain oscillations enhance the willingness for interaction, emotional temperature can be measured by the magnitude or degree of negativity, the extent of sadness, criticism, sarcasm, anger, or physical brutality. The negative energies are just mental tools to expand the boundaries of the temporal confinement.

Criticism and anger provoke retaliation and reactions from the environment, which actually maintains the temporal pressure or temperature over time. Modulation of neuronal connections and the sensitivity of the brainstem structures (i.e., the temporal field curvature) manipulate time perception. The longer time perception of constricted and painful negative emotions leads to impatience, and stress. As time slows in both gravity and acceleration, *time perception elongates* within both negative (corresponding to positive temporal curvature field) and positive emotional states, corresponding to negative-curvature temporal fields (Neupert & Allaire, 2012; Rudd et al., 2012; Yamada & Kawabe, 2011)! Negative curvature temporal field increases confidence, whereas positive curvature reduces it. The unintuitive and puzzling characteristics of mental operation are an outgrowth of the mind's often tentative seeking of the energy neutral state by self-regulation.

3.3 Free will

It is hard to fully appreciate the environment's ability to direct our lives by regulating our emotions. Although we have little or no power over our own thoughts, which ultimately determine our actions and behavior, the brain's control over the body creates the belief in free will. The mind forms a unified experience by connecting sensory perception with mental states based on event related potentials (Guterstam et al., 2015; Mancini et al., 2011). Whether action occurs due to priming by conscious or unconscious (subconscious) stimuli, the mind presumes its ultimate causative role. Nevertheless, the common belief that our life is governed by conscious thinking has been increasingly challenged. As early as 1965 Libet questioned the existence of free will by showing that thinking and conscious actions are signaled by preceding unconscious brain activity. In addition, the sluggish conscious decisions have vastly longer time requirements from the fast, automatic actions. Conscious processes take a second or longer, but our fluid, fraction of-a-second mental operation is overwhelmingly automatic. Conscious focus also becomes quickly tiring, but the automatic mind operates over the long term and remains stable in the face of environmental changes. We have to consider that our automatic mind, highly

influenced and regulated by the environment and operating behind (sometimes against) conscious awareness, determines the course of our lives.
Parasites exploit their host and can fully manipulate host behavior in support of their life-cycle. For example, Toxoplasma gondii infection will spur a feline attraction in rodents which, assuredly deadly for the rodent, helps to complete the parasite's life-cycle in the body of the cat (Sugden et al., 2016). Behavior manipulation is also possible by an implanted electric sensor in the brain. A properly implanted remote control device in the animal's brain can be essentially used to drive the animal around as a car, at will, by electric regulation. This occurs, because the brain operates via electric impulses, which activate appropriate neuron assembles and trigger well-choreographed muscle movements (Carillo-Reid et al., 2016). A wide range of drugs as well as various brain stimulation techniques can radically change behavior, in some cases the changes lasting beyond the expected affective term (Fitz & Reiner, 2013). Yet addicts and other substance abusers claim to be in full control of their lives. Conscious decisions enhance brain frequencies and lead to information overload, a selfish down-spin state (stress), which distorts mental vision and twists memories.

Detailed focus wastes time, distorts reality, and turns experience into a house of mirrors. Thus, the mind becomes partial and acts contrary to its own best interest, by forming back-and-forth emotional swings, leading to regret or remorse. The constantly changing attention eliminates freedom. As a result, people with negative attitude are enslaved by their circumstances and behave as puppets on a string. Their conscious minds are employed as public relation agents, to constantly explain away previous behavior. Like the distractive turbulences of a fast-flowing river, conflicts destroy mental progress and life suffers a gradual decline (Fredrickson & Joiner, 2002). Being in tune with the environment is the ability to sense and the flexibility to follow the flow of events. The mind with high mental energy (confident and calm mind) is satisfied, trusting and happy, is having no emotional incentive for change, which translates into satisfaction, private and professional success – possibly even on the trading floor (Kandasamy et al., 2016).

3.4 Heisenberg uncertainty principle

Primitive animals with a limbic brain display fairly predictable behavior; but the cortical manifold retains a memory and its response is heavily influenced by past experience. The response's nonlinear nature becomes especially prominent with enhanced stimuli, which produce polarized and even extreme reactions. The Heisenberg uncertainty principle, which prohibits the position and momentum of the particle from being known simultaneously, regulates the behavior of complex animals. In the mind the opposite poles of uncertainty are the temporal position and the extent of emotion. As a cocked gun, which easily fires, down spin decoherence only discharges the enhanced brain frequencies' accumulated pain and negative energy. This way the extent of anger or negative mood (how far one is willing to go) is uncovered, but its temporal position (origin) remains hidden. In contrast, up spin decoherence uncovers the temporal position. The transient positive emotions bubble up in the present moment. However, the extent of joy is unknowable, because there is no partial happiness.

3.5 Pauli exclusion principle

Through extensive connections to a host of brain structures, the amygdala has a central and powerful role in emotional regulation and fear conditioning (Dolan, 2008). By modulating

emotions, it controls behavior and memory, often outside of conscious awareness. Being activated by perceived proximity and emotionally charged images (even if we are not consciously aware of them), the amygdala regulates personal space and boundaries by moving us (emotionally) closer to others or further away from them. The Pauli exclusion principle states that fermions cannot occupy the same quantum state. For matter fermions, the principle is valid in space, but for temporal fermions (animals and people) it prohibits temporal closeness and generates a conceptual (i.e., emotional) distance. Manifested as distrust, this leads to territorial needs, or to avoiding eye contact in the elevator. Because the Pauli exclusion principle is responsible for the structure of matter, it also creates the structure of society or of ecosystems. People with low emotional temperature are satisfied and happy. Their mental calm makes them flexible and accepting (trusting) toward others. As in colder matter, the Pauli exclusion principle is muted. The opposite is also true. In nervous, stressed individuals the Pauli exclusion principle, manifested as critical tendency, is strong. However, critical tendency only applies to emotionally close situations (i.e., temporal closeness). For example, eye contact shortens emotional (i.e., conceptual) distance and thus enhances the potential for conflict (or connection) between conversation partners. Anxious people create conceptual distance by avoiding eye contact (Chen et al., 2012). When faced with increasing emotional distance, we intuitively move closer in an attempt to maintain the emotional distance (Lenz's law in the mind). Emotionally distant people (if spending time together) tend to approach each other emotionally, but loving partners tend to become distant. As with matter, societies and ecosystems are also regulated by the second law of thermodynamics; without outside influence (such as wars or natural disasters) emotional distance decreases over time and leads to democratization, culture and congruence of society.

3.6 Cognitive interference

The famous double-slit experiment in physics is described by quantum probability. Its mental analogue demonstrates irrational behavior, the so-called disjunction effect. The famous example is: one will do A given event E occurs and will do A given event E does not occur, yet will not do A when the outcome of event E is unknown – which violates Savage's *Sure-Thing Principle* (Savage, 1954; Tversky & Shafir, 1992). Without feedback the possibilities remain open; the mind, ignorant about the implications of its decision, is in a quantum limbo. The phenomenon is analogous to quantum interference, which occurs during the double-slit experiments in physics. Information on the score collapses the wave function and liberates the mind from interference. Mental interference, which occurs *instantaneously* and without any conscious involvement, exaggerates or extinguishes (by adding or subtracting from the temporal wave form of the stimuli) personal emotional tendencies. Thus temporal interference produces temporal waves and bursts. Positive interference often leads to exaggerated interest, such as an investment bubble. However, over time, negative interference extinguishes enthusiasm and can even lead to avoidance. Therefore, in analogue to interference in quantum theory, the presumed context of the first judgment or decision interferes with subsequent judgments or decisions.

3.7 Quantum entanglement

Quantum mechanics considers events to be subspaces (or orthogonal projections on these subspaces) of a vector space. In quantum entanglement observation on one part of the system instantaneously affects the state in another part of the system, even if the respective systems are separated by space-like distances. Entanglement entails a common wave function, which cannot be decomposed into separate subsystems. The same phenomenon transpires in emotional

fermions over conceptual distance, i.e., over time. In word association experiments entanglement activates associative target words simultaneously, thus can be modeled by quantum theory (Busemeyer & Bruza, 2012; Pothos & Busemeyer, 2013). Word associations often defy logic (analogue to "spooky action at a distance") and there is a conceptual resistance to ambiguous situations (such as the Necker cube). The delayed choice quantum eraser, proposed by Scully and Druhl in 1982 and verified some years later, investigates the paradox of the photon's path to the detector. Changing the experimental apparatus while the photon is in mid-flight, the photon was able to modify its state between a wave and a particle (cf. Kim et al., 1999). Analogous to the above experiment, a cemented mental reality can be completely overturned by new information. With temporal fermions, the Bell nonlocality means that present comprehension is updated retroactively, as recognition miraculously expands understanding in time, pushing it into the past (to the time of the first experience) and the future. Discovering a secret expands comprehension over time, so childhood experiences can only be viewed later by the mind of the adult. The Bell nonlocality means that decoherence can be influenced from great spatial distances (for matter) or temporal expanses (i.e., for the mind). Ideas in the hidden corners of the mind can be activated and manipulated by quantum entanglement years or even decades later. In many ways the study of quantum phenomena in the mind is still an uncharted territory. Experimental designs are often difficult or impossible due to the conceptual insufficiencies in the understanding of the nature of consciousness.

4. Cosmologic evolution

The organic unity of cosmos

Like atoms in chemistry, prime numbers form indivisible and deterministic building blocks in number theory. The existence of prime structures in nature might be more general however. Material fermions and consciousness form the essential, fundamental and exclusive constituents of the universe. Originating at zero time, matter fermions use up space to produce temporal evolution, which culminates in the emergence of the mind. In turn, the mind originates at zero volume and interacts with time to build mental volume in mental fermions. Thus, the orthogonal elementary fermions (matter and mind) are the indivisible building blocks of the universe; forming predator-prey relationship, they embrace as yin and yang and determine each other's future and past.

White holes infuse a creative potential of cosmologic expansion throughout the cosmos and lead to the experience of expansion we call dark energy, which presses against the immediate proximity of black holes, forming excess gravity, called dark matter. Both the spatial and temporal fields are oriented between and bounded by the poles (Figures 1 and 2), but interaction fuels their low entropy states. With death interaction seizes up, eliminating the local vision and experience of consciousness. The fundamental connection between the mind, the material fermions and the universe lead to their energetic and structural similarity, coherence and unity. Moving between matter, mind and the universe the frequencies (energy levels) decrease, whereas increasing degrees of freedom manifest increasing complexity. The physical laws are limited to and characteristic of the universe, which cannot be divided and from which nothing can escape.

Awareness is associated with the highly organized neuronal assembly of the brain. However, unhindered awareness has been shown to exist during clinical death, when the EEG is flat and brain activity is absent (Borjigin et al., 2013; Parnia, 2014). Death halts brain activity and sensory interaction, allowing the mind to increase its entropy as it transverses the temporal field of the cosmos. People with negative attitude accumulate information and converge toward the black holes; those with positive attitude mind congregate along white holes. Black holes represent a mental world consumed by details, problems and obstacles; the proximity of white holes means an elimination of details, leading to mental expansion with unlimited possibilities. Since entropic changes occur over time, movement toward the black holes stretches time into infinity, whereas progression toward the white holes rewinds time to zero.

Conclusions

Material interaction forms a cosmologic evolution that culminates in the emergence of the intelligent mind. Material fermions, which situate along space, and the emotional mind, which aligns according to time, are necessary, inherent and organic energy building blocks of the universe. Matter fermions are directly regulated by the environment, whereas consciousness is integrated into the environment via the body. As the energy of photons betrays variations in spatial volume, emotions testify about mental change. A positive stimulus forms positive emotions by accumulating energy via low frequencies (negative temporal field curvature), whereas negative stimulus (positive temporal field curvature) involves the sense of temporal shortage due to detail oriented high frequencies, which parallels negative emotions. Emotions force actions that modify the neuronal connections (modulating mental energy). Fermions (matter and mind) are energy formations that accumulate information via interaction. Death ends biological life and sensory interaction, but the intelligent mind, as the essential ingredient of the cosmos, stretches into a temporal infinitum.

Via a journey through time energetic changes increase mental entropy that culminates at one of the poles of the cosmos. High entropy is the ability to predict the next element, which is satisfied by both maximal (black holes) and zero information (white holes) content. The high entropy fermion merges with the corresponding pole: the information saturated black holes or the energy rich white holes. This guarantees the global conservation of information. The two dimensional confinement of the black holes is dark, hot and non-moving. Everything feels unapproachable, difficult and heavy due to infinite information content. White holes are infinitely spacious, yet everything feels close, full of possibilities, youthful energy and light. White holes are the light itself. This way the individual mind becomes part of the cosmos, and actively participates in its evolution.

The Big Bang gives birth to material particles and evolution begets consciousness. The universe's energy and information states vary smoothly between the poles. However, conditions are fine-tuned for life (and consciousness) only within mild gravity, which fits our world. Significant changes of field curvature are energetically prohibited: it would first destroy life and later would destroy material structures as well. Evolution appears to be a random process, but over time it forms an arch that spans between the formation of material fermions and the emergence of intellect. The Pauli exclusion principle increases the differences in field curvature

(spatial or temporal) of the universe, creating its poles, which form its unapproachable boundaries. The microdimensions (both time and space) form a closed minimal surface through entanglement. The opposing dynamics of macro and microdimensions lead to self-regulation, which is a continuous fine-tuning of the physical parameters of the universe.

Intelligent life arises wherever the necessary minimal conditions for biological evolution are met. Intelligent occupants of the cosmos should be similar not only in the structure of their minds, but in the biological building blocks of life, and in their emotional sophistication as well. The hypothesis sets up an intuitive and organically connected worldview. The physical basis of consciousness opens a new dimension of understanding that can revolutionize the social sciences and technology as well as the healing of mental diseases. The realization that the mind is an inalienable part of the infinite universe, therefore itself is infinite, will increase social cohesion and goodwill. The human mind operates according to the same organizational principles, the same physical and mathematical laws, as the cosmos, which is the monotheistic God of worship. This tells me that there is some form of cosmic intelligence, which manifests in sophisticated self-regulation.

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Article

The Idealist View of Consciousness After Death

Bernardo Kastrup*

Abstract

To make educated guesses about what happens to consciousness upon bodily death, one has to have some understanding of the relationship between body and consciousness during life. This relationship, of course, reflects an ontology. In this brief essay, the tenability of both the physicalist and dualist ontologies will be assessed in view of recent experimental results in physics. The alternative ontology of idealism will then be discussed, which not only can be reconciled with the available empirical evidence, but also overcomes the lack of parsimony and limited explanatory power of physicalism and dualism. Idealism elegantly explains the basic facts of reality, such as (a) the fact that brain activity correlates with experience, (b) the fact that we all seem to share the same world, and (c) the fact that we can't change the laws of nature at will. If idealism is correct, the implication is that, instead of disappearing, conscious inner life *expands* upon bodily death, a prediction that finds circumstantial but significant confirmation in reports of near-death experiences and psychedelic trances, both of which can be construed as glimpses into the early stages of the death process.

Keywords: Ontology, metaphysics, mind-body problem, death, near-death experience, psychedelics, quantum physics.

1. Introduction

Our capacity to be conscious subjects of experience is the root of our sense of being. After all, if we weren't conscious, what could we know of ourselves? How could we even assert our own existence? Being conscious is what it means to *be* us. In an important sense—even the *only* important sense—we are first and foremost consciousness itself, the rest of our self-image arising afterwards, as thoughts and images constructed *in* consciousness.

For this reason, the question of what happens to our consciousness after bodily death has been central to humanity throughout its history. Do we cease to exist or continue on in some form or another? Many people today seek existential solace in body-self dualism, which opens up the possibility of the survival of consciousness after bodily death (Heflick et al, 2015). But is dualism—with the many serious problems it entails, both philosophical and empirical (Robinson, 2016)—the only ontology that allows for this survival?

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Although consciousness itself is the only directly accessible datum of reality, both dualism and the mainstream ontology of physicalism (Stoljar, 2016) posit the existence of something ontologically distinct from consciousness: a physical world outside and independent of experience. In this context, insofar as consciousness is believed to be constituted, generated, hosted or at least modulated by particular arrangements of matter and energy in the physical world, the dissolution of such arrangements—as entailed by bodily death—bears relevance to our survival. This is the root of humanity's preoccupation with death.

However, the existence of a physical world outside and independent of consciousness is a theoretical inference arising from *interpretation* of sense perceptions, not an empirical fact. After all, our only access to the physical is through the screen of perception, which is itself a phenomenon of and in consciousness. Renowned Stanford physicist Andrei Linde (1998) summarized this as follows:

> Let us remember that our knowledge of the world begins not with matter but with perceptions. … Later we find out that our perceptions obey some laws, which can be most conveniently formulated if we assume that there is some underlying reality beyond our perceptions. This model of material world obeying laws of physics is so successful that soon we forget about our starting point and say that matter is the only reality, and perceptions are only helpful for its description. This assumption is almost as natural (and maybe as false) as our previous assumption that space is only a mathematical tool for the description of matter. (p. 12)

The physical world many believe to exist beyond consciousness is an abstract explanatory model. Its motivation is to make sense of three basic observations about reality:

(a) If a physical brain outside experience doesn't somehow generate or at least modulate consciousness, how can there be such tight correlations between observed brain activity and reported inner experience (cf. Koch, 2004)?
(b) If the world isn't fundamentally independent and outside of experience, it can only be analogous to a dream in consciousness. But in such a case, how can we all be having the same dream?
(c) Finally, if the world is in consciousness, how can it unfold according to patterns and regularities independent of our volition? After all, human beings cannot change the laws of nature.

Nonetheless, if these questions can be satisfactorily answered *without* the postulate of a physical world outside consciousness, the need for the latter can be legitimately called into question on grounds of parsimony. Moreover, while physicalism requires the existence of ontological primitives—which Strawson (2006, p. 9) called "ultimates"—beyond consciousness, it fails to explain consciousness itself in terms of these primitives (cf. Chalmers, 2003). So if the three basic observations about reality listed above can be made sense of in terms of consciousness alone, then physicalism can be legitimately called into question on grounds of explanatory power as well. And as it turns out, there is indeed an alternative ontology that explains all three basic

observations without requiring anything beyond consciousness itself. This ontology will be summarized in Section 3 of this brief essay.

In addition, the inferred existence of a physical world outside and independent of consciousness has statistical corollaries that can be tested with suitable experimental designs (Leggett, 2003; Bell, 1964). As it turns out, empirical tests of these corollaries have been carried out since the early eighties, when Alan Aspect performed his seminal experiments (1981). And the results do *not* corroborate the existence of a universe outside consciousness. These seldom-talked-about but solid empirical facts will be summarized in the next section.

Without a physical world outside consciousness, we are left with consciousness alone as ground of reality. In this case, we must completely revise our intuitions and assumptions regarding death. After all, if consciousness is that within which birth and death unfold as phenomenal processes, then neither birth nor death can bear any relevance to the existential status of consciousness itself. What does death then mean? What can we, at a personal level, expect to experience upon bodily death? These questions will be examined in Section 4 of this essay.

2. The empirical case against a world outside consciousness

A key intuitive implication of a world outside consciousness is that the properties of this world must not depend on observation; i.e., an object must have whatever properties it has—weight, size, shape, color, etc.—regardless of whether or how it appears on the screen of perception. This should clearly set the physical world apart from the sphere of consciousness. After all, the properties of a purely imagined object do not exist independently, but *only insofar as they are imagined*.

As mentioned earlier, the postulated independence of the world from observation has certain statistical corollaries (Leggett, 2003) that can be directly tested. On this basis, Gröblacher et al. (2007) have shown that the properties of the world, surprisingly enough, *do* depend on observation. To reconcile their results with physicalism or dualism would require a counterintuitive redefinition of what we call *objectivity*. And since contemporary culture has come to associate objectivity with reality itself, the science press felt compelled to report on this study by pronouncing, “Quantum physics says goodbye to reality” (Cartwright, 2007). Testing similar statistical corollaries, another experiment (Romero et al, 2010) has confirmed that the world indeed doesn’t conform to what one would expect if it were outside and independent of consciousness.

Other statistical corollaries (Bell, 1964) have also been experimentally examined. These tests have shown that the properties of physical systems do not seem to even exist prior to being observed (Lapkiewicz et al., 2011; Manning et al., 2015). Commenting on these results, physicist Anton Zeilinger is quoted as saying that “there is no sense in assuming that what we do not measure about a system has [an independent] reality” (Ananthaswamy, 2011). Finally, Ma et al. (2013) have again shown that no naively objective view of the world can be true.

Critics have deeply scrutinized the studies cited above to find possible loopholes, implausible as they may be. In an effort to address and close these potential loopholes, Dutch researchers performed an even more tightly controlled test, which again confirmed the earlier results (Hensen et al., 2015). This latter effort was considered the "toughest test yet" (Merali, 2015).

Another intuitive implication of the notion of a world outside consciousness is that our choices can only influence the world—through our bodily actions—in the present. They cannot affect the past. As such, the part of our story that corresponds to the past must be unchangeable. Contrast this to the sphere of consciousness wherein we can change the whole of an imagined story at any moment. In consciousness, the *entire* narrative is always acquiescent to choice and amenable to revision.

As it turns out, Kim et al. (2000) have shown that observation not only determines the physical properties observed at present, *but also retroactively changes their history accordingly*. This suggests that the past is created at every instant so as to be consistent with the present, which is reminiscent of the notion that the world is a malleable mental narrative.

Already back in 2005, renowned Johns Hopkins physicist and astronomer Richard Conn Henry penned an essay for *Nature* (2005) wherein he claimed that "The universe is entirely mental. … There have been serious [theoretical] attempts to preserve a material world—but they produce no new physics, and serve only to preserve an illusion" (p. 29). The illusion he was referring to was, of course, that of a world outside consciousness.

Thus from a rigorous empirical perspective, the tenability of the notion of a world outside and independent of consciousness is at least questionable. The key reason for resisting an outright abandonment of this notion is the supposed lack of plausible alternatives. What other ontology could make sense of the three basic observations about reality discussed in Section 1? In the next section, I will attempt to answer this question.

3. A simple idealist ontology

The ontology of idealism differs from physicalism in that it takes phenomenal consciousness to be the only *irreducible* aspect of nature, as opposed to an epiphenomenon or emergent property of physical arrangements. It also differs from dualism in that it takes all physical elements and arrangements to exist *in consciousness*—solely as phenomenal properties—as opposed to outside consciousness.

Historically, idealism has had many different variations labeled as *subjective idealism*, *absolute idealism*, *actual idealism*, etc. It is not my purpose here to elaborate on the subtle, ambiguous and often contentious differences among these variations. Instead, I want to simply describe the basic tenets that any plausible, modern formulation of idealism must entail, *given our present knowledge and understanding* of the world. What follows is but a brief summary of a much more extensive derivation of idealism from first principles (Kastrup, forthcoming).

The defining tenet of idealism is the notion that all reality is in a *universal* form of consciousness—thus not bound to personal boundaries—arising as patterns of excitation *of* this

universal consciousness. Our personal psyche forms through a process of dissociation in universal consciousness, analogous to how the psyche of a person suffering from dissociative identity disorder (DID) differentiates itself into multiple centers of experience called *alters* (Braude, 1995; Kelly et al., 2009; Schlumpf et al., 2014). Recent research has demonstrated the literally *blinding* power of dissociation (Strasburger & Waldvogel, 2015). This way, there is a sense in which each living creature is an alter of universal consciousness, which explains why we aren't aware of each other's inner lives or of what happens across time and space at a universal scale.

The formation of an alter in universal consciousness creates a boundary—a "Markov blanket" (Friston, Sengupta & Auletta, 2014, pp. 430-432)—between phenomenality internal to the alter and that external to it. Phenomenality external to the alter—but still in its vicinity—impinges on the alter's boundary. The plausibility of this kind of phenomenal impingement from across a dissociative boundary is well established: we know, for instance, that dissociated feelings can dramatically affect our thoughts and, thereby, behaviors (Lynch & Kilmartin, 2013), while dissociated expectations routinely mold our perceptions (cf. Eagleman, 2011).

The impingement of external phenomenality on an alter's boundary is what we call sense perception. The world we perceive around ourselves is thus a *coded phenomenal representation* (Friston, Sengupta & Auletta, 2014, pp. 432-434)—which I shall call the *extrinsic appearance*—of equally phenomenal processes unfolding across the dissociative boundary of our alter.

A living biological body is the extrinsic appearance of an alter in universal consciousness. In particular, our sense organs—including our skin—are the extrinsic appearance of our alter's boundary. As such, our brain and its electrochemical activity are part of what our inner life *looks like* from across its dissociative boundary. Of course, *both* the extrinsic appearance and the corresponding inner life are phenomenal in nature. They are both experiences.

A person's brain activity correlates with the person's reported inner life because the former is but a coded representation of the latter. We all inhabit the same world because our respective alters are surrounded by the same universal field of phenomenality, like whirlpools in a single stream. And we can't change the patterns and regularities that govern the world—i.e., the laws of nature—because our volition, as part of our alter, is dissociated from the rest of nature.

See Figure 1 for a graphical depiction of all this.

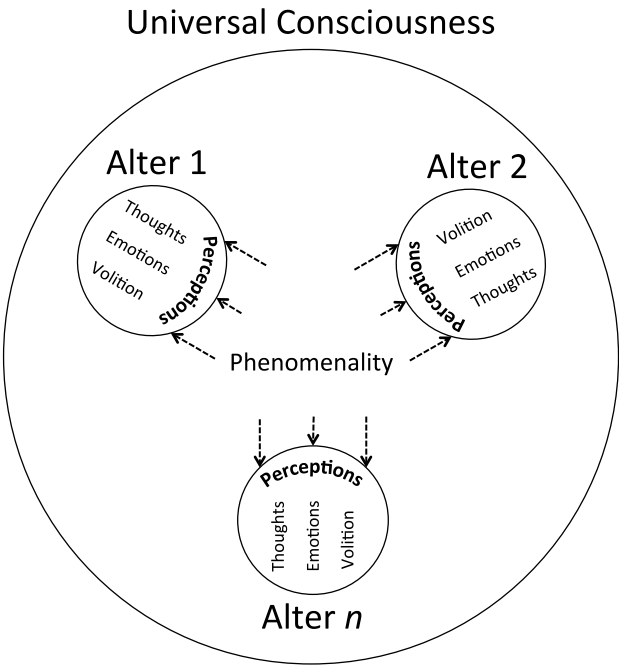

Figure 1. Idealism in a nutshell.

Clearly, all three basic observations about reality discussed in Section 1 can be rather simply explained by this parsimonious idealist ontology. Moreover, unlike physicalism and dualism, the ontology can also be reconciled with the empirical results discussed in Section 2. It thus offers a more promising alternative for interpreting the relationship between body and consciousness than physicalism and dualism. The question that remains to be addressed is this: if idealism is true, what can we then infer about consciousness after bodily death? This is what the next section will attempt to answer.

4. What idealism says about consciousness after death

The idealist ontology briefly summarized in the previous section asserts that the physical body is the extrinsic appearance—the *image*—of a dissociative process in universal consciousness. In other words, a living body is what dissociation—meant simply descriptively, not as something negative or pathological—in universal consciousness *looks like*. Therefore, the death and ultimate dissolution of the body can only be the image of the *end* of the dissociation. Any other conclusion would violate the internal logic of idealism.

The reasoning here is rather straightforward but its implications profound. The hallmark of dissociation is "a disruption of and/or discontinuity in the normal integration of consciousness, memory, identity [and] emotion" (Black & Grant, 2014, p. 191). Therefore, the end of dissociation can only entail a *reintegration* of "memory, identity [and] emotion" lost at birth. This means that bodily death, under idealism, must correlate with an *expansion* of our felt sense of identity, access to a broader set of memories and enrichment of our emotional inner life.

This conclusion is the exact opposite of what our mainstream physicalist ontology asserts. Moreover, there is nothing in the popular dualist alternative—mainly found in religious circles—that requires it either. So idealism is not only unique in its ability to explain reality more parsimoniously and completely than physicalism and dualism, it also offers a unique perspective on death.

Circumstantially but significantly, much of the literature regarding near-death experiences (NDEs) seems to corroborate this prediction of idealism (Kelly et al., 2009). To mention only one recent example, Anita Moorjani (2012) wrote of her felt sense of identity during her NDE: "I certainly don't feel reduced or smaller in any way. On the contrary, I haven't ever been this huge, this powerful, or this all-encompassing. … [I] felt greater and more intense and expansive than my physical being" (p. 69). It's hard to conceive of a more unambiguous confirmation of idealism's prediction than this passage, although Moorjani's entire NDE report echoes the prediction precisely.

Moreover, as recent studies have shown (Carhart-Harris et al., 2012; Palhano-Fontes et al., 2015; Carhart-Harris et al., 2016), psychedelic drugs *reduce* brain activity. This suggests that psychedelic trances may be in some way akin to the early stages of the death process, offering glimpses into how death is experienced from a first-person perspective. And as we know, psychedelic trances do entail an unambiguous expansion of awareness (Strassman, 2001; Griffiths et al., 2006; Strassman et al., 2008), which again seems to circumstantially corroborate idealism's prediction.

5. Conclusions

To make educated guesses about what happens to consciousness upon bodily death, one has to have some understanding of the relationship between body and consciousness during life. This relationship, of course, reflects an ontology. So the question of what happens after death can be transposed into the question of which ontology is most plausible for making sense of the world during life.

While physicalism is our culture's academically-endorsed, mainstream ontology and dualism a popular alternative in religious circles, neither ontology seems tenable in view of recent experimental results in physics. Moreover, both ontologies suffer from problems such as lack of parsimony or limited explanatory power.

A third ontology, known as idealism, overcomes not only these problems but can also be reconciled with the available empirical evidence. It elegantly explains the three basic facts of reality: (a) that brain activity correlates with experience, (b) that we all seem to share the same world, and (c) that we can't change the laws of nature at will.

If idealism is correct, it implies that, instead of disappearing, conscious inner life *expands*—whatever new phenomenology this expansion may entail—upon bodily death. This prediction finds circumstantial but significant confirmation in reports of near-death experiences and

psychedelic trances, both of which can be construed as glimpses into the early stages of the death process.

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Article

Science and Postmortem Survival

Edward F. Kelly*

Abstract

What we see currently emerging, in short, is a middle way between the warring fundamentalisms – religious and scientific – that have so polarized recent public discourse; specifically, an expanded science-based worldview that can accommodate empirical realities of paranormal and spiritual sorts, including postmortem survival, while also rejecting rationally untenable overbeliefs of the sorts targeted by critics of institutional religions. This emerging vision is both scientifically justifiable and spiritually satisfying, combining the best aspects of our scientific and religious heritage in an effort to reconcile these two greatest forces in human history. What is ultimately at stake here seems nothing less than recovery, in an intellectually responsible manner, of parts of our human heritage that were prematurely discarded with the meteoric rise of modern science starting four centuries ago. And what is especially significant at this critical juncture, and the fundamental new factor that may finally allow this recovery to succeed after numerous previous failures, is that it is now being energized by leading-edge developments in science itself. A potentially viable path to a better world seems to be opening up.

Keywords: Science, religion, postmortem, survival, paranormal, spiritual.

The rise of modern science, accompanied by its many technological triumphs, has led to widespread acceptance among opinion elites of a worldview that conflicts sharply both with everyday human experience and with beliefs widely shared among the world's institutional religions – including belief in the possibility of postmortem survival.

Most contemporary mainstream psychologists, neuroscientists, and biologists in particular, along with many philosophers of mind, subscribe explicitly or implicitly to some version of *physicalism*, the modern philosophical descendant of the *materialism* of previous centuries. It comes in a variety of subtly different shadings, but the basic story common to all goes like this: *All* facts are determined in the end by physical facts alone. Reality consists at bottom of tiny bits of self-existent stuff hurtling around under the influence of fields of force in accordance with mathematical laws, and everything else we observe must derive somehow from that most basic underlying stuff. In particular, we human beings are nothing more than extremely complicated biological machines, and everything we are and do is explainable, at least in principle, in terms of our physics, chemistry, and biology. Some of what we know, and our capacities to learn more, are built in genetically as complex resultants of biological evolution. Everything else comes to us through our sensory surfaces, by means of energetic exchanges with the environment of types

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already largely understood. Consciousness and its contents, and all other aspects of mind, are generated by (or in some mysterious way identical with, or supervenient upon), neurophysiological events and processes occurring in the brain. Our everyday experience of ourselves as effective conscious agents equipped with free will is mere illusion, a by-product of the grinding of our neural machinery. And of course since consciousness, mind and personality are entirely products of that machinery; they are necessarily extinguished, totally and finally, by the demise and dissolution of the body. On a more cosmic scale there seem to be no such things as final causes or a transcendent order; the overall scheme of nature appears utterly devoid of meaning or purpose.

This bleak worldview has permeated the intellectual elites and educational systems of all advanced societies and is undoubtedly a principal driver of the pervasive *disenchantment* of our modern world with its multifarious and rapidly worsening ills. It has also driven progressive erosion of traditional forms of religious belief. Indeed, recent years have witnessed a series of all-out attacks on everything religious by well-meaning defenders of Enlightenment-style rationalism such as Richard Dawkins and Daniel Dennett, who clearly regard themselves and current mainstream science as reliably marshaling the intellectual virtues of reason and objectivity against retreating forces of irrational authority and superstition. For them the truth of physicalism has been demonstrated beyond reasonable doubt, and to think anything different is necessarily to abandon centuries of scientific progress, unleash *the black flood of occultism,* and revert to primitive supernaturalist beliefs characteristic of our intellectual childhood.

However, reasons for skepticism regarding this physicalist worldview are rapidly gaining cumulative force. In the first place, classical physicalism is not merely incomplete (which no serious person can deny) but incorrect at its very foundation, essentially the physics of the late 19th century. Major tectonic shifts have subsequently occurred within physics itself. Newton's conception of absolute space and time as a pre-existing container for events, for example, has been replaced by Einstein's experimentally confirmed theories of special and general relativity. Even more fundamentally, with the rise of quantum theory nearly a century ago the deterministic clockwork universe postulated by Newton and Laplace has been overthrown, *matter* as classically conceived shown not to exist, and consciousness implicated as a fundamental player in the manifestation of the experienced world (Rosenblum & Kuttner, 2011; Stapp, 2007). These seismic events within theoretical physics have somehow not yet fully registered with the scientific community at large.

Classical physicalist brain/mind theory now seems headed in the same direction. At present we have no understanding whatsoever of how consciousness could be generated by physical events in brains, and recent theoretical work in philosophy of mind has convinced many, including at least a few prominent neuroscientists, that we can never achieve one.

Let's go back to the basics here. Any contemporary discussion of brain/mind relations must take as its point of departure the strong correlations that unquestionably exist between mental and physical events. New manifestations of mind appear everywhere to be closely associated with modifications of structure or process in brains. In biological evolution, for example, we see an overall correlation across animal species between behavioral complexity and the level of organization of the nervous system. The rapid post-natal development of the human infant is likewise associated with massive structural and functional changes in its maturing brain. Neuropsychologists have catalogued numerous specific and sometimes very peculiar perceptual and cognitive deficits that are reliably produced by brain injuries of particular sorts, and we are all presumably familiar as normal human adults with numerous additional facts – the customary daily cycle of consciousness and the effects of mild cerebral trauma induced by alcohol and other psychoactive substances, fatigue, thumps on the head, and so on – that also reflect this generalized dependence of mind on brain.

All of the traditional philosophical positions on brain/mind relations arise from different ways of interpreting this basic fact of correlation. Contemporary mainstream physicalists assume that brain processes unilaterally cause mental phenomena, and as indicated above there are certainly numerous situations in which that seems to be exactly what happens. But what about the other way around? It seems equally obvious, naively, that mental events can cause physical events too; I decide to raise my hand, for example, and up it goes. But there is a hitch here, an asymmetry in the causal structure. The physicalist response to this challenge is simply to assert that the causality in such cases resides not in the mental events *per se* but in their physical equivalents or accompaniments in the brain. In sum, we can cleanly, simply, and directly manipulate the *physical* side of the correlation, but not so the *mental* – at least under ordinary conditions.

However, as I will next explain, strong empirical evidence has accumulated for a wide variety of human mental and behavioral capacities that outstrip in principle the explanatory potential of physical processes occurring in brains. I will discuss these under two main headings.

I. *"Psi" Phenomena, Including Direct Evidence for Postmortem Survival.*

Here I'm referring to experimental and field observations adduced in the course of systematic scientific effort, beginning roughly with the formation of the British Society for Psychical Research (SPR) in 1882, by workers in psychical research and its narrower modern descendent, experimental parapsychology. The basic phenomena in question involve, by definition, correlations occurring across physical barriers that should be sufficient on presently accepted physicalist principles to prevent their formation ("basic limiting principles" as formulated by Broad, 1962, and refined by Braude, 2002). Popular terms for the main classes of relevant phenomena are *extrasensory perception* (ESP) and *mind-over-matter* or *psychokinesis* (PK). ESP

itself is sometimes broken down into subtypes such as *telepathy* (unmediated awareness of the mental state or mental activity of another person), *clairvoyance* (of distant or hidden events or objects), and *precognition/retrocognition* (of future/past events). It is widely recognized by researchers that these popular terms are unduly theory-laden and probably do not correspond to real differences in underlying process, and many therefore prefer the more theory-neutral terminology introduced by Thouless and Wiesner (1947) – *psi* for paranormal phenomena in general, occasionally divided into *psi gamma* for the input (ESP) side and *psi kappa* for the output (PK) side.

A large amount of peer-reviewed research involving experimental, quasi-experimental, and case studies of various kinds has produced cumulative results more than sufficient to demonstrate beyond reasonable doubt – at least to most open-minded persons who actually take the trouble to study it - that the sheer existence of the basic input/output phenomena is a fact of nature with which we must somehow come to scientific terms (Radin, 2006; Tart, 2009). Indeed, I predict with high confidence that future generations of historians, sociologists, and philosophers of science will make a good living trying to explain why it took so long for scientists in general to accept this conclusion.

All psi phenomena are theoretically important by virtue of providing examples of human behavioral capacities that appear impossible to account for in terms of presently recognized psychological, biological, or classical-physics principles. Two special subcategories stand out, however, in terms of the magnitude of the theoretical challenges they pose.

First is *macro-PK*, psychokinesis involving human-scale physical objects. There are many sources of credible evidence for such occurrences, including individual spontaneous PK events, often associated with extreme emotions of one or another sort; recurrent spontaneous PK (RSPK or *poltergeist* cases), typically involving disturbed adolescents; and various kinds of physical manifestations, including levitation, associated with trance mediums such as D. D. Home, Eusapia Palladino, and Indridi Indridason (Braude, 1991). I will illustrate the subject here with a case that exemplifies the theoretical challenges in particularly stark form.

Levitation, a phenomenon reported of mystics from many traditions, was a principal feature in the case of Joseph of Copertino, a seventeenth-century Franciscan monk for whom "ecstatic flight" was a literal reality. Joseph was observed levitating in broad daylight on hundreds of occasions that cumulatively involved thousands of witnesses of varied types including skeptical and even hostile witnesses. Sworn testimony was obtained within a few years from scores of these and exhaustively reviewed in connection with the formal investigatory processes leading to Joseph's canonization. His flights occurred both indoors and outdoors, covered distances and altitudes ranging from a few feet to thirty yards or more, and went on for periods ranging from a few seconds to many minutes at a time. The reported phenomena, in short, were anything but

subtle, and not glibly dismissible in terms of global allegations about "inattentional blindness" (Simons & Chabris, 1999), "mass hypnosis" or other possible errors of observation and/or memory. Of special significance is the fact that during his canonization proceedings the *promotor fidei* – the "Devil's Advocate" or defender of the faith – was none other than the great humanist (and acquaintance of Voltaire) Prospero Lambertini, later Pope Benedict XIV, who was also the principal codifier of the Church's rules of procedure and evidence for canonization. Lambertini himself was initially hostile to Joseph's cause, but upon thorough and searching examination of all details of the case, including the sworn depositions, he concluded that the ecstatic flights must have occurred essentially as reported. Subsequently, as Pope, he published the decree of Joseph's Beatification. A definitive treatment of this extraordinary case has recently become available in the form of the book by Grosso (2016), who not only provides a thorough and detailed account of Joseph's own well-documented phenomena but situates them in the larger history of macro-PK and related psychic phenomena.

Second and in some ways even more disturbing is *true precognition* – direct or unmediated apprehension of future events. Such phenomena would seem on the surface to suggest that the future is fully determined, and hence to undermine any possibility of free will. This greatly troubled F. W. H. Myers (1895), who was therefore relieved to discover cases in which future accidents seemed to have been anticipated clearly and in detail, but were then averted by appropriate interventions.

The conceptual issues related to precognition are complex and deeply tangled. I will not attempt to unravel them here but rather will simply address the state of the evidence itself, which strongly suggests that true precognition is also a genuine phenomenon. The large amount of apparently supportive evidence from forced-choice precognition experiments is rendered somewhat uncertain in its bearings by the possibility that it might have been produced or contaminated by PK (Morris, 1982), but precognitive *remote viewing* experiments in which the possible targets are not even known to the subjects in advance and have not been picked at the time of the viewing seem less subject to alternative explanations of this sort. Most significant, in my view, are the many well-documented spontaneous cases involving multiple low-level factual details that are recorded at the time of the original experience (which often takes the form of an unusually vivid or intense dream), and then verifiably occur at a distant point in the future (Rosenberg, 2015).

Still more important for theoretical purposes, and particularly germane to the special issue of *JCER*, is the large further body of evidence directly suggestive of postmortem survival, the persistence of elements of mind and personality following bodily death. It is simply *false* to assert, as does eliminative materialist philosopher Paul Churchland (1988, p. 10), that we possess no such evidence. We in fact possess a large amount of such evidence, much of it of very high quality, but unfortunately this work remains practically unknown outside the small circle of

persons professionally involved with it. Here I can provide only the barest glimpses into a literature consisting of literally hundreds of thousands of pages of heavily documented case studies – anything but mere *anecdotes*, as would-be critics often allege. Three main lines of survival research are of particular importance for my purposes here.

The first concerns *trance mediumship*, a principal focus of the SPR during the first several decades of its work. *Mediums* here are persons who are ostensibly able, usually when in some sort of trance-like altered state of consciousness, to make contact with the dead (Gauld, 1982). A large proportion of the most important research revolves around a half-dozen or so such persons who proved especially good at providing, under well-controlled conditions, detailed and accurate information seeming to derive from specific deceased persons about whom they could not have learned in any normal way. There is a difficult issue here related to proper interpretation of such evidence, which we will get to shortly, but let me first indicate the character of the evidence itself.

One of the first and best of the great trance mediums was Leonora Piper, discovered by William James in 1885, and the most important phase of her mediumship involved a "communicator" named GP (George Pellew), ostensibly the surviving personality of a young man who had recently died unexpectedly in a fall. Over several years her principal investigator, Australian lawyer Richard Hodgson, arranged for some 150 "sitters," exactly thirty of whom had been known to GP during his lifetime, to be introduced to sessions anonymously after Mrs. Piper had entered her trance state. The GP communicator recognized all and only those thirty sitters, and for most of them provided numerous and appropriate details of events and memories they shared, often with compelling verisimilitude in terms of GP's own characteristic vocabulary, diction, sense of humor, and so on. Hodgson himself, initially a skeptic, became convinced of the reality of survival largely on the strength of this one series of sittings (Hodgson, 1898).

Speaking more generally, all of the main properties of minds or personalities as we customarily understand these terms are evident in high-grade mediumistic communications. In the formulation of Pols (1998), for example, building on that of Descartes in Book II of the *Meditations*, mind "knows, makes (that is, forms, produces, creates), understands, thinks, conceives, perceives, remembers, anticipates, believes, doubts, attends, intends, affirms, denies, wills, refuses, imagines, values, judges, and feels" (p. 98). Summarizing the very large scientific literature on mediumship, it is fair to say that all of these properties are exemplified individually in many cases, and most or all of them jointly in the best cases such as that of GP. Not only are previously existing semantic, autobiographical, and procedural memories apparently in considerable degree preserved, but new memories can also be formed, mediated at least in part by continuing and presumably psi-based interactions with the world of the living, whether directly or by way of the medium. Less verifiably, the communicating personalities also seem to experience themselves as continuous with their prior selves, and as conscious selves who inhabit

some sort of body and are able to interact with other deceased persons in some sort of shared phenomenal world.

The full picture regarding trance mediumship is of course more complicated and hazy than this brief summary suggests. A large proportion of garden-variety mediumistic (and *channeled*) communications are pure twaddle, and even the best cases sometimes display surprising weaknesses and limitations. Some of these limitations seem to derive from the medium, some from the communicators, and some perhaps from the still largely unknown nature of the connection between them. The GP persona for example exhibited certain curious lacunae, such as a determined unwillingness to discuss philosophic and scientific matters that had been of burning interest to the living GP, and vouched for the authenticity of certain other Piper "controls" that were transparently bogus, such as the soi-disant "Walter Scott" and "Julius Caezar" (sic). As in many other cases, GP's awareness of ongoing events in this world was also very limited and imperfect, often extending even to uncertainty as to whether his attempted communications had gotten through Mrs. Piper to the sitters. For further information about Mrs. Piper and other great mediumistic cases see for example Balfour (1935), Braude (2003), Broad (1962), Dilley (1995), Ducasse (1961), Gauld (1982), Hart (1959), Murphy (1961), Myers (1903), Salter (1950), Sidgwick (1915), and Sudduth (2016).

A second large area of survival research concerns what we call "*cases of the reincarnation type*" (CORT), in which small children – typically ages two to five – begin to speak and act as though they are remembering events from a previous, usually very recent, lifetime. The children often give detailed information about people and places they had known, or talk about the circumstances in which they died, and with this information the parents, or sometimes an independent investigator, can identify a deceased person whose life and death corresponds to what the child was saying. In the best cases, detailed records of the child's statements have been made by independent investigators before any contact between the child's family and that of the ostensible previous personality (PP). The children also frequently show strong and unusual behaviors that seem appropriate for the PP – such as an extreme fear of water when that person had died by drowning – and in a sizeable subset of cases the child has an extremely unusual birthmark or birth defect corresponding to fatal injuries of the PP (see, especially, Stevenson, 1997).

The originator and principal architect of this line of work was our UVA colleague Ian Stevenson, and, between 1961 and the present, he and others including Jim Tucker and Emily Kelly of our group have directly investigated over 2,500 such cases, many in great detail (see, for example, Kelly, 2013; Stevenson, 1975–1983, 1997, 2001; Tucker, 2005, 2013). Although the great majority of cases to date have come from countries where belief in reincarnation is strong, such as India and Burma, good cases have also been found in most other parts of the world including the countries of Europe and North America. An important further development now nearing

completion is the entry of all cases into a cumulative database according to a detailed coding system. Completion of this database will open a path toward development of statistical models and testing of hypotheses about factors that govern the phenomena – for example, predictors of the number and accuracy of remembered details, or the length of the *intermission* between death and rebirth.

Although the latter work in particular is still at an early stage, a number of points have already emerged that should command the attention of theorists. First and foremost, of course, is the strong indication that rebirth at least sometimes occurs. Second, although it is easy to imagine more complex scenarios in which personalities split or merge – i.e., one-to-many or many-to-one relations between PPs and the corresponding children – the data available so far strongly support one-to-one correspondence as the predominant pattern. Something seems to encourage continuity of personality both within and between lives. This picture has been reinforced, moreover, by early results from the database indicating strong tendencies toward conservation of gender and of some basic personality characteristics between successive lifetimes. Another striking fact is the high incidence of early, violent or unnatural death among PPs (around two-thirds of the cases), which may be related somehow to these children's unusual capacity or impulse to recall (Stevenson, 1997). Little evidence has yet emerged of anything like moral improvement or punishment for past misdeeds, such as might be expected from theories of *karma* and the like, but this is conceivably due to limitations of the available sample, biased as it is toward unusual conditions of death in the PPs. If all or most of us in fact reincarnate, and we could discover means for reliably accessing past-life memories in adults, a fuller picture might conceivably emerge.

However, although there is some relevant meditative lore and a bare handful of interesting hypnotic-regression and psychedelic experiences suggestive of such possibilities, no meaningful conclusions can be drawn about such things at the present time. A final point which concerns the birthmark/birth-defect cases is that in most such cases the dying and perhaps surviving PP seems likely to have been aware of the fatal injury, and hence is plausibly suspected of being the source of the subsequent marks or defects. A surviving PP might similarly be the source in an important subclass of *experimental birthmark* cases in which the child's marks correspond to marks deliberately placed on the deceased person's body after the death by grieving relatives in hopes of identifying the successor. However, there are other cases – for example, cases involving wounds to visually inaccessible or even interior parts of the PP's body – in which such interpretations seem less plausible.

The third main area of survival research concerns what we call *crisis apparitions*, in which a "percipient," person A, may see an actual visual apparition, hear a voice, have a dream, or simply feel the presence of a loved one, person B, at or near the time that B, the "agent," is undergoing serious or fatal injury at some physically remote location. The early SPR researchers

took a special interest in such events, carefully collecting and documenting large numbers of cases and produced as its first major work the landmark *Phantasms of the Living* (Gurney, Myers, & Podmore, 1886). This remarkable two-volume study includes not only detailed reports of over 700 individual cases (many including detailed documentation such as medical and legal records, supporting testimony from witnesses or interlocutors, and so on), but also an elaborate and sophisticated discussion of methodological issues regarding eyewitness testimony and means for dealing with them. Subsequent case collections, mostly carried out with far less concern for detailed documentation, have shown generally similar patterns, as revealed especially by initial trailblazing attempts to encode their features in standardized fashion for computer modeling and analysis (Schouten, 1979, 1983).

A number of general features of crisis-apparition cases stand out in terms of theoretical relevance and interest. First is the apparent importance of strong emotional ties as a driver of these unique events, somehow overriding normally existing physical barriers. Also striking is their apparent association with altered states of consciousness in the percipients, especially dreaming and hypnagogic/hypnopompic states – the *twilight zone* between waking and sleeping. In many cases the event begins with the percipient having a vague feeling of distress or disturbance, sometimes accompanied by a vivid sense that the injured person is present at a particular location nearby, and progresses into a full-fledged apparition only later on when the percipient enters a more receptive state. Third, as argued by Myers (1903), the timing of the events relative to verified times of death is sharply asymmetrical, rising steeply right around the time of death and declining slowly thereafter (vol. 2, p. 14). Percipients also typically have only a single such experience in their entire lifetime and remember it vividly for decades afterward as something uniquely significant (and note that Gurney et al. took pains to show that when questioned repeatedly over periods of many years, percipients typically reported *fewer* details with the passage of time).

Many crisis apparitions seem potentially interpretable as hallucinations generated by percipients who have been alerted at some level to their loved ones' circumstances by a psi process, as argued in particular by Louisa Rhine (1977). Others, however, seem to locate agency and purpose squarely in the dying or deceased, as for example in the case of a long-dead husband who seems to have come for his newly deceased wife but is seen by her tenant, a total stranger. Many apparitions also display what are aptly described as *quasi-physical* properties, as discussed by Tyrrell (1953, pp. 77-80). For example, they sometimes obscure the background, cast shadows, and can be seen in mirrors, like ordinary physical objects. Pet animals may also detect them, and, if more than one human is present, all or most may observe it, with differences of perspective appropriate to their differing locations in the communal space. On the other hand, apparitions sometimes enter and exit through walls or floors, become transparent and disappear, and in sundry other respects behave very *unlike* normal physical objects. Thus, they both resemble and differ from ordinary embodied persons, approximating them in widely varying

degrees, from marionette-like to so lifelike as to be mistaken temporarily for the corresponding person. (Similar properties apply, parenthetically, to haunting cases in which the apparitional form is recurrently associated with some particular *place.*) Complicating the picture further, there are also a number of well-documented *reciprocal* and *experimental* cases of out-of-body experiences in which one living person more or less deliberately *projects* to a distant location, observes verifiable circumstances there, and is observed at the corresponding location in the form of an apparition by one or more persons present (Hart & Hart, 1933; Myers, 1903, vol. 1, pp. 682–685).

The bulk of the available evidence concerning apparitions thus seems consistent with a picture in which some part or aspect of a given person departs from one place and appears in another in a form which is somehow intermediate between genuinely physical and purely hallucinatory. This is essentially the picture originally arrived at by Myers (in debate with Gurney), which is also endorsed – but only reluctantly and after lengthy critical consideration – by Gauld (1982). Further confirmation lies in the fact that certain kinds of crisis apparitions that might be expected on the telepathy-plus-hallucination model seem not in fact to occur – in particular, what might be called *disseminated* apparitions, in which a dying person appears simultaneously to loved ones in widely separated locations.

So what are we to make of all this *direct* evidence for postmortem survival? Ironically, the primary threat to survivalist interpretations usually arises *not* from considerations of evidential quality – problems of fraud, credulity, errors of observation or memory, and the like – but from the difficulty of excluding alternative explanations based upon psi-type processes involving only living persons. For example, a trance medium who appears to be delivering veridical information from your deceased uncle might actually be acquiring that information by means of a psi-type process from you as the sitter, or from other living persons who knew him, or from physical records of some relevant sort, rather than from your deceased uncle himself, and in general it proves extremely difficult to determine with certainty which sort of explanation is correct. This is the infamous "survival vs. living agent psi" debate, recently discussed in depth by philosophers Braude (2003) and Sudduth (2016).

Either horn of this interpretive dilemma – survival or psi – is fatal to the prevailing physicalist brain/mind orthodoxy, and this undoubtedly helps explain the hostility of dogmatic physicalists to both. It should also be evident that compelling evidence for postmortem survival, an element of belief common in some form to all of the world's great religious traditions, would demonstrate especially clearly the inadequacy of present-day mainstream physicalism. In my judgment we are at or very close to that point – close enough, I believe, to justify rational belief in the possibility if not indeed the likelihood of one's own personal survival. I must also underscore, however, how little we have learned so far: The most that can responsibly be said at present is that a few persons may have continued to exist in some unknown fashion following bodily death, for

varying periods of time and under essentially unknown conditions, some of whom may also have been reborn. Nevertheless, a world that includes such a possibility is already radically different, and in humanly significant ways, from that inhabited by most contemporary scientists (at least in their day jobs!).

II. Additional "Rogue" Phenomena Incompatible with Physicalism.

Evidence for psi and survival flagrantly conflicts with conventional physicalist expectations, and it is for precisely this reason that many mainstream scientists are anxious to dismiss it, or perhaps more accurately to isolate and quarantine it as though this were the only sector in which contemporary physicalism is not triumphantly advancing. In fact, however, many other well-evidenced human mental and psychophysical capacities also resist or defy explanation in conventional physicalist terms and thus point in the same theoretical direction.

A project organized in 1998 under the auspices of Esalen Institute's Center for Theory and Research (CTR), and led by me, began by systematically assembling large amounts of peer-reviewed evidence of this sort. We approached this task by revisiting an extraordinary book published in 1903 which had already pursued the same general strategy: *Human Personality and Its Survival of Bodily Death* (2 vols.), by Frederic W. H. Myers (1843-1901), a founder of the SPR and friend and colleague of William James. We set out to update and re-evaluate Myers's great work in light of the subsequent century of scientific work on various topics that had been central to his own original argument, and to this end we systematically collected material related to manifestations of extreme psychophysiological influence, such as stigmata and hypnotically induced blisters; prodigious forms of memory and calculation; unexplained aspects of everyday human memory; psychological automatisms and secondary centers of consciousness; out-of-body and near-death experiences, including intense and transformative experiences occurring under extreme physiological conditions such as deep general anesthesia and/or cardiac arrest, which contemporary neuroscience deems incapable of supporting any experience whatsoever; genius-level creativity; and mystical-type experiences whether spontaneous, pharmacologically induced, or resulting from transformative practices such as intense meditative disciplines of one or another sort. Collectively, these phenomena greatly compound the explanatory difficulties posed by everyday phenomena of human mental life (such as meaning, intentionality, subjective point of view, and the qualitative aspects of consciousness) that have recently been targets of intense philosophical discussion. In a nutshell, they add a rich empirical dimension to what appears to be a rising worldwide chorus of theoretical dissatisfaction with classical physicalism as a formal metaphysical position. We seem to be at or very near a major inflection point in modern intellectual history.

This first-stage effort culminated in publication of an 832-page book titled *Irreducible Mind* (Kelly et al., 2007; henceforth *IM*). For details of the evidence I must refer readers to *IM* itself,

but what matters most here is its central theoretical implication. Specifically, it became clear that rogue phenomena of the sorts we catalogued can be accommodated more naturally within an alternative to the conventional physicalist interpretation of the brain/mind correlation, an interpretation already advanced in abstract form by William James (1898/1900). James there points out that to describe the mind as a function of the brain does not fully specify the character of the functional dependence. Physiologists routinely presume that the role of the brain is *productive*, the brain generating the mind in something like the way that the tea kettle generates steam, or the electric current flowing in a lamp generates light, but there are other forms of functional dependence which merit closer consideration. The true function of the brain might for example be *permissive*, like the trigger of a crossbow, or more importantly *transmissive*, like an optical lens or a prism, or like the keys of a pipe organ (or perhaps, in more contemporary terms, like the receivers in our radios and televisions).

More generally, one can at least dimly imagine some sort of mental reality – which in James's view might be anything from a finite mind or personality to a World Soul or cosmic consciousness – that is closely coupled to the brain functionally but somehow distinct from it. Within this basic framework James himself speaks variously of the brain as straining, sifting, canalizing, limiting, and individualizing that larger mental reality existing behind the scenes. He quotes approvingly Schiller's characterization of matter as "an admirably calculated machinery for regulating, limiting and restraining the consciousness which it encases. … Matter is not that which *produces* consciousness, but that which *limits* it, and confines its intensity within certain limits" (James, 1898/1900, pp. 66-67), and Kant's declaration in the *Critique of Pure Reason* that "the body would thus be, not the cause of our thinking, but merely a condition restrictive thereof, and, although essential to our sensuous and animal consciousness, it may be regarded as an impeder of our pure spiritual life" (as cited in James, pp. 28-29). James also explicitly portrays the brain as exerting these various effects in a manner dependent on its own functional status, and links this idea to Fechner's conception of a fluctuating psychophysical threshold (p. 24, pp. 59-66).

Much can immediately be said in favor of such a picture, James then argues. It is in principle compatible with all of the facts conventionally interpreted under the production model, and however metaphorical and incomprehensible it might at first seem, it is in reality no more so than its physicalist rival. It also has certain positive superiorities: In particular, it appears potentially capable of explaining various additional facts, including those being unearthed by F. W. H. Myers and his colleagues in psychical research (pp. 24-27).

In sum, "transmission" or "filter" models are *logically* viable, and they should rise or fall in the usual scientific way in light of their ability to accommodate the available empirical evidence. The central aim of the first phase of our Esalen/CTR project had been to review and re-assess Myers's filter-type model of human personality in light of subsequent research, and we had

found that the evidence supporting such pictures has actually grown far stronger in the century following his death. Myers and James were of course soon pushed aside by the rise of radical behaviorism with its self-conscious aping of the methods of classical physics, and that influence persists in modified form even now in mainstream cognitive neuroscience. In my view psychology has taken a hundred-year detour, and is only now becoming capable of appreciating the theoretical beachhead that our founders had already established.

I should also underscore here that for me personally this first phase of our project had gone a long way toward dissolving what the eminent American psychologist Gardner Murphy (1961) long ago called the "immovable object" in the survival debate – the *a priori* biological objection to survival: Specifically, if physicalism were true, and mind and consciousness manufactured entirely by neurophysiological processes occurring in brains, then survival would be impossible, period. This is essentially the position argued *ad nauseum* by Martin and Augustine (2015), as though it were something novel. But the evidence we assembled in *IM* clearly shows, I submit, that the connections between mind and brain are in fact much looser, and can be conceptualized in the alternative fashion of filter or transmission models without violence to other parts of our scientific understanding, including in particular leading-edge neuroscience and physics (see especially *IM* Chapter 9). For me this shift in theoretical perspective instantly opened the door to the possibility of survival.

The normally hidden subliminal region of the mind, "The More" of William James, is the wellspring of the latent human potentials that historically have comprised Esalen's main practical focus. But it is also precisely these transpersonal aspects – especially psi phenomena and mystical experience with their deep historical and psychological interconnections, postmortem survival, and genius in its highest expressions – which jointly demonstrate that classical physicalism must give way to some richer form of metaphysics. Please note here that what is at issue is *not* whether we will have metaphysics – because we inevitably will, whether conscious of it or not – but whether we will have good metaphysics or bad.

Classical physicalism is definitely inadequate, but what sort of alternative metaphysics should take its place? Our basic strategy in approaching this second and much more difficult task was to examine in depth a sampling of conceptual frameworks or theories, ancient and modern, that take the existence of rogue phenomena of the sorts catalogued in *IM* for granted and attempt to imagine how reality must be constituted in order that such things can happen. This ultimately led to our publication of a second large book, *Beyond Physicalism* (Kelly, Crabtree, & Marshall, 2015; henceforth, *BP*), which includes theoretical contributions from an unusual diversity of perspectives including those of physicists, neuroscientists, psychologists, philosophers, and scholars of religion.

The central conclusion of *BP* is that theorizing based on an adequately comprehensive empirical foundation of the sort set forth in *IM* leads inescapably into metaphysical territory partly shared with the world's major religious traditions. Specifically, we argue that emerging developments in science and comparative religion, viewed in relation to centuries of philosophical theology, point to some form of evolutionary panentheism as the current best guess about the metaphysically ultimate nature of things. In brief, panentheisms attempt to split the difference between classical theisms and pantheisms, conceiving of an ultimate consciousness of some sort as pervading or constituting the manifest world, as in pantheism, but with something beyond, as in theism. The version we tentatively embrace further conceives the universe as in some sense slowly waking up to itself through evolution in time. Most importantly, the rough first-approximation picture we have developed so far can be elaborated and tested through many kinds of further empirical research, especially research on meditation and psychedelics as pathways into higher states of consciousness. In sum, although a great deal remains to be done both theoretically and empirically to bring the current rough picture into sharper focus, we feel confident that it is headed in the right general direction.

What we see currently emerging, in short, is a middle way between the warring fundamentalisms – religious *and* scientific – that have so polarized recent public discourse; specifically, an expanded science-based worldview that can accommodate empirical realities of paranormal and spiritual sorts, including postmortem survival, while also rejecting rationally untenable *overbeliefs* of the sorts targeted by critics of institutional religions. This emerging vision is both scientifically justifiable and spiritually satisfying, combining the best aspects of our scientific and religious heritage in an effort to reconcile these two greatest forces in human history. What is ultimately at stake here seems nothing less than recovery, in an intellectually responsible manner, of parts of our human heritage that were prematurely discarded with the meteoric rise of modern science starting four centuries ago. And what is especially significant at this critical juncture, and the fundamental new factor that may finally allow this recovery to succeed after numerous previous failures, is that it is now being energized by leading-edge developments in science itself. A potentially viable path to a better world seems to be opening up.

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Article

Near-Death Cases Desegregating Non-Locality/Disembodiment via Quantum Mediated Consciousness: An Extended Version of the Cell-Soul Pathway

Contzen Pereira* & J Shashi Kiran Reddy

Abstract

The word *soul* in the cell-soul pathway does not have a scientific definition but has been hypothesized to be an indefinite, non-structured, massless energy made up of electromagnetic radiations that is confined in the cytoskeletal network of a living cell. It is a coherent, imperceptible, uncontainable and recyclable support pathway, which uses energy to promulgate consciousness in the cell supporting its functions (Pereira 2015). The pathway currently provides a mechanistic explanation of the flow of consciousness within the body, but the intent of this paper is to provide an arduous explanation of non-local consciousness or disembodiment observed in near-death experiences. The paper hypothetically subsets the cell-soul pathway with the presence of two forms of consciousness, consistent with a recently developed model by Reddy (2016b): bodily consciousness, which manages functions only at cellular level, and functional consciousness, which is present in the body but can get disembodied and perform non-locally; the two forms of consciousness represent the overall state of consciousness. The non-locality of subjective experiences observed in near-death cases can be related to the realm of quantum physics – quantum entanglement between the two forms of consciousness that can demonstrate the capability of storing information holographically within the void or vacuum with the ability to create memories beyond the limitations of the brain and body.

Keywords: Cell-soul pathway, consciousness, entanglement, near-death, experience, disembodiment, zero point field.

Introduction

Consciousness is an enthralling topic in the field of science and various disciplines, but being conscious minus a body when clinically dead is abstruse to apprehend and recognize. Several near-death cases have been recorded and studied. In many cases the individual is conscious outside the body with a capacity to conceive and store memories when clinically dead and can recount these experiences when resuscitated. Non-local consciousness has been defined as a state, where consciousness occurs beyond the physical boundary of the body (Van Lommel 2013), otherwise known as disembodiment. Consciousness in this view is divided into two

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forms, wherein one form remains identified with the body while the other can be non-material aspect; when the body loosens the other form takes up the task and therefore resulting in retention of memory of a subjective experience. Disembodiment is an ambiguous term rarely accepted in the scientific community but commonly defined as, "A soul, spirit, or consciousness that has been disembodied, or which lacks a physical form" (in Wiktionary). It is therefore an immaterial state, most often invisible to others, so it is ignored by science and only accepted in philosophy as ontological dualism, religious or otherwise. Descartes called the immaterial aspect of consciousness *res cogitans* – in other words, mind, soul or spirit, in which form it correlates with near-death, out-of-body and end-of-life experiences.

Studies conducted by Dr. Sam Parnia and group (2001, 2002, 2014), Dr. Pim van Lommel and group (2001, 2014), Dr. Kenneth Ring and group (1999, 2001, 2006) and Dr. Janice Holden (2009) have provided significant evidence of survival of consciousness after death and has been presented in the form of several near-death cases. Dr. Sam Parnia and group have confirmed that approximately 9% of adults have a near death experience after a cardiac arrest (Parnia et al. 2014). Von Lommel and group (2001) claimed this number to be 18% while IANDS (International Association for Near-Death studies) published that approximately 85% of children have near-death experiences (Long & Holden 2007; Holden 2009). Dr. Bruce Greyson, a well know researcher in near-death studies, has the following opinion about near-death studies: "Our mind-brain identity model works fine for everyday walking and talking, but when you're looking at times when the brain is not functioning and the mind seems to function quite well, you get into that extreme area where we need to look at some other models" (as cited in MacIssac 2015).

Near-death and out-of-body experiences have been termed absurd by some and hallucinatory or illusory by others (e.g., Mobbs & Watt 2011). Recently, respected philosopher and Buddhist, Evan Thompson (2015), contended such experiences are scientifically unproven so must be considered dreams of the brain. Near-death experiences have some common facets which involve a feeling of peace and tranquillity, a sensation of floating through a tunnel towards a bright light while undergoing a complete life review, etc. Sometimes near-death experiences can be horrific, caused by unpleasant feelings of fear or panic which may or may not be associated with a life review (Blanke & Dieguez 2009).

These common features in near-death experiences have been challenged by sceptics, who claim these features to be caused in the brain by factors such as, anoxia or hypercarbia in the dying brain, insufficient administration of general anaesthesia, release of endorphins in brain during stress, high level of serotonin, resident brain electrical activity, administration of painkillers, etc. (Blackmore 1993; Blackmore 1998; Carr 1981, 1982; Judson & Wiltshaw 1983; Morse et al. 1989). Most of these claims by the sceptics have been ruled out by critics, but there are some of them that are still under evaluation (Parnia et al. 2001; Shulman et al. 2003; White & Alkire, 2003;). During cardiac arrests, the brain is presumably dead and both human and animal studies

have provided extensive supporting data on cerebral physiology during and after cardiac arrest (Parnia & Fenwick, 2002). However, as Thompson (2015) and others have noted, brains completely without measurable activity during a cardiac arrest when the NDE presumably is occurring have never been observed under clinical conditions, so it is possible brains continue less visible activity at the crucial time.

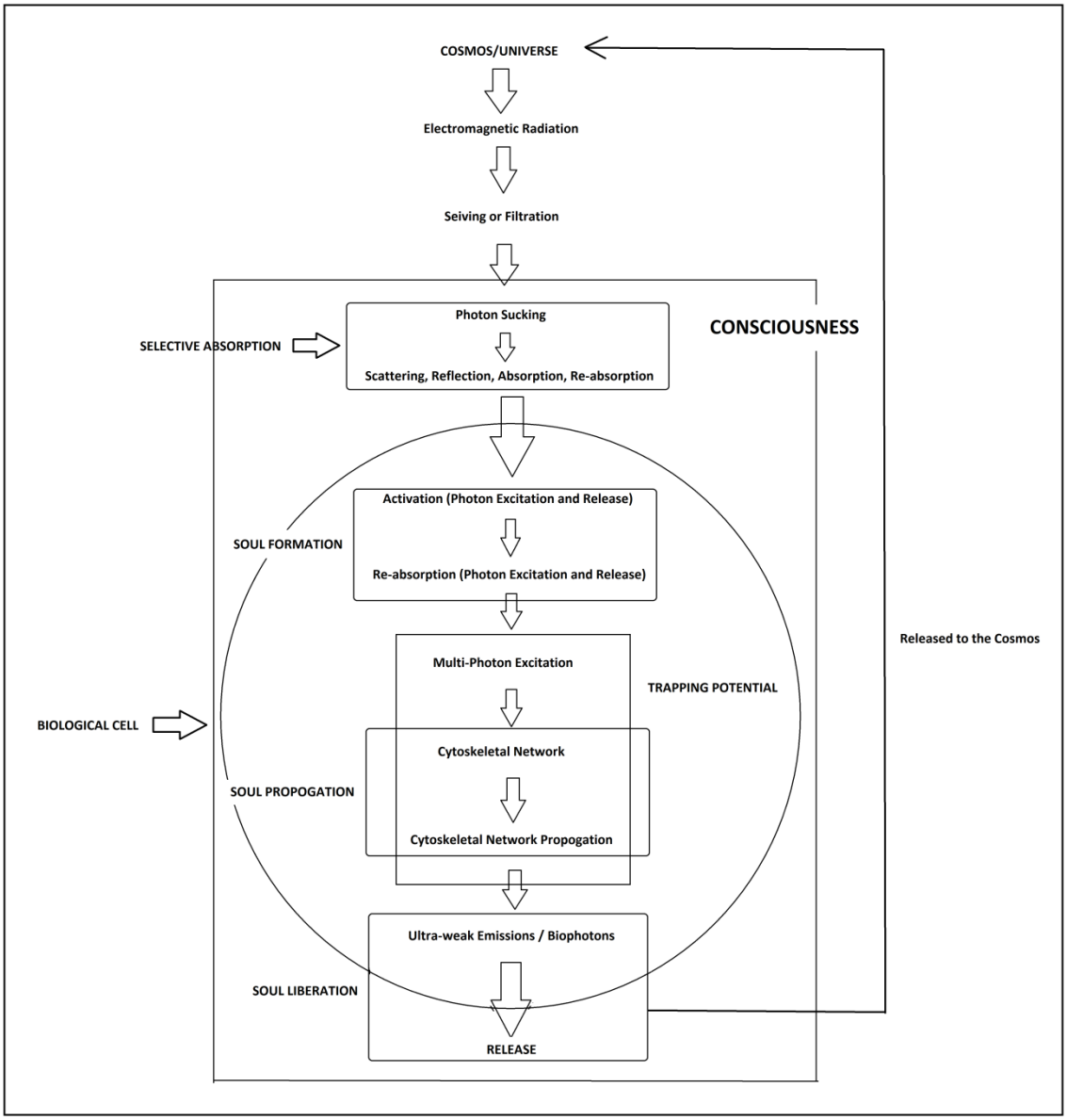

Figure 1. The Schematic Representation of the Cell-Soul Pathway (Pereira 2015)

The cell-soul pathway is a hypothetical pathway and has been defined as a coherent, imperceptible, uncontainable and recyclable support pathway, which uses electromagnetic

energy in the form of photons to promulgate consciousness in a living cell. (See Fig. 1, from Pereira 2015). The pathway is currently limited to the propagation and functioning of consciousness within the microtubular network of the cell, but with further backing from a quantum physics perspective, an attempt is made to understand and justify non-local consciousness or the state of conscious disembodiment, as well as its vivaciousness and richness through the experiences observed in some exceptional near-death cases.

How is it possible for a conscious essence to exist without a physical host? To avoid the purely religious explanations of a separable *soul* or *spirit*, we offer our research into quantum mediated consciousness: an extended version of the cell-soul pathway.

Intriguing Experiences in Near-Death Cases Supporting Disembodiment or Non-Locality of Consciousness

Cardiac arrest patients are one of the most studied cases with regards to near-death and out of body. When resuscitated, patients provide a narration of their experience. The fullness associated with the experience implies that during a near death experience the non-local conscious component or disembodied conscious state leaves the body, but remains in the resuscitation room or in close proximity to the body. Many of these characteristics can be verified by doctors and independent researchers after patients return to their bodies to tell their experience. The capacity of being out of the body and simultaneously being conscious in a near-death state has never been accepted by the scientific community and has often been categorized and disregarded by sceptics as a neuro-psychological state associated with the dying brain (cf. Blackmore 1998). Several near-death cases have demonstrated this phenomenal state of being disembodied, but there are a few cases that stand-out from the regular cases and thus pose a challenge to the scientific community. The case studies presented in this paper are exceptional near-death cases that provide a substantiation of the existence and rationalized approach of consenting non-local consciousness. The case studies presented here are not *proven beyond all doubt* as they have been criticized for various reasons by several sceptics, yet they still support the idea of non-local consciousness and disembodiment.

The first case is of Kimberly Clark (e.g., Rivas 2015; Sharp 2007) who had an experience that changed her life and her belief in the existence of consciousness after death. One morning, as part of her daily work schedule at the Harbour View hospital, she was working with a team of doctors who were trying to save a woman who had been bought to the intensive care ward as she was suffering a massive heart attack. As the doctors tried to save the woman, her heart stopped several minutes; she was clinically dead for those few minutes and it was a miracle that the doctors could bring her back. When the woman calmed down she explained to Kim, that during her resuscitation she had found herself at the ceiling level and could accurately point at the

corner of the room from where she was observing her own resuscitation. But this was not all; she had also felt herself three storeys above the ground from where she could see a tennis shoe sitting on a ledge. The tennis shoe was dark blue, worn with a scruff by the little toe and the lace going under the shoe heel; she felt agitated because she wanted someone to get the shoe.

When Kim checked the ledge of the patient's window there was no shoe, but when a through search of all the ledges in the hospital was conducted, on the opposite side of the hospital on a different floor, in a room with a window facing to the west there was a tennis shoe on the ledge with the same description that had been provided by the woman. Kim could not believe her eyes as she opened the window and reached down and picked up the shoe which bore the scruff on the opposite side. There were no other buildings on that side of the hospital and the details of this shoe as described by the woman could definitely not have been seen from the ground or from anywhere inside the hospital. To add to that, it was the first time that this woman had ever visited this hospital. To know that a shoe is lying on the ledge with its nearly perfect description, she should have either seen the shoe before the operation or she should have been there in the same room much before the operation, as there was no possibility of viewing the shoe from an opposite building. Then how did she see this shoe and experience its pattern and colour especially during a situation when she was dead?

Hovering above her body and viewing the shoe from three storeys high was possible only if she was suspended from that height or if she was flying. This case clearly reveals a state of disembodiment, where the individual could move out of the body, rise up to a level of three storeys and observe a shoe placed on a ledge with a scruff on the side not facing the window (see Rivas 2015; Sharp 2007). Under no circumstances, can this experience can be considered as a dream or hallucination, as the shoe that was described by the woman was found later on the ledge with the same features. In this disembodied state the woman was conscious, as she was aware of her surroundings where she could even describe the colours and texture of the shoe. There seems to prove that there is a form of consciousness that can be non-localized in a situation like death, which is evident in this experience. The fact that this form of consciousness can become re-localized in the body (return to the body) proves that even when disembodied, it is still connected in some form to the body and can enter back into the body with memories that were created in the disembodied state.

Another interesting case study is of Vicki Noratuk, who has been blind from birth and was terribly injured in a car crash (Stroganoff 2010; Ring & Valarino 2006). She had a skull fracture, concussion, neck injury, back injury, leg injury and, worse, her heart stopped rendering her clinically dead for approximately 4 minutes. At that very moment she felt her back against the ceiling and she kept looking at everything that was happening on the hospital table. She even heard a doctor say that it was unfortunate that she would now also be deaf along with being blind, because there was blood on her left ear drum. She even recollected one of the lady doctors mentioning that even if she survived this coma she would be in a vegetative state. As she fought

for her life something extraordinary was happening – she could see for the first time in her life, but she felt was a nightmare, as she had never before perceived anything beyond the reach of touch. The blind usually touch things to feel them; therefore, this woman's world was always at an arm's length. This frightened her as she could now perceive things through sight that were beyond reach.. In this state she could see her left hand and the ring on her left finger; she even felt her shortened hair that had been shaved off; she was conscious without her body which lay on the operation table.

She had never dreamed in visual images, but now she was actually experiencing them She could not differentiate between the colours that she was seeing for the first time and considered them different intensities of light. She survived and returned to her world of darkness yet she has no doubt that for just a few minutes she could see. This case study strongly supports the state of conscious disembodiment – a woman who was blind from birth could see and experience in full consciousness and in her disembodied state could create and retain memories that could be narrated once she was back into her body. Experiencing her senses in such a state must be overwhelming, but it provides us with an explanation that the senses can be experienced even in a disembodied state and by some means get transmitted to the sense organs of the body, which is in a state of suspended animation while being refurbished. Being conscious in a disembodied state confirms the non-locality of consciousness which differs from the grounded state of consciousness.

Many such cases have been reported in blind subjects and none of the explanations or models proposed to explain them provides an in-depth understanding of such phenomenon. To explain such happenings in the blind, Ring and Cooper (1999) coined the term *mindsight* and sees it as a form of transcendental knowing often reported by both blind and sighted during extrasensory or out-of-body experiences (cf. French, 2005; Ring, 2001; Ring & Cooper, 1999).

The next case study is of 55 year old truck driver, Al Sullivan, who was undergoing a triple by-pass surgery (Kelly et al. 1999; Sullivan, 2013). This was the first time he had met his cardio-vascular surgeon on the operating table. As the anaesthesia took effect the surgeon introduced himself and kept explaining the whole operation procedure which involved removing his veins from the leg and the arteries from chest wall in order to perform the planned 4-5 bypasses. Suddenly, he felt that he did not have to listen to the surgeon anymore, as he was no longer in his body and did not need his ears to listen, for he had left his body and could watch the whole procedure from above. He saw the team covering his eyes with tape and placing all sorts of drapes and blankets around him, with the surgeon and his team getting ready to operate on him.

Hovering above his body he saw his surgeon standing alone over his opened chest, which was being held open by metal clamps while two other surgeons were working over his leg. He recalls being puzzled at the time about why they were working on his leg when the problem was with his heart, but he now knows that at this point in the surgery the surgeons were stripping the vein

out of his leg to create the bypass graft for his heart. At one point he observed the surgeon take a step back, place his arms near his armpits and move his folded hands in an unusual manner that looked as if he was flapping his arms. This was later confirmed by the surgeon and his team: when the surgeon was not operating he had a habit of placing his hands close to his chest and point with his elbow to prevent contaminating his hands. He could not have known this peculiar behaviour of his surgeon unless he was conscious in the room or someone would have told him that way before the operation, which was next to impossible. When he came back to his body after the surgery was over, the surgeon was startled that he could describe his own arm flapping, which was his idiosyncratic method of keeping his hands sterile.

This case confirms that in a disembodied conscious state the individual can experience his surroundings as if he were in his conscious body. The connection between the body and the disembodied conscious state seems to be so enduring that it can create and store these memories, which can be revived once consciousness re-enters into the body. Observing the operation, providing details about the procedure and observing the behaviour of his surgeon could not have been possible when his eyes were taped and he was in a state of unconsciousness. During a near-death experience the brain is apparently inactive and there seems to be no activity in the vision centre of the brain (Parnia & Fenwick, 2002), so how can memories be created without the presence of active brain in a body? How is the individual conscious, when clinically dead? There should be a mechanism that creates these memories within the realms of the world that lay beyond the imagination of oneself.

The above cases strongly support the possibility of a disembodied state during a near death experience, but we also need a more physical-mechanical explanation of how this is possible. It is a difficult task to prove the existence of the experience as well as the mechanism that made it possible, but it can be hypothesised. The next section attempts to understand and provide an explanation to this form of conscious state from the perspective of a hypothesised pathway known as the cell-soul pathway (see Fig. 1 above, Pereira 2015), which we feel indicates the flow of consciousness within the body. The existence of a conscious state other than the body and its interaction with the circulating consciousness within the cellular network of the cells in the body as described by the cell-soul pathway could provide a convincing explanation of non-locality of consciousness.

The Extended version of the Cell-Soul Pathway

The word *soul* in the cell-soul pathway does not have a scientific definition but has been hypothesized to be an indefinite, non-structured, massless energy made up of electromagnetic radiations that is confined in the cytoskeletal network of the biological cell. The cell-soul pathway is a hypothetical pathway that helps in the propagation of consciousness to support the

functioning of the body at the level of a biological cell by means of immeasurable assortment of photons of different frequencies and wavelengths within the cytoskeletal network of a single cell (Pereira 2015).

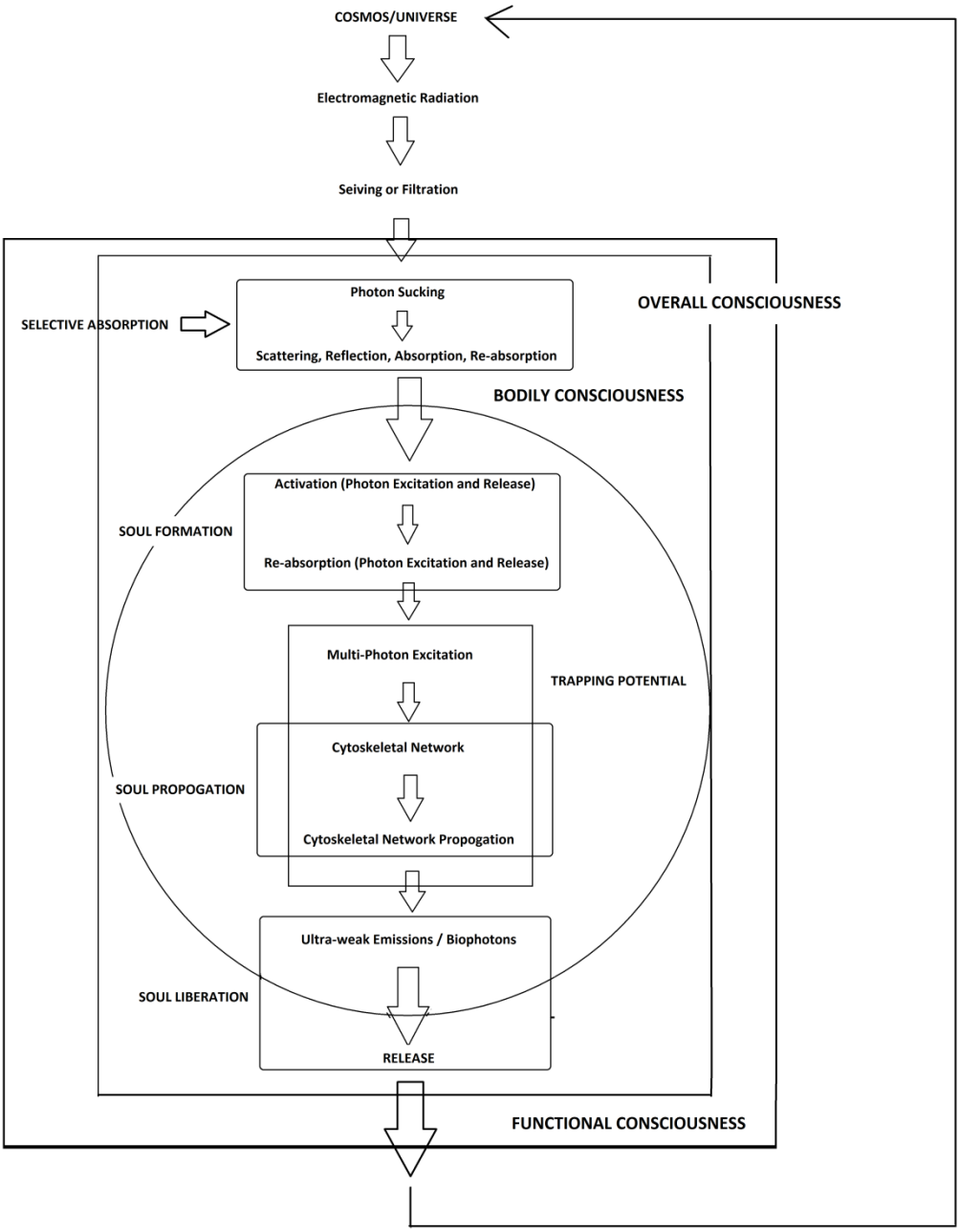

Figure 2. The Schematic Representation of the Extended Cell-Soul Pathway (Embodied State)

Consciousness propagated by this pathway is a form of consciousness which we now propose as "bodily consciousness". Bodily consciousness is circulated within the cell and the cells of the body and together keeps the cells and the bodily functions going (see Fig. 2). This form of

consciousness is involuntary and is dependent on the individual cells and their individual consciousness. Aging, malfunctioning, sudden death or damage of cells and cellular function can impair the flow of bodily consciousness which may or may not result in death but brings about a change in the overall consciousness of the body. Bodily consciousness is propagated by means of photons and has been well explained by the cell-soul pathway which involves trapping and circulation of electromagnetic radiation that prevails in the universe resulting in the formation of consciousness that wholly depends on the organization of matter that makes up the cell, its components and biochemical systems (see Fig. 1, Pereira 2015).

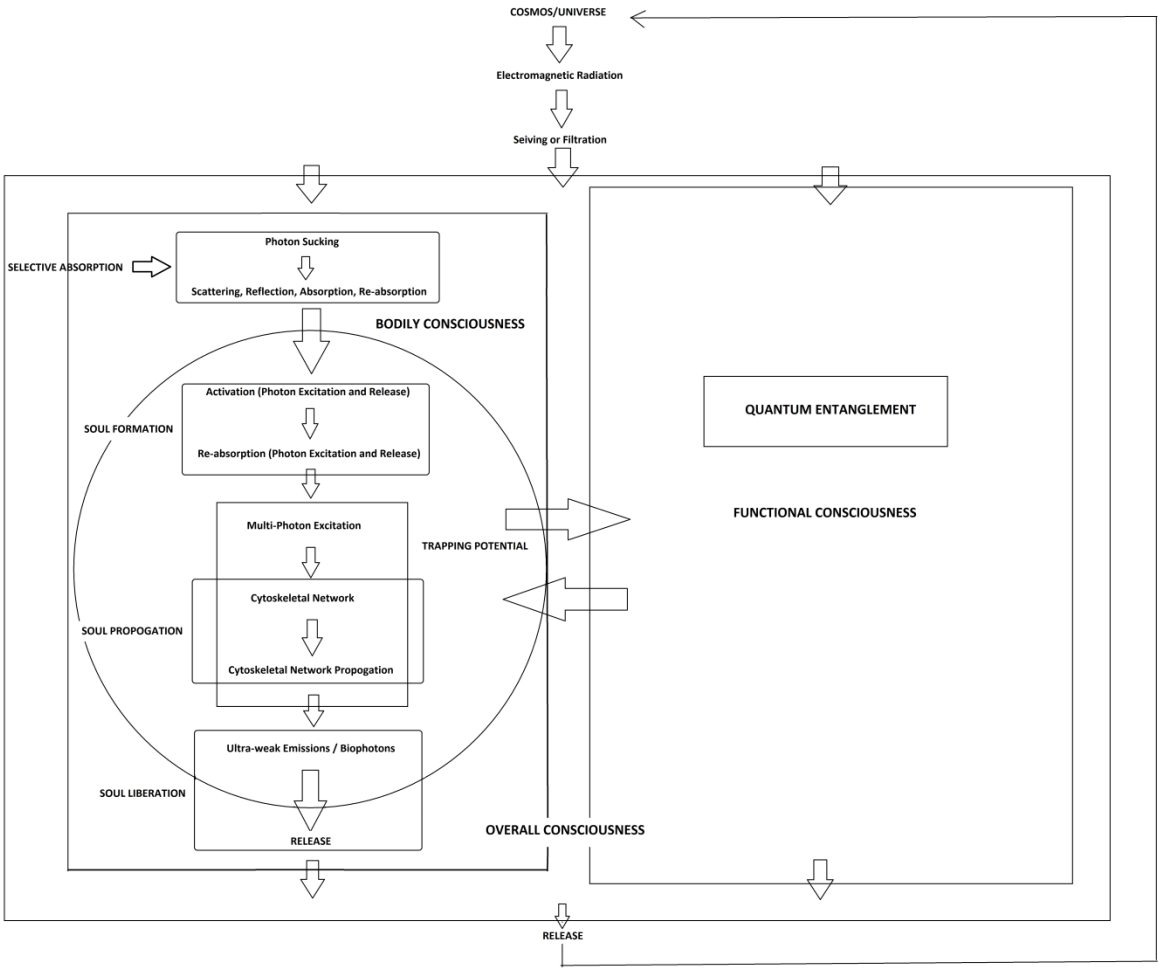

Figure 3. The Schematic Representation of the Extended Cell-Soul Pathway (Disembodied State)

In order to support the non-local consciousness that is effective during near-death experiences we propose the presence of another form of consciousness that exists within the body along with the bodily consciousness. As part of the extension to the cell-soul pathway we call this form of consciousness the "functional consciousness", which originates and terminates by means of the same process as that of the cell-soul pathway (Fig 2). The functional form of consciousness

immediately detaches from the body during death and is likely the main cause for the non-local conscious experiences during a near-death experience (Fig. 3). This form of consciousness can also support the conscious states observed in rapid eye movement sleep or end-of-life experiences, but we would need further sources of information to claim it exists after actual death, so such explorations are beyond the scope of this paper (and any conceivable paper at this time). The bodily and functional forms of consciousness together form the overall state of consciousness of a body and therefore support this unique and untouched pathway that has been prevailing since life came into existence that maintains obedience in its interaction with various cellular, bodily and out-of-body functions.

Photons play an important role in the cell-soul pathway. Gradual release of photons has been demonstrated in dying biological cells that shows a rapid increase in ultra-weak emission, an activity termed the "flash of death" (Reddy 2016a; Slawinski 2005). Biophotons are known to show increased intensity when they undergo physiological changes under chemical or physical stress (Slawinski 1990) or when the cells get damaged beyond repair (Reddy 2016a; Scheminzký 1916) indicating increased absorption of electromagnetic radiation leading to amplified cell-soul pathway activity under cellular stress. A breach in the cellular process or clinical death as observed in cardiac arrest patients can lead to an obstruction in the flow of bodily consciousness via the cell-soul pathway which may recover by increased absorption of electromagnetic radiation or photons from the environment, but until then the functional form of consciousness may remain dissociated but conscious. If this exchange or recovery is not swift, it may lead to cell death, which will result in a gradual release of the bodily consciousness from each and every dying cell and a complete severance of the functional consciousness from the body.

In a near-death experience, the functional consciousness resides outside the body and seems to be an exploratory state but stays connected to the body. At this moment the functional consciousness is fully aware as even though it is out of the body it still stays connected to the body. The connection of the functional consciousness to the body can be better explained by quantum entanglement, wherein the photons of the functional form of consciousness are entangled to the photons of the bodily form of consciousness that resides with the body This entanglement which is better explained in the next section sustains until the body is in a state of return, where each damaged cell of the body tries to revive the rhythmic biochemical cycles that manage the cellular process within each cell from the exterior. The cell soul-pathway supports several conscious roles in cell functions, including cell proliferation and differentiation, apoptosis, DNA synthesis, RNA transcription, protein expression, ATP synthesis and metabolic activity and the overall consciousness of the body. The pathway is an ultra-fast networking pathway in gigahertz, megahertz and kilohertz frequencies and is required for the propagation and integration of both forms of consciousness (Pereira 2015).

The disembodied or the non-local form of experience in the near-death cases is conscious or aware to a level that memories can be created and stored and later recalled and narrated is supported by the ultra-fast processing of the cell-soul pathway. Bokkon and team (Bokkon et al 2013). have already provided a biophysical visual representational model to show the involvement of low-energy quantum entanglements during near-death experiences. Whether these processes are conducted within the bodily consciousness or the functional consciousness is difficult to answer, but the exuberance or richness of the experiences are similar to those created in a state of deep dream or meditative consciousness. Despite of the existence of the various forms of consciousness, consciousness functions as a whole unit when it comes to an experience. The working of the senses in a non-local or disembodied state supports the hypothesis that the body though technically (no blood circulation) dead is still conducting consciousness externally by means of the cell-soul pathway; awaiting an assurance of the death or return to life of the body.

Consciousness is therefore an indefinite form of energy that propagates via the cell-soul pathway and in the process creates experiences within and outside the body. During a near-death case, the bodily consciousness is in a process of recovering with the recovery of the body and its cellular functions, but the functional consciousness can experience the whole recovery process of the body and therefore is more interested in the resuscitation process.

Quantum entangled states of consciousness

Self-sustaining quantum generated energy through entanglement is the answer to all mystical realties and the answer lies in believing in its existence in and around us (Pereira & Harter 2015). Based on our extended hypotheses, it is now well established that the cell-soul pathway supports two forms of consciousness, functional consciousness and bodily consciousness. These forms of consciousness have the same source of energy supply; the electromagnetic radiation that manages the cell and its functions thus supporting the bodily form of consciousness which interim creates the functional form of consciousness (Fig. 2). The way of life in living systems, is trapping of electromagnetic radiation energy, its conversion into chemical energy and its use for cellular maintenance and growth (Overmann & Garcia-Pichel 2006) which is the basis of the energy flow system for this pathway. The Planck postulate, which describes how all matter absorbs and re-emits photons, i.e., quanta of energy, from and into the quantum foam of the zero-point field that pervades all matter and even the vacuum of space (Haisch et al. 1997). Normally these emissions are random exchanges of energy between particles and the zero-point field but in living tissue have been shown to exhibit quantum coherence and also carry information non-locally i.e. instantaneous transmission of information across space and time (Darling 2005).

Physicists have experimentally demonstrated the entanglement of two particles no matter how far apart they are (even a billion miles apart, in theory), so a change in one particle instantly creates a simultaneous change in the other as if they were connected or in some way the same particle. This phenomenon is called quantum entanglement which Einstein dismissed as "spooky actions from a distance" and is suggestive of an underlying reality that physicists have not yet been able to explain although there are many theories. A biological cell demonstrates consciousness built by the quantum principles of entanglement, coherence and non-locality as explained by the cell-soul pathway (Pereira 2015) and its extended version. There is a vice versa interaction between the functional and bodily forms of consciousness which supports consciousness outside and inside the body (Fig. 3). Quantum entanglement is a unique property in quantum physics that best describes the mysterious behaviours that take place at a quantum level with its effects observed at a macroscopic level (Peres 1993). When two particles are entangled, they behave as one and not as two separate particles, so what happens in the quantum world is completely different from what we perceive in the macroscopic world, and this also holds true for the world of quantum biology. In an entangled state of photons there will be a constant exchange of energy between these particles which interacts with one another resulting in information gathering. Hameroff and Chopra (2012) suggest that quantum entanglement of low-energy particles could interact even outside the body suggesting a near-death experience; therefore the existence of a quantum soul.

According to physicist Fred Alan Wolf (1994), near-death experiences can be explained using a holographic model in which death is merely a shifting of a person's consciousness from one dimension of the hologram to another. Based on the cell-soul pathway hypothesis, it can be further hypothesised that the information creation, gathering and transfer during a near-death experience or in a state of disembodiment, may occur as a result of quantum entanglement of the photons present between the two states of consciousness resulting in a photon cloud that acts as a holographic image processor (Fig. 3). The cloud of energised photons is therefore in a constant state of exchanging energy with the cosmos with an ability to retain memory through holographic processing to teleport consciousness outside the body. Creating a hologram of a single photon was believed to be impossible due to the fundamental laws of physics. However, scientists at the Faculty of Physics, University of Warsaw, have successfully applied concepts of classical holography to the world of quantum phenomena (Chrapkiewicz et al. 2016). A new measurement technique has enabled them to register the first-ever hologram of a single light particle, thereby shedding new light on the foundations of quantum mechanics. This experiment is a major step toward improving the understanding of the fundamental principles of quantum mechanics and supports the hypothesis of creation of memories beyond the limits of the body.

In quantum theory, the *zero-point field* (ZPF) is a quantum vacuum state or void which generally contains nothing but electromagnetic waves and infinitesimal particles popping into and out of

existence (Caligiuri & Musha 2015). The cell-soul pathway along with the forms of consciousness functioning within the zero-point field supports the entanglement that occurs during a near-death experience, wherein the entangled photons of the two forms of consciousness result in creation of memories of their experiences by means of the holographic principle. Marcer and group had hypothesised the existence of a holographic memory and holographic image that is stored in the zero-point field (Marcer & Schempp 1997). The information, its storage and its access is nature's information transfer mechanism and has been explained by the quantum hologram concept laid down by Mitchell and Staretz (2011) and others. The quantum hologram and its information is therefore contained in the amplitude, frequencies and the relationships with the phases and their interference patterns of the photons emitted and absorbed in the four dimensional space/time reality.

A zero-point field of the universe is supportive of the holographic principle where consciousness and memories are not localized in the body but are distributed within the conscious disembodied state. The discovery of an *electromagnetic zero-point field* lends credibility to the possibility of having vast memory storage capabilities outside of the physical body and supports the functioning of the functional consciousness during a near-death experience. Phenomena such as these can be best understood if the zero point fields can be *tapped* as a storage location for information and energy which can be accessed at any time. The zero-point field is ubiquitous, nonlocal, cannot be attenuated, lasts indefinitely with no loss of coherence and can store unlimited information processed non-locally as a quantum holographic processor (Mitchell 2016), which is an ideal location to process information non-locally during a near-death experience. When the disembodied state or functional consciousness restores back to the body or rather merges with the bodily state of consciousness, the memories stored within the holographic field created during this process can be revived by the body and appears as vivid as it would be in a fully functional conscious body.

Conclusions

Non-local consciousness or disembodiment is a unique characteristic state observed in near-death experiences, where an individual is conscious in that state and generates memories that are rich and vivid to be remembered when back into the body. The extended version of the cell-soul pathway explains this feature from a point of quantum entanglement within the zero-point field where the photons within the functional form of consciousness are connected to the bodily form of consciousness resulting in an energy exchange. The non-localized subjective experience in an near-death experience has therefore been hypothesised to be a characteristic within the limits of quantum physics; quantum entanglement a property that can demonstrate the capability of storing information holographically within the void or vacuum with the ability to create

memories beyond the limitations of the brain and body, thus supporting the state of conscious disembodiment or non-locality.

Finally, I do not believe that functional or disembodied consciousness survives after death (not near-death), the End-of-Life situation. Consciousness of any form converts its self to simple energy (cosmic energy) and is returned back to where it belongs, supporting the first law of thermodynamics. In accordance to the second law, the entropic change is managed by the retention of a holographically created memory of the mind within the matrix of this cosmic energy. This hologram can be reactivated if tapped by an individual who has learned the art of interacting with cosmic energy, in a good way or a bad way. These individuals (shamans, mediums, channelers, etc.) can utilize their functional consciousness to intermingle with the holograms of specific individuals. In a dying situation, the functional consciousness exists in the same state and therefore taps into the cosmic energy and starts seeking the memories of its loved ones, etc.

Consciousness stays so long as the body stays; this condition is supported by quantum entanglement. During an NDE, the embodied and disembodied consciousness stay connected and the memories are revived only after the individual comes back to the body. Death of the body will release consciousness in the form of energy that will be a gradual process for embodied consciousness as compared to the disembodied functional consciousness.

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Article

The Tilde Fallacy and Reincarnation
Variations on a "Skeptical" Argument

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Abstract

In this article, I will be discussing these different Tilde Fallacy arguments in increasing order of general acceptability. The first argument is, as far as I know, accepted by no one today who has seriously studied the subject. The next is accepted only by a small but vocal cult following. The third is accepted by a very large group probably including the majority of the academically employed. The last of these Tilde Fallacy arguments is acceptable to probably almost everyone except me (and perhaps you, gentle reader, if you find my arguments convincing). The topic of this argument is survival after biological death. The so-called "materialist" position, which I will call mortalism, relies heavily on the Tilde Fallacy. I will argue that once the Tilde Fallacy has been removed from the debate, the most ontologically parsimonious position is belief in reincarnation. I will also argue, at much greater length, that the mortalist position is self-contradictory, but that the contradiction is phenomenological, not logical.

Keywords: Tilde Fallacy, reincarnation, biological death, mortalism, materialist.

Introduction

What I will be calling the Tilde Fallacy, expressed crudely, is this:

> My position uses the logical symbol known as the tilde (the logical symbol used for translating "not", "no", "it is not the case that", etc.). Therefore it is not really a position at all, but only a denial of some other position. Consequently, I can always invoke Occam's razor against the position I am denying, and my opponent cannot. The burden of proof is always on my opponent, not on me, because my position has no actual content (which follows from the fact that it has only negative content).

One way of diagnosing a case of the Tilde Fallacy is to show that a position claiming this privileged status can be restated without the tilde. In some cases, this restatement reveals that this position is self-contradictory, which of course refutes it. In other cases, this transformation merely refutes the Occam's razor argument that allegedly supported it, and thus reveals that it needs to be supported by further arguments and evidence. Although this transformation from negative to positive is often sufficient to demonstrate the presence of the Tilde Fallacy, it is not necessary. In most cases, a single negative claim implies numerous unstated positive claims, and in such cases it is equally invalid to assert that the negative claim requires no further support.

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The negative claim and its implied positive claims are a package deal, and any application of Occam's razor must consider the entire package when making judgments about relative simplicity.

The following four arguments support very different conclusions about very different topics, and yet all of them rely on the Tilde Fallacy. I will have to spend some time considering arguments other than the Tilde Fallacy, which support each of these conclusions, to bring the Tilde fallacy itself into greater clarity through contrast. The fact that these conclusions are often supported by the Tilde Fallacy does not mean that there aren't other stronger arguments available to support them. I don't find any of these arguments convincing myself, but I don't have the space here to make more than a few brief (and admittedly rather snide) comments against them, which I fully acknowledge are far from decisive.

I will be discussing these different Tilde Fallacy arguments in increasing order of general acceptability. The first argument is, as far as I know, accepted by no one today who has seriously studied the subject. The next is accepted only by a small but vocal cult following. The third is accepted by a very large group probably including the majority of the academically employed. The last of these Tilde Fallacy arguments is acceptable to probably almost everyone except me (and perhaps you, gentle reader, if you find my arguments convincing). The topic of this argument is survival after biological death. The so-called "materialist" position, which I will call *mortalism*, relies heavily on the Tilde Fallacy. I will argue that once the Tilde Fallacy has been removed from the debate, the most ontologically parsimonious position is belief in reincarnation. I will also argue, at much greater length, that the mortalist position is self-contradictory, but that the contradiction is phenomenological, not logical.

The Tilde Fallacy and Logical Positivism

The Logical Positivist's version of the Tilde Fallacy was widely accepted for about a decade, and then was rejected by all of the philosophers who originally proposed it. This is perhaps the only time in the history of philosophy where everyone involved agreed about anything. This logical positivist version of the Tilde Fallacy is the prototype on which the other three arguments are based. I expect the majority of my philosophically trained readers to find the other arguments acceptable in direct proportion to how closely they feel they resemble that prototype.

The Logical Positivists tried to resolve the questions of metaphysics by saying "all metaphysics is nonsense." This claim was importantly different from the materialist commonsense feeling that all metaphysics is BS. "BS" is simply a term of abuse, but "nonsense" has a specific meaning. To say that a claim is nonsense is to say that it lacks sense, which must lead to theoretical questions about the relationships between sense, reference and meaning. The consideration of those questions eventually made the Logical Positivists realize that the claim "all metaphysics is nonsense" is itself a metaphysical claim. When pressed to define the term "nonsense", they implied it meant "any proposition which was neither empirically verifiable nor

tautologous", which eventually made them realize that by these criteria their own position was nonsensical, and thus also self-contradictory.

The Logical Positivists thought at first that, because there was a tilde implied in their metaphysical claim, it was not a metaphysical claim at all. This was exposed as a fallacy by in effect removing the Tilde and stating the position in the positive, i.e., by unpacking and defending its metaphysical theory of the relationship between language and reality. Once they realized that it was a metaphysical theory, however, it became clear that this theory contained the only flaw that can decisively falsify a metaphysical theory. It was self-contradictory because by its own definition it was itself nonsensical. Thus the Logical Positivists realized that whatever the answer was to the big metaphysical questions, it couldn't be this. They reluctantly returned to asking the same kinds of questions that had bedeviled Western philosophy since Descartes, becoming Logical Empiricists instead of Logical Positivists.

Libertarianism and the Tilde Fallacy

There are numerous objections to Libertarian political philosophy, some of which I have summarized in Rockwell (2013). Some of these objections are Utilitarian, i.e., based on issues of what would produce the greatest happiness for the greatest number of people. (A Libertarian society would be a bleak and joyless place for almost everyone because of a lack of infrastructure and extreme differences between wealth and poverty.) Other objections are Deontological, i.e., based on issues of justice: the networks of privilege that would inevitably emerge in such a society would falsify the Libertarian claim that each person had justly acquired everything they owned. In this article, however, I will be concerned only with the Libertarian use of the Tilde Fallacy. Here we find a parallel with Logical Positivism. The Tilde Fallacy is not as obvious in the common sense materialist view that metaphysics is BS, or in the rhetorical rants of Ayn Rand. It can, however, be revealed in the more explicitly theoretical writings of the Logical Positivists and also in the writings of Robert Nozick, who attempts to justify the Libertarian revulsion towards government as a positive principle.

Nozick's moral justification for Libertarianism can be seen as an extrapolation from the liberal principle of the separation of church and state. In a theocracy, the state has ideals and values set by the state religion and passes laws to insure that people live up to those ideals (no card playing or dancing on Sunday, women must dress modestly, etc.). In a liberal state, however, each individual has her own values and ideals, and the state's only job is to insure that each individual has the freedom to pursue those ideals. Nozick argues that this principle, when taken to its logical conclusion, requires the state to have no goals or ideals at all. Because "liberty upsets patterns" (Nozick 1974, p. 160), and the Government's sole job is to protect liberty, this means that the government has no right to consider what Nozick calls "end result principles" (Nozick 1970, p. 170). The State's only purpose is to protect the freedom of its citizens, and freedom, like the metaphysics of the Logical Positivists, is defined purely negatively. This means that government must be completely neutral as to the outcome of any actions by any member of society or even by itself. Physical force and the breaking of voluntary contracts are forbidden not

because they interfere with the goals of government, but because they interfere with the freedom of individual citizens to pursue their own goals.

Just as Logical Positivism was the metaphysical position that said all metaphysics was nonsense, Nozick's Libertarianism says that the purpose of government is to have no purpose. Just as Logical Positivism thought it was superior to all other metaphysical positions because it enabled scientists and engineers to do their jobs without having to tangle with messy metaphysical conundrums, so Libertarianism thinks itself superior to other forms of government because it enables citizens to trade in the free market without messy governmental interference. One promises a metaphysics that is not really a metaphysics, and the other promises a government that is not really a government. Both positions assume they are superior to their competitors because they define their position in exclusively negative terms, and thus both are guilty of the Tilde Fallacy.

However, as Colin Bird (1999) has pointed out, Libertarians do not actually treat freedom as something unconditional that can never be compromised to serve some government goal.

> Suppose a wealthy self-owner wants to donate … to the Lutheran Church … but now suppose that the public agent taxes the wealthy self-owner in order to … prevent a greater number of more serious violations of self-ownership in the future … [In] this case, then, the public agent violates this self-owner's right to make the donation. … Local violations are then justified when they would make it easier for everyone to live by the lights of their own consciences. (pp. 154-155)

In other words, Libertarianism, like all theories of government, posits an ideal society, and it must compromise the freedoms of its citizens to achieve that ideal society. The ideal society for the Libertarian is one in which people are free to exchange property and labor without fear of theft or swindle. In order to maintain that society, it is necessary to tax people to pay for an army, a police force, and a court system, which will inevitably compromise their freedom to spend their money elsewhere. Nozick's Libertarianism thus does presuppose an end result principle, which contradicts itself in much the same way that logical positivism contradicts itself. The Libertarian government must limit the rights of its citizens to defend the principle that rights must never be limited.

Unlike with Logical Positivism, the self-contradictoriness of this argument does not prove that Libertarianism is itself self-contradictory. The Libertarian still retains the option of admitting that she posits an ideal society, and then urges us to accept Libertarian policy as the best way of producing that ideal society. Libertarian literature contains many such panegyrics to the free market Eden that will arrive when the invisible hand is set free to bless us all. However, these panegyrics need additional support not required by Nozick's version of the Tilde Fallacy. These include 1) empirical arguments that prove that Libertarian policies will actually produce this kind of society, 2) ethical and/or aesthetic arguments that show why we should prefer the Libertarian ideal society even if it is produced by these policies, and 3) a recognition of the possibility that some non-Libertarian system might be better at fulfilling that ideal, and a willingness to embrace that other system if this turns out to be the case.

To clarify 3), let us suppose that the Libertarian ideal is a society in which all private property is safe from theft or swindle. Let us further suppose that the best way to protect property is to provide free education and good paying jobs for the unemployed *lumpenproletariat* that does most of the stealing. Anyone who sees the Libertarian ideal society only as a means to producing a society with free trade and safe property, rather than as an end in itself, would have to support these social programs if they come closer to fulfilling the Libertarian ideals. I think Nozick realized this, which is why he tried to justify Libertarianism by claiming it had no social goals at all. This claim, however, was what led him into the contradictions of the Tilde Fallacy.[1]

The Tilde Fallacy and Atheism

The Tilde Fallacy is probably the most popular defense of atheism, and my claim that it is fallacious will unquestionably be controversial. It is often argued that the atheist should start with some kind of home court advantage when confronting the theist in the Space of Reasons. The theist is claiming that something exists. The atheist is only claiming that something doesn't exist, and therefore her claim has negative content, and therefore no content at all. (It gives a stronger sense of necessity if you leave out that second "therefore".) The most popular atheist expression of this version of the Tilde Fallacy is Russell's teapot argument. We don't need reasons or evidence for disbelieving that there is a teapot rotating the earth that is always blocked by the moon. As Hermione Granger pointed out to Luna Lovegood (in the Harry Potter books), you don't need evidence against the existence of crumpled horn snorkacks to rationally disbelieve in them (Rowling 2007). The same is true for Bigfoot and the Loch Ness Monster. Why isn't this true of God? Isn't atheism the null hypothesis, and theism the positive hypothesis?

This argument appears compelling if you look at atheism and theism as each entirely captured and expressed by a single sentence. In that case you count up the entities posited by theism (world + God = 2), compare them to those posited by atheism (world = 1), and atheism wins the Occam's Razor derby with the lowest score. If we accept Russell's philosophy of logical atomism or the theory of language expressed in Wittgenstein's *Tractatus*, we could see every

[1] Another way for Libertarians to escape the Tilde Fallacy is with Anarchist Libertarianism, which is not self-contradictory even though it is empirically delusional. Anarchist Libertarians say that because property rights are unconditionally inviolable, all taxation is theft, and therefore all government is morally indefensible. This position is consistent. Anyone who believes that government should have no purposes can get what they want by abolishing government, and a society with no government at all would not be vulnerable to the contradiction described above. This is one reason that Nozick felt compelled to devote almost half of *Anarchy, State, and Utopia* (1974) to defending his position against Anarchist Libertarianism. There is also no logical contradiction in a possible world in which government is unnecessary, such as a world where there is so much abundance that no one will starve or covet another's property, and/or a world in which property rights are so universally sacred that the poor will voluntarily starve rather than steal. That world, however, bears essentially no resemblance to our own, so there is really no point in bothering to refute Anarchist Libertarian–ism, despite the fact that there are a small number of people who actually defend it.

sentence as being completely independent of every other sentence in precisely this way. This would mean that Wittgenstein was right in claiming that "the world divides itself into facts. Anyone can be the case or not be the case and everything else remains the same" (Wittgenstein 1922, Para 1.2--1.21). This however, is another one of those logical positivist dogmas that has long since been discredited, even by the people who originally proposed it. The rejection of this view of language is one of the main differences between early and later Wittgenstein, because it leads to undeniable absurdities.

Can anyone coherently assert that mountains exist, but that valleys don't? Or that aunts and uncles exist but that nieces and nephews don't? Or assert that nieces and nephews exist, but deny that people with children ever have siblings? If we are going to understand what any given sentence is actually asserting, we need to understand other sentences it necessarily implies. This total network of sentences is, as I said earlier, an ontological package deal. The network of sentences that gives meaning to the sentence "Bigfoot exists" is relatively small, which is why we can either remove or place Bigfoot in our possible universe and leave the rest of it relatively intact. Removing God from the Universe, however, has implications for almost everything else in it. This is why it is possible for writers like Richard Dawkins to write book after book articulating the numerous and important implications of God's non-existence. The arguments in these books are often original and thought provoking, and their conclusions might even be right. But their detailed thoroughness makes it impossible for Dawkins to claim that his position is ontologically simpler than theism.

The Blind Watchmaker (1986) is one of the most important theological tracts of our time, and Dawkins' denial that he is doing theology is based on the Tilde Fallacy. He is saying God doesn't exist, therefore his claim has negative content, and therefore no positive content. Nevertheless, Dawkins manages to evoke a very vivid and precise view of the nature of reality, even when using sentences heavily sprinkled with tildes. When he says, "Natural selection has no purpose in mind. It has no mind and no mind's eye. It does not plan for the future. It has no vision, no foresight, no sight at all" (1986, p. 5), his description creates a precise and memorable image in our mind, which is the positive content of his Atheist theology. To some of us, this may seem obvious, but for those who are still dazzled by Dawkins' tildes we can remove them and state his theology in the positive.

Here's a bit of metaphysics that I doubt my readers will question. There are two different kinds of entities in the world, conscious agents and mechanisms. We don't need a detailed definition of how they are different to recognize that they are different. The moral argument for vegetarianism uses this distinction to support the claim that no one should ever kill and eat a conscious being, as does anyone who understands this argument well enough to disagree with it. Dennett mentions that his brand of Darwinian atheism implies that we conscious agents possess "foresight: the realtime anticipatory power that Mother Nature wholly lacks" (Dennett 1990, p. 61). This is probably not all there is to being a conscious agent, but it is certainly an important part, and clearly implied in the ideas of many Darwinian atheists. With this distinction in mind, we can assert Dawkins' theology in the positive by saying, "The only conscious agents with foresight are medium sized biological creatures with very big brains. All other organized patterns, micro and macro, are mechanisms, not agents." There is no contradiction in this claim. It might even be true, and there are other arguments that support it (the argument from evil, for

example.) But Blind Watchmaker theology cannot claim a right to use Occam's razor because it is allegedly the null hypothesis. The fact that it has as much positive content as theism becomes clear once it is stated in the positive.

The Tilde Fallacy and Mortalism

Before I wrote this paper, I would refer to the following arguments as defending or attacking personal immortality, and did not name the position I was actually talking about and critiquing. The burden of proof is so widely assumed to be on the shoulders of the immortalist that we are forced to coin a new technical term – *mortalist* – for the position that rejects personal immortality. The assumption was that immortalism was a metaphysical and religious claim, but that mortalism was not a position at all. This shows how deeply this question has been obscured by the Tilde Fallacy. In fact, thanks to certain new developments in cognitive science and philosophy of mind, the Tilde Fallacy might be the only serious argument that the mortalist has left.

For many years, the most popular argument for mortalism was something like this: The mind is identical to the brain, the brain is a piece of meat that will eventually decay and pass out of existence; therefore, the mind will eventually decay and pass out of existence. If the first two premises were unambiguously true, the mortalist would have very strong biological evidence supporting her position. For many people, in fact, this argument still seems so unassailable that they assume it cannot be rejected unless we throw out all of modern science. Eugene Brody, after carefully analyzing the data in Stevenson (1966), concluded there was no actual evidence to discredit it, but also concluded that it would be more rational to accept unfounded speculations about alternative explanations, because "paranormal phenomena and the theory of reincarnation are intrinsically unacceptable – there is no way to make them compatible with the total accumulated body of scientific knowledge" (Brody 1979, p. 770). Stephen Hales (2001) makes a similar argument against Almader (1992), saying, "Reincarnation is not consistent with either our best empirical theories or with our best philosophical theories about the mind" (p. 338). Almader also cites both C.D. Broad and Paul Edwards as indicating this data should be rejected because it contradicts materialist metaphysics. Almader agrees, but grasps the opposite horn of the dilemma and says we should reject materialism.

Today, however, I argue that the orthodox scientific position is fully compatible with the existence of reincarnation. Modern Cognitive Science says that the mind is what the brain does, not the piece of meat that does it. The computer metaphor for mind, although somewhat problematic in certain respects, captures the fact that something like the hardware/software distinction accurately describes the relationship between mind and the matter that embodies it. Dennett (1991) refers to this "software" with the carefully ambiguous phrase, "…the organization of information that runs your body's control system" (p. 430). At that level of ambiguity, the consensus for this position is decisive. Roughly speaking, the mind is the software that runs on the brain/body's hardware, not the brain itself. But how soft is software, exactly? It is obviously softer than tapioca pudding or cotton candy. Is it as soft as a ghost? Not quite,

because there is a significant difference between this kind of materialism and hardcore dualism, and this difference is expressed by the technical term *supervenience.*

Supervenience requires mental software to always be embodied in some kind of physical hardware, unlike the disembodied spirits of dualism. Software possesses a kind of immortality because it can be uploaded and downloaded indefinitely, even after the first copy has long been destroyed. This is equally true of literary classics like *The Iliad*. Its first oral and written manifestations have been gone for millennia, and yet the books themselves are still very much with us. Philosophers describe this distinction by saying that the book is not identical with any individual volume, but only *supervenes* on that volume. Nevertheless the book does not endure eternally in Plato's heaven, according to this view. If all the physical volumes containing *The Iliad* were destroyed, the book would pass out of existence, as did most of the writings of Parmenides and Democritus.

Dennett (1991) argues that modern cognitive science grants conscious beings the possibility of the kind of immortality achieved by *The Iliad*. However, he also argues that Occam's razor requires us to assume that each human consciousness suffers the fate of Democritus' writings, rather than being immortalized as was *The Iliad*. Could this be an example of the Tilde Fallacy – the assumption that a negative claim is more parsimonious merely because it contains a tilde?

The question is more complicated in this case than in the three previous examples, but I think the answer is yes in two senses. First of all, the mortalist position is as speculative as the immortalist one, and consequently the mortalist, like the atheist, cannot win this debate using Occam's razor. Secondly, a good case can be made that the Tilde Fallacy as used by the mortalist is self-contradictory, and therefore necessarily false, although the contradiction is phenomenological, not logical. Phenomenological contradictions need to be treated with caution, for they are harder to bring to consensus than are logical contradictions. Dennett famously said that it is easy to confuse a failure of imagination for an insight into necessity. I would go further and claim that there is never any way of proving that phenomenological necessity is not mere failure of imagination. Nevertheless, the appearance of necessity is often all we have, and it seems rational to accept it at face value until someone dissolves it by expanding our imaginations.

Mortalism and "Extraordinary Claims"

Dennett says, "I don't believe that there is any reason to think that anybody yet has achieved the sort of immortality I allow for" (personal communication). This statement is strongly challenged by numerous historical books that offer such evidence (Almeder 1992, Braude 2003, Carter 2012, Stevenson 1966, Fontana 2004). These books look pretty convincing to me, as do the replies to attempted debunkings in Carter (2012). But I am a philosopher, not a historian, so I will limit myself to making a philosophical point. Once we recognize that our current view of the nature of mind is fully compatible with the possibility of immortality, we can no longer dismiss the books cited above with Hume's argument against miracles, often

paraphrased as, "Extraordinary claims require extraordinary proofs". Some of us believe that Hume's argument is perniciously fallacious and seriously interferes with scientific and historical objectivity (see Earman 2000). But those who still accept it must use it elsewhere, if they are permitted to use it at all. If the mind is software that supervenes on brains, rather than the brain itself, there is nothing miraculous about a mind supervening on some other physical substance after death, and then eventually downloading into some other body. This is arguably the most plausible explanation for the data in the above listed books (although I will show later that there are other explanations equally problematic for the mortalist.)

There are some other attempts to show that immortality contradicts known facts. Those arguments, when carefully scrutinized, often reveal themselves to be variations on the Tilde Fallacy. Consider the claim that reincarnation is impossible because there are so many more people now than there used to be. This argument is paraphrased and replied to in Carter (2012), but I have encountered it frequently elsewhere. Like Carter, I have several possible replies to this – perhaps more people from other planets are reincarnating on Earth, perhaps more mosquitos are reincarnating as people – which are usually met with derisive demands that I prove these claims. Those demands would be appropriate if I were claiming that these things actually happened, or if my opponents were claiming to have concrete evidence that Earth was the only planet with conscious beings on it. Then we could weigh the evidence for each of our claims and judge them on purely scientific terms. However, neither of us has any evidence for either claim, which is why we are talking only in terms of possibility, impossibility, and necessity.

The claim that reincarnation is factually impossible[2] can be refuted by showing that there are possible scenarios that permit reincarnation and are fully compatible with currently accepted scientific facts. The existence of life on other planets is fully compatible with our current state of knowledge (or ignorance) on this topic. Therefore, this argument's unstated but necessary premise is false. What is really going on in this argument is this: I am saying it is possible that there is life on other planets, and my opponent is implying that there must not be. Even if she doesn't explicitly assert or believe this, she must imply it, or her argument will not go through. A claim that X is possible is clearly weaker than a claim that X is impossible. This is especially obvious when both arguments are stated in the positive. If the evidence cannot resolve the question, it is surely more speculative to dogmatically assert that there cannot be life on other planets than to accept the possibility that there might be. But because my opponent's claim has a tilde in it, she reflexively assumes that my position needs further proof and hers doesn't.

What applies to this argument applies to mortalist arguments in general. Denying that there is life after death has tremendous implications for the rest of reality, and these implications have as much speculative content as the immortalist position. At this point I could add some

[2] Factual impossibility occupies the middle ground between logical impossibility and possibility. There are many things that are logically possible that are factually impossible. It is logically possible that the entire universe is made out of cream cheese, but no one has ever noticed. There are various facts about the universe in which we live that make this factually impossible. The main point of this section is that the "facts" about the mind/brain relationship, which allegedly made immortality factually impossible, have been revealed to be false.

sentences that followed the parallel structure of the previous three arguments and show why each side of this argument is implying and/or stating positive claims that are equally speculative. That project, however, would be hampered by the fact that those positive claims are rather muddled and confused – so much so that they seem to imply a much stronger argument. The libertarian and logical positivist versions of the Tilde Fallacy reveal that the positions they are defending are self-contradictory. The atheist version of this fallacy is not self-contradictory, only illegitimately employs Occam's razor. If I stop now, I could content myself with a parallel argument against the mortalist's use of Occam's razor. I think however that a case can be made that the mortalist position is as self-contradictory as Logical Positivism or Nozick's argument for libertarianism. When the mortalist does try to state her position in the positive, it is not at all clear that what she says even makes any sense. It might even be self-contradictory, in much the same way that Logical Positivism is self-contradictory. If this is the case, the mortalist position can be rejected for the same kinds of reasons that Logical Positivism was rejected, and some kind of immortalism would win by default. We may not know what does happen to us after death, but we can be essentially certain that we are not going to be reborn as four-sided triangles.

Mortalism and Phenomenological Necessity

If thoughtfully considered, the most common statements of the mortalist position reveal its incoherency. "When you're dead, you're dead." Like all tautologies, this is uninformative. We still haven't answered the question, "What happens when you're dead?" How about: "You lie very still, and eventually your body rots away"? But both the mortalist and the immortalist are in complete agreement about this. How can we express what it is that the two sides disagree about? This can be done only by referring to the first person perspective of the person who dies. That is the only question at issue here, and statements about biological decay are simply changing the subject. So are statements about radical changes in the abstract pattern of behavior we described above as "software". Both the immortalist and mortalist are providing answers to one question only: *What happens to me, from the first person perspective, when I die?*

The first person perspective always provides answers to questions of the form "What is it like to be X?" Consequently, the question that the mortalist and the immortalist are both attempting to answer is, "What is it like to be dead?", or, more precisely, "What is it like for *me* to be dead?" We all know what it is like for other people to be dead, if we have ever seen corpses and/or images of them. This is a different question. Every possible mortalist answer to that question is either an empty metaphor or explicitly self-contradictory. You snuff out like a candle, cash in your chips, hand in your dinner pail. If you're there, then death isn't. (Great! That means I'm never going to die!) You wake up one morning and discover you are not there any more. All of the non-metaphorical formulations are as self-contradictory as "the ultimate metaphysical truth is that all metaphysics is nonsense" or " the purpose of government is to have no purpose". However, unlike the Logical Positivist and the Nozickian Libertarian, the mortalist's position is not *logically* self-contradictory but *phenomenologically* self-contradictory. The inherent contradiction of mortalism does not emerge from the syntax of the proposition that states it, but from fundamental structures in subjective experience.

I am leery of any claims of necessary structures in consciousness, and am open to any thought experiments that might reveal that any so-called impossibilities are possible after all. Nevertheless, there are certain claims about human experience that I believe are presupposed by both sides of this debate, and we must not doubt in our philosophy what we do not doubt in our hearts. Phenomenological necessities are few and far between, but there are some that are undeniable. There are no visible shapes without color[2], and no colors without shapes. Anyone who speaks of such things is talking nonsense. I argue that the mortalist position is revealed to be similarly self-contradictory, once we acknowledge that it must refer to my awareness of "what things are like for me". My knowledge that all Homo sapiens are mortal, and that I am a Homo sapien, gives me good reason to believe that I will eventually die, in the sense that eventually my body will stop moving, then gradually decay. But it tells me nothing about what it will be like for me to die, or what it will be like to be dead.

The mortalist claims that being dead won't be like anything at all, but we have no way of making sense of that claim. We may not know what it is like to visit Paris or to taste haggis. If somebody tells us that the taste of haggis is indescribable, and the only way to know it is actually experience it, we can make sense out of that claim. But if someone tells us that it isn't like anything at all to taste haggis, we would say that they are talking nonsense. And yet that is exactly the sort of nonsense that the mortalist is trying to pass off as down-to-earth scientific fact. The mortalist may reply that death is completely different from anything else that ever happens to us, so these analogies are not valid. But if this is the case, the burden of proof is on the mortalist to explain how it is different, and this is a burden she has not taken up. Within the phenomenological range in which we currently dwell, what the mortalist is saying makes no sense, and thus we must reject it until it is made more coherent. To accept mortalism in its present form would be like believing that we reincarnate as four-sided triangles. The contradiction inherent in mortalism is visible once we acknowledge the following premises:

1) The debate between the mortalist and the immortalist must concern death as experienced from the first person perspective. Anything else is changing the subject.

2) The first person perspective always provides answers to questions of the form, "What is it like to be X?"

3) The mortalist answers to the question "what is it like to be dead?" either change the subject or are self-contradictory. Therefore,

4) the mortalist position on death either changes the subject or is self-contradictory.

Those who have problems with this conclusion need to falsify at least one of these premises. They seem undeniable to me.

[3] I add the qualifier "visible" because a student pointed out to me that we can imagine shapes without color if we imagine them kinesthetically. Thus what once seemed to me to be a necessary truth turned out not to be necessary after all, until I limited it to visible shapes. A vivid example that illustrates the fragile nature of what we must take to be necessity.

The Reductionist Defense of Mortalism

One possible mortalist strategy I will call *reductionism*. The reductionist in this context claims that the self is nothing but the sum total of its experiences, and thus there is no such thing as a subjectivity that is distinct from the experienced world. David Hume was the first to make this assertion, claiming that introspection reveals the contents of consciousness, but not a subject that experiences those contents. Hume's justification for his claim is thus, like mine, based on phenomenology. When two phenomenologists disagree, they are often reduced to asserting that "my intuitions can beat up your intuitions". Dennett (1991) avoids this cul-de-sac by relying not on phenomenology but on contemporary neuroscience and cognitive psychology. He claims that these new scientific developments support what he calls a *multiple drafts theory of consciousness* that, like Hume's theory, suggests that we should deny the existence of a "central meaner". For Dennett, the subjective self is a verbal construct, not a privately experienced reality. This is what Dennett calls *first person operationalism*: my self is what I say it is when I tell the story of myself to myself. If he is right about this, doesn't this mean that there is no such thing as a distinct self, and therefore no first person perspective and no "what-it-is-like-to-be"-ness? This is the strongest argument against my position, but ultimately I do not think it can prevail. When all of its implications are followed to their logical conclusions, the result is a rat's nest of absurdities that could be summed up with the following question: if the central meaner doesn't really exist, how can it die?

The "middle way" Buddhist philosophy of Nagarjuna has a theory of self very similar to Dennett's and Hume's (Varela Thompson, & Rosch 1992), but this school of Buddhism saw this fact about the self as support for the existence of reincarnation, not mortalism. Buddhism recognizes that the empirical self – the self to which we are so attached and in which we take such pride – is nothing but an aggregate of contingently clustered traits and qualities. The deep recognition of this fact is what enables the Buddhist practitioner to maintain the state of equanimity that liberates the practitioner from suffering. However, if our consciousness is nothing more than an aggregate of experiences, wouldn't this imply that when that aggregate disintegrates into its parts, consciousness would disappear as that aggregate disappears? Buddhism does not accept that conclusion. Instead, it asserts that there is a consciousness which is distinct from the aggregate of experiences we call the self. Consciousness is a kind of emptiness, but it is also accompanied by the qualities of clarity and unimpededness, which can be most clearly seen when we are not distracted by the numerous qualities and character traits we ordinarily call the self. The mortalist will dismiss this as speculative mystical nonsense, but her alternative has serious problems of its own.

If we are nothing above and beyond our various experiences and character traits, then each of us died sometime during our first decade. This is equally true whether we consider the outdated idea that we are nothing more than the meat we are made of, or the more sophisticated claim that we are the pattern that supervenes on that meat. As we pointed out earlier, software can endure *in principle* forever by being replicated in a variety of hardwares. We, however, have the ability to endure even when our software becomes completely unlike our earlier software. It is not just that all of the molecules of the four-year-old boy I once was have now been completely replaced. The formal structures that determined the size, shape and temperament of

that boy have now vanished as decisively as have his molecules. And yet here I am, in some strange sense the same person now that I was then. How am I able to pull this off if I am nothing but a pattern supervening on some material stuff, and both the original pattern and the original stuff have passed out of existence?

The immortalist claims that when our current body is destroyed our consciousness continues on somewhere else. The mortalist claims that the self is nothing but the form and matter of our current physical body – and yet somehow our consciousness endures even when the matter and form have been transformed into something completely different. The mortalist position as it stands is thus self-contradictory, unless we deny the universally accepted proposition that I am the same person that I was when I was five years old. If the mortalist bites the bullet on this, and concedes that I am not same person as that five year old, the immortalist wins even more decisively. The mortalist is in effect conceding that I have already died, and still managed to carry on. That may not be immortality by some definition or other, but it's good enough for me.

Mortalism and Reincarnation

These problems come into sharpest focus when we consider the type of immortalism known as reincarnation. In the western Abrahamic traditions, immortalism usually is bundled with the claim that there is a separate place or places where the conscious self continues to have experiences after the destruction of the body (Heaven, Hell, Purgatory, etc.). That is a much harder position to defend because of Occam's razor issues. Belief in Heaven, etc. requires both a belief in the endurance of the soul and an unseen place where the soul endures. Reincarnation only claims that the soul returns "here" in some sense, and we already know that "here" exists because here we are. This argument for the reincarnation alternative is decisive as far as I am concerned, although it is wise to be tolerant of other conclusions when our ignorance on this subject is so vast. Accepting reincarnation, however, brings with it a variety of implications that cannot be ignored. The Abrahamic immortalist does not have to deal with hard questions about the nature of the self that survives. At least in the popular versions, I remain essentially the same person in life and death, with a few moral purifications to bring out my best qualities more vividly. On the other hand, it's an empirical fact that most of us have no memory of previous reincarnations. Consequently, if immortality is produced by reincarnation, it does not require any formal or material components from our previous lives. In the yogic traditions that accept reincarnation, we do not reunite with our long dead friends and relatives in a celestial home. There are some tales in those traditions about people who reincarnate repeatedly in interlocking relationships, sometimes reversing roles such as master and servant, or pet and owner, or parent and child. But the sentient beings in these relationships have no awareness of their identities in previous lifetimes, and the various personalities of each reincarnation are radically different from each other.

This creates problems for the possibility of verifying any possible case of reincarnation. It is obviously impossible to prove that currently living X is a reincarnation of deceased Y, if X has no memories whatsoever of having been Y. Indeed from the third person point of view, the

idea makes no sense at all. How can something be the same as something else if the two items share no characteristics? It's rather like the Catholic Idea of the Eucharist, in which bread and wine is the body of Christ, without having any of the characteristics of the body of Christ – an idea which most Catholic theologians recognize as a self-contradictory paradox that can only be believed on faith. Actually, this rhetorical question underestimates the problem. Reincarnation doesn't just imply that two individuals are in the same category. It implies that these two individuals are the same individual, even though they have nothing in common. Although this idea makes no sense from a third person point of view, it is easily imaginable from the first person point of view. Imagine you are given a choice of either 1) having your memories and personality completely removed and replaced or 2) being completely annihilated. Both alternatives would be disastrous, but we have no trouble realizing that they are different. This is partly illustrated by the fact that most people would choose 1) over 2), but more strongly illustrated by the fact that even if someone chooses 2) or is indifferent to either, it is still phenomenologically obvious that these are two different choices. Perhaps you want to argue that this is a pseudo-problem, and neither of these alternatives are acceptable? This may be true, but this won't help the mortalist. She is irreparably committed to alternative 2) in this debate, just as the reincarnationist is committed to alternative 1). Throw out this debate, and mortalism goes with it.

Once we accept the inevitability of these problems, it seems that the only possible proof for reincarnation would come from those anomalous souls who allegedly remember their past lives. Unfortunately, serious philosophical problems arise from the fact that there are always alternative explanations for any empirical data based on these alleged memories. Robert Almeder (1992) proposes a criterion for proof of reincarnation paraphrased from A. J. Ayer: "It would be sufficient for the truth of the belief that the man beside you is Julius Caesar reincarnated if that man had all the memories that one would ordinarily expect of Julius Caesar, and if he had some verified memories that appealed to facts that were not in any way items of public information" (p. 60). Nevertheless, Almeder also quotes Stephen Braude (2003) and others, who propose a variety of counter-explanations to cases of this sort. Even if we can prove that our subject's knowledge of Julius Caesar's life could not have been acquired by the usual means, how can we be sure that the subject didn't acquire that knowledge through ESP? Just because she knows a lot about Julius Caesar's life doesn't mean she actually lived it, and this is true no matter how much she knows. Braude acknowledges that ESP, as we currently know it, could not deliver the detailed acquisition of skills and personality traits so often described in the literature. He says, however, that there is no reason to deny the existence of what he calls super ESP, a power that goes far beyond what has been documented in the PSI laboratory. The evidence that allegedly supports reincarnation could also be used to support claims of something like exorcist-style *possession*. In other words, a person who claims a new identity and is manifesting new skills and personality traits and knowledge could just as easily have been taken over by a completely different person, rather than revealed to have been a different person in the past.

I must ask my readers who are equally repulsed by all of these explanations to bracket their repugnance and just consider this as a thought experiment. My point is that even if all of these alternatives deserved to be taken seriously, it would still be impossible to distinguish between them in any individual case. The problem is this: The fact that *someone has extensive knowledge of a person's life can never prove that she has actually lived that life. Knowing*

something (or even everything) about a person does not make you that person. This is not just the problem of Mary the Color Blind Neuroscientist. Even if we accept Dennett's (1991) conclusion that knowing all the neuroscientific facts about a color is the same as experiencing that color, we cannot apply this conclusion to the reincarnation problem. In most of the cases discussed by Almeder (1992) and Carter (2012), the subjects remember both propositional facts and experience. The problem is that it is impossible to tell the difference between experiences that are actual memories of having been there and experiences that are imaginative fabrications, even if those fabrications are crammed with true facts. That's because, once we strip away the memories and personalities of the person having the experience, it becomes clear that "being there" is nothing more and nothing less than the first person perspective.

Almeder and Carter both try to draw the line clearly amongst the alternatives of reincarnation, memory and possession – and indeed there are clusters of behaviors that make certain cases somewhat more amenable to one description rather than another. But it seems necessarily true that any possible set of facts that could be explained by reincarnation could also be explained by either super ESP or possession, if one were more inclined towards either of those alternatives. This has two very important implications. 1) It is not just difficult, but impossible, to use scientific methods to decisively decide between these explanations. 2) Therefore, science can neither prove nor disprove the existence of reincarnation. Here, of course, is where the Tilde Fallacy usually rears its head. If we cannot scientifically prove that something exists, doesn't Occam's razor require us to assume that it doesn't? No, because negative claims still need some kind of evidence to back them up. Bigfoot and the Loch Ness Monster have partial evidence against them, based on the fact that many people have diligently looked for them and not found them. There is no such evidence against life in other galaxies, because we don't have resources that could search for them. However, It is still possible that life from other galaxies might show up in good Hollywood fashion, and that hope, slim though it may be, is not an option for reincarnation research. Evidence for or against reincarnation is not just non-existent. It is impossible, as far as we can tell, to find evidence one way or the other because of the presuppositions of our research methods. Science cannot be said to have answered a question that it has never asked.

Who am I?

What are the presuppositions that hamstring the study of reincarnation so inexorably? I think it has to do with the fact that subjective experience is necessarily linked to our experience of ourselves as particulars, and there can be no such thing as a science of particulars. Subjective experience is what gives us our awareness of this-here-now, and there can be no such thing as a science of this-here-now. It was Kant's awareness of this fact that made him write an entire critique on the problem of judgment – applying a rule to a case – and the depth of this problem is why so much of *The Critique of Judgment* is evocative handwaving. It is not possible to scientifically prove or disprove that I will survive after death, any more than there can be a science of this table. Those aspects of me that are abstract are the only aspects that are scientifically comprehensible, and they are not me, because my being, as Heidegger rightly pointed out, is in each case mine.

Although the mind-as-software theory is a great improvement over the mind-as-two-pounds-of-meat-between-the-ears theory, it still has some serious problems. The mind is paradoxically both abstract and concrete, universal and particular. It's true that the self has no necessary connection to the particular stuff on which it supervenes. However, the mind-as-software theory cannot account for the fact that the mind also has no necessary connection to its abstract qualities. It's not just that the self can remain the same even when all its abstract qualities change, as when a child becomes an adult. These problems with the reincarnation data show that it's also possible to have all the abstract qualities of a particular self and not have that self present. Furthermore, we don't have to consider the data on reincarnation to see this problem. Although Hofstadter and Dennett have created a renowned version of the mind-as-software theory, their classic anthology *The Minds I* (1981) contains two compelling counterexamples to that theory.

1) Stanislaw Lem tells a story of a man who wishes to live happily-ever-after with a tiny princess who lives inside a box. A helpful wizard starts with the assumption that the man's mind is nothing but the abstract patterns of his mind and then duplicates those abstract patterns in a tiny copy of the man. The tiny copy of the man embraces the princess and strolls off with her towards the tiny sunset. When the man protests that he is not in the box, because he is here observing, not there, the wizard offers to solve that problem by killing him with a large hammer. (In Hofstadter & Dennett 1981, pp. 96-98).

2) Dennett offers an alternative explanation for the teleporter beams that appear in science fiction stories. The usual assumption is that "the teleporter will swiftly and painlessly dismantle your body, producing a molecule-by-molecule blueprint to be beamed to earth, where the receiver, its reservoirs well-stocked with the requisite atoms, will almost instantaneously produce from the beamed instructions – you!" (Ibid., p. 3). But is there any reason to doubt the possibility that the machine is not actually a teleporter, but rather what Dennett calls a "murdering twin maker"? From a purely physical point of view, what the machine is doing is destroying your body and then making an exact copy of it somewhere else. Because this copy has all of your memories and emotions, this distinction makes no difference to the organism that emerges from this device. But it makes a tremendous difference to the organism that enters the device. If you think this difference is trivial semantics, consider the following variation. Suppose that the teleporter only travels from one side of a room to the other, and instead of vaporizing the body immediately, you get to stare at your new clone for a few seconds? Would you be willing to be killed with the hammer in the previous example, secure in the knowledge that you will survive because your abstract form has been preserved? According to the terms of the thought experiment, no one else but you can ever know whether you survived or were merely murdered and duplicated. And yet anyone who refuses to be killed by that hammer is acknowledging that this difference is real, even though it is completely subjective.

There is no logical contradiction in claiming that you are the person "over there", and consequently you are willing to have the self "over here" killed with the hammer. If there is anyone out there who answers affirmatively to that question, I have nothing to say to them. For the rest of us, however, I think these examples show phenomenologically that my personal identity is not constituted by my abstract form. I think the most effective way to resolve this

phenomenological paradox is to say that there is an aspect of my being which is completely concrete that cannot be identified with any abstraction, and therefore always escapes the universal laws that are the tools of science and other forms of knowledge. That is why there can be no first person science that completely closes the explanatory gap separating it from its subject matter. We can of course talk and write about concepts that deal with what I call the third-person-first-person. That's part of what I am doing in this essay. But the first person perspective cannot be reduced without remainder to those concepts.

These diversions into philosophy of mind and ontology are not really diversions, because without them it is impossible to uncover the phenomenological structures that reveal the mortalist position to be self-contradictory. If the first person perspective is reducible to an abstract pattern, there is no need to ask the question, "What is it like to be dead?" However, if it is not so reducible, then we must ask that question. We can then see that the mortalist answer to it makes no sense. If we don't ask that question, we can only talk about death in general, which changes the subject away from metaphysics to biology and/or psychology. That is the heart of the argument in this section: that when we ask "what happens to me when I die?" that question is not answered by saying some abstract pattern identified with you either lives on or is destroyed. People are often not aware of this. That is why they sometimes say things like, "Beethoven lives on in his music." This is a charming metaphor, but we should not permit it to muddy up the discussion of this very different topic. Many of us would love to have our creations remembered long after we have died, even if the mortalists are right about what happens when we die. But that is not the same thing as actually remaining alive and/or conscious. As the Monty Pythons pointed out in their song, "Decomposing Composers," the fact that you can still hear Beethoven does not imply that Beethoven can hear you. The fact that the mind-as-software theory implies something like this could be seen as making this idea into a *reductio ad absurdum*.

Hofstadter Bites the Bullet on Immortality

Hofstadter recognizes that he must take this metaphor of "Beethoven lives on in his music" as a literal truth because it is necessarily implied by his mind-as-software theory. In *I am a Strange Loop* (2007) he bites the bullet on this issue with heroic consistency and embraces a variety of counterintuitive conclusions. These conclusions, however, are as critical of mortalism as are my arguments, despite the fact that they deny one of my essential premises. My argument is that the irreducibility of the first person perspective requires us to conclude that mortalism is self-contradictory. Hofstadter says that there is no first-person perspective that is distinct from the content and character of my personality. However, he also points out that this content and character endures after the person dies, often taking root in the minds and behaviors of other people that live on. Consequently, if I am nothing but my thoughts and behavior patterns, and my thoughts and behavior patterns survive my biological death, then I survive my biological death. Hofstadter seems to almost say, contra the Pythons, that Beethoven literally lives on in his music! Usually, however, he limits this claim to a kind of abstract pattern with a distinctive self-referential structure that he calls a strange loop (hence the title of the book). This structure has a peculiar kind of complexity that Hofstadter spends most of the book describing, and Hofstadter thinks that this kind of structure is all that there is to the first-person perspective. In other words,

he does not accept my claim that there is something irreducibly *particular* about the first-person perspective that cannot be reduced to any abstract principle.

Hofstadter admits that when strange loops are transferred from brain to brain, the resulting copy is usually very "grainy" and inaccurate. A strange loop is a very complicated structure that doesn't transfer from one brain to another as easily as a Beethoven symphony. Sometimes, however, two or more people can be in such close synchrony that they see the world from essentially the same perspective. In that case, they become a "we" instead of a cluster of "I"s. When one of the persons in this kind of group dies, Hofstadter claims it is literally true that the deceased continues to think and live, using the brains of the survivors who continue to see the world from her point of view, and thus continue to participate in her strange loop.

It would probably be more accurate to describe the result of this process as survival rather than immortality. It offers us no guarantee that survival will go on forever. If the mind is nothing but software, there is no contradiction in the possibility of software having nothing to supervene on, and thus passing out of existence. It is only when you accept my claim of the irreducibility of the first-person perspective that the mortalist position becomes self-contradictory. I think Hofstadter needs to pay more attention to the implications of the examples of the tiny princess and the murdering twin maker, and to the factors that make it impossible in principle to either prove or disprove the existence of reincarnation. I think that these factors require us to accept an immortalist position, not just a survivalist position. Nevertheless, Hofstadter and I are in agreement that the mortalist position is not the only one acceptable to a rational person in touch with the latest scientific facts. The fact that mortalism has managed to maintain this reputation, while doing essentially nothing to earn it, is one more example of the seductive strength of the Tilde Fallacy.

Furthermore, as far as I can see, our two positions provide a dilemma from which the mortalist cannot escape. If the mortalist is unpersuaded by my phenomenological arguments, she will have to agree with Hofstadter that the self is nothing more than the abstract behavior that I have metaphorically called mental software. Because these abstract patterns survive our bodily death, this would imply that our selves survive bodily death. This survival would perhaps not be technically the same thing as eternal life, because these patterns do pass out of existence eventually (at least this appears to be true of the ones of which we are aware). But because we have gone through this particular extinction process several times since childhood, it doesn't appear that death has the sting we originally attributed to it (in so far as what we thought about it made any sense at all). In other words: Either 1) the first person perspective is genuinely irreducible, in which case it makes no sense to say we could wake up one morning and discover we are not here any more, or 2) The first person perspective has no separate existence of its own, in which case each of us has already died many times.

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Essay

The Theory of a Natural Afterlife: An Overview

Bryon K. Ehlmann*

Abstract

This overview of the theory of a natural afterlife gives a scientifically plausible, logically consistent answer to the age-old question of "Where is heaven?" and may change forever how you view death. It abbreviates a more comprehensive and in-depth paper entitled "The Theory of a Natural Afterlife: A Newfound, Real Possibility for What Awaits Us at Death."[1] As the natural afterlife is all relative to what's in the mind of a dying person, it is best described and imagined here in terms of you, the dying person.

Keywords: Afterlife; natural afterlife; human mortality; death and dying; near-death experience; imperceptible death.

1. Introduction

You're dying having what will be called your near-death experience (NDE) should you recover. Within this very intense, "even more real than real"[2] dreamlike experience†, you believe you're in heaven. You're overcome by marvelous feelings of wonder, love, and contentment and excited about such a glorious eternity. With death and the end of consciousness, this is your *never-ending experience* (*NEE*) and *natural afterlife*. At least, so posits the *theory of a natural afterlife*.

But how is such a natural afterlife, based on an NEE, possible when presumably any dreamlike experience ends with death and a non-functioning brain? Ironically, it's possible not because individual consciousness continues after death but because with death, when *and if* such consciousness ends, you won't know that:

- You've died. You won't see the "NDE screen" go blank.
- Your NDE has ended. You won't notice that nothing more happens in your NDE.
- An eternity is fleeting by. Is this happening just before or after you died? You can't tell. *Relative to you*, it's irrelevant, time is suspended, and your NDE is essentially everlasting.

The situation is like watching an extremely exhilarating movie and not knowing that: you've unbelievably, with no perceivable drowsiness, fallen asleep; for you the movie is suspended; and time is fleeting by. Until you wake up, you still believe you're captivated in that movie.

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† Here NDEs are not differentiated from near-death dreams as only the dreamlike aspects and the very intense reality of NDEs are relevant to the theory of a natural afterlife.

2. Understanding and Appreciation

The natural afterlife is hard to understand, even harder to appreciate. To grasp it, you must be able to imagine what it's like to never wake up from a dream, something you've never experienced. You must imagine not knowing in your dreamlike NDE that it has ended, thus believing it hasn't, despite knowing now that it will. And, you must imagine the relative irrelevancy of billions of years rushing by in what for you is a timeless, everlasting, final NDE moment.

Why won't you know that your NDE has ended? Because you almost certainly won't perceive your moment of death (just as you never perceive the moment you fall asleep). And why does your final NDE moment become timeless and everlasting? Because with an *imperceptible death* (as with falling asleep) your perception of time ends because perceived events, whose sequence defines such time perception, i.e., an *event relative time*, cease. Thus, when you die within a dreamlike NDE, you simply lose your sense of time, but as within any dream, you never lose your sense of self. There's no time to experience nothingness. You and your NDE simply become timeless and everlasting—i.e., an NEE and natural afterlife as shown in Fig. 1.

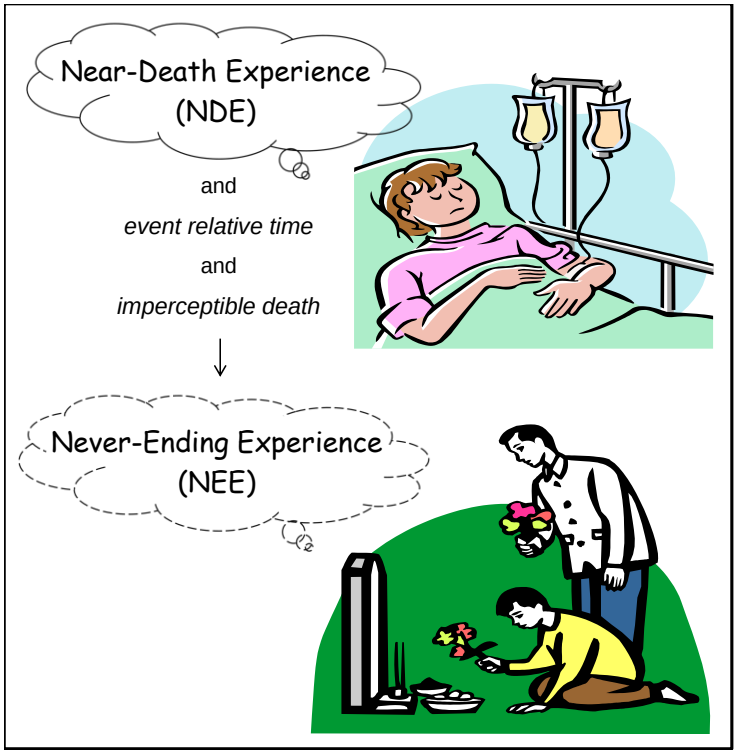

Fig. 1. An NDE, an event relative time perception, and an imperceptible death result in an NEE and natural afterlife. Others know you've died, but you don't. Instead, you're suspended within a dreamlike NEE. Clip Art from Microsoft Office.com

To appreciate such a timeless afterlife, you must be able to envision and value being left at death in a static, dreamlike yet intensely real-like state of mind enjoying an everlasting, ideally

heavenly moment—one heightened by a never-ending anticipation of many more such moments to come. For some, this vision must replace the traditional vision of spending an eternity of human time in a time-perceptive, perfect world. Actually, such a world isn't logical since perfection implies no challenges, no free-will lest decisions be bad (even evil), and thus an eternity of boredom. Certainly, not perfect! A timeless afterlife on the other hand has no such inconsistencies as one can logically experience a relatively forever, perfect moment—in reality, the optimal heaven.

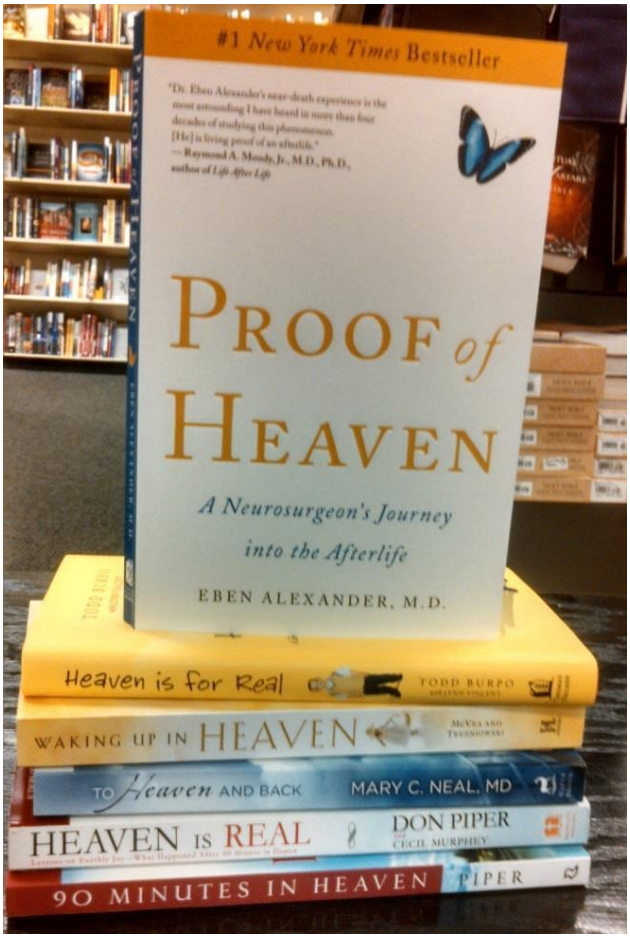

Fig. 2. Books claiming NDEs as proof of heaven. NDEs provide no proof of heaven but do provide evidence for the natural afterlife.

3. Significance

The natural afterlife differs from the supernatural afterlife or the nothingness that for centuries were considered the only possibilities for what one experiences after death. For example, the natural afterlife wasn't considered by the authors of many bestselling books each claiming, based on a personal NDE, that consciousness survives death—e.g., *Proof of Heaven* by Dr. Eben Alexander[3]. See Fig. 2. Nor was it considered by the authors of many scientific articles each

claiming that NDEs provide no evidence of an afterlife since they're induced by the natural physiology of the brain shutting down—e.g., "The Death of "Near Death": Even If Heaven Is Real, You Aren't Seeing It" by Kyle Hill.[4] See Fig. 3. Actually, NDEs, while providing no *proof* of an afterlife, provide *evidence* for the natural afterlife as does the science attempting to explain them.

Fig. 3. Popular science articles on NDEs. The science that refutes the claim that NDEs provide proof of a supernatural afterlife provides evidence of the brain's propensity to create a natural one.

Evidence for the natural afterlife, however, doesn't guarantee that *you* will have one, that it will be heavenly, or that it's the only one possible. You may not have an NDE, in which case your afterlife may be just like your before-life. Or, your NEE may be of a perfectly marvelous day on the beach, which for you may be the ideal heaven. Or, unfortunately, your NEE may be a hellish nightmare. Up to 15% of NDEs are such by one estimate.[11] Also, your NEE could be overridden by a supernatural afterlife at death or sometime thereafter. The theory of a natural afterlife doesn't preclude this.

It merely defines a new, very plausible after-life alternative, whose possibility can impact how one views death (and life), which is its main significance.

4. Conclusion

In a nutshell, your natural afterlife could simply be described as dying while believing you're in heaven (or hell) and for all eternity never knowing otherwise.

The following features make this afterlife extraordinary.

- It's supported by science—i.e., requires no supernatural beliefs.
- It doesn't suffer from logical inconsistencies.
- It was apparently never part of the discussion before being identified by a 2013 article[12].
- It's a gift of nature, perhaps from a God, resulting from our amazing ability to have a dreamlike NDE and perhaps our brain's propensity to induce one, our event relative perception of time, and our nearly certain imperceptible death.
- It can be seen as acceptable to both theists and atheists and doesn't preclude a supernatural afterlife if some type of consciousness continues or emerges sometime after death.
- Its content is mysteriously produced and personalized, either by nature or by a God as you may choose to believe.

The difficulties in understanding and appreciating the natural afterlife also make explaining it difficult. You can find more detailed explanations and discussion in the paper that is identified in the abstract and referenced below.

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    (This is the first article ever written on the theory of a natural afterlife. It gives a more religious and philosophical perspective on the theory, arguing for its plausibility both philosophically and scientifically.)

Vision Statement

Science and Spirituality: An Emerging Vision

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Abstract

The vision sketched here provides an antidote to the prevailing postmodern disenchantment of the world and demeaning of human possibilities. It not only more accurately and fully reflects our human condition but engenders hope and encourages ego-surpassing forms of human flourishing. It offers reasons for us to believe that freedom is real, that our human choices matter, and that we have barely scratched the surface of our human potentials. It also addresses the urgent need for a greater sense of worldwide community and interdependence - a sustainable ethos - by demonstrating that under the surface we and the world are much more extensively interconnected than previously recognized.

Keywords: Science, spirituality, vision, postmodern, human condition, freedom, human potential.

The rise of modern science has brought with it a host of extraordinary intellectual and practical achievements, but a host of serious and worsening problems as well. Many if not all of these problems seem connected somehow with a deep split that has developed in modern times between science and spirituality. This split itself resulted mainly from the recent ascendance of scientistic secular humanism, a worldview that is anchored in the classical physical science of the late 19th century and profoundly hostile to all things religious, in which it sees only vestiges of our intellectual childhood. This “physicalist” worldview basically holds that reality consists at bottom of tiny bits of solid self-existent stuff moving in accordance with mathematical laws under the influence of fields of force, and that everything else, including our human minds and consciousness, must emerge somehow from that basic stuff. Our everyday understanding of ourselves as effective conscious agents equipped with free will is delusive, because we are in fact nothing more than extremely complicated biological machines. Consciousness and its contents are generated by (or in some mysterious way identical to) neurophysiological processes in the brain, and beliefs about postmortem survival, common to the world’s religious traditions, are therefore also delusive: Biological death is necessarily the end, because without a functioning brain there can be no mind and consciousness, period. On a more cosmic scale, there are no final causes and no transcendent order: The overall scheme of nature is utterly devoid of meaning or purpose.

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Views of this sort have permeated the opinion elites of all advanced societies and undoubtedly contribute to the pervasive "disenchantment" of the modern world with all of its accompanying ills. They have also accumulated enormous cultural momentum and become in effect self-perpetuating by gaining near-total control of key elements of modern society such as our educational institutions and the media. In recent decades our secondary schools, colleges, and universities have all in effect become advocates for the prevailing physicalist worldview, which by now not only dominates mainstream scientific disciplines such as biology, neuroscience, cognitive psychology and the social sciences, but also has destructively colonized neighboring academic areas including the humanities generally (perhaps most surprisingly, religious studies), and even theology. It has also encouraged the recent spate of scientistic attacks on traditional religions, especially the Abrahamic religions, which in turn has engendered pushback in the various forms of fundamentalist fanaticism we witness with depressing regularity on the evening news.

Classical physicalism, however, is not merely incomplete, but incorrect at its very foundation. The deterministic clockwork universe postulated by Newton and Laplace was overthrown with the rise of quantum theory a century ago, and "matter" as classically conceived shown not to exist. Contemporary physicalist brain/mind theory is headed in the same direction. At present we have no understanding whatsoever of how consciousness could be generated by physical events in brains, and recent theoretical work in philosophy of mind has convinced many that we can never achieve one. Meanwhile, large amounts of credible empirical evidence have accumulated for a variety of human mental and psychophysical capacities that resist or defy explanation in conventional physicalist terms. These "rogue" phenomena include, for example, paranormal or "psi" abilities of various kinds, extreme forms of psychophysical influence such as stigmata and hypnotic blisters, the most basic experiential properties of our human memory system, multiple and overlapping centers of consciousness associated with single physical organisms, powerful near-death experiences occurring under extreme physiological conditions such as deep general anesthesia and/or cardiac arrest, genius-level creativity, and mystical experiences whether spontaneous, the result of intensive meditative practice, or induced by psychedelics. There is even direct evidence of several substantial kinds for postmortem survival, coupled with increasing recognition that the only credible explanations for this evidence involve either survival itself or psi processes in and among living persons – a dilemma both horns of which are fatal to the physicalist worldview.

Classical physicalism is too impoverished to carry this heavy empirical burden, but what should take its place? Serious attempts to imagine how reality must be constituted, in order that rogue phenomena of the indicated sorts can happen, appear to lead inescapably into metaphysical territory partially shared with the world's religious traditions – specifically, toward some yet-to-be-fully-characterized form of evolutionary panentheism. A worldview of this type rests upon just three core principles: First, that the manifest world arises from and is constituted by a

tremendous world-transcending ultimate reality of some conscious sort; second, that we humans are intimately linked with that ultimate reality in the depths of our individual psyches, and can experience it directly in a variety of ways; and third, that the antecedently existing universal consciousness or universal self that is the source of the manifest universe is in some sense slowly waking up to itself as evolution of more complex biological forms enables fuller expression of its inherent capacities.

What is currently emerging, in short, is a middle way between the warring fundamentalisms – religious and scientific – that have dominated recent public discourse; specifically, an expanded science-based understanding of nature that can accommodate empirical realities of spiritual sorts while also rejecting rationally untenable "overbeliefs" of the sorts targeted by critics of institutional religions. This emerging vision is both scientifically justifiable and spiritually satisfying, combining the best aspects of our scientific and religious heritage in an intellectually responsible effort to reconcile these two greatest forces in human history. It can provide sustenance in particular to persons who view themselves as "spiritual but not religious", and to those who remain in a traditional faith but are troubled by inescapable conflicts between elements of religious doctrine and the teachings of science. At the same time, like traditional faiths, it makes room for the possibility of postmortem survival and can therefore provide comfort to persons who are facing the reality of death, whether for themselves or for loved ones such as aging parents, or who have themselves encountered powerful mystical-type experiences through meditation, psychedelics, or a close brush with death.

The vision sketched here provides an antidote to the prevailing postmodern disenchantment of the world and demeaning of human possibilities. It not only more accurately and fully reflects our human condition but engenders hope and encourages ego-surpassing forms of human flourishing. It offers reasons for us to believe that freedom is real, that our human choices matter, and that we have barely scratched the surface of our human potentials. It also addresses the urgent need for a greater sense of worldwide community and interdependence - a sustainable ethos - by demonstrating that under the surface we and the world are much more extensively interconnected than previously recognized.

Our individual and collective human fates in these dangerous and difficult times – indeed, the fate of our precious planet and all of its passengers - may ultimately hinge upon wider recognition and more effective utilization of the higher states of being that are potentially available to us but largely ignored or even actively suppressed by our postmodern civilization with its strange combination of self-aggrandizing individualism and fundamentalist tribalisms. Availability of this improved worldview does not guarantee its acceptance, of course, and even widespread acceptance would not guarantee that its potential benefits will be fully realized, or its potential abuses adequately controlled. But a viable pathway to a better world does appear in principle to be opening up.