

# Saving Souls sans Psi

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## ABSTRACT

The evidence amassed by parapsychologists suggesting that some portion of the human mind may survive the death of the physical body is briefly reviewed. The findings of modern neuroscience undermine the view that substantial portions of one's personality could survive the death of the physical brain. However, one's true self is not the current collection of atoms that comprise one's body, nor is it the current configuration of one's personality traits (*i.e.*, emotions, thoughts and memories), but rather a pure center of consciousness through which these qualia flow. One's body likely holds millions of such centers (or "microsouls"), that may be recycled (reincarnated) frequently during the life of the physical body, with memories of previous incarnations lost in each transition. The philosophical doctrine of panpsychism is endorsed as offering the most viable solution to the mind-body problem

**Key Words:** panpsychism, mind-brain interaction, souls, afterlife, mind-body problem

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## Introduction

Many parapsychologists become interested in the field due to its seemingly profound implications regarding the status of mental events in the cosmos as well as the evidence it offers that each person may possess some sort of a soul that might be capable of surviving the death of the human body and persisting in some form of afterlife.

The general consensus among scientists these days appears to be that the universe consists solely of the atomistic particles and physical fields studied by modern physicists and is therefore devoid of souls that might persist beyond the death of the physical bodies they currently inhabit.

I will argue below that even if the materialistic, atomistic picture of the universe painted by modern physics is true, there still may be souls inhabiting human bodies that are capable of persisting after their dissolution. In fact, I will argue that human bodies are in all likelihood vastly outnumbered by the souls inhabiting them.

## Parapsychological Phenomena

There are two types of evidence adduced by parapsychologists that suggest that current materialistic theories of the universe are fundamentally incomplete and fail to address certain phenomena indicating that the mind may interact with the physical world in ways that materialistic science cannot explain.

## Psi Phenomena

The first category of seemingly inexplicable phenomena consists of those currently termed "psi phenomena," which include extrasensory perception (ESP) and psychokinesis (PK). ESP encompasses phenomena in which a person or animal evidences knowledge of remote or hidden events in the absence of any currently known physical signal. PK involves the direct influence of mind upon matter, such as rolling dice or quantum-mechanical random number generators (RNGs).

There is a large body of evidence consisting of spontaneously reported instances of apparent psi phenomena. These phenomena include dreams accurately depicting future or remote events, sudden feelings or "hunches" regarding remote crises (such as one's house burning down), and inexplicable physical events (such as clocks stopping at the time of their owners' deaths).

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Some of these events are quite striking; nevertheless, even most parapsychologists do not view this body of evidence as providing conclusive proof of the existence of psi phenomena, in view of the fact that the reported cases may be due to simple coincidence (as some such striking correspondences would be expected to arise by chance), sensory cues (one's grandfather might have been breathing heavily at the time of one's last encounter, spurring a dream of his death), confabulation (subjects may unconsciously elaborate such cases before reporting them), and of course that old standby, outright fabrication.

For this reason, most parapsychologists feel that only experimental evidence can demonstrate the existence of psi. However, in my view, the spontaneous case reports may offer stronger support than most parapsychologists are willing to acknowledge. Even some hardline skeptics whisper in the darkness that their own experiences provide the strongest evidence for psi in their minds.

Experimental tests of psi, such as guessing the identity of a hidden playing card, influencing the output of a quantum-mechanical RNG, and free-associating about a hidden target while in a sensory deprivation chamber, enable the scientists to rule out the hypothesis that the results are due to chance coincidence (by computing their statistical improbability) or sensory cues (by employing proper shielding).

Skeptics point to the existence of alternative explanations, such as improper randomization, inadequate shielding of the target, and outright fraud on the part of the experimenter.

For reviews of the evidence for psi arising from spontaneous case and experiments, the reader is referred to Carter (2006), Irwin and Watt (2007), Radin (2006) or Stokes (2007). Based on my review of the body of the evidence for psi, the evidence arising from spontaneous cases, while suggestive, is not definitive for the reasons given above. As parapsychology still lacks a methodologically sound, repeatable experiment, the experimental evidence does not compel one to conclude that psi exists. If anything, the experimental evidence is weaker than it was when I joined the field 40 years ago.

### **Survival Research**

Parapsychologists have also produced evidence that suggests that one's personality may persist beyond the death of the physical body in some sort of afterlife. This evidence includes (among many other things): apparitions of the deceased or the dying, hauntings, messages received from the dead in dreams, messages communicated through mediums and psychics, messages received via electronic media such as radio and telephone and now even text messages (see Stokes, 2010), near-death and out-of-body experiences, deathbed visions, and people who report memories of past lives, to name just a few. This evidence is well-summarized in Kelly, Kelly, Crabtree, Gaul, Grosso and Greyson (2007) and is critically reviewed in Stokes (2007).

The evidence for the survival of the personality is susceptible to many of the same sort of objections as is the evidence for psi; namely, these proffered cases could be the result of hallucination, false memories, fabrication, and the human tendency to see meaningful patterns in random stimuli. The most convincing cases include those in which accurate information is seemingly communicated by the deceased that is later corroborated by detailed investigation, such as the existence of a second will stuck between the pages of the family bible or statements made by young children describing events in previous lives. If psi exists, then these seemingly accurate messages from the dead could reflect the operation of psi processes among the living, rather than actions taken by the surviving personalities of the dead.

### **Souls without Psi The Implications of Modern Neuroscience**

When I entered the field of parapsychology four decades ago, relatively little was known about the relation of brain processes to psychological process. For instance, almost nothing was understood about the nature of the neural engrams supporting memories. For this reason, I was willing to entertain the hypothesis that the human personality, or some portion thereof, might survive the death of the body. Today, the situation is much different. Modern neuroscience has amassed a vast body of evidence showing the intimate dependence of mental processes on brain



processes. A brain tumor at the right site may turn a chaste Buddhist monk into a drunken raincoat-opening exhibitionist. Alzheimer's disease can rob you of most of your memories. Surely, the death of the entire brain would result in a radical change in the nature and content of one's conscious experience. For this reason, I no longer believe that the personality, defined as the collection of one's thoughts, memories, feelings, beliefs, emotions, and sensations, or any nontrivial portion thereof, could survive the death of one's body (setting aside for the moment several science fictional scenarios discussed below).

However, I will argue below that, even if psi phenomena do not exist, one's soul, conceived as a center of pure consciousness, in all likelihood will survive the death of one's physical body, the dissolution of one's personality, and perhaps even the death of the universe itself. To see this, one must, like Scrooge, awake from three dreams.

### ***The Dream of Matter***

You are born into the world as a blob of protoplasm, the astronomically improbable result of a random recombination of genes and the confluence of a vast sea of random events. Had just a few of these countless random events had a different outcome, you would in all likelihood never have been born. Your very existence could not be more improbable.

You are nothing but your body and brain. Your inner self, your aspirations and strivings, your deepest emotions, and innermost thoughts are nothing more electrical discharges and chemical secretions in the wetware of your brain. When that brain and body are gone, decomposed once more into their constituent elements, dispersed back into the Mother Earth, and finding new homes in her countless new creatures, plants and minerals, you will be no more. Aside from your works, influences on others, and the continuation of the all the myriad other causal chains in which you once participated, it will be as though you never existed.

Such is the dream of modern science and indeed of many modern enlightened religions that, perhaps prematurely, have rushed to embrace the materialist worldview of modern science, not wanting to be left behind in the dark ages from which they sprang.

### ***Awakening From the Dream of Matter***

Based on the physicalistic worldview of modern science, we are identical to our physical bodies, our selves nothing more than the electrochemical activity of billions of neurons housed in calcium skulls. In the view of modern science, the world/universe is comprised of a collection of blindly careening elementary and not-so-elementary particles, a space-time stage for them to perform their antics in, and little else. The behavior of these material particles is governed by the mathematical laws of physics and nothing more.

But, if each of us does have a self that endures from moment to moment, from day to day, and year to year (however much it may be extinguished at death), then that self cannot be identical with any specified collection of material particles. The material particles that make up our bodies are constantly changing. Atoms and molecules are continually entering into and exiting from your body, so that the collection of material particles that comprises your body of today is a completely different assemblage of material particles from that which comprised your body of several years ago. For instance, Burruss (2006) computes that some of the atoms in your body were part of the sun only months ago, having been driven to Earth by the solar wind, and that hydrogen atoms that were a part of your body only months ago have exited from the Earth's atmosphere and are on a course toward interstellar space. Yet you perceive that you are the same self you were several months ago. If this perception is correct, then you cannot be identical to any particular collection of material particles, including your present physical body.

If each of us is identical with his or her physical body, it is most surprising that we would find ourselves conscious at the present moment of time. A human lifespan is only several decades long. On the other hand, the universe has existed for approximately 13.7 billion years and will likely exist for billions more to come (to say nothing of the age of any "multiverse," of which the universe may be only a part). Thus, the probability that the moment in time that has somehow been mysteriously selected to be the "present" (something that physics, by the way, has no explanation whatsoever for) would correspond



to a moment in one's lifetime would seem to be vanishingly small.

Also, if one is to be identified with a particular physical body, the probability that the set of genes that formed the blueprint for that body would ever have come into combination is virtually zero (and still smaller is the probability that the particular configuration of material particles that comprises one's present physical body would ever have formed, much less exist at the present moment). Yet here you find yourself (a field of consciousness that is unique and special to you at any rate) existing at the present time. This is most surprising (indeed virtually impossible) based on the view that you are identical with, or dependent on, the presence of a particular collection of material particles at a particular moment in time.

There is no real place for mind or consciousness in the great World Machine of modern physicalistic science (leaving aside for the moment certain interpretations of quantum mechanics). Indeed, physicalistic science is at a loss to explain how the human brain, composed like everything else of supposedly insensate matter, can give rise to conscious experience (as contrasted with mere information-processing). To be sure, modern cognitive neuroscience has achieved remarkable insights into the nature of the brain activities that are associated with various forms of cognitive experience. What it has not thus far achieved is any explanation of how a three-pound hunk of meat, which is basically nothing more than an ongoing (albeit complex) chemical reaction, can give rise to conscious experience in the first place.

### ***The Dream of the Person***

You are your mind, not your body, not even your brain. You are your thoughts, your personality, your memories, your emotions. In short, you are a person, not a blob of pulsating neurons. While your body and brain might decay into dust, your thoughts, memories and emotions may survive in some type of afterlife.

If one cannot bring oneself to subscribe to any of the traditional models of the afterlife offered by organized religions, some writers, such as Frank Tipler (1994) have suggested that one's thoughts, memories and personality could be "downloaded" into a computer or robot, allowing one's essential self to survive after death in a cybernetic world or as a

cybernetic simulacrum operating in the physical world. This survival could be for eternity, or at least until the heat death of the universe (after which the universe may not be that much fun to play in anyway).

### ***Awakening from the Dream of the Person***

Just as the collection of atoms and elementary particles making up your physical body undergoes continual change and replacement, so do your thoughts, emotions, memories and personality traits. Your essential self persists, despite these continual changes in the contents of your consciousness (and, we might add, subconscious and unconscious minds as well). Thus, you cannot be your personality or its "contents," such as your thoughts, emotions, and memories.

As already noted, over the past four decades, neuroscientists have amply demonstrated that one's sensations, feelings, thoughts, emotions, memories, ideas, and even personality can be radically altered through electromagnetic, surgical, chemical, and accidental interventions in the brain. If relatively minor modifications of brain states can substantially alter the nature of one's experience and personality, as has by now been amply demonstrated, how could your personality and experiences manage to continue on in a more or less an uninterrupted fashion after the far more drastic event of the destruction of your entire brain? Also, many of the concerns that drive the structure of your personality have to do with the preservation of your own physical body and those of people who are closely related to you. What would be the point of the continuance of these concerns once your physical body has been returned to dust and your ability to intervene in the physical world perhaps radically curtailed?

There is the possibility, discussed above, that your personality may be resurrected by a benevolent and almost omnipotent Programmer that is so enamored of you that She creates a simulacrum of your personality in a semi-eternal cyberspace. However, there is nothing in principle stopping a sufficiently ardent Fan of your personality from constructing a computer or robot to simulate your personality while you are still alive. Surely it would be absurd to think that your self would then reside both in the computer and in your physical body. The



computer or robot is just a replica of you. It is not you. You are not your personality traits and behavior patterns.

Along similar lines, it could be argued that, if you are not the particular *collection* of physical particles that make up your present physical body, perhaps you are the particular *pattern* of molecules that make up your present body (including your brain configuration and thus personality). You would then remain the same person even if the physical particles that make up your body changed, so long as the general pattern remained the same. This is the basis of the famous beaming technique in the Star Trek television and movie series. In Star Trek, one can “beam” to a new location by undergoing a process in which one’s physical body is atomized, information about the pattern of the physical particles that make up one’s body is sent to a distant location, and a new body is reassembled (presumably out of new atoms) at the second location. Peter Oppenheimer (1986) and Derek Parfit (1987) have independently concluded that this beaming process would result in the death of everyone who used it as a form of transportation, followed by the construction of a replica of the person at the destination site. This replica may not be the original person any more than identical twins are the same person as one another. To make this example more compelling, assume that more than one copy of the person is assembled at the destination site. Surely it would be difficult to believe that one’s self could simultaneously inhabit all the replicas of one’s physical body that are constructed at the destination site, insofar as a conscious self cannot have several separate and independent streams of consciousness occurring at the same time.

Thus, you cannot be the pattern of your neural activity, your emotions, your memories, your personality traits, or your present hopes and dreams. We have now awakened from both the Dream of Matter and the Dream of the Person. If we are not our physical bodies and not our personalities, then what can we be? What further dreams await us?

### ***The Dream of Atman and Brahman***

The self that (seems to) persist over long time periods (from birth to death in the popular, common view) is not the conglomeration of the thoughts, feelings, memories, and

sensations themselves, but rather the field of pure consciousness in which these qualia act out their drama. In other words, we are the vessel of consciousness rather than the contents of that vessel.

When Descartes famously said, “*I think, therefore I am,*” I do not believe his error lies in the second clause (the affirmation of the existence of a continuing and unified self). The experience of oneself as a continuing field of consciousness is for me immediately given. If I cannot even know that I am a field of consciousness that continues from moment to moment, then I cannot know anything. To second Descartes’ conclusion, the knowledge of oneself’s existence, at least from moment to moment, cannot be doubted.

For me, Descartes’ error lies not in his conclusion, but rather in his premise. As a continuing field of consciousness, I do not think; rather, the brain prison in which I am somehow trapped does the bulk of my thinking for me. As noted above, modern research in cognitive neuroscience has made it made abundantly clear, my thoughts, my feelings, and the other elements that make up my personality are dependent on brain activity, and if that activity is radically altered or discontinued, they will not persist in any recognizable manner. However, my true self, construed as a field of pure consciousness, might persist, either trapped in a vegetative brain or on to new adventures.

To me the evidence of a continuing self is not that it thinks, which it cannot do without massive assistance from a brain (and external sources such as the Internet), but that it has feelings and experiences. Thus, a rectified version of Descartes’ statement might be: “I’m nauseous, therefore I am.”

Of course there are those, such as Daniel Dennett (1991), Susan Blackmore (1991; 1993; 2002) and Thomas Metzinger (2003), who deny the very existence of a continuing self, or “Cartesian theater,” as Dennett disparagingly calls it. The self, they maintain, is a merely a convenient “story” we tell ourselves in an attempt to render our experiences coherent and consistent. As such, the self is an entirely fictional concept, and “we” are nothing more than the scattered contents (fleeting sensations, thoughts, and emotions) of “our” minds. To most people the existence of a continuing self is immediately given and obviously true. It is an integral part



of our essential existence. However, if thinkers such as Blackmore and Dennett are correct, there is no need to worry about whether the self will survive death. Indeed, the “self” does not even survive moment to moment and in fact does not even exist at all.

The Buddhist doctrine of “No Mind” also denies the existence of a continuing self. However, the this doctrine seems more directed at the concept of the self as one’s personality, comprising one’s aspirations, motivations, cravings for material possessions, lusts, pride, and so forth, rather than at the existence of a field of pure consciousness. A goal of Buddhist practice is to distance oneself from these transitory elements. In order to achieve a state of peace and tranquility, the Buddhists teach that one must suppress and eliminate one’s cravings and greed, which, unfulfilled, are the root of all human misery and suffering.

Most branches of Buddhism and Hinduism teach that the true self is pure consciousness, not the contents or objects of consciousness. Thus, rather than clinging to the hope that one’s personality will survive relatively intact in some sort of afterlife, the Eastern philosophies teach that our personalities are transitory and not our true selves. One’s true self in this view is the pure consciousness (Atman) that in Hindu philosophy is taken to be identical with all consciousness, including that of the World Soul (Brahman). Under the Vedantic worldview, there is only one pure consciousness, and we are the entire Universe looking at itself from different perspectives. Thus, according to this view, when persons temporarily abandon their individual identities and perceive themselves as merging with the Cosmos or as being in perfect union with God, as in the mystical experiences described by William James (1902) and others, they are seeing directly into their true selves, as all centers of consciousness are manifestations of the one Consciousness that underlies this and all other worlds. In this view, we are fragmented splinters of the World Soul, our selves at once separate from, and yet identical to, one another.

It should be conceded that survival in the form of pure consciousness with little continuity of memories, emotions, and predispositions and other assorted baggage from one’s previous biological life may not be

what most persons would consider survival in the true sense (*i.e.*, survival with one’s memories and personality completely intact). It would, however, be survival of one’s essential self, the central core of one’s existence.

If our true self is Atman, pure consciousness, is there any Brahman, any larger Consciousness for it to merge in, or be identical with? In recent times, most scientists have turned their backs to the concept of Deity and a Creator. Arguments for a Designer have largely been abandoned as regressive. After all, if there was a Designer, who designed Him? If there was a “*pre-universe*”, then what preceded that?

The answer for some is consciousness. The noted mathematician and physicist Sir James Jeans, pondering the subtleties of the mathematics of laws of physics and the seeming dependence of material events upon observation by conscious minds, observed that the “universe begins to look more like a great thought than a great machine” (Jeans, 1937; p.122). Another great physicist, Sir Arthur Eddington, remarked, “the stuff of the world is mind-stuff” (Eddington, 1920/1959; p.200).

Indeed, the base reality of the world appears to be one of quantum probability waves inhabiting an abstract, multidimensional mathematical space rather than the solid, marble-like electron and protons zipping around in a four-dimensional space-time continuum that we imagine to be the firm underpinnings of our material existence. The mathematical complexity and beauty of the laws of the quantum mechanics are remarkable. It does indeed seem as though the Creator is, as both Jeans and Einstein thought, a great mathematician. As Henry Stapp says, under quantum mechanics, the world has “an essentially ‘idea-like’ structure” (Stapp, 2005; p.73). Stapp’s remarks are echoed in an editorial in *Nature*, the flagship journal of orthodox science, in which Richard Conn Henry points out that modern physics has demonstrated that the universe is “entirely mental” in nature and that “nothing exists but observations” (Henry, 2005; p.29).

But if the universe is a thought, whose thought is it anyway? In recent years, a seemingly endless succession of physicists have observed that the laws of the universe and the initial conditions set at the time of its creation seem extraordinarily finely tuned to



support the evolution of complex life forms and hence conscious observers. This seeming evidence of intelligent design is often referred to as the anthropic principle. Was the universe created as a vast cosmic amusement park? And why go to trouble of designing such an elaborate “roadside attraction” unless One intended to enjoy it Oneself, if only vicariously? Are our individual consciousnesses just aspects of the Creator’s (or Creators’) consciousness, lost in an unimaginable form of contemplation of the myriad creatures It has managed to generate from Its mathematical inventions, much as we may become lost in the adventures of a goldfish in the bowl in our living room?

However, as Tim Hill points out in a letter to the Editor of the *Skeptical Inquirer* (Hill, 2005), the vast emptiness of space is totally hostile to human observers with its lack of air, pockets of intense radiation and unimaginably high temperatures, not to mention the total absence of fast-food establishments. If the anthropic principle is valid, Hill suggests, the overwhelming evidence surely suggests that the universe was created for beings that exist in the vacuum of space, not for the amusement of a handful of abnormally smart “geek” apes confined to one tiny speck in a cold dark corner of a comparatively uninterested and desolate cosmos (although the recent discovery of a vast number of “exoplanets” orbiting remote stars, may indicate that the universe is a friendlier place than it appeared to be at the time Hill wrote his letter).

If the creating minds are just looking at various combinations of physical laws and initial conditions to see what universes are generated as some sort virtual parlor game and then letting themselves get lost in the resulting Dream or Thought, this may explain why the universe does not appear to be designed by an all-powerful, all-caring compassionate God. It may have been designed for the fun and entertainment of daredevils. It may be more akin to a bungee jump than to the body or sensorium of the traditional Western God (Newton’s view).

There is a vast literature on the anthropic principle that the reader is undoubtedly familiar with, and I will not attempt to summarize it here.

### *Beyond the Veil of Maya*

We awake from the Dream of Atman and Brahman to find ourselves in still yet another, but this time possibly the final, dream. We are, exactly as in the dream from we have just awakened, each of us specks of consciousness adrift among the beautiful clouds of quantum waves, admiring their beauty, touching them, drawing them this way and that as the potential universe is actualized, and our minds plow the uncertain future into the actualized present, leaving it behind, frozen in the determined past.

Perhaps we are more akin to antiprotons than to angels, small islands of consciousness born to force the amorphous clouds of quantum possibilities into the crystallized raindrops of actualized events. In the view of many interpreters of quantum mechanics, observation by consciousness is what causes such quantum collapse (*i.e.*, collapse of the state vector containing an array of possibilities into one definite outcome). Walker (2000) has even proposed the existence of “mini-consciousnesses” or “proto-consciousnesses” that govern the collapse of quantum vectors that are remote from human observers.

Thus, conscious minds may well produce the experience of “time flow” as we ride the “now” as it carries us into the future. It would seem that in the last few decades philosophers and scientists have generally given up any attempts to explain the phenomenon of time flow, surely one of the most basic facets of our existence, along with the centers of consciousness that each of us is. Science and philosophy has not made much (if any) progress in explaining either of these core elements of the world.

Some physicists (*e.g.*, Wheeler, 1983) have suggested that the universe itself, conceived as a quantum process, could not have come into existence without some conscious observer to force the collapse of state vectors and thus to give rise to a definite history of the universe. Wheeler terms this view the “participatory universe.” Wheeler notes that this view may explain the fact that the initial state and physical laws of the universe seem finely tuned to support the existence of conscious observers. Potential universes that do not support the presence of conscious observers could not become actualized in Wheeler’s view, as there would be



no conscious observers to collapse their state vectors in the proper “direction” to create such a history. Davies (2008) even proposes that that the existence of life was caused by such a “teleological” quantum state vector collapse.

But perhaps those observers are more akin to Walker’s “proto-consciousnesses” than to human beings. If physics suggests anything, it is that the fundamental constituents of the universe are more likely to be very small in comparison to the human observers that formed the center of the medieval view of the cosmos. Our essential selves are more likely to resemble an electron than a human body.

Parapsychological researchers have provided evidence that conscious minds may not only cause quantum state vectors to collapse to definite outcomes, but also may determine which of the myriad quantum possibilities are actualized (although these findings fall short of replicability upon demand). These psychokinetic effects on quantum random event generators include the influence of random quantum events that have already been recorded, but not yet observed by anyone (Schmidt, 1976). Thus, the creation of the universe may have been the ultimate act of retroactive psychokinesis by future observers.

If minds can influence the outcomes of quantum processes, this might open a window whereby a soul might influence the brain. The degree to which the brain is open to such influence has spawned a specialized literature of its own, which I will not attempt to summarize here.

### **Microsouls**

We each seem to be a single conscious self (field of consciousness) which in some mysterious manner became attached to our brains shortly after our conceptions and will persist in those brains until we die. But our brains are powerful and unimaginably large in comparison to our single-celled ancestors, who, we might suppose, had the glimmerings of consciousness. Our brains and bodies are in essence a colony of billions of amoebas. Many of us may ride in a single brain. For instance, when a human brain is split into its two hemispheres by severing the corpus callosum (the primary bundle of neural fibers connecting the two hemispheres), two fields of consciousness seem to exist, sometimes with such differences in motivation that the right hand (controlled by the left hemisphere) may

be forced to grab the left hand (controlled by the right) in order to prevent the latter from carrying out an assault on one’s spouse.

In fact, the findings of split-brain research are precisely the evidence Patricia Churchland uses to refute the existence of a nonphysical self or soul in human beings (Churchland, 2002; pp.46-47).

Churchland is likely correct so far as the “single soul” theory goes; but the evidence suggests that multiple centers of consciousness or “souls” may exist within a single brain, with each of them falling under the delusion that they are the single center that is “in charge of” the body.”

Gazzaniga (2011) proposes that the left hemisphere of the brain hosts an “interpreter” that in split-brain patients fabricates explanations for emotion and behaviors that are caused by the now isolated right hemisphere, and thus creates the illusion of a unified self. Perhaps each microsoul identifies itself with the entire body in the same way each member of a football audience may identify with the whole team.

Take for instance the phenomenon of “blindsight,” a term coined by Lawrence Weiskrantz (1986) to describe a syndrome in which cortically blind subjects respond appropriately to visually presented stimuli even though they report no conscious awareness of such stimuli. Cortical blindness refers to blindness that is a result of damage to the visual cortex in the occipital lobes of the brain. Even though the eyes of such patients may be normal, they may be blind in part of their visual field because of such damage to their visual cortex. If you present a small dot of light to such patients in the blind areas of their visual fields, they will say that they saw nothing. However, if you ask them to just take a guess by pointing to where the dot of light might have been, they frequently point at the exact location that the dot occupied. If you present erotic pictures to such a patient in the blind area of the visual field, the patient may blush or giggle or say things such as “That’s quite a machine you’ve got there, Doc!” Many researchers have speculated that blindsight is mediated by a secondary visual center in a subcortical area of the brain known as the superior colliculus. Thus, there may be multiple centers of consciousness within a single human brain. Free will denier Sam Harris (2010) likewise contends that there are





too many separable components for there to be a single entity standing as a “rider to the horse” (brain).

Christof Koch, who describes himself as a reductionist, is well known for his theory (developed in collaboration with Francis Crick, one of the co-discoverers of DNA) that the unification of conscious experience is due to the synchronous firing of neurons. In his latest book (Koch, 2012), he asserts that consciousness is an individual unity, but contends that there are numerous relatively complex lower level “modules” in the brain that he describes as “zombie agents,” as they are not as highly integrated as the core self. He asserts that conscious experience is simply neural activity experienced from within. He contends that all complex material activity, including that of “every living cell on the planet” is associated with some form of consciousness (p.131). He asserts that even elementary particles such as neutron and protons are conscious to some degree. He reviews the history of the philosophical doctrine of panpsychism (the view that all matter is conscious, of which more below). He endorses panpsychism as well as Julian Huxley’s observation that “Evolution is nothing but matter becomes conscious of itself” (p.134). Finally, he compares the soul to a psychic “crystal” that returns to the unformed void after death.

Jonathan Edwards (2005) and Willard Miranker (2005) have even proposed that that each single neuron in the brain is associated with its own center of consciousness. Due to the complexity of the input to each neuron, each such center of consciousness would likely identify with the body as a whole and fall under the delusion that it is the single center conscious self “in charge” of the whole body. Edwards (2006) notes that:

“Physicist[s] seem to assume that the thing with a point of view, the observer, is some big lump of stuff [the brain] that does not have to fit into theories about things that are observed” (p. 69).

Zeki (2002) has likewise proposed the existence of an array of microconsciousnesses at each “node of neural activity.” Bray (2009) compares neurons to amoebas having a complex array of inputs and thus possibly comprising centers of consciousness. Clayton (2010) offers living cells and electrons as possible centers of consciousness. Goetz

(2001) suggests that the soul may be one of the “simple atoms” in the brain.

The field of consciousness that constitutes one’s core self (*i.e.*, soul) appears to be a unitary and indivisible entity. In tracing the development of the modern conception of the soul, Alan Segal (2004) notes that the ancient Greek philosopher Epicurus asserted that the soul is an atomic (*i.e.*, indivisible) body or it is nothing. It could not be incorporeal in Epicurus’ view, as all things are material. Aristotle, on the other hand asserted that *nous* (perfect intelligence) survives the death of the body, but this was an impersonal form of survival that did not include one’s memories, feelings or personality. Aristotle’s impersonal form of survival was not as popular as the Pythagorean view of the soul, which did retain some elements of the personality.

Lund (2009) notes that the manner in which a composite thing is destroyed (*i.e.*, dissolution of its elements) is not possible for souls, which lack parts in his view. Similarly, Martin and Barresi (2006) cite Joseph Butler’s observation that the conscious self is something indivisible and simple and thus cannot be identical to a material organism. They argue that is its simplicity rather than its immateriality that ensures the survival of the soul. They note that Hobbes viewed souls as material entities and that this view avoids (or at least diminishes) the problem of how minds and brains interact. To this one might add that the fact that we seem to be somehow stuck in physical brains further argues for the physicality of the soul.

Martin and Berressi (2006) favorably cite the philosopher Edmund Husserl’s view that the self is a transcendent ego or center of pure consciousness, for which everything that exists is an object. Consciousness cannot be investigated through observation, as can the physical world, but only through phenomenological investigation. Consciousness exists absolutely and is indestructible. If the world were destroyed, Husserl maintained, consciousness would remain, as it is the absolute foundation of the material world. They note that Husserl abandoned these views later in his career.

Keith Ward (2010) seconds the early Husserl in writing that “consciousness is the condition of any and all possibilities existing...and not merely a very complex thing that happens to exist” (p. 295).



If the soul is unitary and indivisible, it could not be a compound entity such as a neuron, or even an atom for that matter. It would have to be something more akin to a proton than a protozoan.

### **Panpsychism**

This view leads naturally to panpsychism, the view that consciousness pervades the universe. Many of the most prominent practitioners of human thought, including Leibniz, Spinoza, and Alfred North Whitehead, have proposed that consciousness pervades all things and that, at root, the universe consists of a plenitude of spheres of pure consciousness, or “monads” in Leibniz’ terminology. In the early stages of my intellectual career, I scoffed at the notion that a rock might be consciousness. How silly my naive rejection appears in retrospect. It is a shame that the cosmos of Leibniz, Spinoza, and Whitehead has to be “discovered” anew by each generation, due to the fact this point of view is drowned in a seemingly ubiquitous sea of irrationalism on the part of all sides in the debate over religion.

One advantage of the panpsychist view is that it does not need to explain how consciousness arose from insentient matter, which is perhaps the most vexing, fundamental and seemingly unsolvable problem confronting modern science and philosophy. Consciousness was here from the start. It is angels all the way down.

Our bodies are composed of a vast number of cells and bacteria, with only a fraction of them from our own species. In fact, our bodies seem more akin to a ferocious battleground for microorganisms, which are replaced from minute to minute, than to a unified entity. If one is to grant consciousness to animals “all the way down,” could not our white blood cells possess a (possibly dim) consciousness capable of recognizing their foes and engulfing them? Might plants be conscious? While they seem less complex than us, rice plants contain upwards of 50,000 genes, compared to a measly 20,000 to 25,000 for a human being. Thus, appearances may be deceiving. Is it inconceivable that plants possess a glimmer of consciousness, perhaps operating on a much slower time frame than we do? If one watches plants in a speeded up movie, their behavior seems almost animal-like as they open and close their petals and stretch to capture the maximum sunlight. Do

plants experience thirst when deprived of water (to say nothing of the Venus flytrap, which might be expected to experience pleasure as it emits a contented burp)? It is true that plants have no nervous systems; however, might we not be biased toward neurons because of our present unfortunate location? McGinn (1999) for instance begins his book *The Mysterious Flame* with a short story in which future silicon-based artificial intelligences stumble across the Earth and are astounded to find lumps of meat that can think (our brains). McGinn suggests that conscious minds may be remnants of a nonspatial world that preceded the Big Bang, and he hypothesizes that we may not be mentally equipped to solve the problem of how minds and brains interact.

There are still many, seemingly sophisticated modern writers who deny consciousness to nonhuman animals or to any but a small set of animals. The prominent neuroscientist Antonio Damasio (2010) states that consciousness exists only after a brain develops language. He denies consciousness to snails without any supporting discussion. He asserts that plants have no mind because they have no neurons. On page 192, he states that there is only one mind or self per body, but then immediately modifies this view by speculating that there may be “protoselves” in the brain stem and the superior colliculus (the secondary visual center thought to underlie blindsight). However, he states that these protoselves are not “Cartesian theaters” or centers of consciousness.

The neurophilosopher Thomas Metzinger (2009) asserts that consciousness arose for the first time when humans developed culture.

Nicholas Humphrey (2011) denies consciousness to “lower” animals such as frogs and states that “we would never attribute a will to live to an oak tree, an earthworm, or a butterfly” (p.86), going so far as to state that “human beings, alone among the animals, fear death” (p.206). But how often do you run into houseflies who eagerly take the supine position in the hope that you will swat them and end their miserable coprophagous existence? And what of the elephants, who make pilgrimages to the graveyards of those they have lost long ago?

Humphrey argues that since consciousness evolved, it must have a purpose.



Humphrey does attribute consciousness to “higher” animals who engage in play “just for fun.” He cites the examples of galahs (Australian birds), who fly into the vortices of dust-devils and tornados just for the wild ride, as well as group of ice-skating buffalos. He proposes that such enjoyment of life creates a “will to live” and that this is the evolutionary purpose of conscious experience. One might ask how Humphrey knows that, say, earthworms do not play. Turning right and burrowing downward might be hysterically funny to such creatures and their compatriots. How does he know this is not the case? Is it because he has not seen an infectious smile on their anterior orifices?

He asserts that the “core” conscious self comes into being “only as and when you have sensations” (p.91), as a housefly self-evidently does not. He sarcastically dismisses the notion that there could be a conscious self-waiting in the wings for sensations to occur and rejects the philosopher Gottlob Frege’s assertion that there can be no experience without an experiencer and that “an inner world presupposes the person whose inner world it is” (p.94).

Humphrey then turns to the subject of life after death. He notes that the hypothesis of personal survival of death requires the acceptance of a dualistic worldview in which the mind can function independently of the physical body. He somewhat surprisingly states that dreaming suggests that the mind can function independently from the body, although one would have thought that it has been amply demonstrated that dreams are closely tied to brain states. However, he questions the “staying power” of such states, which fall short of the promise of eternal life promised by many religions. He goes on to make the indefensible statement that your consciousness “vanishes completely” in deep sleep and that when you emerge into a dream or wake up from sleep, “you *emerge from nothing*-but as the very same *you* you were before” (p. 197, italics in original).

One might add here that you have seem to have “emerged from nothing” at least once, namely when you were born. And as the legendary writer and satirist Voltaire once wrote, it is no more surprising to be born twice [and one might add a billion times] than it is to be born once.

Humphrey then strangely asserts that “human beings rationally ought to believe in an afterlife” (p. 197). He notes that belief in the afterlife and in religion generally promotes health. But then, right as the reader is sitting down at the dining table to enjoy this fillet of soul, Humphrey pulls the chair right out from under him by asserting that modern science rules out the existence of an individual personal soul that could survive death.

On the other side, free will opponent Sam Harris (2010), who views the self as a center of pure consciousness, states that it is as likely to be found in a hyena as a human being.

Our brains are essentially comprised of colonies of single-celled animals (our neurons). What if these animals could move? Might their collective then be considered an even more complex brain?

Hölldobler and Wilson (2008) propose that communities of insects comprise “superorganisms” and that evolutionary selection acts on the colony as a unit, rather than on the on the individual insects. Can the whole of humanity be considered as a single super-brain, perhaps associated with global spheres of consciousness? Goldberg (2009) has even suggested that in the future the Internet may develop into an “advanced intrinsic consciousness” (p.54).

And what of the famous thermostat? Can it be said to be aware of the rise of heat? Might rocks as they weather and absorb radiation experience consciousness on an extremely slow time span? As I work in my current job I sometime catch glimpses of the patterns on my Windows media player that resemble the light show at the end of Kubrick’s “2001: A Space Odyssey”. I sometimes think that the consciousness of a rock might be something like that (as well as how much more peaceful it would be to be such a rock rather than to return to the Microsoft Word window at which I am toiling). Thus, the very dust from which we were born and into which we will die may well still carry still the stuff of mind.

In view of the complexity of the quantum mechanical wave governing the behavior of individual physical particles, it might not be too big of a stretch to hypothesize that a single proton might possess consciousness in the form of “knowledge” of a



complex array of inputs, and protons are essentially immortal.

### ***Microsouls and the Afterlife***

Elementary particles such as electrons and quarks sometimes become embedded in physical brains; these particles persist and remain stuck over “long” time intervals such as minutes and hours. These particles appear, like our individual consciousnesses, to be indivisible (leaving aside the possibility of subquarks for the moment). If an electron can “incarnate” in a body for a period of time, then be expelled, and then be “reincarnated” in another body or physical system, then so might we. We may ourselves be material or quasi-material entities that can become stuck in individual brains on a temporary basis. We may be a particle or field already known to physical science, although it is more likely we are an entity yet to be discovered and explained.

We directly experience ourselves as single unified fields of consciousness that persist through changes in our brain states and bodily composition over periods of at least hours. We think we persist as the same selves over the lifetimes of our bodies. In this we may be wrong. If memories are, as an overwhelming body of scientific evidence indicates, stored as patterns of synaptic connections among neurons in our brains, how do you know that you are the same field of consciousness that inhabited your body when you fell asleep? If you can become attached to your brain shortly after conception (or in the view of some people at birth) and become detached from it at the moment of death, it stands to reason that you can also become attached to it long after birth and leave it well before death. Our association with our bodies may be only temporary. We may be breathed out and breathed in like so many oxygen atoms. Indeed, while many philosophers (such as Descartes) have thought that minds or souls are not extended in space and time and hence immaterial, the fact that we find ourselves stuck in physical bodies occupying particular locations in space and (even more mysteriously) located at a particular moments in time, suggests that we too must (at least partially) be residents of space-time ourselves, if only temporarily.

If we are continually being recycled, then when we wake in the morning, we may

not be in the same bodies (or objects or plasma fields) that we were in the day before. If our memories, thoughts and emotions are largely a function of our brain states, we would not remember our existence as, say, a crow the day before. Our previous “memory pad,” namely the crow’s brain, is lost to us. We cannot find those memories in the same way that we cannot access a telephone number written on a misplaced piece of paper. The telephone number and the pad it was written on are not parts of our essential selves. Neither are we the memories stored in the brain of the crow that now perches outside our window or the memories and personality traits stored in the new human brain in which we have just awakened. What we will remember are the memories stored in that new human brain (sometimes after a period momentary of confusion upon awakening). We will feel the emotions caused by the intense firing of our midbrain neurons and the hormones and neurotransmitters rampaging through our cerebral cortex. Accessing the brain’s memories of our sixth birthday party, we will immediately come to the conclusion that we have inhabited this brain and body for decades. The brain has evolved to serve the body, and we are now made to serve that purpose as well, overwhelmed by the delusion that we are the Person, that is to say, the body and the memories, thoughts and emotions that result from the neural activity of that body’s brain. We think we are in sole command of the body, whereas in fact our nerves, the neurochemical soup in which they bathe, as well as numerous other centers of pure consciousness also mired in the same brain, may have as much or more to say about the fate of the body than we do. In short, we fall under the illusion that we are the Person, the physical body that continues from birth to death and the stream of memories, thoughts and emotions those courses through it, rather than the centers of pure consciousness that we are.

We are not the Person, we are not even Atman (in the sense of a sphere of pure consciousness inhabiting the body from birth until death), and are likely no longer Brahman, although it is possible that we were once conjoined in an aggregate of consciousnesses that may have somehow “designed” the world.

As we have seen, through replacement of atoms, the body we inhabit today is a totally



different body from that of a decade ago and the spheres of consciousness that inhabit it (including ourselves) are likely themselves different as well. There is no Person in the sense of a continuing aggregation of matter or a continuing self. The Person is likely to be, as Blackmore and Dennett insist, a story we tell ourselves. However, it is a very useful story, just like the story of my car or my kitchen table. It helps credit card companies to obtain payments for purchases we made the preceding month and guides our interactions with former classmates at a high school reunion. But in an absolute sense, the Person is only a cognitive construct, a very vivid hallucination. Our souls could be eternal, but “we” (the People) have only a momentary time in the sun and may only be cognitive constructs, much like the ever-changing body

of water that is now called the Mississippi River.

We cling to our present form of existence thinking that there is no other, but when you stop to think about the matter, human bodies, with their ills, needs and subjugation in mindless repetitive jobs, may not be the best places in the universe to inhabit. In fact, they may be “mini-Hells,” aberrations in Great Cosmic Scheme. But we may not inhabit such Hells (or such Heavens as there might be) for as long as we think. The best thing for us to do is likely to take the poet Robert Frost’s advice and momentarily stop the “horses” we are currently riding to enjoy the beauty of the falling snow. As Frost suggests, there may be miles to go (although perhaps not so many as one might think) before we sleep (and enter yet another dream).



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