

# Article in Magazine Watkins Mind Body Spirit

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Is consciousness generated in and confined to the brain? Or does it extend in some way beyond the brain—and could it even be a fundamental feature of the cosmos? Until a few years ago nobody other than deeply spiritual or religious people would have subscribed to a concept of consciousness other than what I call the “turbine theory”: the theory that the brain generates consciousness, and the consciousness it generates is confined to the brain. Today there is more and more evidence that consciousness is not confined to the brain but is “nonlocal,” embracing minds and events beyond the brain and the body. And there is an insight dawning among avant-garde scientists, thinkers and spiritual people that consciousness may be not only nonlocal, but cosmic.

I outline here three concepts of consciousness: the concept of consciousness as a local “turbine,” as a nonlocal “cloud,” and as a cosmic “hologram.” They constitute a logical progression, an evolution from the first to the third concept reflected also in my own thinking and writing.[1]

## 1.

### The first concept: consciousness is local (the turbine theory)

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In the modern world the common assumption is that the stream of experience we call consciousness is generated by the living brain, much as a stream of electrons is generated by a working turbine. As long as the turbine functions, it generates a stream of electrons: electricity. As long as the brain functions it generates a stream of sensations: consciousness. When they shut down, the streams they generate vanish. Consciousness no more exists in a dead brain than electric charge exists in a stopped turbine.

The turbine is a particularly apt metaphor because it refers to a tangible object that produces something that is itself intangible. We do not see, hear or taste electricity; we know it only by

the effects it produces. This is much the same with consciousness. We experience the stream of sensations, feelings, volitions and intuitions we call consciousness, but we do not perceive consciousness as such. No amount of scrutiny of the brain and its workings will disclose anything we could call consciousness: all we find is grey matter with networks of neurons firing in complex sequence. These processes govern the organism, coordinating the myriad reactions that maintain the organism in the living state.

It appears that in some cases consciousness does not cease when the brain stops working.

In the more advanced interpretation of the “mainstream” theory, in the course of performing its vital function the brain also generates a stream of sensations, feelings, intuitions and volitions. I say “more advanced interpretation” because the hard core of the mainstream conception do not recognize consciousness as a real existent in the world: it is an epiphenomenon, a kind of illusion.

The turbine theory is considered confirmed by the observation that when the brain’s coordinating and regulating functions are impaired, the stream of sensations that constitutes consciousness is distorted, and when the brain stops, the stream stops as well. Thus, mainstream thinkers conclude, the stream must be a by-product of the workings of the brain. (We should note that this concept confronts the so-called “hard problem” of consciousness research: how the brain, a material system of neurons, can generate a stream of immaterial sensations. This problem, as we shall see, does not arise for the third concept of consciousness where the brain does not *generate* consciousness, it only *receives* and *displays* it.)

There is a still more advanced variant of the mainstream theory that “universalizes” the phenomenon of consciousness in the realms of the living. It maintains that consciousness is generated not only by the subject’s brain, and not only by all human brains, but by all living organisms. Humans generate human forms of consciousness and other species generate other, lesser forms of consciousness. Even simple organisms, such as plants, could have the primitive equivalent of a consciousness in experiencing a rudimentary “feel” of the world. Cleve Backster’s experiments with the polygraph show that plants react sensitively to things that happen around them. Backster claims that they have “primary perception.” [2]

The thesis that consciousness would exist at various levels of scale and complexity in nature is logically unassailable: there is no cut-off point in the range of biological evolution where one could say that above this point there is consciousness, and below it there is not. Yet, even if consciousness is associated with living organisms throughout nature, the turbine theory still holds. The turbine is then not limited to human beings but functions throughout the living world.

## 1.1

### The challenge to the turbine theory

The turbine theory of consciousness can be upheld as valid as long as there is evidence that matches the predictions based on it. The critical prediction is that when the brain stops, consciousness vanishes, just as when a turbine stops, the electric current generated by it disappears. At first sight, this claim is corroborated by the evidence: the observation that when cerebral functions cease, consciousness ceases as well. This is not experienced in the first person, of course, but it is a reasonable inference from the observation of people who are brain-dead or entirely dead. They do not behave as if they had a working consciousness. The prediction that consciousness ceases in the absence of cerebral function does not admit

of exceptions. We could no more account for the presence of consciousness in a dead brain than we could account for the presence of electric charge in a stationary turbine. Evidence to the contrary would place in question the turbine theory, the dominant concept of consciousness in today's world. But evidence to the contrary has surfaced. It appears that in some cases consciousness does not cease when the brain stops working.

Evidence for this astonishing claim is furnished by people who have reached the portals of death but returned to the ranks of the living. In some cases critically sick people become temporarily brain dead, but when they regain normal cerebral functions they report having had conscious experience. This is known as the NDE: the near-death experience. NDEs are not reported by all people who return from the threshold of death, but they are reported in a sufficiently large percentage of the population of temporarily brain-dead people—in some instances 25 percent—to make the phenomenon worthy of serious attention.[3]

NDEs are a critical issue for the turbine theory. A by-product of brain activity cannot persist in the absence of the brain function that generates it. There is no known physiological mechanism that could account for conscious experience in a dead brain. Yet some NDE reports prove to be veridical: the experiences reported by the subjects during their brain-dead period match the experiences they would have had if their brains had functioned normally.

The NDE is not the only critical issue for the turbine theory. There are indications that conscious experience persists in some form not just during the temporary cessation of brain function, but also in its permanent absence: when the subject is fully and irreversibly dead. Mediums, for example, seem able to channel messages from deceased persons. These transmissions have encountered various objections, among them that the mediums themselves invent the messages, or that they pick them up from living persons through some form of ESP. There are cases, however, in which these possibilities can be effectively ruled out: the messages conveyed by the mediums contain information that neither the mediums themselves, nor any living person they could have been in touch with, are likely to have possessed.[4] Moreover dead people communicate at times also through electronic instruments. Known as ITC (Instrumental Transcommunication), this strange phenomenon consists of anomalous voices and sometimes images appearing on TV receivers, tape recorders, radios, and even ordinary telephones. Hundreds of controlled experiments have been reported from various parts of the world, leaving little doubt that the phenomenon exists, even if it lacks satisfactory explanation.[5]

## 2.

### **The second concept: consciousness is nonlocal (the cloud theory)**

Evidence that consciousness can persist in the absence of brain function is a critical problem for the turbine theory. The evidence is significant and needs to be taken into account. The simplest and most logical way to account for it is to assume that consciousness is conserved in some way beyond the brain. NDEs, past-life experiences, and experiences of after-death communication could be instances of accessing items of consciousness that have been “saved” beyond the living brain.

The term “saved” is entirely appropriate here. The concept of consciousness implied by the persistence of elements of consciousness can be illustrated in reference to information conserved in a computer network.

In the computer theory of consciousness an item of consciousness is an item of information. If that item is entered on an old-fashioned computer without built-in memory and links to other computers, we have the equivalent of the classical turbine: the information entered on

a given computer is limited to that computer. When that device is shut off, the information disappears. But there are computers with built-in memory, and computers linked to other computers and to information systems. Then the information entered on the given computer need not disappear when it is turned off: it may have been “saved,” either to its own memory stores or to the other computers with which it is linked.

A networked computer is similar to a turbine connected to an energy grid. A connected turbine can be stopped and even destroyed, and the energy it has generated remains conserved. Of course, the particular electric charge generated by a given turbine cannot be identified. This is not the case in a networked computer: here the information is identified by a specific code and can be called up again. When it is called up it appears precisely as it was entered, regardless of whether or not the computer that entered it is functioning.

There is more to the evidence for the persistence of consciousness beyond the brain, however, than the finding that the consciousness of an individual can be recalled when he or she has died. It appears that not only one, but a conceivably indefinite number of consciousnesses can be recalled. The network in nature operates not merely as a memory device, but as a cloud-computing system.

Cloud computing is a good metaphor for the observations of psychiatrists and consciousness researchers when they induce altered states of consciousness in their clients. It appears that in suitably altered states people have a nearly complete recall of everything that has happened to them. Their recall is not limited to their own experience: it includes the experience of other people as well. In altered states one may experience episodes from the lives of historical figures as well as of common people. Psychiatrist Stanislav Grof concluded that in altered states of consciousness one can recall almost anything that has ever taken place in space and time.[6]

These observations suggest that there is something like an Akashic Field in nature—a field that conserves all that happens in space and time, integrates it with all that happens and has ever happened in all places and at all times, and makes the complete information available for recall, acting much as the legendary “Akashic Records.” [7]

## 2.1

### **The challenge to the cloud theory**

The cloud theory of consciousness is an appropriate metaphor for understanding the observations that come to light at the frontiers of consciousness research. But it has its limitations: it does not account for all the features of the observations. It appears that some items of consciousness encountered in altered states are not mere traces of one’s own or other people’s consciousness but are consciousnesses themselves. This conclusion is warranted by the finding that one cannot only recall images and episodes from the experience of other people, but one can enter into communication with whatever it is one is reaching.

For the cloud theory this is an anomaly. If there is something like an information network in nature that saves and stores items of consciousness, the recall from that system should be the same as the original: the system stores and conveys information, it does not elaborate it. Yet there is evidence that in an altered state people can experience “something” that is not merely the trace of a consciousness but an active consciousness itself. It is a living consciousness that is not the consciousness of a living person.

This remarkable phenomenon emerges in the mystical experience, in the experience of therapists who induce an altered state of consciousness in their clients, as well as in the trance state of mediums. Therapist Allan Botkin claims to have induced “after-death

communication” in thousands of patients,[8] after-life researcher Raymond Moody reported many cases of spontaneous communication with deceased persons, and psychic mediums seem able to enter into communication with active intelligences that appear as living beings, answer questions and recount what happened to them after they died.[9]

These observations point to a remarkable conclusion: it appears that we can be in communication with entities that manifest a sense of self, carry memories of physical existence, and occasionally manifests a keen desire to communicate. This is “transcommunication,” and it is not explained either by the turbine or the cloud theory.

### 3.

#### **The third concept: consciousness is cosmic (the hologram theory)**

Consciousness seems to persist in nature as an active intelligence, capable of perceiving some aspects of the world and communicating its experience. How could this be?

Traditionally, the answer has been that it is the transcendental soul or spirit that survives the body, and thus it is the soul or spirit that we communicate with when we encounter an entity that appears as a living consciousness but is not the consciousness of a living person.

Consciousness may not be “in” spacetime but in a realm beyond it.

The traditional explanation may be correct, but it exceeds the bounds of science. Science can only deal with things in nature, and not with transcendental realities. Yet there may be a scientifically acceptable explanation for consciousness beyond the brain. Consciousness may not be “in” spacetime but in a realm beyond it.

The latest theories in quantum physics suggest that the spacetime realm is not all there is: there is a deeper dimension in the cosmos. Consciousness could reside in that dimension, and only manifest itself in space and time.[10]

This insight has been known for millennia. Philosophers of the mystical branch in Greek metaphysics differed on many points, but were united in affirming the existence of a deep or hidden dimension. For Pythagoras this was the Kosmos, a trans-physical, unbroken wholeness, the prior ground on which matter and mind, and all being in the world arises. For Plato it was the realm of Ideas and Forms, and for Plotinus “the One.”

At the dawn of the modern age Giordano Bruno brought the concept of a deep dimension into the ambit of modern science. The infinite universe, he said, is filled with an unseen substance called aether or spiritus. The heavenly bodies are not fixed points on the crystal spheres of Aristotelian and Ptolemaic cosmology, but move without resistance through this unseen cosmic substance under their own impetus.

In the nineteenth century French physicist Jacques Fresnel revived this idea and called the space-filling and in-itself unobservable substrate “ether.” When the famous Michelson-Morley experiments failed to detect the “ether drag” predicted by Fresnel’s theory, the physics community embraced Einstein’s Special Relativity and discarded the ether concept.

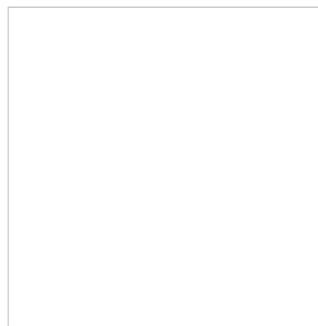
However, by the dawn of the 21st century the ether, as an unobservable plane of reality grounding the observed phenomena, came back to physics. Theoretical physicists began to trace the fields and forces of nature to common origins in a unified, a grand-unified, and then super-grand-unified field. In the Standard Model of particle physics, for example, the basic entities of the universe are not independent material things even when they are endowed with mass. They are localized crystallizations or nodal points in a unitary matrix.

The realization that dawns today is that the unitary cosmic matrix is beyond space

spacetime: it generates spacetime. In current theories—advanced by Craig Hogan, Brian Greene, Juan Martin Maldacena, Leonard Susskind and Gerard 't Hooft among others—spacetime is a holographic projection of codes at its periphery. The codes themselves may be at the spacetime boundary, or perhaps in another universe. What is clear is that they are not *in* spacetime, but beyond it.[11]

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The emerging view is that spacetime, and all the things that emerge and evolve in space and time, are holographic projections of a deeper dimension. In my view that dimension harbors the consciousness we encounter in us, and in other living beings. All forms of consciousness are manifestations of the integral consciousness that is beyond spacetime—that is the integral logos, the absolute and unchanging reality the Hindus call Brahman. In the final count Erwin Schrödinger is right: consciousness is one—it does not exist in the plural. Our consciousness is a holographic part of the cosmic consciousness, a part that embraces and contains the whole. It does not vanish with the demise of our brain, it only shifts from a localized to a cosmically integrated nonlocal form.



THE SELF-ACTUALIZING COSMOS: The Akasha Revolution in Science and Human Consciousness by Ervin Laszlo, published by Inner Traditions, paperback (208 pages).

The bottom line is this. Much research needs to be carried out yet, but this stands out with remarkable clarity already: the brain is not a consciousness-generating turbine, whether operating by itself or as part of a cloud-computing network. It is not part of the brain and it is not produced by the brain. It is a cosmic phenomenon, of which localized but themselves nonlocal manifestations—my consciousness and yours—are temporarily associated with a living brain. But consciousness itself exists in the deep dimension independently of its association with any brain.

Encountering a disembodied consciousness is not a mystery but part of the range of human experience. This has been known to classical cultures and spiritual traditions, and is re-discovered today at the cutting edge of science, where quantum cosmology meets experimental consciousness research.

[Part two of this three-part series follows in the next issue of *Watkins Mind Body Spirit* in November]

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