

## Interview with Dr. Greyson

This interview is in the book “It’s A Wonderful Afterlife: Further Adventures into the Flipside” written by Richard Martini, Homina Publishing, all rights reserved 2014. The interview is adapted from conversations with Dr. Bruce Greyson, (Professor of Psychiatry at the University of Virginia, co-author of “Irreducible Mind” co-editor of “The Handbook of Near-Death Experiences”) and the talk he delivered in Dharamsala on behalf of "Cosmology and Consciousness Conference - Mind and Matter" in 2011.

*Richard Martini: The question everyone wants to know; does consciousness exist outside the brain, and is there any scientific evidence that’s the case?*

Dr. Bruce Greyson: Most western scientists assume consciousness is produced in some way by the brain. There is of course a lot of evidence for that position, common sense evidence from our everyday lives; when you drink too much alcohol or get knocked on your head, you don’t think very clearly. We also have more sophisticated evidence from science of the link between the brain and consciousness; we can measure electricity in the brain during certain kinds of mental tasks, we can stimulate parts of the brain and record what experiences result and we can removed parts of the brain and observe the effects on behavior.

All this evidence suggests the brain is indeed involved in thinking, perception and memory, but it doesn’t necessary suggest the brain *causes* those thoughts or memories. As you listen to me speak, there’s electric activity in the temporal lobe of your brain, but does that mean your brain, or suggest that your temporal lobe is producing the sound of my voice? Not at all – all the studies showing brain areas associated with different mental functions only show correlation, not causation.

*Are you saying it’s possible that thoughts aren’t created by the brain?*

Thoughts, perception and memories could take place in a consciousness somewhere separate from the brain, but are then received and processed by the brain. Much like a phone, radio or TV; the signal, the message is created

somewhere else, but your cell phone is necessary to receive and process the message. If we were to measure the electrical activity inside your cell phone, we could show certain parts of the cellphone were involved in your hearing the message, but we would not be proving that the message is coming from your cell phone, any more than we can prove thoughts originate within our brains.

*How does that square with Western materialist science?*

Western science breaks everything down to its component parts, which makes it easier to study the whole. But the component parts sometimes do not act like the whole. The brain is composed of millions of neurons - but a single neuron cannot formulate a thought, a single neuron cannot feel angry or cold. It seems that brains can think and feel, but brain cells cannot.

We don't know how many neurons you need to collectively formulate a thought and we don't know how that collection of neurons can think when a single neuron can't. Scientists get around this problem by saying the brain is an "emergent property;" when a large enough mass of brain cells get together it creates thought. What does that mean?

We have no idea what that means. Saying something is an "emergent property" is a way of saying that it is a mystery we can't explain. There is in fact no known mechanism by which physical processes in the brain (or anywhere else) demonstrates the brain can produce experiences, thoughts, perceptions or memories.

The materialist view of the world fails to deal with how the brain can produce a thought or feeling or indeed anything that the mind does. And yet despite having no idea how it could work, most neuroscientists continue to maintain this 19th century materialist view that the brain, in some miraculous way we don't understand, produces consciousness. And they discount, or ignore the evidence that consciousness in extreme circumstances can function very well without our brain.

*How did we come to believe that the brain was the source of thought?*

In the 19th century in the west, beginning with Darwin, people started to explore the notion the physical brain might be the source of our emotions. For the past century, our materialist scientists have been moving toward based on classical Newtonian mechanics, that consciousness is nothing more than a byproduct of the working brain. Watson the Psychologist who created Behaviorism, wrote that the brain needs consciousness as little as do the sciences of chemistry and physics.

(Footnote: John B Watson was an American psychologist who established the psychological school of behaviorism. Through his behaviorist approach, Watson conducted research on animal behavior, child rearing, and advertising. In his book “Behaviorism” Watson argued that any existence of a mental life is false. Wiki)

*How has quantum theory affected this field?*

While Watson was doing this in psychology, ironically, physicists were moving away from that to quantum physics, which could not be formulated without consciousness having a role in the universe. As Yale scientist Harold J. Morowitz wrote "It is as if the two disciplines were on two fast-moving trains, going in opposite directions and not noticing what is happening across the tracks."

(Footnote: “Physicists, faced with compelling experimental evidence, have been moving away from strictly mechanical models of the universe to a view that sees the mind as playing an integral role in all physical events. It is as if the two disciplines were on two fast-moving trains, going in opposite directions and not noticing what is happening across the tracks. “Rediscovered the Mind,” by Harold J. Morowitz. From Psychology Today, August 1980.)

Classical Newtonian physics was a good model for everyday objects moving at everyday speeds. Involving objects approaching the speed of light, it was only 100 years ago that we saw the limitations of the classical Newton model and a need for new paradigms. The result was Quantum Physics which explained the world which Newtonian physics could not. But the price scientists paid was to say that consciousness was independent of matter. So too the mind/brain

relationship; it's only when we experience events such as what happens when we approach death, that we find the need for a different paradigm.

*How did you get involved in the work you're doing now?*

In the mid 1960's, Chester Carlson, who invented Xerox, started giving away his fortune. He told his wife his one remaining ambition was to die a poor man; his wife introduced him to Buddhism, and he went on to fund a number of Buddhist centers in NY. But Carlson was also a scientist, and he searched for a western neuroscientist who was interested in investigating accounts of reincarnation. He found Ian Stevenson – donated to the University of Virginia the funds to establish the research division, and Professor Stevenson devoted himself full time to study reincarnation.

I worked with Professor Stevenson since the early 1970's training to be a psychiatrist at UVA. Under his mentorship I studied a variety of human experiences that suggested consciousness functioning separate from the brain, but I focused primarily on near death experiences (NDE), the complex experiences people have on the threshold of death when the brain is shutting down. Ten years ago, Dr. Stevenson retired and I succeeded him as director of our research division.

*In "Irreducible Mind" you argue that there are a number of ways consciousness exists outside a functioning brain. Can you elaborate?*

There are four lines of evidence to explore. Number one is the unexplained recovery of consciousness for people who've been unconscious for prolonged periods of time moments or days before their death. Number two is complex consciousness in people with minimal brain tissue. Number three is surprisingly complex consciousness in near death experiencers when the brain is not functioning or functions at a diminished level, and number four; young children who recall details of a past life.

The first challenging phenomenon is the surprising recovery on the deathbed of patients whose mental functions had been long lost. They experience an unexpected return of brain function shortly before death. This has been reported

in medical literature over the past 250 years but has received little attention. There are cases published of people suffering from tumors, strokes, meningitis, Alzheimer's, other dementias, Schizophrenia and mood disorders, all of whom had long ago lost the ability to think or communicate. In many of these patients, there was evidence from brain scans or autopsies that their brains had deteriorated, yet in all these cases, mental clarity returned in the last minutes, hours or days before the patient's death.

We have identified 83 cases in western medical literature – and have collected additional unpublished accounts. Complete recovery of consciousness just before death is not a common experience. In 1884 a scientist established that it occurred in 13% of his patients who died. However in a recent investigation into end of life cases in the UK, 70% of caregivers observed patients with dementia becoming completely lucid in their last hours before death.

There is no known physiological mechanism for this happening – it is indeed rare, but the fact that it happened at all suggests the link between consciousness and the brain is more complex than we usually think. It's as if the damaged brain prevents the person from consciousness, but then as the brain finally begins to die, consciousness is released from the grasp of the degenerating brain.

*What about those cases you mention where people have little or no brain tissue?*

John Lorber, who specialized in children with hydrocephalus, or “water on the brain” (which usually leads to blindness and other problems) described dozens of people with severe hydrocephalus but who seemed to lead normal lives. In a sample of children in whom the cerebral spinal fluid was in 95% of their skull, half of them had IQs greater than a hundred. Thirty years ago Roger Lewin published an article about Lorber's work in Science magazine entitled “Is Your Brain Really Necessary?”

Now our best understanding of the normal brain is that the brain stem relays motor and sensory signals to the cerebellum and spinal cord and integrates heart functions, breathing, level of wakefulness etc, but the brain stem does not have the connections to perform higher cognitive functions, like thinking perceiving and so on. That only happens in the cerebral cortex which some children do not

have; they would have been unable to formulate any thought of any kind let alone function at a normal intellectual level.

(Footnote 1: John Lorber was a professor of paediatrics at the University of Sheffield from 1979 until his retirement in 1981. He worked at the Children's Hospital of Sheffield, where he specialized in work on spina bifida. In 1980, Roger Lewin published an article in Science, "Is Your Brain Really Necessary?" about Lorber's studies on cerebral cortex losses. He reports the case of a Sheffield University student who had a measured IQ of 126 and passed a Mathematics Degree but who had hardly any discernible brain matter at all since his cortex was extremely reduced by hydrocephalus. (Wikipedia: John Lorber)

(Footnote 2: An Oxford study shows a man who suffered severe brain damage and yet was able to answer questions and perform tasks as if fully conscious:

<http://cercor.oxfordjournals.org/content/early/2012/04/03/cercor.bhs077.full>

And there are similar cases in a Cambridge study "Consciousness Without a Cerebral Cortex: a Challenge for Neuroscience and Medicine" in 2006 showing how children born with hydranencaphaly are still able to perform higher level functions:

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.100.7898&rep=rep1&type=pdf>

*What about your research into near death experiences?*

Some of the best evidence of the consciousness functioning independently of the brain comes from NDE's. These are profound experiences that some report on the threshold of death. NDE accounts are people who are clinically dead and are resuscitated or revived after a brief interval with memories of what they experience after that period. They typically report exceptional mental clarity, vivid sensory imagery, a clear memory of their experience, and an experience more real than their everyday life; all of this occurring under conditions of drastically altered brain function under which the materialist model would say that consciousness is impossible.

*Roughly how many of these cases have examined?*

NDEs are reported between 10-20% of people revived from clinical death, I've investigated almost 1000 of these cases. The average age is 31, there's a very wide range; one young girl reported an experience she had at 8 months undergoing kidney surgery – the oldest NDE was 81. About a third occur during surgery, a quarter during serious illness, and a quarter during life threatening accidents.

*What are the common features of an NDE?*

Changes in thinking, changes in emotional state, paranormal features and other worldly features are the common features of NDEs. Changes in thinking during the NDE include a sense of time being altered; often people reported that time stopped or ceased to exist during the experience. It also includes a sense of revelation or understanding where everything in the universe becomes crystal clear. There's a sense of the person's thoughts being much faster and clearer than usual, and finally there was a life review or panoramic memory where their entire life seems to flash before them.

Typical emotions reported during the NDE include an overwhelming sense of peace and well-being, a sense of cosmic unity or being one with everything, a feeling of complete joy and a sense of being loved unconditionally.

The paranormal features often reported in the NDE include a sense of leaving the physical body, sometimes called an out of body experience (OBE), where a person's physical senses, such as hearing or visual experience become more vivid than ever before. Some experience hearing sounds that don't exist in this life, and a sense of ESP; knowing things beyond the range of physical senses such as things happening at a remote location.

And finally, they may report visions of the future. Many report in their NDEs they entered some other or unearthly world or realm of existence; many report they came to a border they could not cross, or a point of no return that if they had crossed, they wouldn't be allowed to return to life. Many report encountering or seeing a mystical being, and some report seeing deceased spirits, often loved ones, welcoming them into another realm, or in some cases sending them back to another life.

*Do people retain the emotions of the experience once they return to consciousness?*

One of the things about NDE that interests me as a psychiatrist are the profound after-effects that people report, is a consistent change in values that don't fade over time. Near death experiencers report overwhelmingly that they're "more spiritual" after the experience, they have more compassion for others, and a greater desire to help others, a greater appreciation for life, and a stronger sense of meaning or purpose in life. An overwhelming majority of NDErs report they have a stronger believe we survive death of the body and just as many report they no longer have any fear of death. About half lose interest in material possessions, and many report they have no longer any interest in prestige or competition. Some become less attached to material possessions and statues, more compassionate.

*If you could walk us through; how does the NDE experience suggest consciousness is not produced by the brain?*

Among several hundred NDErs I've studied, 47% report that their thinking is clearer than it is in their normal waking state, 38% say it's faster than usual, 29% say it's more logical than usual, and 17% say they have more control over their thoughts. An analysis of their medical records shows that mental functioning is significantly better in those people who come closest to death. Many NDErs experience a panoramic life review, not just visual images, but elaborate events, sometimes the entirety of that person's life.

A 25 year old nurse had become depressed and overdosed; he took medication from the hospital where he worked, became quite ill, then decided to phone for help. He tried to walk to the phone, but had difficulty standing and walking. He hallucinated there were many small people in his apartment stopping him from getting to the phone. In that confused state, he found himself leave his body, standing ten feet above himself—he watched his body sway unsteadily, and saw himself looking around in confusion at the imaginary people. He was thinking very clearly from that above perspective and could not see the tiny people; so the center of his consciousness had left his body and could see what was happening to him down below.



Professor Kenneth Ring did a study of 31 blind near death experiencers who were able to describe the scene around them, including accurate descriptions of colors of a number of objects. In a recent review of 93 published reports, a study showed that 92 were completely accurate, 6% had a minor error and 1% were wrong – but even in the case where someone reported it to someone else first, they were 90% correct.

A 56 year old van driver had emergency heart bypass, and during the procedure, while fully anesthetized, he left his body and was able to look down and see his body. To his surprise, he saw the surgeon appear to flap his arms as if trying to fly; not something you'd expect a surgeon to be doing. The day after the operation, he asked the Doctor why he was “flapping his arms?” The surgeon was embarrassed and asked the patient “Who told you that?” No one had told him; he saw it himself from above, during the operation. When he got over his embarrassment, the surgeon explained he was supervising his assistants, and in order to ensure his hands remained in sterilized gloves, he put them on his chest, and used his elbows to instruct his nurses where to cut, which caused him to look like he was trying to fly.

*Have you had any accounts of seeing other people or family relatives during an NDE?*

Among several hundred NDE's I've studied, 42% reported seeing people during the NDE's.

An American pediatrician treated a 9 year old boy with meningitis. During the 36 hours the boy was surrounded by his anxious parents who never left his bed, and during the vigil, when his fever broke, he described seeing several of his deceased relatives, including his sister Theresa, who told him he had to go back to his body. The father got very upset because Theresa was away in college in another state and very healthy; but the boy insisted that Theresa told him she had to stay there and he had to go back. The father learned later that Theresa had in fact been killed in an automobile accident.

Sometimes the deceased person in the NDE is a person the near death experiencers didn't know existed. Elisabeth Kubler-Ross reported a case of a

woman who saw her brother during heart surgery and the parents revealed she had a brother they had never mentioned to her before. Of course if consciousness is produced by the brain, then when the brain dies, consciousness ends – it cannot continue into another incarnation – so if some of us do remember our past lives, then those memories cannot reside solely in the brain.

*Dr. Eben Alexander reports the same kind of story, while he was in his NDE he says his sister was his guide, he didn't know he had a sister until his parents revealed she'd died before he was born. How about Ian Stevenson's work in reincarnation? Did he find scientific proof of reincarnation?*

Dr. Stevenson did much of his research in Asia where reincarnation is an accepted part of the societal norms. Children mentioned names, names of relatives, details of how their past life ended. In many cases we could take the child to the remote village and the child was able to identify people and places never seen before in this life. They may exhibit qualities of the previous life; sometimes remembering a past life as another gender, or a child will remember being a Muslim and reject certain types of food, or they were Japanese pilots shot down during WWII in Burma, and they reject food their parents offer and want traditional Japanese food.

Some exhibit unusual skills they've not been taught, play a musical instrument they've not being taught, or have skills related to their occupation in a past life. We've also examined children who can converse in languages not of their current country. 335 of them had birthmarks or birth defects matching wounds from past life, 18% of cases match confirmed medical records or autopsy reports that death wounds correspond to marks in current life.

*Are there many cases in the United States?*

James Leininger, born in Louisiana, as a toddler, seemed to remember being shot down during WWII. He would often play with planes and wake up screaming from a nightmare of being trapped on a plane. James gave many details of his past life including the name of his airplane and details of the plane, the aircraft carrier he flew from, and the details of his death. His sister confirmed the boy's accounts of friends and identified several objects in her

home that used to belong to him in his previous life. She's convinced this little boy is indeed the rebirth of her brother.

*In terms of the research, it sounds a bit like you're saying that in some cases, consciousness functions better in spite of the brain.*

There's a lot of evidence from scientific research that the brain, under extraordinary circumstances, seems to come unlinked from consciousness, and consciousness can in fact, function better without the mediation of the physical brain. Again this evidence is not accepted or known by most American scientists; nevertheless it is there, it is reliable and reproducible evidence. We have cases of people whose brains have been deteriorating for years suddenly think clearly on their deathbeds, people who function normally sometimes with high intelligence who have virtually no brain tissue, we have people who during a near death experience think more clearly than ever, when their brains are not functioning. And we have very young children who can barely speak, who talk about their past lives with accurate details.

These phenomena - all well investigated by modern scientific methodologies, and building upon decades or centuries of prior research - strongly suggest that under extraordinary circumstances, consciousness can be produced and can function without the intercession of the physical brain.

*Thank you.*