

24 August, 2008 * “Venturing into the Impossible”
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When I was in Mr. Shisler’s eighth-grade class at St. Mary School, we received a daunting assignment: to write a research paper. Big stuff for a thirteen year old, especially in those days when writing papers involved trips to the library, and typewriters. But I dove in and selected a topic that had fascinated me for years – a topic, I was certain, about which I could find something to say for ten whole pages. My 8th grade research paper addressed the weighty existential question: does Bigfoot exist?

I’ve always gotten a thrill from trying to wrap my mind around impossible questions: What happens after we die? Is ESP real? Do we share the universe with other life forms? Is it true, as my “Ripley’s Believe It or Not!” book claimed, that a woman lost her wedding ring while swimming in a lake, and that several years later her husband caught a fish, and inside it was the ring? How does stuff like that happen?

The goal, for me, was never to come to certain conclusions. It was to dwell in the goose-bump zone of wonder, possibility, and more questions. Even as a child, I couldn’t live without Mystery (we’re all glad that I’m a minister, not an engineer or a doctor).

Last Sunday, I gently criticized of the polemics of the so-called “new atheists.” My chief grievance against them is the secular fundamentalism with which they fight religious fundamentalism, but I have another: those who resolutely and absolutely deny God and other “non-scientific” phenomena have turned their back on mystery. To deny something is to abandon curiosity, or openness, about it. If you don’t believe in something, you rarely bother to investigate it.

These are the three “laws” of prediction formulated by science fiction writer and futurist Arthur C. Clarke (dear Arthur – may he rest in peace – wasn’t enough of a “futurist” to avoid sexist language, so please overlook that with me):

1. When a... scientist states that something is possible, he is almost certainly right. When he states that something is impossible, he is very probably wrong.
2. The only way of discovering the limits of the possible is to venture a little way past them into the impossible.
3. Any sufficiently advanced technology is indistinguishable from magic.

Today, I’m honoring all those who bow to mystery, raise dizzying questions, and attempt to find satisfying answers. And so, what follows are a few stories about science venturing into the impossible: the people who have found ways to meld reason with wonder; and the mystical with the scientific. The scientists you’ll hear about are guided by the doctrine of “that which is not forbidden is mandatory” – that is to say, “unless

there is a law of physics forbidding a technology, then it is not only possible, it is sure to be built someday.”¹ The exciting thing for us is that every day, things are being moved from the “forbidden” column into the “mandatory” one.

For example, Michio Kaku has been a professor of theoretical physics for thirty-five years. For years, he told students in his optics class that “invisibility was impossible,” because “for an object to become invisible, light would have to wrap around it, like water flowing past a boulder...light would have to travel faster than the speed of light in order to bend...in that way.”²

*Arthur C. Clarke’s first law of prediction:
When [a scientist] states that something is impossible,
he is very probably wrong.*

Last year, physicists in California and Germany made a “breakthrough”: they were able to “bend light in a way that could eventually produce invisibility devices.” Admits Dr. Kaku, “it is now conceivable that...an invisibility cloak somewhat like Harry Potter’s could be possible within this century.”³

*Arthur C. Clarke’s third law of prediction:
Any sufficiently advanced technology is indistinguishable from magic.*

Here are a few more things that physicists deem possible within “the foreseeable future”: starships, antimatter engines, and forms of teleportation and telepathy. Other phenomena that present “huge obstacles” but are nonetheless “within the realm of possibility” are time travel and entering parallel universes.

Perhaps, like me, you find it easier for to trust a physicist’s judgment that time travel is possible, than it is to believe doctors who recount their patients’ stories about out-of-body experiences (where we’re headed next). One small matter is the nature of scientific integrity,⁴ of course, because “what information counts as evidence depends on how you define ‘evidence.’”⁵ There’s also the parameters of “science” itself. Rupert Sheldrake⁶ points out:

As science progresses, it continually changes the boundaries of the scientifically ‘normal’... at any given stage in the history of science, phenomena that do not fit into the prevailing model or paradigm are dismissed or ignored or explained away... Yet to the embarrassment of the reigning theories,... Sooner or later science has to expand to include them⁷... I believe it is more scientific to explore phenomena we do not understand than to pretend they do not exist.⁸

With that nod to exploring the Elephant in the Lab, we turn to psychiatrists and cardiologists who study near-death experiences (NDEs) and out-of-body experiences (OBEs). If you don't know about these phenomena, there are some arresting stories out there (and in our own congregation).⁹

Typically, patients who report NDEs are in critical condition, or have gone into cardiac arrest. They report seeing a bright, welcoming light and moving towards it, filled with love. "At the center of many near-death experiences is the sensation of the mind having left the body;" in the case of these OBEs, patient later report looking down at themselves and their surroundings, lucid and observant.

Here's where mysticism and science meet: physicians have documented the fact that, at the moment of a patient's near-death experience, "the brain is not functioning."¹⁰ That is to say, according to their doctors,¹¹

people are not only conscious, their consciousness is even more expansive than ever. They can think extremely clearly, have memories going back to their earliest childhood, and experience an intense connection with everything and everyone around them. And yet their brain shows no activity at all.

No brain activity, but their "consciousness is even more expansive than ever" – that suggests that human consciousness can, or does, operate outside of, or independent of, the physical brain.¹² Another name for consciousness that exists beyond the activity of neurotransmitters and gray matter is the *soul*.

*Arthur C. Clarke's second law of prediction:
The only way of discovering the limits of the possible
is to venture a little way... into the impossible.*

In all fairness, at least one neuroscientist¹³ has been able to induce an out-of-body experience in a patient – but the effects of OBEs are universally "deep and lasting," and so transformative that they make psychiatrists sound wistful. Listen to the words of one researcher:¹⁴

As a psychiatrist, what was most impressive to me was how people changed as a result of a near-death experience. It...changes their lives. Psychiatrists spend years and years trying to help people make fairly small changes in their lives, and here comes this experience which in a blink of an eye totally transforms reality... If we can figure out what's going on there and tap into that power, it would be an important tool for us to use. Basically, they come back believing that the golden rule is the way the

universe works, just like gravity... so they come back with a different attitude toward almost everything. Some people change their careers, their relationships, how they do things. Some become more spiritual or more altruistic...

What seems to be true about NDEs is this: a neurological switch flips, triggering a transformation in which people are filled with altruism and a profound sense of connection. Is that connection and bliss a separate consciousness, or is it just sophisticated brain chemistry?

Enter our last set of cognitive scientists,¹⁵ who tackle the thorniest issue of all: the human capacity for mysticism. Where does that drunk-with-bliss feeling of connection with life *come from*?

In their now-famous experiments,¹⁶ Andrew Newberg and Eugene D'Aquili used high-tech imaging devices to observe the brains of meditating Buddhists and Franciscan nuns.¹⁷ They found clear evidence that their subjects' mystical experiences were not imagined or "wishful thinking, but were associated instead with a series of observable neurological events." In other words, they found that our human brains have a biological basis and capacity for mysticism that might be described as "unbounded bliss."¹⁸ Because these "religious behaviors" are good for us, these scientists explain, "evolution has picked up on these dynamics and favored the religious brain."¹⁹ In fact, they compare our neurological priming to the evolution of flight:

At one time, there were no animals on earth that could fly. Today, there are many. Obviously, flight ability didn't evolve in one generation... Just as the concept and possibility of flying existed before there were animals that could fly... the capacity to experience a metaphysical reality might exist even though we experience it in only brief moments of connection.²⁰

This, for me, is the ultimate mystery, which will tumble itself through my mind for a long time to come.

What does a hard-wired capacity for mysticism mean in a world where we humans have also created violence, greed, and domination?

Which of these two tendencies will be selected for most strongly, a hundred generations from now?

What promise – what *impossibility* – does our brains' ability to experience connection and "oneness" point toward?

May we explore life's mysteries with open, seeking minds;
may we hunger to understand our selves and our world;
and may we discover the limits of the possible
by continuing to venture into the impossible.

***Benediction**

The words of Mary Oliver:²¹

“Is the soul solid, like iron?
Or is it tender and breakable, like
the wings of a moth in the beak of an owl?
Who has it, and who doesn't?...
One question leads to another.”

As you go, souls unfolding,
live into the questions,
and immerse yourself in wonder.

Endnotes

1. “Never Say Never,” by Michio Kaku. *New Scientist*, 5 April 2008, p. 36.

2. Kaku.

3. Kaku.

4. As Carlos Alvarado explains the field of parapsychology: “What characterizes the field is the use of the scientific method to learn about psychic phenomena. While the so-called movements of occultism and the “New Age” focus on personal experiences, and different forms of revelation, parapsychologists focus their efforts on the collection of empirical data through laboratory and case studies procedures.” Alvarado is a researcher at the University of Virginia Health System’s Division of Perceptual Studies. See www.healthsystem.virginia.edu/internet/personalitystudies/home.cfm

5. “Soul Search,” by Jane Bosveld. *Discover Magazine*, June 2007.

6. Sheldrake is a Cambridge-educated biologist. Our Message for All Ages this day was an experiment he designed, to test “the sense of being stared at.”

7. Rupert Sheldrake, *The Sense of Being Stared At*, p. 3.

8. Sheldrake, p. 9.

9. In her book *Leaving the Saints* (pp. 99-106), Martha Beck describes the mystical near-death experience that occurred while she was under anesthesia, in surgery. Although the experience left her “goofy with joy” for days and is still a clear memory, she also talks about the depression that filled her in the months after the NDE, because of how flat life seemed afterwards, and how deeply she longed for “the Being of Light.”

10. In Bosveld.

11. Dutch cardiologist Pim van Lommel, in “Soul Search” by Jane Bosveld.

12. Peter Fenwick, a neuro-psychiatrist at London University, believes that “the mind may operate in part outside the brain as a sort of field which works in the same way as a TV receiver receives programmes through the airwaves. See www.remoteviewer.nu/index.php?name=News&file=article&sid=600

13. Olaf Blanke, at the Swiss Federal Institute of Technology in Lausanne. See Bosveld.

14. In Bosveld.

15. Newberg and D’Aquili. Cited in *Steering by Starlight* by Martha Beck, pp. 149-151, but see www.andrewnewberg.com/why.asp.

16. See *Why God Won’t Go Away*, Newberg and D’Aquili.

17. Paraphrased from Gail Hudson’s review of *Why God Won’t Go Away*.

18. Beck, p. 150.

19. “Exploring the biology of religious experience” by Rich Heffern. *National Catholic Reporter*. See www.natcath.com/NCR_Online/archives/042001/042001a.htm.

20. Beck, p. 151.

21. “Some Questions to Ask”