

This Must Be Heaven



Once upon a time, a neurosurgeon named Eben Alexander contracted a bad case of bacterial meningitis and fell into a coma. While immobile in his hospital bed, he experienced visions of such intense beauty that they changed everything—not just for him, but for all of us, and for science as a whole. According to *Newsweek*, Alexander’s experience proves that consciousness is independent of the brain, that death is an illusion, and that an eternity of perfect splendor awaits us beyond the grave—complete with the usual angels, clouds, and departed relatives, but also butterflies and beautiful girls in peasant dress. Our current understanding of the mind “now lies broken at our feet”—for, as the doctor writes, “What happened to me destroyed it, and I intend to spend the rest of my life investigating the true nature of consciousness and making the fact that we are more, much more, than our physical brains as clear as I can, both to my fellow scientists and to people at large.”

Well, I intend to spend the rest of the morning sparing him the effort. Whether you read it online or hold the physical object in your hands, this issue of *Newsweek* is best viewed as an archaeological artifact that is certain to embarrass us in the eyes of future generations. Its existence surely says more about our time than the editors at the magazine meant to say—for the cover alone reveals the abasement and desperation of our journalism, the intellectual bankruptcy and resultant tenacity of faith-based religion, and our ubiquitous confusion about the nature of scientific authority. The article is the modern equivalent of a 14th-century woodcut depicting the work of alchemists, inquisitors, Crusaders, and fortune-tellers. I hope our descendants understand that at least some of us were blushing.

As many of you know, I am interested in “spiritual” experiences of the sort Alexander reports. Unlike many atheists, I don’t doubt the *subjective* phenomena themselves—that is, I don’t believe that everyone who claims to have seen an angel, or left his body in a trance, or become one with the universe, is lying or mentally ill. Indeed, I have had similar experiences myself in meditation, in lucid dreams (even while meditating *in* a lucid dream), and through the use of various psychedelics (in times gone by). I know that astonishing changes in the contents of consciousness are possible and can be psychologically transformative.

And, unlike many neuroscientists and philosophers, I remain agnostic on the question of how consciousness is related to the physical world. There are, of course, very good reasons to believe that it is an emergent property of brain activity, just as the rest of the human mind obviously is. But we know nothing about how such a miracle of emergence might occur. And if consciousness were, in fact, irreducible—or even separable from the brain in a way that would give comfort to Saint Augustine—my worldview would not be overturned. I know that we do not understand consciousness, and nothing that I think I know about the cosmos, or about the patent falsity of most religious beliefs, requires that I deny this. So, although I am an atheist who can be expected to be unforgiving of religious dogma, I am not reflexively hostile to claims of the sort Alexander has made. In principle, my mind is open. (It really is.)

But Alexander’s account is so bad—his reasoning so lazy and tendentious—that it would be beneath notice if not for the fact that it currently disgraces the cover of a major newsmagazine. Alexander is also releasing a book at the end of the month, *Proof of Heaven: A Neurosurgeon’s Journey into the Afterlife*, which seems destined to become an instant bestseller. As much as I would like to simply ignore the unfolding travesty, it would be derelict of me to do so.

But first things first: You really must read [Alexander’s article](#).

I trust that doing so has given you cause to worry that the good doctor is just another casualty of American-style Christianity—for though he claims to have been a nonbeliever before his adventures in coma, he presents the following self-portrait:

Although I considered myself a faithful Christian, I was so more in name than in actual belief. I didn’t begrudge those who wanted to believe that Jesus was more than simply a good man who had suffered at the hands of the world. I sympathized deeply with those who wanted to believe that there was a God somewhere out there who loved us unconditionally. In fact, I envied such people the security that those beliefs no doubt provided. But as a scientist, I simply knew better than to believe them myself.

What it means to be a “faithful Christian” without “actual belief” is not spelled out, but few nonbelievers will be surprised when our hero’s scientific skepticism proves no match for his religious conditioning. Most of us have been around this block often enough to know that many “former atheists”—like Francis Collins—spent so long on the brink of faith, and yearned for its emotional consolations with such vampiric intensity, that the slightest breeze would send them spinning into the abyss. For Collins, you may recall, all it took to establish the divinity of Jesus and the coming resurrection of the dead was the sight of a frozen waterfall. Alexander seems to have required a ride on a psychedelic butterfly. In either case, it’s not the perception of beauty we should begrudge but the utter absence of intellectual seriousness with which the author interprets it.

Everything—*absolutely everything*—in Alexander’s account rests on repeated assertions that his visions of heaven occurred while his cerebral cortex was “shut down,” “inactivated,” “completely shut down,” “totally offline,” and “stunned to complete inactivity.” The evidence he provides for this claim is not only inadequate—it suggests that

he doesn't know anything about the relevant brain science. Perhaps he has saved a more persuasive account for his book—though now that I've listened to [an hour-long interview](#) with him online, I very much doubt it. In his *Newsweek* article, Alexander asserts that the cessation of cortical activity was “clear from the severity and duration of my meningitis, and from the global cortical involvement documented by CT scans and neurological examinations.” To his editors, this presumably sounded like neuroscience.

The problem, however, is that “CT scans and neurological examinations” can't determine neuronal inactivity—in the cortex or anywhere else. And Alexander makes no reference to functional data that might have been acquired by fMRI, PET, or EEG—nor does he seem to realize that only this sort of evidence could support his case. Obviously, the man's cortex is functioning now—he has, after all, written a book—so whatever structural damage appeared on CT could not have been “global.” (Otherwise, he would be claiming that his entire cortex was destroyed and then grew back.) Coma is not associated with the complete cessation of cortical activity, in any case. And to my knowledge, almost no one thinks that consciousness is purely a matter of cortical activity. Alexander's unwarranted assumptions are proliferating rather quickly. Why doesn't he know these things? He is, after all, a neurosurgeon who survived a coma and now claims to be upending the scientific worldview on the basis of the fact that his cortex was totally quiescent at the precise moment he was enjoying the best day of his life in the company of angels. Even if his entire cortex had truly shut down (again, an incredible claim), how can he know that his visions didn't occur in the minutes and hours during which its functions returned?

I confess that I found Alexander's account so alarmingly unscientific that I began to worry that something had gone wrong with my own brain. So I sought the opinion of [Mark Cohen](#), a pioneer in the field of neuroimaging who holds appointments in the Departments of Psychiatry & Biobehavioral Science, Neurology, Psychology, Radiological Science, and Bioengineering at UCLA. (He was also my thesis advisor.) Here is part of what he had to say:

This poetic interpretation of his experience is not supported by evidence of any kind. As you correctly point out, coma does not equate to “inactivation of the cerebral cortex” or “higher-order brain functions totally offline” or “neurons of [my] cortex stunned into complete inactivity”. These describe brain death, a one hundred percent lethal condition. There are many excellent scholarly articles that discuss the definitions of coma. (For example: [1](#) & [2](#))

We are not privy to his EEG records, but high alpha activity is common in coma. Also common is “flat” EEG. The EEG can appear flat even in the presence of high activity, when that activity is not synchronous. For example, the EEG flattens in regions involved in direct task processing. This phenomenon is known as event-related desynchronization (hundreds of references).

As is obvious to you, this is truth by authority. Neurosurgeons, however, are rarely well-trained in brain function. Dr. Alexander cuts brains; he does not appear to study them. “There is no scientific explanation for the fact that while my body lay in coma, my mind—my conscious, inner self—was alive and well. While the neurons of my cortex were stunned to complete inactivity by the bacteria that had attacked them, my brain-free consciousness ...” True, science cannot explain brain-free consciousness. Of course, science cannot explain consciousness anyway. In this case, however, it would be parsimonious to reject the whole idea of consciousness in the absence of brain activity. Either his brain was active when he had these dreams, or they are a confabulation of whatever took place in his state of minimally conscious coma.

There are many reports of people remembering dream-like states while in medical coma. They lack consistency, of course, but there is nothing particularly unique in Dr. Alexander's unfortunate episode.

Okay, so it appears that my own cortex hasn't completely shut down. In fact, there are further problems with Alexander's account. Not only does he appear ignorant of the relevant science, but he doesn't realize how many people have experienced visions similar to his while their brains were operational. In his [online interview](#) we learn about the kinds of conversations he's now having with skeptics:

I guess one could always argue, "Well, your brain was probably just barely able to ignite real consciousness and then it would flip back into a very diseased state," which doesn't make any sense to me. Especially because that hyper-real state is so indescribable and so crisp. It's totally unlike any drug experience. A lot of people have come up to me and said, "Oh that sounds like a DMT experience," or "That sounds like ketamine." Not at all. That is not even in the right ballpark.

Those things do not explain the kind of clarity, the rich interactivity, the layer upon layer of understanding and of lessons taught by deceased loved ones and spiritual beings.

"Not even in the right ballpark"? His experience sounds so much like a DMT trip that we are not only in the right ballpark, we are talking about the stitching on the same ball. Here is Alexander's description of the afterlife:

I was a speck on a beautiful butterfly wing; millions of other butterflies around us. We were flying through blooming flowers, blossoms on trees, and they were all coming out as we flew through them... [there were] waterfalls, pools of water, indescribable colors, and above there were these arcs of silver and gold light and beautiful hymns coming down from them. Indescribably gorgeous hymns. I later came to call them "angels," those arcs of light in the sky. I think that word is probably fairly accurate....

Then we went out of this universe. I remember just seeing everything receding and initially I felt as if my awareness was in an infinite black void. It was very comforting but I could feel the extent of the infinity and that it was, as you would expect, impossible to put into words. I was there with that Divine presence that was not anything that I could visibly see and describe, and with a brilliant orb of light....

They said there were many things that they would show me, and they continued to do that. In fact, the whole higher-dimensional multiverse was this incredibly complex corrugated ball and all these lessons coming into me about it. Part of the lessons involved becoming all of what I was being shown. It was indescribable.

But then I would find myself—and time out there I can say is totally different from what we call time. There was access from out there to any part of our space/time and that made it difficult to understand a lot of these memories because we always try to sequence things and put them in linear form and description. That just really doesn't work.

Everything that Alexander describes here and in his *Newsweek* article, including the parts I have left out, has been reported by DMT users. The similarity is uncanny. Here is how the late Terence McKenna described the prototypical DMT trance:

Under the influence of DMT, the world becomes an Arabian labyrinth, a palace, a more than possible Martian jewel, vast with motifs that flood the gaping mind with complex and wordless awe. Color and the sense of a reality-unlocking secret nearby pervade the experience. There is a sense of other times, and of one's own infancy, and of wonder, wonder and more wonder. It is an audience with the alien nuncio. In the midst of this experience,

apparently at the end of human history, guarding gates that seem surely to open on the howling maelstrom of the unspeakable emptiness between the stars, is the Aeon.

*The Aeon, as Heraclitus presciently observed, is a child at play with colored balls. Many diminutive beings are present there—the tykes, the self-transforming machine elves of hyperspace. Are they the children destined to be father to the man? One has the impression of entering into an ecology of souls that lies beyond the portals of what we naively call death. I do not know. Are they the synesthetic embodiment of ourselves as the Other, or of the Other as ourselves? Are they the elves lost to us since the fading of the magic light of childhood? Here is a tremendum barely to be told, an epiphany beyond our wildest dreams. Here is the realm of that which is stranger than we can suppose. Here is the mystery, alive, unscathed, still as new for us as when our ancestors lived it fifteen thousand summers ago. The tryptamine entities offer the gift of new language, they sing in pearly voices that rain down as colored petals and flow through the air like hot metal to become toys and such gifts as gods would give their children. The sense of emotional connection is terrifying and intense. The Mysteries revealed are real and if ever fully told will leave no stone upon another in the small world we have gone so ill in. This is not the mercurial world of the UFO, to be invoked from lonely hilltops; this is not the siren song of lost Atlantis wailing through the trailer courts of crack-crazed America. DMT is not one of our irrational illusions. I believe that what we experience in the presence of DMT is real news. It is a nearby dimension—frightening, transformative, and beyond our powers to imagine, and yet to be explored in the usual way. We must send fearless experts, whatever that may come to mean, to explore and to report on what they find. (Terence McKenna, *Food of the Gods*, pp. 258-259.)*

Alexander believes that his E. coli-addled brain could not have produced his visions because they were too “intense,” too “hyper-real,” too “beautiful,” too “interactive,” and too drenched in significance for even a healthy brain to conjure. He also appears to think that despite their timeless quality, his visions could not have arisen in the minutes or hours during which his cortex (which surely never went off) switched back on. He clearly knows nothing about what people with working brains experience under the influence of psychedelics. Nor does he know that visions of the sort that McKenna describes, although they may seem to last for ages, require only a brief span of biological time. Unlike LSD and other long-acting psychedelics, DMT alters consciousness for merely a few minutes. Alexander would have had more than enough time to experience a visionary ecstasy as he was coming out of his coma (whether his cortex was rebooting or not).

Does Alexander know that DMT already exists in the brain as a neurotransmitter? Did his brain experience a surge of DMT release during his coma? This is pure speculation, of course, but it is a far more credible hypothesis than that his cortex “shut down,” freeing his soul to travel to another dimension. As one of his correspondents has already informed him, similar experiences can be had with ketamine, which is a surgical anesthetic that is occasionally used to protect a traumatized brain. Did Alexander by any chance *receive ketamine* while in the hospital? Would he even think it relevant if he had? His assertion that psychedelics like DMT and ketamine “do not explain the kind of clarity, the rich interactivity, the layer upon layer of understanding” he experienced is perhaps the most amazing thing he has said since he returned from heaven. Such compounds are universally understood to do the job. And most scientists believe that the reliable effects of psychedelics indicate that the brain is at the very least *involved* in the production of visionary states of the sort Alexander is talking about.

Again, there is nothing to be said against Alexander’s experience. It sounds perfectly sublime. And such ecstasies do tell us something about how good a human mind can feel. The problem is that the conclusions Alexander has

drawn from his experience—he continually reminds us, as *ascientist*—are based on some very obvious errors in reasoning and gaps in his understanding.

Let me suggest that, whether or not heaven exists, Alexander sounds precisely how a scientist should *not* sound when he doesn't know what he is talking about. And his article is not the sort of thing that the editors of a once-important magazine should publish if they hope to reclaim some measure of respect for their battered brand.

<http://www.samharris.org/blog/item/this-must-be-heaven>