

# Why I am a possibilian

When it comes to life's big questions, we feel forced to choose between God or atheism. Why? Surely good science doesn't so restrict us, asks **David Eagleman**

I HAVE devoted my life to scientific pursuit. After all, if we want to crack the mysteries of our existence, there may be no better approach than to directly study the blueprints. And science over the past 400 years has been tremendously successful. We have reached the moon, eradicated smallpox, built the internet, tripled life spans, and increasingly tapped into those mind-blowing truths around us. We've found them to be deeper and more beautiful than anyone could have guessed.

But when we reach the end of the pier of everything we know, we find that it only takes us part of the way. Beyond that all we see is uncharted water. Past the end of the pier lies all the mystery about our deeply strange existence: the equivalence of mass and energy, dark matter, multiple spatial dimensions, how to build consciousness, and the big questions of meaning and existence.

I have no doubt that we will continue to add to the pier of knowledge, appending several new slats in each generation. But we have no guarantee how far we'll get. There may be some domains beyond the tools of science—perhaps temporarily, perhaps always. We also have to acknowledge that we won't answer many of the big questions in our brief twinkling of a 21st-century lifetime: even if science can determine the correct answer, we won't get to enjoy hearing it.

This situation calls for an openness in approaching the big questions of our

## PROFILE

David Eagleman is a neuroscientist at Baylor College of Medicine in Houston, Texas. He directs both the Laboratory for Perception and Action and the Initiative on Neuroscience and Law. His book of "possibilian" tales, *Sum*, became an international best-seller and is published in 22 languages

existence. When there is a lack of meaningful data to weigh in on a problem, good scientists are comfortable holding many possibilities at once, rather than committing to a particular story over others. In light of this, I've found myself surprised by the amount of certainty out there.

Take, for example, this decade's books by the new atheists such as Richard Dawkins, Daniel Dennett, Sam Harris and Christopher Hitchens. Their books are brilliant and insightful, but sometimes feed a widespread misconception that scientists don't have the capacity to gambol around beyond the available data. Some readers walk away from these books with the impression that scientists think they have the big picture solved—if not in detail, at least in outline.

But good science is always open-minded, and that the history of science is one of surprises and overturnings. Science is nothing but careful thinking, and careful thinking encourages an appreciation of the complexity of the world. The complexity encourages us to maintain several possibilities at once. In a single lifetime, we may have no way to remove the ambiguities from these possibilities.

A scientist may tend to favour one story over the others, but will always be careful to concede uncertainty and maintain a willingness to change the balance with new, incoming information. As an example, there are two very different interpretations about the reality underlying quantum physics. It is possible that there will be no way to ever know which is correct, or if instead some entirely new theory is correct. And that ambiguity is accepted as part of the enormity of the mysteries we face, and the terms of the agreement we have with nature.

So while there are plenty of good books by scientist-atheists, they sometimes under-



emphasise the main lesson from science: that our knowledge is vastly outstripped by our ignorance. For me, a life in science prompts awe and exploration over dogmatism.

Given these considerations, I do not call myself an atheist. I don't feel that I have enough data to firmly rule out other interesting possibilities. On the other hand, I do not subscribe to any religion. Traditional religious stories can be beautiful and often crystallise hard-won wisdom -- but it is hardly a challenge to poke holes in them. Religious structures are built by humans and brim with all manner of strange human claims—they often reflect cults of personality, xenophobia or mental illness. The holy books of these



## “A life in science prompts awe and exploration over dogmatism”

religions were written millennia ago by people who never had the opportunity to know about DNA, other galaxies, information theory, electricity, the big bang, the big crunch, or even other cultures, literatures or landscapes.

So it seems we know too little to commit to strict atheism, and too much to commit to any religion. Given this, I am often surprised by the number of people who seem to possess total certainty about their position. I know a lot of atheists who seethe at the idea of

religion, and religious followers who seethe at the idea of atheism - but neither of them are bothering with more interesting ideas. They make their impassioned arguments as though the God versus no-God dichotomy were enough for a modern discussion.

What if we were planted here by aliens? What if there are civilisations in spatial dimensions seven through nine? What if we are nodes in a vast, cosmic, computational device? Wouldn't that make their debates seem limited, in retrospect? I don't think the important goal should be to fight for a particular story in the absence of strong evidence; it should be to explore and celebrate the vast possibilities.

## The origin of the cosmos still lies among the many mysteries facing humans

Consider the enormous “possibility space” of stories that can be dreamed up. Take the entirety of the Judeo-Christian-Islamic tradition as a single point in this possibility space. The eastern religions are another point. Strict atheism is another point. Now think of the immense landscape of the points in between. Many of these points will contain stories that are crazy, silly, or merely wildly improbable. But in the absence of data, they can't be ruled out of that space.

This is why I call myself a possibilian. Possibilianism emphasises the active exploration of new, unconsidered notions. A possibilian is comfortable holding multiple ideas in mind and is not driven by the idea of fighting for a single, particular story. The key emphasis of possibilianism is to shine a flashlight around the possibility space. It is a plea not simply for open-mindedness, but for an active exploration of new ideas.

Is possibilianism compatible with a scientific career? Indeed, it represents the heart of science. Real science operates by holding limitless possibilities in mind and working to see which one is most supported by the data. Sometimes it is difficult or impossible to gather data that weighs in - and in those cases we simply retain the possibilities. We don't commit to a particular version of the story when there is no reason to.

Possibilianism does not suggest free rein to believe whatever strikes one's fancy. It is not tantamount to “anything goes”. We know a great deal, not only about the cosmos and molecules, but also about human yearning, fallibilities, poor memories and extraordinary ability to fabricate any variety of fantastic but utterly untrue stories. Within the realm of what is addressable, we profitably apply logic to further knowledge. Possibilianism is “anything goes at first” - but we then use science to rule out parts of the possibility space, and often to rule in new parts.

In every generation, people are seduced by the idea they possess all the tools they need to explain the universe. They have always been wrong. From consciousness to dark energy, we know that we are missing an unknowable number of pieces of the puzzle. This is why in the debates between the strict atheists and the fundamentally religious, I choose a third side. A little less pretence of certainty and a little more exploration of the possibility space.

As Voltaire put it, “Doubt is not a pleasant condition, but certainty is absurd.”

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