

Daniel C. Dennett

Daniel C. Dennett is a world-renowned American philosopher and cognitive scientist. He is currently University Professor and Austin B. Fletcher Professor of Philosophy, and Co-Director of the Center for Cognitive Studies at Tufts University. His research centers on the philosophy of mind, free will, and philosophy of biology. He is also well known for his atheism and is often referred to as one of the "Four Horsemen of New Atheism" (along with Richard Dawkins, Sam Harris, and the late Christopher Hitchens). He is the author of several influential books including *Content and Consciousness* (1969), *Brainstorms* (1978), *Elbow Room: The Varieties of Free Will Worth Wanting* (1984), *The Intentional Stance* (1987), *Consciousness Explained* (1991), *Darwin's Dangerous Idea* (1995), *Kinds of Minds* (1996), *Freedom Evolves* (2003), *Breaking the Spell: Religion as a Natural Phenomenon* (2006), *Science and Religion: Are They Compatible?* (co-authored with Alvin Plantinga) (2011), and *Intuition Pumps and Other Tools for Thinking* (2013). In 2004 the American Humanist Association named him Humanist of the Year, in 2010 he was named to the Freedom from Religion Foundation's Honorary Board of distinguished achievers, and in 2012 he was awarded the Erasmus Prize.

1. What initially drew you to theorizing about science and religion?

Early in the 21st century I had become concerned, as many others had, that the Religious Right had overstepped the bounds of reasonable activism and proselytizing, and were threatening to push America towards a theocracy. (It is hard to remember how aggressive and threatening these factions were in those days, but they had both the media and the politicians cowed into submission, or so it seemed to many of us.) I decided the day of the diplomatically silent atheist was over; it was time to come out in public and assert my point of view in hopes of encouraging others to do likewise. When I published an op/ed piece about the attempt to re-label atheists, freethinkers, humanists and agnostics as "brights," (titled, by the NYTimes: "The Bright Stuff") in July of 2003, I received hundreds of messages urging me to write more about atheism and religion. I had been working on cultural evolution and its biological background, and a natural application of the insights I'd been garnering from that work was an assessment of religions as natural phenomena. I set aside my main research interests for three years and devoted myself full time to researching and writing *Breaking the Spell*.

2. Do you think science and religion are compatible when it comes to understanding cosmology (the origin of the universe), biology (the origin of life and of the human species), ethics, and/or the human mind (minds, brains, souls, and free will)?

No, science and religion are not compatible on these topics, except on those rare occasions when religious texts happen to express truths inadvertently (ancient people weren't wrong about everything, after all). The creation myths of religion are interesting pre-scientific fictions, devised by people who did not yet have the perspectives or thinking tools of science to aid them in their queries, and they reveal a lot about both the powers and limitations of human imagination, but they have nothing else to add to our understanding of how the universe came to be as it is and what is to become of it. The portrayals of people we get in religious narratives are often illuminating, demonstrating at the very least that ancient people had much the same psychology as we have, and responded to life's opportunities and challenges as we do today. Among them are many cautionary tales that, by being "universally" known, help to stabilize our mutual expectations about how people treat each other—but we get just as many, and often better, narratives from Aesop and Homer and the other great storytellers over the millennia. Other Biblical tales are more problematic to today's audiences, full of breathtaking cruelty and baffling excesses of pride or hatred, and their enigmatic quality probably explains their staying power; we try, unsuccessfully, to conjure a settled context in which we can see why folks found this tale worth repeating, and our unsatisfied curiosity propels the story down through the generations. We have moved so far beyond Biblical morality, especially Old Testament morality, that pastors and Sunday School teachers have to perform heroic framing exercises to make large parts of the Bible decent fare for young people, and many verses are either consigned to oblivion or reserved for mature audiences that can somehow rationalize the presence of such indefensible moral judgments in their holy scripture.

3. Some theorists maintain that science and religion occupy non-overlapping magisteria—i.e., that science and religion each have a legitimate magisterium, or domain of teaching authority, and these two domains do not overlap. Do you agree?

Stephen Jay Gould's idea of NOMA was a well-intentioned try, but utterly hopeless as a reconciler of science and religion. It stripped religions—rightly—of all pretense to be a source of factual truth, but this went too far for all but the most hyper-liberal and "sophisticated" religionists, while wrongly stripping secular investigations in the huma-

nities, primarily philosophy, of any authority in the domain of ethics and the meaning of life. How could Gould, a Harvard professor, declare that his Harvard colleagues John Rawls, Amartya Sen, and Robert Nozick—to name just three of the panoply of brilliant non-religious, secular thinkers—were poaching on the magisteria of religion? Religion is no more authoritative about ethics than it is about science. The advances in moral perspective of the last two millennia—the abolition of slavery, the prohibition of cruel and unusual punishments, the tempering of judgments about all manner of "sins"—have been a series of triumphs of secular reasoning over religious conservatism. Gould's proposal satisfied nobody: religious leaders were not ready to consign all their scriptural narratives to the disarmed categories of myth and metaphor, and secular theorists in a variety of fields—philosophy, economics, political science, literary theory, anthropology—were unwilling to accept that they could offer no solid guidance on ethical questions, whereas religious thinkers could.

4. What do you consider to be your own most important contribution(s) to theorizing about science and religion?

I think my analysis of belief in belief is perhaps my best contribution. I pointed out that belief in God actually takes a back seat to belief in belief in God: more people believe in belief in God than actually believe in God. That is, they think believing in God is a good thing, even if they can't muster the conviction themselves. In fact it is very difficult for anybody to show evidence that they believe in God—beyond the evidence of their avowals, which attest to their belief in belief in God, but are strictly neutral as evidence of actual belief in God. The second-order belief has been the source of a mighty river of disingenuousness: politicians avow their belief in God in order to be elected but few would take that avowal as convincing evidence of belief in God, since it is so obvious to everybody that there are deep motivations for saying this whether or not it is sincere. To take a dramatic case, there is no good evidence that the pope believes in God, especially since Catholic doctrine enjoins all good Catholics to profess a belief in God whether or not they actually believe. Under the circumstances, what could a pope do to convince his audience that he really was a believer? Since we know that many do not (any longer) believe in God, the burden of proof lies heavily on those who profess, and there is no obvious way for them to discharge it.

5. What are the most important open questions, problems, or challenges confronting the relationship between science and religion, and what are the prospects for progress?

The main pressing issue is whether religions will continue to demand special treatment on this issue, when there are no grounds for granting it. Religions that can welcome intense scientific scrutiny of their histories, their practices, their creeds and commandments will deserve to survive; the rest, if they wither away under the harsh light, will deserve their fate.

George F. R. Ellis

George F. R. Ellis is a theoretical cosmologist and Emeritus Distinguished Professor of Complex Systems in the Department of Mathematics and Applied Mathematics at the University of Cape Town in South Africa. He co-authored *The Large Scale Structure of Space-Time* (1973) with Stephen Hawking, and is considered one of the world's leading theorists in cosmology. He is a Fellow of the Royal Society (FRS), Fellow and past President of the Royal Society of South Africa, past President of the International Society for General Relativity and Gravitation, and past President of the International Society for Science and Religion. He has an A-rating from the National Research Foundation (NRF) and has received numerous awards and distinctions. He is the recipient of the Herschel Medal (RSSA), the South African Institute of Physics De Beers Gold Medal, the South African Association for the Advancement of Science Gold Medal, the South African Mathematical Society Gold Medal, and the Academy of Science of South Africa Science-for-Society Gold Medal. In 1999 Ellis was awarded the Order of the Star of South Africa by President Nelson Mandela for his outspoken opposition to apartheid, and in 2006 President Thabo Mbeki conferred the Order of Mapungubwe on Ellis. Ellis is also the recipient of the Templeton Prize (2004), presented by Prince Philip at Buckingham Palace, for "Progress Towards Research or Discoveries about Spiritual Realities."

1. What initially drew you to theorizing about science and religion?

I initially started thinking about these themes through reading *The Nature of the Physical World* by Arthur Stanley Eddington (A. S. Eddington 1928). But this was not an active involvement. I then collaborated on technical papers in cosmology with William Stoeger, a Jesuit scientist attached to the Vatican Observatory. Our discussions extended over time to philosophical issues underlying cosmology, a long standing interest of mine (G. F. R. Ellis 2006). He then invited me to an integrative series of workshops about the interplay between science and religion run by the Vatican Observatory (Castel Gandolfo) in conjunction with the Centre for Theology and Natural Sciences (Berkeley). Through this I learnt much from very knowledgeable and intelligent colleagues, and then wrote a series of articles on the subject and co-authored a book on it with Nancey Murphy (N. C. Murphy and G. F. R. Ellis 1995).