

# Defending the Faith: Even in science, faith isn't optional

By [Daniel Peterson](#), For the Deseret News  
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[Andrew Steane](#) is a professor of physics at the University of Oxford, and he speaks on science with considerable authority. Awarded the 2000 Maxwell Medal and Prize of the Institute of Physics for work in the field of quantum error correction, he's the author of, among other things, "The Wonderful World of Relativity" (Oxford, 2011) and "Relativity Made Relatively Easy" (Oxford, 2012).

He's also an unabashed Christian, and his most recent book is "[Faithful to Science: The Role of Science in Religion](#)" (Oxford, 2014). In this column, I'll report on one theme from his excellent book's second chapter, "Faith and Engagement."

When we converse with one another, he points out, we seldom start off by doubting the goodwill or good sense of the other person. Instead, perhaps because we already know her to some extent or because of indefinable first impressions, we're inclined to trust the other person to a degree well beyond what we could justify, to ourselves or anybody else, by rigorous proofs. "We thus risk being misled all the time," he writes, "but we are happy to accept this risk since the alternative would be a very lonely existence. This common experience is faith."

That kind of trust, based on informal impressions, is fundamental even in more seriously consequential situations. To illustrate his point, Steane gives the example of someone requiring major surgery. Beyond personally approving the surgeon, a prospective patient will want to ensure that that surgeon has a good reputation, relevant training and proper certifications. Wisdom and prudence are entirely appropriate. "However," Steane observes, "at some point that careful checking ceases, and we have to trust people" — perhaps literally putting our lives in someone else's hands.

He also cites the example of two lovers considering marriage. What he calls "sure-fire knock-down rational argument knowledge" simply isn't available to them at that early

stage of their relationship. It cannot be. Nevertheless, he remarks, “A marriage begun from wisdom, humility and generosity is an expression of faith and a powerful force for good. This faith is very much like faith in the One Who calls us: it says, ‘I don’t know completely, but I know enough — enough to risk being proved a fool, but also enough to begin something long-lasting and creative.’”

“Faith is not irrational,” writes Steane, “but it does go beyond what can be proved by reason.”

In science as elsewhere, Steane contends, faith is essential. “Scientific progress,” he says, “is guided not by pure reason but by a combination of reason and gut instincts.”

“I can say, for example, that in my experience as a physicist, I have never published a single scientific paper in which I was absolutely sure I was not mistaken in my arguments. I simply honestly believed I had done a good job and was not mistaken. If I had not gone ahead and published, I would have been left silent and would have had nothing to contribute.”

Steane observes that proponents of scientific theories in which they’ve seen beauty and explanatory power have often gone well beyond what the available evidence strictly demonstrated. Charles Darwin and Albert Einstein provide clear examples of this, he notes, as does the great theoretical physicist Paul Dirac, who won the Nobel Prize in 1933 at the age of 31. “Dirac was famous,” Steane comments, “for seeking beauty in his theories, over and above consistency with experiment, arguing that a sufficiently elegant theory would always be (or was very likely to be) supported by evidence, eventually, or at the least would provide fruitful insight along the way.”

T.H. Huxley (d. 1895), the famous Victorian biologist whose advocacy of evolution justified his nickname “Darwin’s bulldog” and who served as a pallbearer at Darwin’s funeral in 1882, said it well: “In scientific work, those who refuse to go beyond fact rarely get as far as fact.”

“The truth about science,” Steane writes, is that “it flourishes when scientists show faith in their theories: they embrace them because they are beautiful, and they put up some resistance to abandoning them. They take seriously serious counter-evidence, but they require it to prove its credentials.”

Thus, Steane argues, the neat division that some claim to see between reason and science on the one hand and, on the other, religious faith and irrationality, is largely

illusion. “Faith of some kind is not optional,” he says. “We only get to choose what we put our faith in.”

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