

Defending Science and Taking down Religion

Faith vs. Fact: Why Science and Religion are Incompatible, by Jerry A. Coyne, Viking, New York, New York, 2015, ISBN 978-0-670-02653-1, cloth, 311 pp., \$16.24.

Reviewed by Norm R. Allen Jr.

Since the advent of the leading New Atheists such as Richard Dawkins, Sam Harris, and the late Christopher Hitchens, many religious and non-religious people have complained that religion has not been getting the respect it supposedly deserves. Atheists have harshly criticized religion and the God concept with no apologies whatsoever.

To some of us, this kind of brutal, hard-hitting honesty is very refreshing and badly needed. And it is this kind of writing style that informs Coyne's excellent book. The author, a professor in the Department of Ecology and Evolution at the University of Chicago, brilliantly defends science and dismantles religion persuasively and with the greatest of ease.

One of the best points the author makes is that, just because people might hold contradictory beliefs, it does not necessarily follow that those beliefs are compatible. For example, he notes that some scientists accept evolution but still believe that the Earth is only thousands of years old. Some people that accept science also believe in astrology. However, would we seriously claim that science and creationism are compatible, or that astronomy and astrology are compatible? Of course not!

However, Coyne also understands that not *all* science is incompatible with religion. There is only a conflict when certain deeply cherished religious beliefs collide with science.

The author demolishes the late Stephen Jay Gould's idea of non-overlapping magisteria (NOMA), in which science and religion occupy separate realms. Religion is supposedly concerned only with morals, values, the meaning of life, and so on, and science is supposedly only concerned with questions about the natural world. Of course, this is simply not true. Religionists are always making claims and implications about the natural world – the age of the Earth, Noah's Ark

and the supposed worldwide flood, and so on. Moreover, science can tell us a lot about the roots of morality, how it evolved, why it is advantageous, how other animals behave in altruistic ways, and so on.

Coyne discusses a poll conducted by *Time* magazine and the Roper Center in 2006, in which it was found that 64 percent of respondents said they would reject scientific findings to embrace their faith.

All too often, this point becomes painfully obvious. For example, Coyne points out that "...science has completely falsified the idea of a historical Adam and Eve." (p. 126) He continues, "...evolutionary geneticists now know that the human population could never have been as small as only two individuals – much less the eight who rode out the flood in Noah's Ark....The total number of ancestors of modern humans...was not two but over 12,000 individuals." (*ibid*) Obviously, the Adam and Eve "theory" cannot be reconciled with the indisputable genetic evidence, and millions of believers prefer to accept the biblical myth. So much for NOMA.

Theists and deists believe that God created life. However, that is not what science implies. As Coyne writes: "...life...probably arose via a...process of 'chemical selection' among collections of molecules [like natural selection], [and] there is probably no sharp distinction between the *origin* of life and the *evolution* of life." (pp. 133-134)

Coyne does a wonderful job of demolishing the absurd claim that a perfectly intelligent and omnibenevolent God directs something as cruel, painful and wasteful as evolution. He notes that scientists have shown "with microorganisms that no external force seems to be producing mutations in an adaptively useful way." (p. 138) He further writes that "...evolution doesn't show the signs of teleological guidance or directionality proposed by theistic evolutionists."

The late humanist and physicist Victor Stenger wrote and spoke extensively on the fine-tuning argument. Coyne ably knocks down the (theistic) fine-tuning argument, or the idea that the constants of physics "fall within a narrow range that permits human life," and therefore, must have been the result of God's tinkering with the universe. (Many naturalists also believe in fine-tuning, but believe it can be accounted for naturalistically.) Coyne writes:

The cosmological constant and the entropy of the early universe...could have been substantially larger than they are without affecting our presence, for those changes would simply reduce the number of galaxies in the universe without affecting their fundamental properties. Stars could still exist, as well as planets that could harbor life....Further, we don't know how improbable the values of the constants really are. Such a claim makes the crucial assumption that all values of constants are equally likely and can vary independently. It also assumes that there is no deep and unknown principle of physics that somehow constrains physical constants to have the values we see. Given our complete ignorance of the proportion of "physical-constant space" that could be compatible with life, there's simply nothing we can say about how improbable life is. (p. 162)

Coyne shows that religion is in conflict with science in the areas of intercessory prayer, faith healing in which children sometimes die, climate change, vaccinations against curable diseases, the fight against Ebola, birth control, stem cell research, and so on.

This book is absolutely superb – a must read, without question, and more scientists should garner the courage to write as forcefully and unapologetically as Coyne does.