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## *Further Book of Note*

**Science for Heretics: Why So Much of Science Is Wrong** by Barrie Condon. CreateSpace Independent Publishing, 2016. 470 pp. $16.99 (paperback). ISBN 978-1534820586.

This title, *Science for Heretics*, seemed to demand a review in the *Journal of Scientific Exploration*; nine unanimously 5-star reviews on amazon.com lent confirmation. But I was very disappointed in this book.

Somewhere I've read about other work, "What's true isn't new and what's new isn't true," and that applies here. There's much sound criticism (in Chapters 2–6) of cosmology, quantum mechanics, relativity, string theory, chaos theory. Condon details the mutual incompatibility of relativity, gravity, and other continuous-field concepts with non-continuous concepts involving particles and quanta, and he points out that those incompatible views lead to directly conflicting conclusions about black holes.

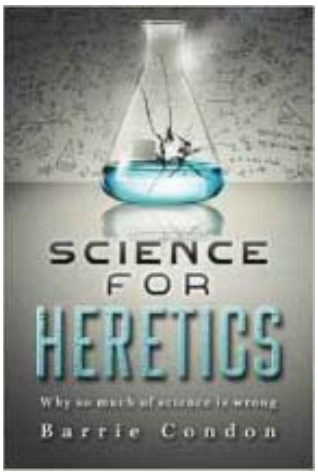
The book is also sound in criticizing accepted cosmological views that claim to understand much while asserting that 90% or more of the universe consists of things about which we know essentially nothing except that they are needed as fudge factors: dark matter and dark energy.

Chapters 7 and 8 also are sound in criticizing reductionism and pointing to limitations, inherent in being human, as to comprehending the universe and ultimate origins.

Chapter 9 is correct in describing engineering as not simply a step-child of science, but seems off-base in ascribing engineering mistakes to inappropriately relying on science and mathematics.

Chapters 10 and 11 discuss failings of modern drug-based medicine in dealing respectively with physical and with so-called mental illnesses. There is far more that needs to be said on those matters, and the references are quite inadequate; for better coverage, see my bibliography (Bauer no date).

Chapter 12 is partly sound as to the intellectual difficulties faced by the social sciences; but I disagree with the book's contention that the physical sciences should model their investigations on the social sciences. That contention follows from Condon's apparently central




dissatisfaction with physics and other quantifying disciplines: He asserts that there is a fundamental flaw in applying mathematics to the natural world.

Condon's reason for this iconoclastic assertion is spelled out in Chapter 1 and caused me to read the rest of the book with a jaundiced mind. No two things in nature are truly identical, according to Condon, so it is inappropriate to group and count them as though they were identical. Not even two elementary particles (electrons, etc.) may be identical (pp. 99–100).

In my view, the successes of the natural sciences are strong evidence that one can indeed properly treat, say, two atoms of hydrogen 1 as identical. That natural laws and constants of nature have been discovered that describe so many phenomena so well seems to justify treating as identical the ultimate components of matter—electrons, neutrons, protons, etc.—even if those components are not "particles." That the equations used in quantum mechanics get so much right about what happens in the world seems to me disproof of Condon's contention. I agree with his concerns to the extent that the physical meanings we attach to or imply for the variables in equations are arbitrary, that the real things are not as we picture them; but this too may be true but not new; Richard Feynman (Feynman, Leighton, & Sands 1964: II, 18) is cited not infrequently to this effect: "What counts are the equations themselves and not the models used to get them."

I suggest that the fundamental difference between the physical sciences and the social sciences is that the former but not the latter can indeed treat the things they study as collections of identical objects (Bauer 2016).

Chapter 13 is about "Long Timescale Controversies: Evolution and Climate Change." Condon claims to be impartial since he is no fan of "either side" in these controversies. However, he raises questions about dating techniques in ways that, so far as I know, only adherents of scientific creationism or intelligent design do. The discussion of evolution is flawed by mis-describing modern "Darwinist" views, for example not mentioning Margulis's demonstration of big-step–wise

"evolution" via symbiosis.

Doubts are also expressed over the dating of ice cores in climate-change research. I agree with this book that the evidence for human-caused climate change is far from sound, but I do so on other grounds (Bauer 2012, 2015).

I found again unsatisfactory, unconvincing, the discussion in Chapter 14 of potential risks from science. Thalidomide, DDT, the archiving of smallpox virus seem appropriately pertinent here, but the possibility of catastrophic events from research with the Large Hadron Collider seems too farfetched.

Technical failings of this book include the lack of an index and a very unattractive presentation—it looks like photocopied typescript, too faint to be read comfortably. The cited references neglect much relevant and important material. These flaws no doubt reflect self-publication through Amazon's CreateSpace Independent Publishing and illustrate the potential benefits that might have accompanied competent editorial work. I was also quite puzzled by the statement on page 2, "First published by Hartley and Truro in 2016"; Google and Internet yielded no information about the existence of such a publisher.

I dislike writing bad reviews. Given the comments on amazon.com, I'm in a minority of one as against nine fans in being disappointed in this book. Clearly, potential readers attracted by the book's title should look also at the amazon.com reviews.

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